REPORT OF THE

ALIGARH MUSLIM UNIVERSITY

ENQUIRY COMMITTEE

(APPENDICES)

ALIGARH MUSLIM UNIVERSITY
ALIGARH
1961

(Reference paragraph 3, Page 7, Chapter II)

APPENDIX I.

MUSLIM UNIVERSITY ENQUIRY COMMITTEE
ALIGARH

Notification

In pursuance of the Resolution passed by its Executive Council, the Muslim University, Aligarh, has appointed a Committee of Enquiry consisting of the following members to enquire into and report on the matters specified in para 2 below, relating to the University :

(i)	Prof. G. C. Chatterji	(Chairman)
(ii)	Prof. A. R. Wadia, M.P.	(Member)
(iii)	Shri Kartar Singh Malhotra	(Member)
(iv)	Shri P. N. Sapru, M.P.	(Member)
(v)	Shri M. A. Shahmiri	(Member)
(vi)	Shri R. P. Naik, ICS.	(Member Secretary)

2. The terms of reference of the Enquiry Committee are :

(a) To enquire into the financial transactions of the University from 1951-52 to date, with special reference to the audit objections relating to the accounts of these years and the steps, if any, taken by the University to meet these objections ;

(b) To enquire into the recruitment, appointment and promotion of the teaching and administrative staff of the University and the admission of students to the University since 1951-52 and to report on the same ; and,

(c) To suggest suitable measures of reform necessary for the efficient functioning of the University.

3. The Committee will be glad to receive any memorandum that the members of the University Authorities, Teachers and representatives of University bodies, and interested members of the public may wish to forward to the Committee. Such memoranda may kindly be sent so as to reach the Member-Secretary, Shri R. P. Naik, ICS, Joint Secretary to the Government of India, Ministry of Education, New Delhi, on or before the 30th June, 1960. Persons submitting the memoranda are requested to give full information as to their designation, present address as well as the nature and duration of connection which they have had with the University. It may also be indicated whether the persons submitting memoranda would be willing to give oral evidence before the Committee if requested to do so.

4. In case any person requests the Committee that his name in respect of the evidence tendered by him be kept confidential, this will be done.

R. P. Naik, ICS,
Member-Secretary

(Reference paragraph 6, Page 8, Chapter II)

APPENDIX II.

ALIGARH MUSLIM UNIVERSITY ENQUIRY COMMITTEE

Names of persons examined

Sl. No.	Name	Address	Date on which examined
1.	Dr. S. Yusuf Husain	Pro-Vice-Chancellor Aligarh Muslim University, Aligarh	1-8-60
2.	Sh. Obaidur Rahman Khan Sherwani	Treasurer, Muslim University, Aligarh	1-8-60
3.	Prof. M. Umaruddin	Dean, Faculty of Arts	2-8-60
4.	Dr. A. Basir Khan	Proctor, Muslim University, Aligarh	2-8-60
5.	Prof. A. Bose	Head of the Department English	2-8-60
6.	Prof. H. L. Sharma	Head of Department of Hindi and Sanskrit	2-8-60
7.	Dr. Mohan Lal	Chief Medical Officer, Gandhi Eye Hospital	2-8-60
8.	Prof. Hameeduddin	Retired Professor of Persian	2-8-60
9.	Prof. Ale Ahmed Saroor)	of Aligarh University Staff	
10.	Mrs. Zohra Verma)	Association	2-8-60
11.	Shri Masoodal Hasan)		
12.	Mr. Ammar Ahmed Khan)	Honorary General Secretary	
13.	Shri S. Jerror Hyder)	Muslim University Old Boys' Association	2-8-60
14.	Prof. A. Aleem	Head of Department of Arabic and Islamic Studies	2-8-60
15.	Dr. S. M. Tahir Rizvi	Dean, Faculty of Science	3-8-60
16.	Dr. N. C. Saha	Principal, Engineering College	3-8-60
17.	Dr. P. S. Gill	Head of Department, Physics	3-8-60
18.	Prof. B. Mirza	Department of Zoology	3-8-60
19.	Prof. K. A. Chowdhury	Head of Department, Botany	3-8-60
20.	P. N. Ganjoo	Head of Department, Geology	3-8-60
21.	Dr. M. O. Farooq	Retired Dean, Faculty of Science	3-8-60
22.	Dr. S. M. Ahsan Kazmi	Retired District Sessions Judge	4-8-60
23.	Shri Devendra Sharma	President, District Youth Congress, Aligarh	5-8-60
24.	Dr. Rais Ahmed	Lecturer in Physics, Muslim University	5-8-60

Sl. No.	Name	Address	Date on which examined
25.	Shri Ashfaq Ali Khan	Lecturer in Physics, Muslim University	5-8-60
26.	Prof. S. Mahmood Husain	Professor of English, Muslim University	5-8-60
27.	Dr. K. A. Hamid	Member of the Aligarh University Court	5-8-60
28.	Shri A. M. Khwaja	Member (Visitor's nominee) Executive Council, Aligarh Muslim University	14-9-60
29.	Dr. K. C. Chakko	Engineering College, Aligarh Muslim University	14-9-60
30.	Shri B. S. Jaiman	Engineering College, Aligarh Muslim University	14-9-60
31.	Dr. P. Venkateshwarulu	Physics Department, Aligarh Muslim University	14-9-60
32.	Dr. S. Nurul Hasan	Head of Department, History, Aligarh Muslim University	16-9-60
33.	Dr. Satish Chandra	Reader, Department of History	16-9-60
34.	Dr. Ghayyur Ahmed and others of Tibbiya College	Aligarh Muslim University	16-9-60
35.	Shri G. Samdani	—do—	16-9-60
36.	L. Nahar Singh	—do—	16-9-60
37.	Shri G. M. Sadiq	M.L.A. (Jammu & Kashmir)	8-11-60

(Reference paragraph 13, Page 10, Chapter II)

APPENDIX III.

ALIGARH MUSLIM UNIVERSITY ENQUIRY COMMITTEE UNIT

List of M.P.'s invited to meet the Committee and of those who accepted the invitation

S. No.	Name	Date of Meeting With the Committee
*1.	Dr. Tara Chand, M.P.	12-9-60
*2.	Shri Akbar Ali Khan, M.P.	12-9-60
*3.	Shri Jamal Khwaja, M.P.	12-9-60
*4.	Shri Nawab Singh Chauhan, M.P.	13-9-60
*5.	Shri Prakash Vir Shastri, M.P.	13-9-60
*6.	Shri Ansar Harvani, M.P. (with Shri A. M. Tariq M.P.)	13-9-60
*7.	Shri Mukut Behari Lal, M.P.	14-9-60
*8.	Maulana M. Hifzur Rahman, M.P.	17-9-60
9.	Shri Shah Mohammad Umair, M.P.	
10.	Shri Dahyabhai V. Patel, M.P.	
11.	Shri Attal Behari Vajpayee, M. P.	
12.	Dr. Ram Subhag Singh, M.P.	
13.	Dr. Raj Bahadur Gaur, M.P.	
14.	Shri Faridul Haq Ansari, M.P.	
*15.	Begum A. Kidwai M.P.	9-11-60
*16.	Dr. Syed Mahmad M.P.	11-11-60
*17.	Dr. Z. A. Ahmad M.P.	11-11-60

(*Indicates those who accepted the invitation)

(Reference paragraph 19, Page 11, Chapter II)

APPENDIX IV.

ALIGARH MUSLIM UNIVERSITY ENQUIRY COMMITTEE—PARTICULARS OF MEETINGS HELD

S. No.	Dates	Place
1.	13th & 14th February, 1960	Aligarh
2.	11th March, 1960	New Delhi
3.	19th & 20th April, 1960	New Delhi
4.	16th & 17th May, 1960	Aligarh
5.	27th to 30th June, 1950	Hyderabad
6.	1st August to the 5th August, 1960 ..	Aligarh
7.	12th to 17th September, 1960	New Delhi
8.	10th to 14th October, 1960	Ranikhet
9.	8th to 11th November, 1960	New Delhi
10.	21st November, 1960 to 3rd December, 1960	New Delhi
11.	12th Dec. 1960 to 17th Dec., 1960 ..	New Delhi
12.	27th Dec., 1960 to 28th Dec., 1960 ..	Aligarh


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(Reference paragraph 61, Page 53, Chapter IV)

APPENDIX VI.

Note by Mr. P. N. Sapru, member, Aligarh Muslim University Enquiry Committee.

The question of the exercise by the Vice-Chancellor of his emergency powers has to be looked at from two points of view. The first is its purely legal aspect and the second concerns itself with its propriety. So far as the first is concerned it is quite clear that the Vice-Chancellor who is vested with emergency powers is the sole judge of whether the emergency exists or not. There can, therefore, be no doubt that legally the powers exercised by the Vice-Chancellor cannot be challenged. So far as the question of propriety is concerned the position is that the Vice-Chancellor has to work with an Executive Council to which one may take it he normally reports his decisions. The emergency powers which we have been examining were exercised during the period under review by two successive holders of the office of the Vice-Chancellor and the pro-Vice-Chancellor who also in the absence of the Vice-Chancellor gets vested with them. The propriety of their actions does not appear to have been questioned, on the material before me, directly or indirectly, by the Executive Council. It is, therefore, difficult for me to say at this distance of time, without examining closely all the relevant facts whether the action taken was in every case a proper one or not. An impression which has, however, been created upon my mind by such material as I have been able to go through is that there was a tendency undoubtedly to use it liberally for the reason that the two Vice-Chancellors and the pro-Vice-Chancellor thought it that it was in the interest of the University that they should do so. The Executive Council must have felt compelled, in the circumstances, to put a seal of approval upon their resort to it. I think we should emphasise that Vice-Chancellors should resist the tendency to use these emergency powers except in those clear cases which really call for emergent action. All that I am, therefore, prepared to say is that without specifying percentages, I am not satisfied that the use of emergency powers was strictly from the point of view of propriety called for in all the cases in which recourse was had to it by the two Vice-Chancellors and the Pro-Vice-Chancellors. It is difficult for me to be precise in working out the percentage in which the powers have been misused. I do not know what the extent to which Vice-Cancellors vested with similar powers in other universities have been using these powers is. It is true that one impropriety cannot cure another but an acquaintance with the manner in which such powers have been used by other universities is, perhaps, necessary for providing us with a correct perspective in regard to the extent to which these powers lend themselves for misuse. In my opinion, we should recommend that the power should be used sparingly and, if necessary, the law should be amended so as to substitute some objective tests to prevent its possible misuse. Alternatively, the Executive Council may be given power to delegate authority to the Vice-Chancellor within strictly defined limits to act on its behalf in cases which cannot wait for decision until it meets. Of course, when it meets it should have the powers to approve or disapprove of the step taken by the Vice-Chancellor.

I agree (P. N. Sapru)

(M. A. Shahmiri)

(Reference paragraph 9, Page 61, Chapter V)

APPENDIX VII

GENERAL REPORT OF THE CHIEF TECHNICAL EXAMINER, MINISTRY OF WORKS, HOUSING & SUPPLY, ON THE INVESTIGATIONS CARRIED OUT INTO THE PURCHASE OF IMMOVABLE PROPERTY AND CONSTRUCTION OF BUILDINGS UNDERTAKEN BY THE MUSLIM UNIVERSITY, ALIGARH, DURING THE PERIOD 1950-60.

On a request made by the Minister for Education to the Minister for Works, Housing & Supply, *vide* his letter No. 548|60-EM dated 7th March, 1960, investigation into the purchase of several immovable properties and building works executed during the period 1950-60 by the Muslim University, Aligarh, was undertaken by the Chief Technical Examiner, Ministry of Works, Housing & Supply.

The following cases were referred for investigation *vide* Secred D.O. letters No. 2214|60-O & M dated 4-6-60 and D-127|60-AMU. Enq. dated 21-9-60 from Shri B. N. Malhan, Deputy Secretary, Ministry of Education :—

I. *Purchase of Immovable Property.*

(a) Nagotiated purchase :—

To examine whether the price paid for the following buildings at the time of purchase are reasonable :—

(i) Azizjehan Manzil.
(ii) Ali Manzil.
(iii) Shafi House.
(iv) Azmat Elahi Zubari's House.
(v) Jalil House.
(vi) Nashaman, Yusuf Villa and Raza Lodge.

(b) Evacuee property purchased in auction :—

To examine whether the price paid for the following buildings at the time of purchase are reasonable :—

(i) Sarfaraz House.
(ii) Shahjehan Manzil.
(iii) Shakshana.
(iv) Kashana.

II *Purchase of land from Begum Khwaja.*

To examine whether the price paid for the land is reasonable.

III. *Additions and alterations to the Engineering College.*

To technically examine whether the value of the work done is commensurate with the expenditure actually incurred.

IV. Geology Laboratory. V. Physics Laboratory. VI. Library. VII. Vice-Chancellor's residence.	To examine the quality and quantity of work done and correctness of payments made therefore upto date.

Detailed Reports on each of the 7 works referred to above have been prepared on the basis of the investigations carried out at the site of work and are attached. These Reports bear the same serial number as the items mentioned above. As the report of each case has been dealt with in detail and contain all the facts of the case, as could be ascertained, only a brief summary of the outcome of the investigation of each case, and general comments on the execution of works and suggestions for improvements, are given in this Report.

I. *Purchase of Immovable Property.*

In order to examine whether the prices paid for the building properties referred to above are reasonable, the valuation of the buildings has been done under three different methods as described below :—

(i) To arrive at the probable cost of construction, if the building were to be constructed in the year of purchase and allow depreciation for the number of years between the date of construction and purchase.

(ii) By adopting an empherical formula—

$$D = P\left[1 - \frac{r.d.}{100}\right]n$$

WHERE, D = Depreciated value ;

P = Capital cost of construction ;

r.d. = rate of depreciation $\frac{100}{40}$; and

n = the age of the building in years.

(iii) To arrive at the capital cost of the building on the basis of the rental value assumed by the Municipality in arriving at the house tax.

The cost of the buildings arrived at by adopting the three different methods described above and the price actually paid are tabulated in the statement attached to the Report No. I (Appendix II). It would be seen from this statement that the price paid for all the buildings, either purchased through negotiation or in auction, is quite reasonable, if the valuation arrived at on the basis of the Municipal rental is ignored in respect of the following buildings:

Negotiated Purchase.	*Evacuee Property*
a) Ali Manzil	a) Sarfaraz House.
b) Shafi House	b) Shakshana.
c) Zubari's House	c) Kashana.

Arriving at the capital cost of a building on the basis of Municipal taxes does not always work to be correct, as the rent varies from time to time, depending upon market conditions in certain cases, and sometimes the land-

lords furnish a low cost of construction with a view to keep down the house tax. Therefore, valuation on this basis can be used only as a guide, which does not always represent the true picture.

Though the prices paid for all the houses are quite reasonable, the valuation has been arrived at in an arbitrary manner by the University Officers and it does not conform to any of the recognised methods. In this particular case, it so happens that the valuation is low, whereas on the other hand it could have also resulted in payment of higher price than what the buildings are worth. It is, therefore, suggested for consideration that in such transactions, the recognised method of valuation should be adopted in future.

II. PURCHASE OF LAND FROM BEGUM A.M. KHWAJA

The terms of reference in this case was whether the price paid by the University for the purchase of 30 bighas and 17 biswas (85,030 sq. yards) of land from one Begum A.M. Khwaja in the year 1957 at a cost of Rs. 2,42,667/- was reasonable. The rate paid for this land works out to Rs. 2|85 per sq. yd. To find out the reasonableness of the rate paid, a reference was made to the Land Acquisition Officer at Aligarh to intimate to us the prevailing price of land in this locality during the period of purchase, i.e. 1957. In his reply, the Land Acquisition Officer has given details of 2 transactions that took place during this period in this locality. The correct average rate given by him works out to Rs. 2|93 per sq. yard.

It is seen from the records of the Ministry of Works, Housing & Supply, Government of India, that they have been interested since the year 1955 in the purchase of 47 bighas and 10 biswas of land in the same locality, a part of which belonged to Begum A.M. Khwaja, which was later on purchased by the University; and which is now the subject matter of the enquiry. To an enquiry made by the Ministry of Works, Housing & Supply in the year 1956, the District Officer, Aligarh, informed that the price they may have to pay for acquiring the property would be about Rs. 3|8|- per sq. yd. On the basis of this and on the basis of the price now intimated by the Land Acquisition Officer, it would appear that the rate of Rs. 2|85 per sq. yd. paid by the University for the purchase of the land in question is reasonable.

III. ADDITIONS AND ALTERATIONS TO THE ENGINEERING COLLEGE.

This work was examined in accordance with the terms of reference to find out whether the value of work done is commensurate with the expenditure actually incurred.

As the accommodation available in an old Market building which was being used as an Engineering College was inadequate, the work of Additions & Alterations to this building was taken up on the basis of a grant of Rs. 4,69,000 made available to the University by the Ministry of Education, in order to make it suitable for use as a first class Engineering College. The work of preparation of plans, drawing and specifications was entrusted to a foreign Architect, one Mr. Heinz of Delhi. He was paid a sum of Rs. 16,510 towards services rendered by him. One Shri Abbasi, a retired Engineer who was initially a member of the Building Committee was appointed, as Honorary Supervising Engineer for this project. Shri Abbasi was in complete and over-all charge of this project. Initially, tenders were called for this project but the lowest tenderer backed out. The work was entrusted to another contractor on the recommendations of the Hony. Supervising Engineer and this

contractor also backed out after doing work to an extent of about Rs. 82,000, and after receiving a lot of advances which he never repaid. The University lost the suit filed against this contractor for the recovery of the amount. Thereafter, bulk of the work was completed by engaging several petty supply & labour rate contractors. The total expenditure incurred on the building portion of the work upto the period 54-55 as per accounts made available to us by the University authorities was Rs. 5,11,882. Full details regarding this expenditure were not available either in the Cash Book, Ledger or Register of Works. Nor the detailed estimate, based on which the work has been executed was available. Therefore, in order to arrive at a fair valuation of the work done, it became necessary for us to record detailed measurements of the various items of work executed, and to determine the specifications for the various items, on the basis of information available from the records in some cases, and in other cases on the basis of assessment of the work done. Detailed analysis of rates for the several items of work involved had to be worked out for the relevant period.

The valuation arrived at on this basis, works out to Rs. 4,17,200. Therefore, a difference of Rs. 94,682 between the expenditure of Rs. 5,11,882/- actually incurred and the fair valuation of Rs. 4,17,200 arrived at by us has to be accounted for.

The Special Engineer of the University had also earlier independently evaluated the work actually done and arrived at a figure of Rs. 4,76,775. The reasons for the difference between our valuation and that of the Special Engineer's and why the latter's valuation cannot be accepted, have been explained fully in the detailed Annexure III of Report No. III.

Similarly, Shri Ahmed Sardar Khan, Special Officer of the University, had prepared a report justifying the expenditure of Rs. 5,11,882. Our comments as to why the findings of Shri Ahmed Sardar Khan cannot be accepted are contained in paras 15 to 25 of the Main Report No. III. Even admitting the expenditure on certain doubtful items referred to in Shri Ahmed Sardar Khan's note as actually having been incurred, a sum of Rs. 77,684 still remains unaccounted for.

A summary of the various irregularities, improper maintenance of accounts and malpractices as brought out in the detailed Report would not give a clear picture of the seriousness of the case. Therefore, only the concluding paragraph of the detailed Report is reproduced below and a perusal of the detailed Report is requested for a complete understanding of the case:

> "The unaccounted for expenditure of Rs. 77,684/-, the shaddy manner in which several transactions have taken place, as brought out in the Audit Report, irregular and incomplete manner of maintaining accounts, non-reply to the audit objections and decamping from the scene of occurrence leads me to the irresistible conclusion that Shri Abbasi has been the main Villain of the show, as he appears to have had his way in every respect without any check whatsoever."

IV. GEOLOGY LABORATORY

The construction of the Geology Laboratory costing Rs. 2,86,185 was undertaken in 1957 through the agency of a contractor, M/s. Ford Macdonald & Co. Private Ltd., Kanpur and the work is now nearing completion.

An inspection of the work done so far revealed certain defects as enumerated in the detailed Report No. IV and also overpayments to the extent of about

Rs. 3,923|-, some due to inferior quality and insufficient quantity of materials used and some others due to excessive rates paid for extra items. Though there are no serious defects in this work, whatever defects there are in the quality of work, mode of recording measurements and sanction of extra items, can be overcome if the existing procedures and the organisational set up are reviewed and put on a proper footing. Suggestions in this regard are made at the end of this report.

V. PHYSICS LABORATORY

The construction of the Physics Laboratory costing Rs. 5,01,143 through the agency of M|s. Ford Macdonald & Co. Private Ltd. was undertaken in 1957 and about 75% of the work has been completed so far.

Examination of the work done so far revealed certain defects, details of which are contained in detailed Report No. V. Similarly, defects noticed in the bill paid to the contractor and wrong mode of measurements adopted, are also contained in the detailed Report. The total overpayment assessed works out to Rs. 6,895|-. Apart from these, there are no other serious irregularities.

The suggestions made at the end of this Report to overcome the defects in the quality of work, mode of measurements and better supervision etc. apply to this case also.

VI. LIBRARY

The construction of the Library building, which costs about Rs. 9 lakhs, was started in 1956 through the agency of M|s. Gannon Dunkerley & Co. Ltd. and completed in May, 1959.

Inspection of the work did not reveal any serious defects, except in the case of one item relating to Marble Veneering in the front hall, which has been dealt with in detail in the Main Report No. VI. The only special feature of this case in that items of 'Providing & fixing steel doors and windows' which were included in the contract of M|s. Gannon Dunkerley & Co. Ltd. were subsequently deleted and got done through other agencies, resulting in a loss of Rs. 18,738|- to the University, due to payment of higher rates than those quoted by M|s. Gannon Dunkerley & Co. Ltd.

Recovery of Rs. 3,128|- due to excess use of cement, due under the terms of the contract, has not been made from the contractor.

An amount of Rs. 720|- was paid in excess to the contractor due to payment of high rates for extra items.

Barring these, there were no other defects in this work.

VII. VICE-CHANCELLOR'S RESIDENCE

Bungalow No. 11, University Road, which had thatched roof over most of the portions of the building and kutcha walls, was being used as the Vice-Chancellor's residence. Initially, it was proposed to change the roof of the building from thatched to R. B. roofing and an estimate amounting to Rs. 30,000 was prepared and placed before the Building Committee. Due to certain changes made by the Building Committee and other suggestions made by the Architects for the work, a revised estimate amounting to Rs. 81,800 was prepared. Separate contracts were fixed for building work, wood work, flooring and sanitary and water supply installations, on the basis of negotiated rates. Detailed observations on the site examination of the work

and payments made to the contractors are contained in the detailed Report No. VII.

The work executed is generally satisfactory, but the special feature of this work is that due to non-fixation of rates and not entering into proper contract at the outset, the University had to incur an excess expenditure of about Rs. 10,534 toward high rates paid for several items of work. Fancy rates have also been paid for imported Sanitary articles.

It would appear that due to lack of scale and standard of accommodation and proper conception of the scope of the work at the outset, an estimate, which was initially prepared for Rs. 30,000 was revised to Rs. 81,800, ultimately resulting in an expenditure of Rs. 1,24,208.

SUGGESTIONS FOR IMPROVEMENT IN THE EXISTING PROCEDURES AND SET UP OF THE BUILDING DEPARTMENT OF THE UNIVERSITY

As a result of the investigations undertaken by us in respect of the several works costing about 30 lakhs, we had the opportunity to come into close contact with the working of the Building Department of the University and to find out the inadequacy and shortcomings in the existing procedures in regard to call of tenders, maintenance of accounts, mode of measurements, method of execution of works, division of work, responsibility of officers etc:—

DUTIES & FUNCTION OF ENGINEERING OFFICERS

1. There does not appear to be any set of rules or code, defining the functions, duties and responsibility of the technical officers of various grades. If the officers are performing these functions on the basis of conventions, then the existing conventions need to be revised, as they are outmoded and ineffective. I would, therefore, strongly recommend framing of rules in this regard on the model of the CPWD 'D' Code and CPWD Manual with suitable additions and alterations to suit University requirements.

CALL OF TENDERS AND AWARD OF WORK

2. At present there are no definite rules governing the call of tenders and award of works. Very scant reference has been made to this matter in the existing Accounts Code. It would be desirable to maintain a list of approved and registered contractors of the University. The various rules governing the call of open tenders, advertisement in the press, award of work etc. contained in the CPWD Manual could be suitably modified and adopted as University rules for such transactions. It will also be desirable to advertise tenders in the papers for works costing, say, above Rs. 20,000/- in order to get better competition.

AGREEMENT FORM AND SPECIFICATIONS

3. The existing printed form of Agreement needs revision to suit the current conditions and practices. In the existing form, a reference is made to the 'University Schedule of Rates', whereas actually no such schedule exists.

4. The University should also prepare a Book of Specifications of its own for building as well as electrical works, or in the alternative they could adopt the new edition of the Central P.W.D. Specifications, which is expected to be published shortly. This is a comprehensive one, reviewed and brought uptodate by a Committee of experts.

PROPER MAINTENANCE OF MEASUREMENT BOOKS

5. The various drawbacks and irregularities noticed at present in the maintenance of Measurement Books, which form the important basic record for all payments, could be overcome if rules regarding proper maintenance of Measurement Books and mode of making entries therein are framed on the model of paras 208 to 211 of the Central P.W.D. Accounts Code, and rules regarding test check of measurements by superior officers may be made on the model of paras 5.605 to 5.607, p. 35 to 37 of the CPWD Manual, Vol. II, and printed on the inside cover of the Measurement Book, as in the case of the measurement books maintained by the CPWD.

6. *Maintenance of Accounts.* The existing rules regarding maintenance of accounts as contained on pages 33 to 37 of the University Accounts Code (Edition 1858) are totally inadequate and outmoded. It is high time that detailed rules and procedure were prepared governing the maintenance of accounts of the various types of transactions that normally take place in an Engineering Organisation, if the various irregularities and defects noticed in the maintenance of accounts as brought out in our several reports are to be avoided. I would, therefore, strongly suggest the Central PWD Accounts Code, which is a very comprehensive one, with suitable additions and alterations, to suit the University's requirements, be adopted.

7. *Scale and standard of accommodation.* It appears that at present no standards or scale of accommodation exist, both for non-residential, as well as residential requirements of the University. Had there been any such standard, the excess of expenditure incurred over the estimates in the case of the Engineering College and Vice-Chancellor's residence would not have been so great. As large sums of money are made available by the University Grants Commission for building construction every year, it is highly desirable to lay down scales and standards with a view to securing economy in construction.

8. *Architectural designs.* It is highly desirable to entrust architectural design works particularly for costly projects, to recognised architectural firms of repute, as the economy in construction, stability and life of a structure is to a great extent dependent on the design, the Architect prepares. There are several recognised Indian Architectural firms of repute. It should, therefore, be normally not necessary to entrust such works to foreign firms. In cases where for some reason or other it becomes necessary to employ the services of a foreign firm, proper investigation must be carried out regarding their background, capability and bonafides, as we have come across several cases of so-called foreign experts turning out to be bogus ones.

The work of additions and alterations to the Engineering College, which has revealed serious irregularities and malpractices as brought out in Report No. III, was entrusted to a foreign Architect, Mr. Heinz of Delhi. The files connected with the award of work, correspondence and payments made to him, have not been made available to us by the University authorities on the plea that they were not traceable. It is, therefore, not possible for us to comment on the nature of the transactions which the University had with Mr. Heinz, in this particular case.

9. *Technical audit.* In order to overcome the defects in the maintenance of accounts, it has been suggested earlier the adoption of the Central PWD Accounts Code. With the introduction of this system of maintenance of Accounts and the recently introduced system of internal pre-audit, it is hoped

that the accounts of the Building projects would be maintained in a satisfactory manner. As regards the technical examination of the works, the University Engineer, who is of the rank of a senior Assistant Engineer, is the final authority. As is obtaining in other organisations, there is no technical scrutiny of works of the University Engineer by higher officers. Even in big Departments like the Central PWD, MES, UP PWD, where there is supervision by higher officers, it has been considered desirabl and necessary to have the works technically examined by an independent body. This independent check has been in vogue in the Central PWD for over three years now. The useful work done by this Organisation in pointing out defects in works, detecting malpractices, overpayments and suggesting remedial measures, has been appreciated by the AGCR., Comptroller & Auditor General and the Public Accounts Committee. Without in any way casting reflection on the existing Engineering set up in the University, I would strongly recommend a similar external technical audit of the University works. It has been our experience that the very existence of such an organisation and the possibility of any particular work being subjected to the technical scrutiny of such an organisation, makes the executive officers alert and do the work to proper specifications and in accordance with the terms of the contract.

10. *Organisational set up.* The existing Engineering set up consists of a senior Assistant Engineer borrowed from the State PWD, who is in charge of all the planning and designing and maintenance and repair works of the University. The construction works of the University are directly under the charge of the Special Engineer, recruited from the open market. There are Assistant Engineers and Section Officers working under both the Engineers. Though the designations of these officers are similar to those in the State or Central PWD, the pay scales and responsibilities are not corresponding to those obtaining in the Government Departments. It is considered that it would be desirable and healthy to take officers on deputation from the State or Central PWD for a limited period to man the senior posts, as they will be fully conversant with the rules and procedures and they will also be in touch with the latest techniques in design and construction. If an Officer is not upto mark, it will be easier for the University to get a replacement, rather than discharge the inefficient person and recruit a new man from the market.

The technical officers represented on the Building Committee of the University are the University Engineer, an Assistant Engineer of the CPWD, a District Engineer of the U.P., P.W.D. and the Principal of the Engineering College. It is reported that the Building Committee, decides issues on the recommendations of an Expert Committee, which consists of the University Engineer, Assistant Engineer of the Central P.W.D., District Engineer of State P.W.D. and the Principal of the Engineering College. Apart from the reported continued absence of representatives from the State and Central PWD Engineers at the meetings, it is considered that the status of the representatives for the State and Central P.W.D. is rather low. It appears the so-called Experts Committee has not been functioning in a satisfactory manner and, therefore, it can be dispensed with altogether, if an officer of the rank of an Executive Engineer in Government is appointed as the University Engineer. All petty and routine matters should be left to the responsibility of the Executive Engineer and with the external technical check proposed, this arrangement should work well. There should, however, be no objection to an internal technical Committee consisting of the University Engineer, the Principal Engineering College and a Finance person to decide on policy matters etc.

On the Building Committee, the technical officers, if they are to be effective, should be of the rank of Superintending Engineers. If the meetings take place once a month or so, it should not be difficult for the Central or the State P.W.D. to depute an officer for this purpose.

11. The various suggestions made above, could also be introduced with advantage in all the four Centrally-aided Universities, viz., Aligarh, Banaras, Delhi and Vishwabharathi.

12. Before concluding my report, I would like to express my gratitude to Shri B. N. Malhan, Deputy Secretary, Ministry of Education, for arranging to obtain all the documents, and records connected with the enquiry and for the unstinted help he rendered us throughout, to the Registrar, Shri Khan, for making available such of those records which were traceable, and to the University Engineers for the help they rendered in the technical examination of the works.

We are also grateful to the University Authorities for making our stay at Aligarh comfortable and for the courtesy extended to us on all occasions.

(L. G. SELVAM)
CHIEF TECHNICAL EXAMINER
7-X-60

REPORT OF THE CHIEF TECHNICAL EXAMINER, MINISTRY OF WORKS, HOUSING AND SUPPLY, ON THE PURCHASE OF IMMOVABLE PROPERTY BY THE ALIGARH MUSLIM UNIVERSITY

The Chief Technical Examiner's Organisation, Ministry of Works, Housing & Supply has been entrusted by the Aligarh University Enquiry Committee, Ministry of Education, vide D.O. No. 2214|60—O & M, dated the 4th June, 1960 from Shri B. N. Malhan, Deputy Secretary, Ministry of Education, to examine whether the prices paid by the University for the following buildings at the time of purchase are reasonable:

(a) *Negotiated purchase* :

1. Aziz Jahan Manzil.
2. Ali Manzil.
3. Shafi House.
4. Azmat Elahi Zubari's House.
5. Jalil House.
6. Nashaman, Yusuf Villa & Raza Lodge.

(b) *Evacuee property purchased in auction*

1. Sarfaraz House.
2. Shahjehan Manzil.
3. Shakshana.
4. Kashana.

For this purpose, the valuation of these buildings has been made on plinth area basis. Plinth measurements of all the buildings were actually recorded at site the Technical staff. As far as can be ascertained at this stage the specifications of the various items of work in the building were taken note of and the relevant dimensions of the building were recorded in order to be able to arrive at a suitable plinth area rate. Line plans showing the plinth dimensions and brief specification and calculations of plinth areas have been got prepared.

Plinth area rates for similar type of construction carried out in Aligarh at about the same time by the U.P. Public Works Department were obtained from the P.W.D. authorities. These rates have been suitably modified to make allowances for any change in specification and dimensions. The modified rates have been adopted for evaluating the building. Appropriate allowance has been made for depreciation for age and condition of the building. Value of land has also been included in the assesment wherever the purchase was inclusive of land.

Individual cases are dealt below:—

1. AZIZ JEHAN MANZIL:

This building bearing Municipal No. 1|6 to 1|6F is situated on Anoop Sahi Road, Aligarh. This is said to have been acquired in the year 1958 through negotiation for Rs. 31,888.00 on the basis of a valuation made by the University Engineer and includes an amount of Rs. 659 towards cost of trees

in the compound. The land is said to belong to the University and was given on lease in the year 1932 to the person from whom the purchase was made. Therefore, the cost of land has not been included in the assessment.

The plinth areas of the main and ancillary buildings are as follows:—

a) Main building:	
Ground floor	6407 sft.
First floor	793 sft
Total	7200 sft.
b) Kitchen Block, servant rooms and out-houses	3154 sft.
c) Paved courtyard	4517 sft.

Main building is of traditional brick masonry walls in mud mortar finished with cement plaster on the interior and pointed on the exterior. The roof is made up of reinforced brick slab. Doors and windows are of teak wood. The flooring is mostly of cement concrete. The ceiling height is 11'-0" in verandah and 15'-0" in rooms. The building is electrified. The condition of the building is fairly good.

It has been assumed that the year of construction is 1933 i.e. year following the year of lease of the land by the University and the age of the building at the time of purchase would, therefore, be 25 years. It is assessed from the existing condition of the building that it would last for another 30 years. The cost of building if constructed in the year of purchase viz, 1958 would have been Rs. 91,573.00. Taking the residual value of the building at the end of its life as six per cent of its cost, proportionate depreciation for the past 25 years out of a total life of 55 years, works out to Rs. $91{,}573 \times \frac{25}{55} \times \frac{(100-6)}{100}$

The cost of sundry items (a) 91 rft. of compound wall at Rs. 3.50 rft. (b) 4517 sft. of brick pavement at Rs. 10.00 per 100 sft., works to sum total of Rs. 761.00. This is added to the building cost and the total is Rs. 53,000.00.

The electrical installation is nearly 20 years old. Wiring has been carried out with V.I.R. wire and teak casing and capping except in two rooms where V.I.R. wire in concealed conduit system has been adopted. Four fans are installed in the building. The value of electrical installation is taken as 10% of building cost and depreciated value at the time of purchase as 50% of this which works to Rs. 3,400.00 (See page 2 of Appendix I).

Total assessment including electrical installation = Rs. 53,000 plus Rs. 3,400 = Rs. 56,400.00

The assessment of the building has also been made by adopting an empherical formula—

$$\text{Depreciated cost} = \text{Capital cost} \left(1 - \frac{\text{rate of depreciation}}{100}\right)^{\text{age in No. of years.}}$$

On the basis of this formula, the total value of the building works to (49,000 plus 3,400) = Rs. 52,400.00 including service (See page 2 of Appendix I).

Another method of evaluating a building is to work back the cost from the rental value. The Municipal taxes on houses at a place have a certain

bearing to the rental value of the building which in turn depends on the capital cost. Generally the annual rental value is taken as 5% of the capital cost of building. Arriving at the capital cost of a building on the basis of Municipal taxes does not always prove to be correct, as the rent varies from time to time in certain cases, and sometimes the land-lords furnish a low cost of construction with a view to keep down the house tax. Therefore, valuation on this basis can be used only as a guide, which does not always represent the true picture. The annual rental value of this building as furnished by the Municipal Board, Aligarh is Rs. 1,752.00 and hence Municipal assessment would work out to 1752 x 20 = 35,040.00.

The price of 31,888|- paid for this building is reasonable even if we take into consideration the additional sum of Rs. 3439.25 spent on special repairs to the house after it was purchased, as it is considerably less than the value of the building assessed at by three of the recognised methods which give figures of

i) Rs. 56,400|-,
ii) Rs. 52,400|-, and
iii) Rs. 35,040|-.

2. *Ali Manzil*:

Ali Manzil stands on a plot of land of 3,005 sq. yds. at 1|33, Lal Diggi, Aligarh. The Muslim University at Aligarh is said to have acquired this property in the year 1958 through negotiation by paying a sum of Rs. 37,500 for both the building and the land. The University Engineer made valuation for the building and land for Rs. 37,132 and reducing it by Rs. 2132 towards cost of assessed repairs arrived at Rs. 35,000 as net value.

The property comprises of a main building with a plinth area of 7,600 sft. and out-houses with a plinth area of 1,425 sft.

The building is of brick masonry in mud mortar with teak wood shutters in doors and windows. The roof is partly Jack arch and partly R. B. slab and height of the ceiling is 14'-0" in main rooms and 10½' in the verandah. It has cement concrete floor in major portion. The condition of the building is fair.

The total life of the building has been taken as 50 years. It is, therefore, expected to last for another 22 years from the year of purchase. Cost of building if constructed in the year of purchase (1958) would have been probably Rs. 80,503.00 (see page 3 of Appendix I).

Taking the reserve price as 6% at the end of 50 years the proportionate depreciation for 28 years is $80503 \times \frac{28}{50} \times \frac{94}{100} =$ Rs. 42,376.00.

Hence the depreciated value of the building on the day of purchase comes to (80503 — 42376) = Rs. 38,172.00. Sundry items such as compound wall and brick pavement worth Rs. 457.00 bring the total cost to Rs. 38,584.00, say Rs. 38,500.00.

Land : A rate of Rs. 2.50 per sq. yard was adopted by the University Engineer in the valuation done by him. Reference was made to the Collector, Aligarh for the land values and a rate of Rs. 5|- per sq. yard has been furnished by him. Therefore, Rs. 2.50 per sq. yard taken by the University

Engineer is quite reasonable. Hence this rate is adopted and cost of 3,005 sq. yds. of land at Rs. 2.50 per sq. yd. is Rs. 7.513|-.

The building is electrified. Wiring has been done with V.I.R. wire on cleats and is of poor standard. No fans have been installed. Value of electric installation is estimated at 5% of the building cost and depreciated value at the time of purchase as 50% of it, which works to Rs. 1750.00 (see page 4 of Appendix I).

The total value of the building including land and electrical installation works out to Rs. 47,763.00—say Rs. 47.700|-.

On the basis of the empherical formula taking depreciation at 2.5% per annum, $D = P\ (1-\frac{r}{100})^n$, the assessment works to (40,000 plus 7513 plus 1750) = Rs. 49,263—say Rs. 49,200.00 (see page 3 of Appendix I).

Following the method of working back from annual rental value of the building ascertained from the Municipality, the cost comes to 20 x 1200 = Rs. 24,000|- for the building. Adding the land cost, Rs. 7513|-, the total comes to Rs. 31,513|- or say Rs. 31,500|-. The annual rental value as given by Municipal Board is Rs. 1200|- i.e. Rs. 100 per month, is rather low for such a big building. Hence discarding this, the assessment arrived at on the basis of the other two methods which give figures of (i) Rs. 47,700|-; (ii) Rs. 49.200, shows that the payment of Rs. 37,500|- made is reasonable.

3. SHAFI HOUSE:

Shafi House bearing No. 1|4 to 1|4-D on Fort road is said to have been purchased for Rs. 27,500 by the University in the year 1958 through negotiation. The plot of land, 4 Bighas in extent is said to belong to the University and that it was leased in the year 1932. Therefore, the cost paid by the University is for the value of the building only. The University Engineer assessed the building including electrical fittings but excluding cost of land, at Rs. 27,053.00 (A sum of Rs. 2039 was spent on the building by University towards repairs, additions and alterations in the year 1959-60).

The property comprises of—

a) main building (height 14 ft.) with a plinth area of 4340 sft. besides a porch with a plinth area of 291 sft.

b) Out houses (9 ft. height) with a plinth area of 968 sft.

c) brick pavement of area 1104 sft.

d) compound wall about 165 rft.

The walls are of brick in mud mortar, interior finished with cement plaster and pointed on the exterior. Doors and window shutters are of Burmah teak wood with brass fittings and angles iron frames. The flooring is made up partly of cement concrete and partly of brick in cement mortar and pointed. The roof is with reinforced brick slabs. The height of ceiling in rooms is 18'—0" and in verandah 12'6" for the main building. The height of the out houses is 9'—0". The building has been electrified and is in good condition. The probable cost of the building would be Rs. 55,365 if it were to be constructed in the year of purchase i.e. 1958. The total life of the building has been taken as 65 years, and that at the end of this life, the residual value would be 6% of the capital cost. It has been assumed that

the building was constructed in the year the land was leased i.e. in 1932. Therefore, the building was 26 years old at the time of purchase. The proportionate depreciation for the past 26 years works to $55,365 \times \frac{26}{65} \times \frac{94}{100}$ = Rs. 20,817|-. Therefore, the depreciated value of the buildings works out to (55,365 — 20.817) = Rs. 34,548|- (at the time of purchase). To this a sum of Rs. 330|- towards cost of brick apron, pavement and compound is added and the total is Rs. 34,878—say Rs. 34,800.00.

The electrical installation is in good condition. Wiring has been carried out with L.S. wire on teak wood and three fans have been installed. Decorative fittings have been used in a few important rooms. The value of the electrical installation is taken as 12½% of the building cost and 60% of this value is taken as the depreciated value at the time of purchase. This gives Rs. 3612|- or say Rs. 3600|-, as estimated value of electrical installation. The total cost of building and the electrical fittings is Rs. 38,400.00 (see page 5 of Appendix I).

By adopting the method of depreciation at 2.5% per annum according to the formula—

$$\text{Depreciated value} = \text{Principal cost of building} \left[1 - \frac{\text{rate of depreciation}}{100}\right]^{\text{Age of Bldg. in No. of years.}}$$

the depreciated value works to Rs. (29,000 plus 3,600) = Rs. 32,600 inclusive of electrical fittings. (vide page 6 Appendix I).

the depreciated value works to Rs. (29,000 plus 3,600) = Rs. 32,600 inclusive of the building to be Rs. 696.00 capitalising at the rate of twenty-times the annual rental value, the capital cost works to 20 x 696 = Rs. 13,920.00. The annual rental value of Rs. 696|- i.e. Rs. 58|- per mensem is rather low for this building and therefore, the result yielded by this method of capitalising at twenty-times annual rental is unrealistic. Barring this, the assessed value by other two methods which give (i) Rs. 38,400; (ii) Rs. 32,600; go to show that the payment of Rs. 27,000 made by University stands as a reasonable deal.

4. ZUBARI'S HOUSE:

Zubari's House having Municipal No. 1|37 is on Dodpur road and has an extent of land 2 Bighas, 17 Biswas and 14 Bisi i.e. (7924 sq. yds.). This property is said to have been acquired by the Aligarh University in the year 1957 through negotiation. The land belongs to some private party and is on lease with the University. Valuation was done by University Engineer for Rs. 21,473.00 and the University paid Rs. 22,000|- for the building.

The main building has a plinth area of 5079 sft. with an additional incomplete portion in the front having a plinth area of 1611 sft. raised only up to the plinth. The out-houses have a plinth area of 979 sft.

The walls are of brick masonry finished with plaster, in the interior and pointed on the exterior with teak wood doors and windows. Flooring in main rooms has been made of cement concrete whereas in verandah and side rooms it has been made in tile brick. Roof is partly reinforced brick and partly jack arch. The height of ceiling in the main rooms is 16 ft. and for rest it is 12 ft. The building has been electrified. The condition of the building is fair.

The probable cost of construction of the building if it were undertaken in 1957 would be Rs. 58,872. The total life of the building has been assumed

as 45 years in view of its present condition. The building is expected to last for another 26 years as the date of purchase is 1957 and the salvage value at the end of life of the building has been taken as 6% of total cost. Therefore the age of the building at the time of purchase comes to (45 — 26) = 19 years, and the proportionate depreciation works to $58872 \times \frac{94}{100} \times \frac{19}{45} =$ Rs. 23,366. Therefore the net depreciated value of the building at the time of purchase works to (Rs. 58,872 — Rs. 23,336) = Rs. 35,506|-. For the compound wall Rs. 260|- is added and the total comes to Rs. 35,766|-, say Rs. 35,700|-. The wiring in this building has been done with V.I.R. wire in teak wood casing and capping. Servants' quarters have also been electrified. Four fans have been installed in the main building. The value of electrical installation is assessed at 10% of the building cost for main building and 5% of the building cost for the servants quarters. Depreciated value of the electrical installation at the time of purchase is taken as 50% of this value. This works to Rs. 2685|- (See page 7 of Appendix I). Therefore, the total cost of building including electrical installations comes to Rs. (35,700 plus 2685) = Rs. 38,385|-.

In the above method, the amount of depreciation every year is taken to be uniform. Therefore, depreciation after a lapse of nineteen years has been obtained by multiplying depreciation for a year by nineteen.

In the second method the amount of depreciation per every year of the life of building is not the same. Here the depreciated value at the beginning of a particular year is taken, the depreciation on that value is determined and deducted to arrive at residual depreciated value at the end of the year. Therefore, the amount of depreciation in any year is less than its previous year and more than that in the following year. The rate of depreciation, however, is usually kept the same and this is 2.5., whereas in the former case the depreciation is on straight line formula, the second method takes the form of a curve in consideration to the value lost with the passage of time at regular intervals. This interval is taken a calender year. The formula takes the shape—

$$\text{Depreciated value} = \text{Capital Cost} \left[1 - \frac{\text{rate of depreciation}}{100} \right] \text{Age in No. of years}$$

By this formulae, the depreciated value works to Rs. 36,600|- (See page 7 of Appendix I). The cost of electrical installation is added and the total works to Rs. 36,600 plus Rs. 2685 = Rs. 39.285|-.

The Municipal Board, Aligarh, furnished the annual rental value as Rs. 600|- or Rs. 50|- per month. This is very low considering the accommodation available in the building. Therefore, the capital cost at 20 times the municipal annual rental value works to Rs. 12,000|-. Discarding this as unrealistic, the value by the other two methods, viz. (a) Rs. 38,385; (b) Rs. 39.285|- show that the sum of Rs. 22,000|- paid by the University is quite reasonable.

5. JALIL'S HOUSE:

This building adjacent to Sarfaraz House on the rear is said to have been purchased by the University in the year 1956 through negotiations for a sum of Rs. 10,000. The land measuring about 180' x 100' is said to belong to the University. Hence the cost of land is not considered in the valuation.

There are two main blocks, a detached servants block, latrines and temporary shed. It has a compound wall all round enclosing an area 180' x 100'. The main building has a plinth area of 2526 sft. and out-houses and temporary shed have together 883 sft. The buildings are of brick masonry walls in mud mortar, plastered inside and outside with deodar wood doors and windows, flat brick flooring and partly jack arch and partly reinforced brick roofing. Height of ceiling in main rooms and verandah are 14'—0" and 11'—0" respectively. The height of ceiling in out-houses is 9 ft. The condition of the building is fair. The total life of this building has been taken as 40 years. It is assessed from the existing condition of the building that it can last for 20 years more from the date of purchase. Hence it has been taken that the building was (40—20) = 20 years old at the time of purchase. The probable cost of building would be Rs. 27,184|- if it were to be constructed in the year of purchase, viz. 1956. The residual value at the end of life has been taken as 6%. The proportionate depreciation for the past 20 years works to $27,184 \times \frac{20}{40} \times \frac{94}{100}$ = Rs. 12,776|-. Therefore, the depreciated value of the pucca building at the time of purchase comes to (Rs. 27,184 — Rs. 12,776) — Rs. 14,408|-. For temporary structures and the compound wall, a sum of Rs. 2,235|- is added and the total cost comes to Rs. 16,643, say Rs. 16,600|-.

The wiring has been carried out with V.I.R. wire in teak wood casing and capping. Two fans have been installed. The value of electrical installation has been assessed at 10% of the building cost and depreciated value at 50% of this value which comes to Rs. 1321, say Rs. 1300 (see page 10 of Appendix I). Thus the total assessment for building including electrical installations is (Rs. 16,600 plus Rs. 1,300) = Rs. 17,900|-.

Working by the 2nd method with 2.5% as rate of depreciation, in the empherical formula, depreciated cost =

$$\text{Capital cost of the building} \left[1 - \frac{\text{rate of depreciation}}{100}\right]^{\text{Age in No. of years.}}$$

the depreciated cost of the building comes to Rs. 16,380|-. Towards the (1) temporary sheds, (2) compound wall a sum of Rs. 2,235 is added and the total for building, temporary sheds and compound wall works to Rs. 18,615|- or say Rs. 18,600|- (see page 11, Appendix I).

Municipal annual rental value is not available. Hence it is not possible to assess the value by third method. The University paid Rs. 10,000|- towards purchase of the building, spent a sum of Rs. 4638|- for additions and alterations. The assessment done by either of the two methods viz. (1) Rs. 17,900|- (2) Rs. 18,600 shows that the payment made is far less and is quite reasonable.

6. *Nashaman, Raza Lodge & Yusuf Villa*:

The three buildings are said to constitute one group. They bear municipal Nos. 1|3 to 1|3D and 1|4 to 1|4D and are situated along Anoop Shahr Road. University Engineer's valuation was Rs. 30,961 for Nashaman, Rs. 21,270 for Raza Lodge and Rs. 4,848 for Yusuf Villa which works to a total sum of Rs. 57,079|- for all the three. The land is said to belong to the University. It has been said that the University acquired the property through negotiation on payment of Rs. 70,225|- in the year 1958.

Nashaman has a plinth area of 6460 sft. in main building, besides 274 sft. in porch, 2523 sft, in ancillary houses and 6163 sft. acre of brick

pavement. The buildings are of brick masonry with plaster finish in the interior, teak wood shutter fixed on sal wood frames for doors and windows, flooring made mostly in cement concrete, roof partly made of jack arch and partly of reinforced brick. It has been electrified. The height of the main building is 13 ft. The condition of the building is fair.

The total life of the building has been assessed as 50 years. It is considered from the existing condition of the building that it would last for another 25 years. Therefore, the age of the building at the time of purchase comes to (50 — 25) = 25 years. The probable cost of the building would be Rs. 82,189|- if it were to be constructed in the year of purchase, viz. 1958 (See page 11, Appendix I). Taking the residual value of the building at the end of its life as six per cent of its capital cost, the proportionate depreciation for past 25 years works to Rs. $82{,}189 \times \frac{94}{100} \times \frac{25}{50}$ = Rs. 38,629|-. Therefore, the depreciated value of the building comes to Rs. 82,189 — (Rs. 38,629) = Rs. 43,560|-. A sum of Rs. 917|- has been assessed towards value of the temporary A.C. Shed, brick pavement and courtyard wall. Therefore, the total for building including sheds and compound wall works to Rs. (43,560 plus 917) = Rs. 44,477 or say Rs. 44,500|-.

Wiring was done in concealed conduit in two rooms. In other rooms V.I.R. wire in teak wood casing and capping has been adopted. Three fans have been installed. Wiring is very old. The value of electrical installation has been assessed at 12½% of the building cost and depreciated value at 40% of this value and this works to Rs. 3150|-. (Page 12. Appendix I). Thus the total assessed cost of the building including electric fittings works to Rs. (44,500 plus Rs. 3150) = Rs. 47,650|-.

Raza Lodge has a plinth area of 4317 sft. in ground floor and 2021 sft. in first-floor. Height of ceiling in ground floor and first floor is 13 ft. and 10 ft. respectively.

The building has brick masonry walls with plaster finish on both sides, teak wood shutters fixed on sal wood frames for doors and windows, cement concrete flooring in ground floor and marble mosaic floor in first floor, roof made of reinforced brick and is electrified. The condition of building is fair.

The total life of the building has been assumed as 50 years. It has been assessed from the existing condition of the building that it would last for another 25 years more from the date of purchase. The probable cost of the building would be Rs. 60,309 if it were to be constructed in the year of purchase 1958 (see page 13, Appendix I). Taking the residual value of the building at the end of its life as six per cent of its capital cost the proportionate depreciation for the past 25 years works to Rs. $60{,}309 \times \frac{94}{100} \times \frac{25}{50}$ = Rs. 28,345|-. Therefore, the depreciated value of the building at the time of purchase comes to (Rs. 60,309—28,345) = Rs. 31,964|-. A sum of Rs. 284 is assessed to be the cost of temporary shed and platform. Therefore the total assessment for the building including shed and platform works to (Rs. 31,964 plus 284) = Rs. 32,248|-.

Wiring has been done with V.I.R. wire in teak wood casing and capping.

One fan has been installed. The value of electrical fittings has been assessed at 10% of the building cost and the depreciated value at 50% of this value which comes to Rs. 3,000|- (page 13, Appendix I). Thus the total assessment for building including electrical installation works to Rs. (32,248 plus 3,000) = Rs. 35,248|-, say Rs. 35,200|-.

Yusuf Villa, has a plinth area of 1899 sft. with servant's room of a temporary nature having 442 sft. plinth area, pavement of area 550 sft. and compound wall all round. The height of the main building is 12 ft. and that of the temporary shed is 9 ft.

The superstructure is of brick masonry walls in mud mortar with deodar doors and windows. Flooring in main building is made of flat bricks cement pointed, and the roofs are made of partly reinforced brick and partly jack arch. There is no floor in servants shed. The condition of the building is fair.

The total life of the building has been assumed as 50 years. It has been assessed from the existing condition of the building that it would last for another 25 years more from the date of purchase. The probable cost of the building would be Rs. 16,844 if it were to be constructed in the year of purchase 1958 (See page 14 Appendix I). Assuming the residual value of the building at the end of its life as six per cent of its capital cost, the proportionate depreciation for the past 25 years works to Rs. $16{,}844 \times \frac{94}{100} \times \frac{25}{50}$. = Rs. 7,917|-. Therefore the depreciated value of the building at the time of purchase comes to Rs. (16,844—7,917) = Rs. 8,927. A sum of Rs. 801 is the assessed value of the servants quarters, brick pavement and plinth protection. Therefore, the total value of the building, including servants quarters brick pavement and plinth protection, works to Rs. 9,728 or, say Rs. 9,700|-.

Wiring has been done with VIR wire in teak wood casing and capping. One fan has been installed: The value of electrical installation has been assessed at 10% of the building cost and the depreciated value at 50% of this value, which works to Rs. 842|- say Rs. 800|- (page 15 Appendix I). Therefore the assessed value for the building including electrical installation works to Rs. (9,700 plus 800) = Rs. 10,500 for Raza Lodge. Therefore the assessed value of all the three buildings viz. Nashaman, Raza Lodge, and Yusuf Villa together works to Rs. (47650 plus 35200 plus 10500) = 93,350|-.

The Value is assessed by the 2nd method by adopting the empherical formula and it works to Rs. 93,450|-, more or less same as of 1st method (page 12, 13 & 15—Appendix I).

The Municipal board furnished the annual rental value for this group as Rs. 5,136|- and twenty times this, taken as capital cost gives a value of Rs. 1,02,720|-. The price of Rs. 70,225|- paid for the three buildings is reasonable as it is considerably less than the value of the building arrived at by three of the recognised methods which give figures of (a) Rs. 93,350 (b) Rs. 93,450 (c) Rs. 1,02,720.

7. *Sarfaraz House.*

Sarfaraz House stands on a plot of land said to measure 25,900 sq. yards, at 1|94 to 1|94 C University Road. This is said to have been purchased by the Muslim University in Public Auction of refugee properties in 1956 for a sum of Rs. 50,000 for both the building and the land.

The property comprises of

(a) Main Building of Plinth area .. .. .. 6,929 Sft.
(b) Dilapidated out-houses of plinth area .. .. 3,641 Sft

The building is of brick masonry walls in mud mortar with country wood doors and windows. The roof is made of jack arch. It has brick flooring. The average height of the building is 15 feet. The building is electrified, and its general condition is fair.

The life of the building has been taken as 50 years. It has been assessed that the building was 25 years old at the time of purchase. If the building were to be constructed in 1956, the year of purchase it would have cost then about Rs. 63,226|- for the main building alone. Taking the residual value at the end of full life as 6% the proportionate depreciation for 25 years=

$$63{,}226 \times \frac{25}{50} \times \frac{94}{100} = \text{Rs. } 29{,}716$$

Hence the depreciated value of the building at the time of purchase comes to Rs. (63,226—29,716)= Rs. 33,510 for the main building. The assessed value of other items (1) out-houses and (2) compound wall is Rs. 2,289. Therefore the total assessment of the building including out-houses and compound wall works to Rs. 35,799|- or say Rs. 35,800|-. (See page 19 of Appendix I).

Land

A rate of Rs. 1.00 per sq. yard was adopted by the University Engineer for assessing the value of land at the time of the purchase. A reference was made to the Collector regarding prevailing prices of land in this locality at that time. It has been furnished by him that the prevalent rate for land was Rs. 4.00 per Sq. Yard. Considering this, the rate adopted by the University Engineer in his valuation seems to be rather low, but however the same rate has been adopted in assessing the value of land. The assessed value of land, therefore, comes to Rs. 25,900 for the 25,900 Sq. Yds.

The building has been electrified. Wiring has been carried out with VIR wire on cleats and one fan has been installed. The value of electric installation has been assessed as 7-1|2% of the building cost and depreciated value at the time of purchase as 50% of this value which comes to Rs. 2,370|- (See page 20 Appendix I). The total assessment for building, land and electric installation together comes to Rs. (35,800) plus 25,900 plus 2,370)(= Rs. 64,070 or say Rs. 64,000|-. (See page 2 Appendix 2).

By the second method namely depreciating at 2.5% per annum using the formulae $D = P\left(1 - \frac{rd}{100}\right)^n$, the total assessment comes to Rs. (35,800 plus 25,900 plus 2,370) = Rs. 64,070 or Say Rs. 64,000|-. (See page 19 of Appendix I).

By the third method namely working back from the annual rental value of the building which has been ascertained from the Municipal Board, the value of building comes to Rs. 16,800|-. The assessed cost of land of Rs. 25,900 is added and the value comes to Rs. 42,700. The annual rental value furnished by the Municipal Board is Rs. 840|- i.e. Rs. 70|- per month is definitely low for a building of this size. So it will not be correct to take into consideration this value and hence this has been discarded.

Valuation by the rest of the two methods has been Rs. 64,000|- and therefore the amount of Rs. 50,000 paid by the University for the building and land is quite reasonable.

8. *Shajahan Manzil*

Shajahan Manzil stands on a plot of land said to be measuring 13,692 Sq. yards at 1|8 to 1|8 B Fort Road, Aligarh. This is said to have been acquired by the Muslim University Aligarh in 1956 in the auction of refugee properties for a bid of Rs. 38,000|- for both the building and land. The University had spent Rs. 663 towards repairs and additions and alteration in 57-58.

The property comprises of—

a) Main Building of Plinth area . .. .. 6,496 Sft.

b) Out-houses of plinth area . .. .. 1,540 Sft.

c) Dilapidated garage of plinth area .. .. 488 Sft.

The building is of brick masonry walls in mud mortar with teak wood shutters for doors and windows. The roof is made of jack arch. It has cement concrete flooring in some portion and brick flooring in the rest. The ceiling heights are 18' in rooms and 12' in the verandahs. The building has been electrified and the condition of the building is fair.

The total life of the building is assessed as 50 years. It is considered from the existing condition of the building that it would last for another 25 years. Therefore, it has been taken that the building was (50—25) = 25 years old at the time of purchase. The probable cost of building if constructed in the year of purchase viz. 1956 would have been Rs. 78,000 (Refer page 16 Appendix I). The residual value at the end of its life has been taken as 6 per cent of the Capital cost. The proportionate depreciation for past 25 years works to

$$\text{Rs. } 78{,}060 \times \frac{25}{50} \times \frac{94}{100} = \text{Rs. } 36{,}688.$$

Hence the depreciated value of the building at the time of purchase comes to Rs. (78,060—36,688) = Rs. 41,372. The value of (1) garage (2) compound wall (3) brick pavement has been assessed to be Rs. 544|-. Thus the total assessment for the building, garage and compound wall comes to (41,372 plus 544) = Rs. 41,916|- or say Rs. 41,900|-.

Land

A rate of Rs. 0-12-0 per Sq. Yd. was adopted by the University Engineer for assessing the value of land at the time of its purchase. Reference was made to the Collector, Aligarh, regarding prevailing prices of land in this locality and he has furnished a rate of Rs. 2.000 per Sq. yard. Therefore value of Rs. 0-12-0 per Sq. yard adopted by the University Engineer is quite reasonable and has been adopted in assessing the value of land for 13,692 sq. yards, which works out to Rs. 10,269. The building is electrified. Wiring has been done with VIR wire fixed directly on wall. No fans or shades have been provided. Cost of electric installations has been assessed at 5% of the building cost and depreciated value at the time of purchase at 50% of this value which comes to 1650. (See page 17 Appendix I).

The total assessment for building, including electric installation and land works to (41,900 plus 10,269 plus 1650) = Rs. 53,819 or say Rs. 53,800|-.

By the second method namely depreciating at 2.5% per annum using the formula—

$$D = P\left(1 - \frac{r.d.}{100}\right)^{n}$$

the assessment comes to (41,900 plus 10,269 plus 1,650) = Rs. 53,819 or say Rs. 53,800 (See page 17 Appendix I).

3rd method.

The Municipality, Aligarh, has furnished the annual rental value to be Rs. 1,368. Hence, working back from the annual rental value of the building, the capital cost comes to Rs. 20 x 1,368 = Rs. 27,360. The assessed cost of land is Rs. 10,269 and the total value of building and land works to Rs. (27,360 plus 10,269) = Rs. 37,629.

The price of Rs. 38,000 paid for this building is reasonable as it is considerably less than the value got by the first two methods viz. a) Rs. 53,800 b) Rs. 53,800 and is nearly the same as the value got by the third method.

9. *Shakshana*

Shakshana Building stands on a plot of land said to measure 4,674 sq. yards and bears Municipal number 1|6 at Fort Road.

This is said to have been purchased by the Muslim University, Aligarh, in Public Auction of refugee properties in 1956 for a sum of Rs. 11,000 for both the building and the land. The property comprises of

a) Main building of plinth area .. .. .. 1,244 Sft.
b) Kitchen block of plinth area .. .. .. 300 Sft.

The building is of brick masonry walls with teak wood shutters for doors and windows. The roof is made of reinforced brick slab. It has cement concrete flooring and the height of ceiling is 12 ft. The building is electrified and is in good condition.

The total life of the building has been assumed as 60 years. From the existing condition of the building, it has been assessed that the building would last for another 44 years from the date of purchase. The probable cost of the building would be Rs. 14,994 if it were to be constructed in the year of purchase 1956. The residual value of the building at the end of its life has been assumed as 6% of the capital cost. Therefore the proportionate depreciation for the past (60—44) = 16 years work to

$$14{,}994 \times \frac{16}{60} \times \frac{94}{100} = 3{,}757.$$

Hence the depreciated value of the building at the time of purchase comes to Rs. (14,994—3,757) = Rs. 11,237. The value of compound wall is assessed at Rs. 202. Thus the total assessment for the building and compound wall is Rs. (11,237 plus 202) = Rs. 11,439 say Rs. 11,400|- (page 22 Appendix I).

Land

A rate of Rs. 0-12-0 per Sq. Yard was adopted by the University Engineer for assessing the value of land at the time of its purchase. Reference was made to the Collector, Aligarh, regarding prevailing prices of land in this locality and he has furnished a rate of Rs. 2.00 per sq. yard. Therefore value of Rs. 0-12-0 per sq. yard adopted by the University Engineer is quite reasonable and is adopted. The assessed value of land for the 4,674 sq. yards of land comes to Rs. 3,506.

The building has been electrified. Wiring has been carried out with VIR wire in teak wood casing and capping. There are no fans. The value of electric installation is assessed at 7½% of the building cost and its depreciated value at the time of purchase at 50% of this value which works out to Rs. 560|- (page 22 Appendix I).

The total assessment for building including electric installation and land works to (11,400 plus 3,560 plus 560) = Rs. 15,466 or say Rs. 15,500|-.

By the second method namely depreciating at 2.5% per annum by adopting the empherical formulae the total assessment comes to Rs. (10,200 plus 3,506 plus 560 = Rs. 14,266 or say Rs. 14,300 (page 22 Appendix I).

By adopting the third method namely working back from the annual rental value of the building ascertained from the Municipal Board the value of building comes to Rs. 300 x 20 = Rs. 6,000. Therefore the assessed value of building including land comes to Rs. (6,000 plus 3,506) Rs. 9,506.

The Municipal Board furnished the annual rental value at Rs. 300|- i.e. Rs. 25|- per month. This is rather very low considering the accommodation available and therefore the value of the building by this method is unrealistic. Discarding this, valuation by the rest of the two methods gives figures

a) Rs. 15,500|-

b) Rs. 14,300|-

Therefore the price of Rs. 11,000|- paid by the University is far on the lower side and is quite reasonable.

10. *Kashana*

Kashana building stands on a plot of land said to measure 2,676 sq. yds. and bears Municipal Number 1|5 at Fort Road, Aligarh.

The building is said to have been acquired by the Muslim University, Aligarh in Public Auction of refugee properties in 1956 for a sum of Rs. 35,000 for both building and land. The property comprises of

(a) Main building of plinth area	2,394 Sft.
(b) Kitchen and store of plinth area	854 Sft.
(c) Out-houses of total plinth area	807 Sft

The building is of brick masonry walls with partly reinforced brick and partly jack arch roof and has been provided with teak wood shutters for doors and windows. It has marble chip flooring for the main rooms and coment concrete flooring for the verandahs. The average ceiling height is about 12 ft. The building is electrified and is in good condition.

The total life of the building has been assumed as 75 years. It has been assumed that this building was constructed in the same year in which Shakshana was constructed i.e. it was 16 years old at the time of purchase. The probable cost of the building would be Rs. 35477 if it were constructed in the year of purchase 1956. The residual value of the building at the end of its life has been assumed as 6 per cent of the capital cost. Therefore the proportionate depreciation for the past 16 years works to $35477 \times \frac{16}{75} \times \frac{94}{100} =$ Rs. 7114. Hence the depreciated value of the building at the time of purchase comes to Rs. (35477 — 7114) Rs. 28,363. The value of compound wall and brick pavement has been assessed at Rs. 636. Therefore the assessment for the build-

ing including compound wall and pavement comes to Rs. 28,999 say Rs. 29,000 (Page 24 Appendix I).

Land

A rate of Rs. 0-12-0 per sq. yard was adopted by the University Engineer for assessing the value of land at the time of its purchase. Reference was made to the Collector, Aligarh regarding prevailing prices of land in this locality, and he has furnished a rate of Rs. 2.00 per Sq.yd. Therefore value of Rs. 0-12-0 per Sq.yd. adopted by the University Engineer is quite reasonable and is adopted. The assessed value of land for 2676 Sq.yds. comes to Rs. 2007|-.

The building has been electrified. Wiring has been done with VIR wire in teak wood casing. There are no fans. Value of electric installation is assessed at 7½% of the building cost and depreciated value at the time of purchase at 50% of this value which comes to Rs. 1100|- (page 25 Appendix I).

The total assessment for building including electric installation and land works to Rs. (29000 plus 2007 plus 1100) = Rs. 32107 or Say Rs. 32100|-.

By the second method namely depreciating at 2.5% per annum adopting the empherical formula the total assessment comes to Rs. (24300 plus 2007 plus 1100) = Rs. 27,407 or Say Rs. 27,400|-. (Page 24 Appendix I).

By the third method namely working back from the Municipal annual rental value, the value of the building comes to Rs. 2400 (page 24 Appendix I). The value of the building including the assessed cost of land, works to Rs. (2400 plus 2007) = Rs. 4407. The annual rental value as furnished by the Municipal Board is Rs. 120|- i.e. Rs. 10|- per month. This rental value is absurdly low considering the extent of accommodation and construction and hence the assessment by this method has been discarded.

The value of building arrived by the other two methods viz. (1) Rs. 32,100 and (2) Rs. 27,400 are lower than the sum of Rs. 35,000 paid by the University. However if the value of land is considered at the then prevailing rate furnished by the Collector viz. Rs. 2-0-0 per sq.yd. it works to Rs. 5352 as against Rs. 2007|- arrived at by adopting a rate of 0-12-0 per sq.yd. and the assessment would then be by the two methods.

(a) Rs. 35,445
(b) Rs. 30,745

From the following considerations it has been felt that the amount of Rs. 35000 paid by the University is reasonable.

1. One of the methods viz. 1st method gives a value of Rs. 35,445 whereas the amount paid by the University was Rs. 35,000|-.

2. By the 2nd method, the value arrived at viz. Rs. 30,745 falls short of the payment made by Rs. 4,255. Payment of this excess was beyond the control of University as the building was purchased in public auction where the commercial face value and public bid control the price.

3. The building is located in the University Campus and it is said that the University authorities desired the University should possess it and did not like some private person acquiring it and staying in the campus.

L. G. SELVAM
Chief Technical Examiner.
7 - x - 60.

ANNEXURE I.

GOVERNMENT OF INDIA

MINISTRY OF WORKS, HOUSING AND SUPPLY

COPY

VALUATION OF AZIZ JAHAN MANZIL,
M. U. ALIGARH.

I. *By assuming the life of the building*

1.	Assumed date of construction	1933	
2.	Assumed life of Building	55	years
3.	Year of purchase	1958	
4.	Plinth areas : Main Building G.F.	6407	sft.
	F.F.	793	sft.
	Ancillary bldg.	3154	sft.
	Compound wall.	91	Rft.
	Brick pavement.	4517	sft.
5.	Heights of building : Main Building G. F. Average	13	feet.
	Average F. F. Average	10	feet.
	Out-houses : 10 feet on an average.		
6.	P.A. Rates|S. Ft. (at the time of purchase viz. 1958)		
	Main Building G.F. as per item 1 of analysis		9.00
	Add for extra 2' height @ 0.28|Rft. (vide item 7 of analysis)		0.56
	Add for brass fittings (Partly) (vide item 4 of analysis) × ½		0.05
	Net rate for G.F.		9.61
	F.F. As per item 1 of analysis less for 1 ft. height		9.00
	Out-houses (Ancillary Buildings)		
	As per item 1 of analysis 9,00		0.28
	Less for 1 ft. height. 0.28		8.72
	8.72		
	Less for Kutcha flooring and country wood doors & windows (items 2 and 8 of analysis)		1.40
	Net rate		7.32
7.	Assessed cost of New Construction excluding compound wall and pavement (at the time of purchase).		
	Main Building : 6407 Sft. at 9.61|Sft.		61571
	793 Sft. at 8.72|Sft.		6915
	Total		68486 - (a)

Add Out houses 3154 Sft. at 7.32|Sft. 23087

Grand total 91573

8. Depreciation for 25 years for main Building and out houses

$$91573 \times \frac{25}{55} \times \frac{94}{100} = 39127$$

(assuming 6% as reserve price at the end of life)

9. Net Depreciated Value of Buildings (91573-391 27) .. 52346.00
at the time of purchase.
Add for 91 Rft. of compound wall at 3.50|Rft. .. 319.00)
(Item 9 of Analysis) .. ..)
and 4517 Sft of brick pavement at 10.00|100Sft. .. 452.00)-(b)

53117

Net assessed cost Say Rs. 53,000|-.
at the time of purchase

II *By Empherical Formula assuming* 2.5%

Depreciation per annum on compound interest basis

$$D = P\left(1 - \frac{rd}{100}\right)^{n}$$

$91573 \times (0.975)^{25}$ = 48610
Add for Com. wall and pavement 771

as above 49381

Net assessed cost at the time of purchase or say Rs. 49000|-.

III. *Valuation from Municipal Rental Value*

assuming 5 per cent of the cost of building
at the annual rental value.
Annual Rental Value as furnished .. .. Rs. 1752.00
by the Municipal Board.
Hence value of building = 20 X 1752 .. .. Rs. 35040.00

IV. *Assessed cost of Electrical Installation*

Capital cost of main building as worked out above .. Rs. 68486.00
Vide 7(a).
Cost of electrical installation at 10 per cent as per the report of Technical Engineer's (Electrical) .. Rs. 6849.00
Depreciated value of electrical installation at the time of purchase 50% of above which is equal to 3425 or say Rs. 3400|-

* * * *

VALUATION OF ALI MANZIL M. U. ALIGARH.

1. *By assuming the life of building.*

1. Assumed date of construction 1930
2. Assumed life of building .. .. 50 years
3. Year of Purchase : 1958

4.	Plinth Areas : Main Building	7600 Sft.)	
	Out-houses	1425 Sft.)	Brick pavement
	Compound wall	70Rft.)	= 2118 Sft.
5.	Heights of buildings : Main Bldg. Average	12 feet	
	Out-houses	9 feet	
6.	P.A. Rates at the time of purchase viz. 1958		
	Main building As per item 1 of analysis	.. ..	9.00
	Extra 1 ft. ht. at 0.28|Rft.	.. ..	0.28
	(Vide item 7 of analysis) Net Rate.		9.28
Out-houses :	As per item 1 of analysis	.. .. ..	9.00
	Less for C. W. doors vide item 2 of analysis	..	1.00
			8.00
	Less for 2' ht. at 0.28|Rft.	.. .. ..	0.56
			7.44
	Less for G. I. sheet roof item 11 of analysis	..	0.44
			7.00
7.	Assessed cost of New construction at the time of purchase.		
	Main Building 7600 sft. at 9.28|Sft.	.. .. ..	70528
	Out-houses 1425 Sft. at 7.00 Sft.	.. .. ..	9975
		Total	80503
8.	Depreciation for 20 years — $80503 \times \frac{28}{50} \times \frac{9}{100}$	.. ..	42376
9.	Net depreciated value of building at the time of purchase (80503-42376)	.. ..	38127
	Add cost of 70 Rft. compound wall (vide item 9 of analysis) at 3.50|Rft.	.. .. ..	245
	Cost of brick pavement 2118 sft. @ 10.00 / 100 Sft.	.. ..	212
			38,584
		or Say Rs. 38,500|-	
10.	Area of land : 3005 Sq. yds.		
	Value of land assuming Rs. 250|- sq. yds. at the time of purchase.	.. ..	7513

11. *By empherical Formula assuming 2.5 per cent. depreciation per annum on compound interest basis.*

$$D = P\left(1 - \frac{rd}{100}\right)^{n}$$

$$80503 \times 0.975^{28} = 39620$$

Add for compound wall and pavement as above (b) — or 40077 ..

Net assessed cost at the time of purchase — Say 40,000

III. Valuation from Municipal Rental Value assuming 5 per cent of the cost of building as the annual rental value.

Annual rental value as furnished by the Municipal Board. Rs. 1,200.00
Hence value of Building — 20 X 1200 — Rs. 24,000.00

IV. Assessed cost of electrical installation.

Cost of main building as worked out above = ...	70528
Cost of electric installation at 5% of building cost as per the report of the Technical Examiner (Electrical)	3526
Depreciation at 50 per cent.	1763
Net depreciated value of the electric installation at the time of purchase	1763

or Say Rs. 1750|-.

* * * * * * * * *

VALUATION TO SHAFI HOUSE, M.U. ALIGARH

1. *By assuming the life of Building*

1.	Assumed date of construction	1932
2.	Assumed life of the building	65 years.
3.	Year of purchase	1958
4.	Plinth area of Building	
	Main Building excluding porch	4340 Sft.
	(Height, 15' average) Porch.	291 Sft.
	Out-houses (height 9 feet)	968 Sft.
	Brick pavement	1104 Sft.
	3' wide brick apron.	190 Rft.
	9" compound wall 5' ht.	100 Rft.
	and 4' ht.	38 Rft.
	and 7' ht.	27 Rft.
5.	P.A. Rates : at the time of purchase viz. 1958	
	Main Building : As per item 1 of analysis ..	9.00
	Add for extra 4' height at 0.28|Rft. (vide item 7 of analysis)	1.12
	Add for Burmah teakwood at 0.50 Sft. .. (vide item 6 of analysis) X brass fittings at 0.09|sft.	0.59
	Net rate	10.71
	Porch : As per item 1 of analysis	9.00 Sft.
	add for extra 1 ft. ht.	0.28
		9.28
	Less for doors and windows :	1.50
	Less for less brick work etc.	2.00
	(vide items 16 & 17 of analysis)	3.50
	Net rate	5.78 Sft
	Out-houses : As per item (i) of analysis	9.00

	Less for 2' ht. at 0.28|ft. (vide item 2 of analysis)	0.56) 1.00)	1.56
			7.44
6.	Assessed cost of new construction at the time of purchase.		
	Main Building 4340 sft. at 10.71|Sft.		4648 (a)
	Porch 291 Sft. at 5.78 Sft.		1682
	Out-houses 968 Sft. at 7.44 Sft.		7202
		Total	55365
7.	Depreciation for 26 years—55365 $\times \frac{26}{65} \times \frac{94}{100}$		20817
		Total	55365
8.	Net Depreciated value of Building at the time of purchase		34548
	Add Brick pavement 1104 Sft. at 10.00 / 100 Sft.	110	
	Brick apron 190Rft. at 0.50 Rft. (Item 15 of Analysis)		95
	9" compound wall 5' ht. 100' Rft. at 0.75 Rft.		75
	4' ht. 48 Rft. at 0.60|Rft.		23
	7' ht. 27 Rft. at 1.00|Rft.		27
		Grand Total	34878

or Say 34,800

II. By Empherical formula assuming 2.5 per cent depreciation per annum on compound interest basis

$D = P (1 - rd)^{\frac{n}{100}}$

55365 X 0.975 = 28650 — 28650

Add for Brick Pavement, Brick apron and compound walls as above. — 330

(8, b) Total 28.980

or Say Rs. 29,000|-

III. Valuation from Municipal Rental value assuming 5 percent of the cost of building as the annual rental value.

Annual Rental Value as furnished by the Municipal Board : Rs. 696.00

Hence value of building 20 X 695=0 Rs. 13920|-.

IV. Assessed cost of Electrical Installation :

Cost main building: (vide 6(a) — 48163

Cost of electrical installation at 12½ per cent of the building cost as per the report of the Technical Exeminor (Elect.)— Depreciated the value — 60 per cent of above —Rs. 3612|- — 6020

or Say Rs. 3600|-

VALUATION OF ZUBARI'S HOUSE (SHAUKAT VILLA) MUSLIM UNIVERSITY, ALIGARH

I. *By assuming the life of the building*

1.	Assumed date of construction	1938
2.	Assumed life of building	45 years
3.	Year of purchase	1957
4.	Plinth areas. Main building	5079 Sft
	Building up to plinth	1611 Sft
	Out-houses	979 Sft
	Compound	130 ft
5.	Height of Building: Average	14 f
	Out-houses Average	9 ft
6.	P.A. rate: at the time of purchase siz. 1957	
	Rate assumed for 11' bldg. with R.B. roof C.C. floor and T.W. doors)	9.00 per sft
	Add 3 ft. extra ht. at 0.28|ft.	0.84
	.. .. ..	9.84
	For up to plinth 8% of Rs. 9|- per Sft—0.72 nP.	
	Add for plinth higher than 2 ft. plus plinth filling ith earth	1.00 Sft
	0.28	
	1.00	
	For out-house: Basic rate	9.00 Sft
	Less for 2 ft at 0.28|Rft	0.56
	.. .. ..	8.44
	Less for C.W. doors	1.00
	.. .. ..	7.44
7.	Assessed cost of new construction at the time of purchase	
	Main Bldg 5079 Sft at 9.48|Sft.	49,977—(a)
	Upto Plinth 1611 Sft at 1.00|Sft	1,611
	Out-house 979 Sft at 7.44|Sft	7,284—(b)
	Total	58,872
8.	Depreciation (assuming 6% as reserve price at the end life)	
	$58872 \times \frac{94}{100} \times \frac{19}{45} =$	23,366
9.	Net assessed value of Bldg at the time of purchase . . 58872—23366=35,506	

	Add compound wall 130 ft @ Rs. 2|- per Rft. 260		
	35,766	.. ..	say Rs. 35,700
II.	*By empherical formula* $D=P\ (1-rd)n$ / 100		
	$58872\ (1-2.5)19 = 36380$ / 100		
	Add for compound wall (as above) 260		
	Total 36640	.. ..	or Say 36,600
III.	Valuation: Assessed on Municipal Rental value: Annual rental value: Hence Municipal value —20x600=	.. ..	or Say 12,000
IV.	Assessed cost of electric installation. Capital cost of main building worked out above (vide 7 (a)	.. .. ..	49,977
(a)	Cost of electrical installation at 10% of the Bldg cost (vide note of Technical Examiner—Electrical)	.. .. ..	4,998
	Depreciation value of electrical installations at the time of purchase—50% of above which is equal to Rs.....viz. 2,499	.. .. ..	2,499
(b)	Capital cost of servants qrs. as in 7(a) above	.. .. ..	7,284
	Cost of electrical installations @ 5% (as per note of Technical Examiner, Electrical)	.. .. ..	364
	Depreciated value of electrical fittings at the time of purchase —5% of the above which is equal to 182 say Rs. 185|- Hence total cost of electrical installation in main bldg. and servants quarters—Rs. 2,500 plus Rs. 185 =	.. .. ..	2,685

VALUATION OF JALIL'S HOUSE, M. U. ALIGARH

I. By assuming the life of the building

1.	Assumed date of construction	.. .. ..	1936

2.	Assumed life of the building	40	years
3.	Year of purchase	1956	
4.	Plinth areas and heights		
	Block 1 and 2	2526	sft and height 12½'
	Block 3 and 5	551	sft and height 9'
	Ty shed	332	sft
	Compound wall	591	rft
	Brick pavement	288	sft
5.	Plinth area rates at the time of purchase Blocks 1 and 2:		
	Rate for 11 ft. height building	9.00	per sft
	Add for 1½ ft extra height at 0.28|Rft	0.42	
		9.42	
	Less for deodar shutters	0.41	
	Net rate adopted	9.01	
	Blocks 3 and 5		
	Rate for 11 ft. height building	9.00	per sft
	Less for 2ft height at 0.28|ft	0.56	,,
	Less for deodar shutters	0.41	,,
	Net rate adopted	8.03	
	Ty. shed with G.I. roof:		
	Rate for 11 ft height building	9.00	per sft.
	Less for 2 ft height at 0.28|ft	0.56	,,
		8.44	
	Less for C.W. doors	1.00	
		7.44	
	Less for G.I. roof	0.44	
	Net rate:	7.00	
	Depreciated rate at 25 per cent of above	—Rs. 1.75	sft
	Compound wall		
	Cost for 6 Rft		
	B.W.m. mud		
	1x9|8x6—8	8.4	
	1x4.10-1|2x0—9x6.8	24.4	
	1 x 6—0 x 1-1½ x 0.9	5.0	
		37.8	
	Add for foundation 25%	9.5	
		Total 47.3 at 70.00|1000 ft = 33.11	

	Cost for 1 Rft	5.52
	Take repreciated rate at 50 per cent of above—	2.75
	or Say Rs. 2.75 Rft	
6.	Assessed cost of New construction	
	Blocks 1 and 2 2526 Sft at 9.01|Sft. = ...	22759
	Blocks 3 and 5 551 Sft at 8.03|Sft.	4425
	Total	27184
7.	Depreciation for 20 years....	
	$27184 \times \frac{20}{40} \times \frac{94}{100}$ = ...	12776
8.	Depreciated value of main blocks at the time of purchase	14408
	Add Ty. shed 332 Sft at 1.75|Sft.	581
	Compound wall 591 Sft At 2.75|Rft	1625
	Brick pavement 288 Sft at 10.00|100 Sft	29
	.. .. ..	16643
	Total assessment or say Rs. 16,600|-	
II.	By Empherical Formula $D = P(1-\frac{rd}{100})^n$	
	Depreciated value of main building 1 27184×0.975^{20} = ...	16380
	Add cost of ty. shed compound wall and pavement as above.....	2235
	Total assessment	18615
	or say Rs. 18,600	
III.	Valuation from Municipal rental value assuming 5 per cent of the building cost as the annual rental value	
	The annual rental value has not been furnished by the Municipal Board	
IV.	Assessed cost of Electric Installation	
	Cost of main building Blocks 1, 2 and 3	26421
	(Cost of Blocks 1 & 2 as above	22759

Blocks 3, 456 Sft at 8.03|Sft	.. .. ..	3662	
	.. .. ..	26421	
Cost of electric installation at 10 per cent of the building cost as per the report of the Technical Examiner (Electrical)	.. .. ..	2642	
Depreciated value at 50% of above	.. .. ..	1321	
or say Rs. 1,300			

VALUATION OF NASHAMAN, M. U. ALIGARH.

I. By assuming the life of Building.

1. Assumed date of construction:	.. .. ..	1933	
2. Assumed life of building	.. .. ..	50 years	
3. Year of purchase:	.. .. ..	1958	
4. Plinth areas:			
Main Building 6460 sft. and height	.. .. ..	13'—0"	
Porch 274 sft. and height	.. .. ..	13'—0"	
Ancillary Buildings with R.B. or J.A. roof 2523 sft.			
Shed with A.C. roof .. 96 sft.			
Brick pavement: 6259 minus 96 = 6163 Sft			
Courtyard wall: 38 rft.			
5. Plinth Areas Rates at the time of purchase			
Main Building as per item 1 of analysis	.. .. ..	9.00	
Extra 2 ft. height at 0.28|ft. (vide item 7 of analysis).	.. .. ..	0.56	
Net rate.	.. .. ..	9.56	Sft
Porch: As per item 1 of analysis	.. .. ..	9.00	
Add extra 2 ft. ht.	.. .. ..	0.56	
	.. .. ..	9.56	
Less for doors and windows and Less qty. of brick work etc. as per items 16 and 17 of analysis.	.. .. ..	3.50	
Net rate	.. .. ..	6.06	Sft.
Ancillary Buildings:			
As per item 1 of analysis	.. .. ..	9.00	
Less for 2 ft. ht.	.. .. ..	0.56	
	.. .. ..	8.44	

Less for C.W. doors and windows as per item 2 of analysis	.. .. ..	1.00
Net Rate	.. .. ..	7.44 Sft.
A.C. shed (temporary nature)		
As per item 1 of analysis	.. .. ..	9.00 Sft.
Less for 2' ht. and C.W. doors and windows as above.	.. .. ..	1.56
	.. .. ..	7.44
Less for A.C. roof say as per item 11 of analysis	.. .. ..	0.44
	.. .. ..	7.00

Take depreciated rates 25%

6. Assessed cost of buildings excluding the Ty. A.C. shed at the time of purchase.

Main bldg. 6460 sft. at 9.56|sft.	.. .. ..	61758 —(a)
Porch 274 sft. at 6.06|sft.	.. .. ..	1660
Ancillary Buildings 2523 sft. at 7.44	.. .. ..	18771
Total Sft.	.. .. ..	82.189|-

7. Depreciation for 25 years $82189 \times \frac{94}{100} \times \frac{25}{50}$ .. .. .. = 38629|-

8. Depreciated value of buildings at the time of purchase (82189—38629). 43560

Add Ty. A.C. shed 96 sft. at 1.75 Sft (@ 25% of Rs. 7.00)	.. .. ..	168
Brick pavement 6163 sft. @ 10.00/100 Sft	.. .. ..	616
Courtyard wall 38 Rft. at 3.50|Rft. (vide item No. 9 of analysis)	.. .. ..	133
	.. .. ..	44.477

or say Rs. 44,500|-

I. By Empherical formula assuming 2.5 per cent depreciation per annum on compound interest basis.

$$D = P\left(1 - \frac{rd}{100}\right)^{n}$$

$$= 82189 \times 0.975^{25} \quad .. \quad .. \quad .. = 43640$$

	Add cost of sundry item as above.	.. .. ..	917
		.. .. ..	44557
	Net assessment or say 44,500|- at the time of purchase.		
III.	Valuation from Municipal Rental value assuming 5 per cent of the cost of building as the annual rental value. Annual rental value as furnished by the Municipal Board, Rs. 5136 which is for the three buildings namely this, Yousuf Villa and Rasa Lodge. Hence value of these three buildings— 20 × 5136 = 10,2720|-		
IV.	Assessed cost of Electrical Installation		
	Cost of main building vide 6 (a)	.. .. ..	63418
	Value of Electrical installation at 12½% as per report of the Technical Examiner (electrical)	.. .. ..	7927
	Depreciated value at 40% of this or say Rs. 3150|-	.. .. ..	3171|-

* * * *

VALUATION OF RAZA LODGE, M. U. ALIGARH

I. *By assuming the life of the building*

1.	Assumed date of construction	.. .. ..	1933
2.	Assumed life of building	.. .. ..	50 years
3.	Year of purchase	.. ..	1958
4.	Plinth areas: Main bldg. G.F.	.. .. ..	4317 Sft
	F.F.	.. .. ..	2021 Sft.
	Ty. shed with G.I. roof	.. .. ..	129 Sft.
5.	Height of Building G.F. 13' and F.F. 10'.		
6.	P.A. rate at the time of purchase		
	As per item 1 of analysis	.. .. ..	9.00
	Add for extra 2' ht. at 0.28|ft.	.. .. ..	0.56
	Net Rate	.. .. ..	9.56 Sft.
	F.F. as per item 1 of analysis	.. .. ..	9.00
	Less for 1' ht.	.. .. ..	0.28
		.. .. ..	8.72
	Add for mosaic floor (Analysis item 5)	.. .. ..	0.70
			9.42 Sft.

7. Assessed cost of new construction at the time of purchase		
4317 Sft. at 9.56|Sft.	.. .. ..	41271
2021 Sft. at 9.42|Sft.	.. .. ..	19038
Total	.. .. ..	60.309
8. Depreciation for 25 years $= 60309 \times \frac{94}{100} \times \frac{25}{50} =$	.. .. ..	28345
9. Depreciated value of building at the time of purchase (60309 — 28345) =	.. .. ..	31964
129 sft. of Ty. shed. at say 1.25|Sft =	.. .. ..	161
179 Sft. of platform with mosaic flooring at 1-6-0 sft.	.. .. ..	123
Net assessment $= \frac{}{2}$	.. .. ..	32248
or Say Rs. 32200|-		
II. By Empherical formula assuming 2.5 per cent depreciation on compound interest basis.		
$D = P (1 - \frac{r}{100})^n$ — 60309 X 0.975	..	32020
Sundry items as above.	.. .. ..	284
	.. .. ..	32304
or Say Rs. 32,300|-		
III. Valuation from Municipal Rental value—see valuation of Nashaman.		
IV. Assessed cost of electrical installation—		
Cost of building = 60309		
cost of electric installation at 10% of above	.. .. ..	6030|-
Depreciated value at 50% of above	.. .. ..	3015
or Say Rs. 3,000|-		

VALUATION OF YOUSUF VILLA— M. U. ALIGARH

I. *By assuming the life of the building*

1. Assumed date of construction	.. .. ..	1933
2. Assumed life of building	.. .. ..	50 years

3.	Year of Purchase	1958
4.	Plinth Areas	
	Main Building = ...	1899 Sft.
	Servants room with G.I. sheet roof & very temporary nature with kutcha flooring and in bad condition.	442 Sft.
	Brick pavement	400 Sft.
	Concrete Plinth protection	150 Sft.
	Compound Walls:	
	4½" C. wall with 9" x 9" pillars at intervals of about 10 feet with 9" coping 7' ht.	31 Rft.
	—do— 5'—3" ht.	125 Rft.
	—do— 9" wall	17 Rft.
5.	Heights: Main building	12 feet
	Temporary shed	9 feet
6.	Plinth Area rates at the time of purchase	
	Main Building: as per item 1 analysis	9.00
	Add for extra 1 ft. ht. .. .. .. @ 0.28|Rft.	0.28
	.. .. ..	9.28
	Less for Deodar shutters .. .. .. (item 18 of analysis)	0.41
	.. .. ..	8.87
	SUNDRY ITEMS	
	Ty. G.I. shed ½ Rate for R.B. roof & 11' ht.	9.00
	Less for 2' ht. @ 0.28|Rft.	(—) 0.56
	Less for G.I. sheet roof & C.W. doors (—)	1.44
	Less for no floor 0.8 x 0.50	(—) 0.40
	Net	6.60
	Due to the bad condition take depreciated rate as 20% of this i.e. 1.32 or say 1.25|Sft.	

BRICK PAVEMENT

Take depreciated rate as 5.00|100 Sft. against 10.00|- Sft. adopted for other buildings in view of the comparatively bad condition of the pavement in this building:

C.C. plinth protection S. Rate — 50.00|100 Sft.

Take depreciated values as 50% of this i.e. 25.00|100 Sft.

7.	Assessed cost of new construction for main building at the time of purchase	
	Main Building 1899 Sft. at 8.87|Sft. = ...	16844

8. Depreciation for 25 years = $16844 \times \frac{94}{100} \times \frac{25}{50}$ = 7917

9. Depreciated value of Building at the time of purchase = (16844—7917) 8927

Add Sundry items as follows:

Servants room 442 sft at 1.25|sft	553	(b)
Brick pavement 400 sft at 5.00|100 sft	20	
C.C. plinth protection 150 sft at 25.00|100 sft	38	
Compound walls 4½" 7' ht. 31 rft at 1.25|rft	39	

Analysis item:

20 C. Wall 5'—3" ht. 125 rft @ 1.00|rft	125
19 C. Wall 9" 17 rft @ 1.50|rft	26
Net assessment	9728

or say Rs. 9700|-

II. By Empherical Formula assuming 2.5 per cent depreciation per annum on compound interest basis

$D = P\ (1-r)^n$ / 100

$16844 \times (0.975)^{25}$ = 8939

Add sundry items as above (9b) 801

9740

or Say Rs. 9700|-

III. Valuation from Municipal Rental Value See Valuation sheet for Nashaman

IV. Assessed cost of electrical installation

Cost of Main Building	= 16844
Value of electric installation at 10%	1684
Depreciated value at 50% of this	842

or Say Rs. 800|-

VALUATION OF SHAHJEHAN MANZIL, M.U. ALIGARH

1. By assuming life of building

1.	Year of Purchase		1956
2.	Assessed age of building at the time of purchase		25 years
3.	Assumed life of building		50 years
4.	Plinth areas:		
	Main Building		6496 sft
	Out houses		1540 sft
	Dilapidated garage		488 sft
	Brick pavement		1186 sft
	Compound wall		100 rft
5.	Height of Building:		
	Main Building		15 feet (average)
	Out houses		11 feet
	Garages		10 feet
6.	Plinth area rates at the time of purchase		
	Main Building: For 11 ft. height		9.00 per sft
	Add for extra 4' height at 0.28|rft		1.12
	Net rate adopted		10.12
	Out houses for 11 feet height		9.00 sft
	Less for C.W. doors and windows		1.00
	Net rate adopted		8.00
	Garages: for 11 feet height		9.00 per sft
	Less for 1 ft ht		2.28
			8.72
	Less for doors and windows and flooring		1.90
	Net rate adopted		6.82
	Compound wall 4½" and height 8'		
	Cost of brick work as per item 19 of analysis		
	$\times \frac{8-0}{5-3} = 2.49 \times \frac{8}{5.25} =$		3.80
	Add plastering 17 sft at 11.00|100 sft		= 1.87
			5.67
	Take depreciated value of 40% of this i.e. Rs. 2.27 or say Rs. 2.25|rft		

7.	Assessed cost of new construction excluding garage, compound wall and pavement		
	Main Building 6496 sft at 10.12|sft		65740
	Out houses 1540 sft at 8.00|sft		12320
	Total		78060
8.	Depreciation for 25 years: $78060 \times \frac{25}{50} \times \frac{94}{100} =$	=	36688
9.	Net assessed value of main building and out-houses		41372
	Add brick pavement 1186 sft at 10.00|100 sft		119
	Compound wall: 100 rft at 2.25|rft		225
	Garage which is dilapidated at 6% of its cost of construction i.e.		
	$\frac{6 \times 488 \times 6.82}{100}$		200
	Total		41916
	or say Rs. 41,900		
10.	Cost of land:		
	13692 sq. yds. at 0.12.0|sq. yd.		10,269
II.	By Empherical formula $D = P\ (1-r)^{\frac{n}{100}}$		
	Depreciated value		
	78060×0.975^{25}	=	41440
	Add for garage, compound wall and pavement as above		544
	Total		41.984
	or say Rs. 41,900		
III.	Valuation from the Municipal Rental Value assuming 5 per cent of the building cost as the annual rental value		
	Annual rental value	=	1368
	Hence value of building=		
	20 x 1368	=	27360
IV.	Assessed cost of Electrical Installation		
	Cost of Main building		65740

Cost of Electric installation at 5% of building cost as per the report of the Technical Examiner (Electrical)	.. .. ..	3287
Depreciated value at 50% of above	.. .. ..	1644
or say Rs. 1,650|-		

VALUATION OF SARFRAZ HOUSE M.U. ALIGARH

1. By assuming life of building

1.	Year of purchase	. .. ..	1956
2.	Assumed age of Building	. .. ..	25 years
3.	Assumed life of Building	. .. ..	50 years
4.	Plinth areas		
	A. Main Building	. .. ..	6419 sft
	B. Porch of Main Building	.. .. ..	510 sft
	C. Dilapidated out-houses (low roof)	.. ..	3088 sft
	D. Dilapidated out-houses (high roof)	. .. ..	553 sft
	E. Compound wall 7' height	. .. ..	76 rft
	F. Compound wall 11' height	. .. ..	110 rft
	G. Extra height on backwall of out-houses as compound	. .. ..	106 rft
5.	Heights: Main Building	. .. ..	16 feet (Average)
	Out-houses	. .. ..	9 & 14 feet
	Porch	. .. ..	13 feet
6.	Plinth area rates at the time of purchase		
	A. Main Building		
	For 11 feet height	. .. ..	9.00 per sft
	Add for extra 5' at 0.28|ft	.. .. ..	1.40 per sft.
		.. .. ..	10.40
	Less for C.W. doors & windows	.. .. ..	1.00
	Net rate adopted	.. .. ..	9.40 per sft.
	C. Out-house 9' height		
	Rate for 11 ft height	.. .. ..	9.00 per sft
	Less for 2 ft height	.. .. ..	0.56 per sft
	Less for C.W. doors & kutcha floor	.. .. ..	1.40
	Net rate	.. .. ..	7.40 sft
	D. One-house 14' height		
	Rate for 11 ft. height	.. .. ..	9.00 sft
	Add for 3 ft. extra height	.. .. ..	0.84
		.. .. ..	9.84

Less for C.W. doors & kutcha floor.	1.40
Net rate	8.44
B. Porch of Main Building	
Rate for 11 ft height building	9.00 per sft
Add for extra 2 ft. height	0.56 per sft
.. .. ..	9.56
Lee for doors and windows	1.50
Less for large openings	2.00
Less for flooring	0.40
.. .. ..	3.90
Net rate	3.90
.. .. ..	5.66 sft
E. Compound wall 7 ft height	
Cost for 6 rft B.W. in mud mortar	
1 x 9|8 x 9|8 x 6-0	= 7.6
1 x 4-10½ x 0-9 x 6-0	= 22
.. .. ..	29.6
Inside ground add 25% at 70.00|100 Cft 125.90 per 6 rft	7.4
	37 cft
Take depreciated value at 25 per cent of this	= 1.08 or say Re. 1|- rft
F. Compound wall 11 ft height	
As per item No. 22 of analysis	4.75 rft
G. Extra height on back wall of out-house	
As per item No. 23 of analysis	1.00 rft
7. Assessed cost of New Construction (Main Building)	
A. Main Building 6419 sft at 9.40|sft	60339
B. Porch ....510 sft at 5.66|sft	2887
.. .. ..	63226
8. Depreciation for main building 63226 x 25|50 x 94|100	29716
.. .. ..	33510

9.	Depreciated value of Main Building		
	Add 6% of the construction cost of out-houses as worked out below:		
	Low roof: 3088 sft at 7.04|sft	21740	
	High roof: 553 sft at 8.44|sft	4667	
		26407 x 6|100	
	Total	1584	
	Compound wall 7 feet height 76 rft at Re. 1|- rft	76	
	Compound wall 11 feet height 110 rft at 4.75|rft	523	
	Extra height on back walls 106 rft at 1.00|rft	106	
	Total assessment	35799	
	or say Rs. 35,800|-		
10.	Cost of land		
	25900 sq yds at 1.00|sq yd Rs.	25900	
II.	*By Empherical Formula*		
	$D = P\ (1 - \frac{rd}{100})^n$		
	Depreciated value of main building $= 63226 \times 0.975^{25}$	= 33560	
	Add cost of out-houses and compound walls as above	= 2289	
	Total assessment	= 35849	
	or say Rs. 35,800|-		
III.	Valuation from Municipal Rental value assuming at 5 per cent of the cost of building as the annual rental value		
	Annual rental value	= 840	
	Hence value of building = 20 x 840	= 16800	
V.	Assessed cost of Electric Installation		
	Cost of main building	63226	
	Cost of electric installation at 7½% of building cost as per the report of the Technical Examiner (Electrical)	4742	
	Depreciated value at 50% of above	2371	
	or say Rs. 2,370|-		

VALUATION OF SHAKSHANA BUILDING M.U. ALIGARH

I. By assuming life of building

1.	Year of purchase	1956
2.	Assessed age of building	16 years
3.	Assumed life of building	60 years
4.	Plinth areas	
	A. Main Building	1244 sft
	B. Kitchen block	300 sft
	C. Area of basement	174 sft
	D. Compound wall 4½"	70 rft
	E. Purdah wall 9"	35 rft
5.	Heights: A. Main Building	12 ft
	B. Kitchen block	9 ft
6.	Plinth area rates at the time of purchase	
	A. Main building	9.00 per sft
	Rates for 11 ft height building	
	Add for extra 1 ft height at 0.28|rft	0.28 per sft
	Net rate	9.28 per sft
	B. Kitchen block	
	Rate for 11 ft height building	9.00 per sft
	Less for 2 ft height at 0.28|ft	(—) 0.56 per sft
	Less for C.H. doors & Windows	(—) 1.00 per sft
	Net rate	7.44 per sft
	C. Basement	
	Rate for 11 ft height building	9.00 per sft.
	Less for 2 ft height at 0.28|ft	0.56 per sft.
	Less for C.W. doors	1.00 per sft.
	Less for lesser doors and windows L.S.	0.44 per sft.
	Net rate	7.00 per sft
	D. 4-½" compound wall	
	As per item 20 of analysis	1.25 rft
	E. 9" compound wall	
	Cost of B.W. as per item 12 of analysis 7|5 (3.50 x 7|5)	4.90
	Plastering 15 sft at 11.00|100 sft	1.65
		6.55
	Depreciated value take at 50% of above	
	i.e. Rs. 3.28	
	or say Rs. 3.25|rft	

7.	Assessed cost of new construction at the time of purchase:		
	A. Main Bldg. 1244 sft at 9.28|sft	.. .. ..	11544
	B. Kitchen Block 300 sft at 7.44|sft	.. .. ..	2232
	C. Basement 174 sft at 7.00|sft	.. .. ..	1218
	Total	.. .. ..	14994
8.	Depreciation for 16 years= 14994 x 16|60 x 99|100	.. .. .. =	3757
9.	Depreciated value of building	.. .. ..	11237
	Add 4½" compound wall 70 rft at 1.25|rft	.. .. ..	88
	9" purdah wall 35 rft at 3.25|rft	.. .. ..	114
	Total assessment or say Rs. 11,400	.. .. ..	11439
10.	Cost of land: 4674 sq yards at 0-12-0|sq yard	.. .. ..	3506
11.	By empherical formula $D = P\ (1 - \frac{r}{100})^n$		
	Depreciated value= 14994×0.975^{16}	.. .. ..	0.997
	Add compound walls as above	.. .. ..	202
	Net assessment or say Rs. 10,200|-	.. .. ..	10199
III.	Valuation from the Municipal Rental value assuming 5 per cent of the cost of building as the annual rental value		
	Annual rental value	.. .. ..	300
	Hence value of building = 20 x 300=	.. .. ..	Rs. 6000
IV.	Assessed cost of electrical installation		
	Cost of Main Building	.. .. ..	14994
	Cost of electrical installation at 7½% of Building cost as per the report of the Technical Examiner (Electrical)	.. .. ..	1125
	Depreciated value at 50% of this	.. .. ..	563
	or say Rs. 560|-		

VALUATION OF KASHANA BUILDING M.U. ALIGARH

I. By assuming life of building

1.	Year of purchase	1956	
2.	Assessed age of building at the time of purchase	16	years
3.	Assumed life of building	75	years
4.	Plinth areas:		
	Main Building	2394	sft
	Kitchen Block & Stores	854	sft
	Out-houses	807	sft
	Compound wall: 4½" with 9" x 9" Pillasters & ht 5'—4"	80	rft
	Compound wall 9" and ht 6'—10" or say 7 ft	90	rft
	Brick pavement	1950	sft
5.	Heights: Main Building:	12	ft (average)
	Kitchen block & stores	9	ft
	Out-houses	10	ft (average)
6.	Plinth Area Rates at the time of purchase		
	Main Building: for 11 ft ht	9.00	per sft
	Add for extra 1 ft ht at 0.28|rft	0.28	per sft
	Add for mosaic flooring in rooms which is about 50% of the total area	0.35	per sft
	Net rate	9.63	per sft
	Kitchen block and store: for 11 feet height	9.00	per sft
	Less for 2' ht at 0.28|rft	(—) 0.56	per sft
	Less for C.W. doors & windows	(—) 1.00	per sft
	Net rate to be adopted	7.44	per sft
	Out-houses for 11 ft ht	9.00	per sft
	Less for 1' ht at 0.28|rft	0.28	
	Less for C.W. doors and windows	1.00	
	Less for kutcha flooring in some portion 50% of 0.40	0.20	
	Net rate adopted	7.52	per sft

	4½" compound wall:			
	Cost of brick work in mud per rft as per item 19 of analysis	.. .. ..		2.49
	Add plastering 11 sft @ 11.00|100 sft	.. .. ..		1.21
		.. .. ..		3.70
	Take the depreciated value at 50% of this i.e. Rs. 1.85|rft			
	9" compound wall: 7' height			
	Cost of B.W. in mud as per item 12 of analysis x 7|5 = 3.50 x 7|5	.. .. ..		4.90
	Add plastering 15 sft at 11.00|100 sft	.. .. ..		1.65
		.. .. ..		6.55
	Take the depreciated value at 50% of this i.e. Rs. 3.28 or say 3.25|rft			
7.	Assessed cost of new construction:			
	Main Building 2394 sft at 9.63|sft	.. .. ..	=	23054
	Kitchen and store 854 sft at 7.44|sft	.. .. ..		6354
	Out-houses 807 sft at 7.52|sft	.. .. ..		6069
	Total	.. .. ..		35477
8.	Depreciation for 16 years: 35477 x 16|75 x 94|100	.. .. ..	=	7114
9.	Net assessed value of building	.. .. ..	=	28363
	Add cost of compound wall:			
	80 rft at 1.85|rft	.. .. ..	=	148
	90 rft @ 3.25|rft	.. .. ..		293
	Brick pavement 1950 sft at 10.00|100 sft	.. .. ..		195
	Total assessed value of bldg.	.. .. ..		28999 or say Rs. 29000
10.	Cost of land 2676 sq yds at 0-12-0|sq yd	.. .. ..	=	2007
II.	By empherical formula $D=P\frac{(1-r)^n}{100}$			
	Depreciated value = 35477×0.975^{16}	.. .. ..	=	23660
	Add cost of compound wall and brick			

pavement as above	..	..	..	636
Total value	..	..	..	24296
or say Rs. 24300				
III. Valuation from the Municipal Rental Value assuming 5 per cent of cost of building as the rental value				
Annual Rental value	..	..	.. =	120
Hence value of bldg	..	..	.. =	2400
NOTE: The rental value furnished by the Municipal Board is absurdly low.				
IV. Assessed cost of Electric Installation				
Cost of Main Building and kitchen	..	..	.. =	29408
Cost of electric installations at 7½% of building cost as per report of Technical Examiner (Electrical)	..	..	.. =	2206
Depreciated value of it at the time of purchase at 50% or above	..	..	.. =	1103
or say Rs. 1100				

* * * *

(1) Purchase of immovable property — Evaluation of electrical installations in the various buildings.

(*a*) *Negotiated Purchases.*

(i) Aziz Jehan Manzil:—The electrical installation is nearly 20 years old. Wiring has been carried out with V.I.R. wire in teak wood casing and capping except in 2 rooms, where V.I.R. wire in concealed conduit system has been adopted. Four fans are installed in the building. The value of the electrical installation may be taken as 10% of the building cost. Depreciated value (at the time of purchase) may be taken as 50% of this.

(ii) Ali Manzil:—Wiring is of very poor quality. The wiring is with V.I.R. wires on cleats. No fans have been installed. The value of electrical installation may be taken as 5% of the buildings cost. Depreciated value at the time of purchase may be taken as 50% of this.

(iii) Shafi House:—The electrical installation is in good condition. Wiring has been carried out with L.S. wire on teak wood batten and 3 fans have been installed. Decorative fittings have been used in important rooms. The value of electrical installation may be taken as 12½% of the building cost. Depreciated value may be taken as 60% of this.

(iv) Azmat Elahi Zubari's House:—The system of wiring is with V.I.R. wire in teak wood casing the capping. 4 fans have been installed in this building. The wiring is nearly 15 years old. Servant's quarters have also been wired. The value of electrical installation may be taken as 10% of the building cost for the main building and 5% of the building cost for the servants' quarters. Depreciated value may be taken as 50% of this.

(v) Jalil House:—The wiring has been carried out with V.I.R. wire in teak wood casing and capping. 2 fans have been installed. The value of electrical installation may be taken as 10% of the building cost. Depreciated value may be taken as 50% of this.

(vi) Nashaman, Yusuf Villa and Raza Lodge:—The system of wiring is V.I.R. wire in teak wood casing and capping. In Nashaman, the wiring has been carried out in concealed conduit system in two rooms only. In other rooms V.I.R. wire in teak wood casing and capping has been adopted. Wiring is very old in Nashaman (nearly 30 years old) and in Yusuf Villa and Raza Lodge the wiring is about 8 years old. In Nashaman 3 fans have been installed and in Yusuf Villa and Raza Lodge one fan has been installed in each. The value of electrical installation may be taken as follows:—

Nashaman	12½% of the building cost. (Depreciated value may be taken as 40% of this)
Yusuf Villa &	10% of the building cost.
Raza Lodge	(Depreciated value may be taken as 50% of this).

(*b*) *Evacuee property purchased in auction.*

(i) Sarfaraz House:—Wiring has been carried out with V.I.R. wire on cleat and one fan has been installed. The value of electrical installation may be taken as 7½% of the building cost. Depreciated value may be taken as 50% of this.

(ii) Shahjehan Manzil:—Wiring has been carried out with V.I.R. wire fixed directly on wall. No fans or shades have been provided. Cost of electrical installation may be taken as 5% of the building cost. Depreciated value may be taken as 50% of this.

(iii) Shakshana:—Wiring has been carried out with V.I.R. wire in teak wood casing and capping without any fan. Value of the electrical installation may be taken as 7½% of the building cost. Depreciated value may be taken as 50% of this.

(iv) Kashana :—Wiring with V.I.R. wire in teak wood casing has been adopted. No fan has been installed. Value of electrical installation may be taken as 7½% of the building cost. Depreciated value may be taken as 50% of this.

ANALYSIS

The following plinth area rates have been adopted for the purpose of valuation:

1. P.A. rate for 11' high building with brick work in mud mortar T.W. shutters G.C. flooring and R.B. roof as per the information obtained from the E.E., U.P.P.W.D. 9.00 sft

This rate of Rs. 9.00|sft is adopted for all the buildings purchased by the University in Aligarh and referred to us by the Committee with suitable allowance as worked out below for any change in specification noticed.

1. Difference in plinth area rate on account of country wood doors and windows used instead of teak wood.

Cost of 1½" T.W. shutters excluding fittings as per U.P. P.W.D. Schedule of rates—page 25, item 160. 4-6-0 sft.

Cost of C.W. shutters as per above S.R. braced and battened. (Page 30 item 216) 1-6-0

3-00

Area of doors and windows|sft of P.A.=0.3 sft. Usually it comes to 30% of the P.A. which is assumed here also.

Hence difference in P.A. rates=0.3 x 3-0-0=0.90 or say 1.00|sft.

3. Difference in P.A. rate on account of brick floor provided in place of C.C. floor.

The U.P. P.W.D. Schedule of rates for both are same namely Rs. 50.00|100 sft and hence no deduction is to be made. (Page 52 Items 321 and 327).

4. Difference in P.A. rate on account of brass fittings provided for doors and windows in place of ordinary iron fittings.

Approximate cost of brass fittings as per U.P. P.W.D. S.R. Page 32 item 225. 0-10-0 sft

Approximate cost of iron fittings as per U.P. P.W.D. S.R. Page 32 item 224.

0- 5-0 sft

Therefore difference in P.A. rate 0.3 x 0- 5-0 sft
Rs. 0.99|sft.

5. Difference in P.A. rate on account of mosaic floor provided instead C.C.floor.

Cost of C.C. floor with base as per page 52 item 321 of U.P. P.W.D. S.R.

50.00|100 sft

Mosaic floor as per page 52, item 329" of U.P. P.W.D. S.R. 1-6-0|sft i.e. Rs. 137|- per % sft.

Area of floor per sft of P.A. 0.8 sft (Assumed as 80% of P.A.).
Hence extra for mosaic floor 0.8 x 0.87=0.70 per sft.

6. Extra provision for Burmah Teak wood used for doors and windows.

Cost of B.T.W. shutters as per C.P.W.D. Rates	6-12-0 sft
Cost of Indian T.W.	5- 3-0
Difference	1- 9-0

Extra provision 0.3 x 1-9-0=0.47 or say 0.50|sft of P.A.

7. Provision for extra height of building—consider a room of size 12½ x 10' internal size with 1-1½" brick walls.

B.W. in mud mortar per ft height 49.6 x 1-1½ x 1-0=56 sft.

Plastering say with C.M. 1:6

Internal 1 x 45-0 x 1-0	= 45
External 1 x 54-0 x 1-0	= 54
99 or say 100 sft	

Cost of B.W. 56 cft at 70.00|100 cft.	39.20
Cost of plastering 100 sft 11.00|100 sft	11.00
White washing 45 at 0-12-0|100 sft	0.34
Colour washing 54 at 1-3-0|100 sft	0.64
Total	51.18

P.A. 14'—9" x 12'—3"—181 sft

Cost|sft 0.28 sft

8. For kutcha floor 0.8 x 0.50=0.40

9. 8' high compound wall 9" thick 6 cft for rft

Add for foundation plus 1.5

7.5 cft. at 70.00|100 cft	5.25
Plastering 16 sft at 11.00|100	1.76
	7.01

Depreciated value take 50% 3.50|rft

10. Brick pavement depreciated value take as 10.00|100 sft (New work would cost Rs. 20|-% sft).

11. Less for G.I. sheet roof—consider 100 sft of P.A. R.B. roofing excluding steel (S.R. 255) 3|8 x 175.00

(page 40)	66
Steel 100 x 3|8 at 4 Lbs|Cft|ft @ 35.00|Cwt (150 Lbs S.R. 235)	47
L. concrete terracing 100 x 3|8 at 90.00|100 cft S.R. 32 page 6 34	
L. concrete terracing 100 x 3|8 at 90.00|100 cft	34
S.R. 32 page 6	147
Less 120 plus 5 for eves=125 sft G.I. sheet roof S.R. Item 256 page 41 U.P. P.W.D. 70.00|100 sft	87.50
Add for sal ballies 50 rft at 25.00|100 rft P 94 item 677	12.50
Labour for fixing sal ballies @ 0.06 nP.|rft	3.00
	103.00
Difference in cost	44
per sft	0.44

12. 9" wall 5' ht in Shafi house
B.W. in mud above ground 3.75 cft
Add 1|3 for below ground 1.25

at 70.00|100 5.00 at 70.00|100 cft 3.50

As the wall is in very bad condition, depreciated value at 20% of the cost is taken that is 0.70 or say 0.75 rft 0.75 rft

13. 9" wall 4' ht. in Shafi House 0.75|x 4|5 = 0.60|Rft.
14. 9" wall 7' ht. in Shafi House 0.75 x 7.0 = 1.05|Rft. or
5 say 1.00|Rft.

15. Plinth protection in Shafi House rft rate 3 sft
at say 15.00|100 cft = 0.45 or say Rs. 0.05|rft.

16. In porch: Less for doors and windows 0.3 x 4-6-0 = 1-7-4 or say 1.50

17. Less for B.W. Quantity less in porches due to big openings. Consider porch of Shafi House.
P.A. 291 sft (18' 6" x 15½—9")
Four openings (clear)
3 x 10' 6" x 1' 1½" x 10 = 355
1 x 16' 0" x 1' 1½" x 10 = 180
Add for difference in foundation — say 45
580 cft
580 cft @ Rs. 70.00 per 100 cft = Rs. 406 say Rs. 400.00
P.A. rate —400 = 1.37
291
Add for excavation, foundation concrete. 0.63
Chamber finish of openings. 2.00 sft

18. T.W. shutters 4-6-0
Deodar shutters 3-0-0
Deodar shutters
1-6-0
Difference to be detected where deodar shutters are used in lieu of T.W. shutters
30% of 1-6-0 = 0.41 nP

19. 4½" wall with 9" x 9" pillars at about 10' centre with 9" coping 5'—3" ht. in Yusuf Villa: consider 10 rft.
B.W. in mud mortar

1 x 0-9 x 0-9 x 6-0	3.4
1 x 9-3 x 0-4½ x 5-3	18.2
1 x 9-3 x 0-9 x 0-9	5.2
	26.8
	8.9
Add 1|3 for below ground	35.7
Qty.| for rft 3.57 cft at 70.00|100 sft.	2.49

Take depreciated value as 40% of this 1.00
Since repairs needed 1.00|rft

20. —do— 7' ht. $\frac{1.00 \times 7 \times 4}{21} =$ 1.33 or say 1.25|rft

21. 9" wall 7' ht.
vide item (9) 6.00 cft for 8 ft. superstructure
∴ for 7 ft. superstructure $\frac{6.00 \times 7}{8} =$ 5.4 cft

Add for foundations 1.6

7.00 cft

7 cft @ 0.70|cft = 4.9
Plaster 14 sft @ 11|- sft. 1.5

6.4
Take 40% dep. value 2.56 say **Rs. 2.50**

22. Compound wall 1½ brick thickness 11' 0 ht. with coping 9" in brick (Mud mortar)
Per rft. 1' 0" x 1-1|8 x 11'—0" = 12.4 cft
1' 0" x 1' 6" x 0.9"
2 = 0.6 cft
Foundation 1' 0" x 18' 6" x 2' 6" = 3.75 cft

16.75 cft
16.75 cft @ 70|- % cft. 11.73
Pointing 25 sft @ 11.00 % sft 2.75

14.48 or say 14.50
Take 1|3rd depreciated cost 4.83 nP.|rft say Rs. 4.75 nP|rft

23. Compound wall—extra ht. over back wall of Out-houses.
per rft 1' 0" x 2' 0" x 1-1|8 2.25
Coping 0.60

2.85 @ 70% sft.
say 2.00
Pointing 5 sft @ 11.00|- %sft 0.55

2.55
Take 40% of above = 1.00|rft

REPORT OF THE CHIEF TECHNICAL EXAMINER, MINISTRY OF WORKS, HOUSING AND SUPPLY ON THE PURCHASE OF LAND FROM BEGUM A. M. KHWAJA BY THE ALIGARH MUSLIM UNIVERSITY.

The Deputy Secretary to the Government of India, Ministry of Education, in his letter No. D-127|60-AMUECU dated 21-9-1960 requested this Organisation to examine the reasonableness of the price paid by the Aligarh Muslim University for purchase of land for a Medical College from Begum A. M. Khwaja.

2. The University have purihased 30 Bighas and 17 Biswas (85,030 Sq. Yds.) of land from one Begum A. M. Khwaja in the year 1957 at a cost of Rs. 2,42,667|-. A sketch plan showing the land purchased and the surrounding lands is attached. The Khasra numbers (Survey numbers) of the plots in question are 1114 to 1124, 1135, 1138, 1139, 1167 and 1168 as indicated in the plan. The purchase was effected through two sale deeds. (As the sale deeds were in Urdu, Mr. J. H. Kazelbash, the steward of the University, read out to us, during our examination of the sale deeds on 4-10-1960, the extent of land and the price paid under both the sale deeds). The rate paid per Sq. Yard of land works out to Rs. 2,42,667 ÷ 85,030 Sq. Yds. = Rs. 2.85|- per Sq. Yard.

3. With a view to examine the reasonableness or otherwise of the price paid by the University in this transaction, the transactions of adjacent lands during the year 1957 and nearabout were considered by us and the findings are given in the following paragraphs.

4. The Government of India (Ministry of Works, Housing & Supply) have been interested, since the year 1956, in the purchase of about 47 Bighas and 10 Biswas of land in the same locality, part of which belonged to Begum A. M. Khwaja which was later on purchased by the Muslim University, Aligarh and which is being dealt with in this Report. The survey numbers of the plots which the Government of India were interested in the purchase are 1114 to 1124, 1133 to 1142, 1145 and 1168 as shown in the sketch plan attached. This land was required by the Government of India for constructing residential accommodation for the workers of the Government of India Press which is situated adjacent to these plots.

On enquiry, the District Officer informed that the price that may have to be paid for acquiring the property would be approximately Rs. 3|8|- per Sq. Yd. Against this, the rate of Rs. 2.85 paid by the University for this land appears to be reasonable.

A separate reference was made by us to the Land Acquisition Officer, Aligarh, to intimate the price of the land in question as it was obtaining in 1957. He has since intimated that the estimated rate of valuation per Sq. yard is Rs. 2|50 nP. He has stated that this rate is approximate and that it has been arrived at on the basis of the average rate of a few transactions, the details of which he had furnished. As per these details, the correct rate is Rs. 2|93 and not Rs. 2|50.

In the circumstances, on the basis of the valuation furnished in 1956, as well as that furnished now, it would appear that the price paid by the University authorities for the purchase of land from Begum A. M. Khwaja is not excessive and is reasonable.

L. G. SELVAM,
Chief Technical Examiner.
7—x—60.

REPORT OF THE CHIEF TECHNICAL EXAMINER, MINISTRY OF WORKS, HOUSING & SUPPLY ON THE WORK OF ADDITIONS & ALTERATIONS TO THE ENGINEERING COLLEGE BUILDING, ALIGARH.

According to the terms of reference conveyed to us *vide* Shri B. N. Malhan, Deputy Secretary's letter No. 2214|60-O & M dated 4th June, 1960, we were required to technically examine the work of Additions & Alterations to the Engineering College, started in 1950 and the main portion of the work now under examination was completed some time in 1954-55, though some of the remaining items of the work were completed recently, with a view to find out whether the value of the work done is commensurate with the actual expenditure incurred on this project.

2. Before dealing with the valuation of the work actually done, I would like to briefly mention about the history of this work, as far as could be ascertained by us from the records made available and from the oral statements of the University officials.

3. Before the work of Additions & Alterations were taken up, the Engineering College was located in a building having small and narrow rooms constructed originally to serve as a University market and was, therefore, wholly inadequate and unsuitable for the purpose of an Engineering College. It was, therefore, proposed to make extensive additions and suitable alterations to the existing building to meet the requirements of a first class Engineering College.

The Government of India, Ministry of Education, sanctioned a capital grant of Rs. 4,69,000 to the University for the above purpose towards the cost of the building alone, in September, 1949.

4. The work of preparation of drawings, plans and specifications was originally entrusted to a foreign Architect, Mr. Heinz of Delhi. Mr. Heinz initially prepared an estimate for Rs. 3,89,493 which is said to have been revised later on by the then University Engineer to Rs. 4,25,000.

5. It appears that Mr. Abbasi, who was initially a member of the Building Committee of the University and who later became the Honorary Supervising Engineer of the project, suggested certain additions and alterations in the specifications, as a result of which the value of the estimate went up to Rs. 4,87,988.

6. It is seen from the records that the work of Additions and Alterations to the Engineering College was initially awarded some time in October 1950 to one Shri Tufail Ahmed Khan who, however, appears to have backed out after hardly doing any work. Thereafter, the work was awarded to another contractor, one Shri Mohan Lal Chadda, representative of M|s. New India Builders, in April, 1951. This contractor appears to have taken a considerable amount of money as advance and backed out after doing some work for which he had already received payment. A criminal suit filed in the Court of the City Magistrate by the University against this contractor for recovery of the amount advanced, was lost. (The full details of this case can be found on pages 5 to 8, Chapter 2 of the Audit Report on the Aligarh Muslim University for the period 1951-52 and 1952-53).

After the second contractor also failed, the University appears to have proceeded with the work by employing a number of petty labour rate contractors and completed bulk of the work in 1954-55.

It would thus he seen that the history of the construction of the Engineering College building is a chequered one, covering a period of several years.

7. *Valuation* : Normally, the valuation of a building is a simple matter if the detailed drawings, designs and estimate, based on which the work has been executed, are made available. But in this case the University authorities expressed their inability to make these records available on the plea that these were not traceable and as the Engineers then in charge of the work did not maintain proper records. It, therefore, became necessary for us to take completed measurements of the various items of the work actually done. The specifications to which the various items have been carried out, had to be found out from records in certain cases, and in certain other cases they had to be assessed. A note on the specifications adopted in our valuation for the various items of work involved in the Additions & Alterations to the Engineering College Building has been prepared and forms Annexure I to this Report.

8. For evaluating correctly the various items of work done, the quantities of which have been arrived at on the basis of detailed measurements taken at site, the prices of materials and the cost of labour prevailing at Aligarh during the period of execution, would have to be adopted. For this purpose, the U.P. P.W.D. Schedule of Rates applicable for the Aligarh region or the Delhi C.P.W.D. Schedule of Rates with corresponding adjustment for cost index at Aligarh can be adopted. According to the U.P. P.W.D. the rates applicable for the relevant period, i.e. 1950 to 1955, are the U.P. P.W.D. Schedule of Rates 1936-37 enhanced by 175%. An examination of this schedule of rates revealed that the 1936-37 rates enhanced by 115% did not in many cases truly represent the market rates, as obviously the enhancement has been done only on an *ad hoc* basis, without actually revising the 1936-37 Schedule of Rates, to conform to the then prevailing market rates. On the other hand, the Delhi C.P.W. Schedule Rates which was prepared in 1950, reflected more closely the market conditions then prevailing. It also appears that quite a few important items of materials were actually transported from Delhi. In view of the fact that the U.P. P.W.D. Schedule of Rates was rather low in certain cases and as it did not reflect the true market conditions, our valuation has been made on the basis of the C.P.W.D. Schedule of Rates in order to arrive at a fair assessment of the building.

9. By adopting the quantities of the various items of work done and applying the Delhi C.P.W.D. Schedule of Rates referred to in para 8 above, the total cost of the building works out to Rs. 4,17,200 as per estimate attached (Annexure II). Details of the various items of work included in this valuation are mentioned in the report of the estimate.

10. A detailed account of the expenditure actually incurred on the various components of the work does not appear to have been maintained by the University authorities, as admitted by the Special Officer of the Aligarh Muslim University in his Report on the accounts for the Additions & Alterations to the Engineering College Building. Therefore, the statement of expenditure of Rs. 5,11,882 appended to the Special Officer's report, which is said to have been obtained from the ledger entries and certified as representing the actual booked expenditure by the University Engineer, has been *assumed* to be correct.

It would thus be seen that as against a fair valuation made by us of Rs. 4,17,200, the total expenditure is Rs. 5,11,822 (Rs. 4,81,882 being actual expenditure already incurred and Rs. 30,000 as estimated dues to the contractor for the work done). Therefore, an excess expenditure of Rs. 94,682 has to be accounted for.

12. In view of the poor state of maintenance of accounts and to answer Audit objections, it appears that the Special Engineer of the University was directed to get the entire building measured afresh and to evaluate the same.

13. The cost of the building as evaluated by the Special Engineer of the University, according to details made available to us, works out to Rs. 4,76,775 as against the valuation of Rs. 4,17,200 made by us for the corresponding items of work. Some of the items which are mainly responsible for the huge difference between the Special Engineer's valuation and that of ours are mentioned below :—

1. The additions over a part of the building has been carried out on existing foundations, but the Special Engineer has taken into account the cost of the existing foundations also.
2. Depth of plinth filling and sand filling has been assumed to be more in the Special Engineer's valuation than actually done.
3. Excess quantity and rates assumed for RCC work in the Special Engineer's valuation.
4. Adoption of higher rates for doors and windows, which is not commensurate with the quality of work actually done.

14. A detailed note commenting on the valuation made by the Special Engineer has been prepared by us and forms Annexure III of this Report. In view of the reasons given therein, the valuation made by the University Engineer cannot be accepted.

15. The Report prepared by Shri Ahmed Sardar Khan, Special Officer, Aligarh Muslim University on the accounts of the Additions & Alterations to the Engineering College building, was made available to us. In his report, which has presumably been prepared to answer audit objections, Shri Ahmed Sardar Khan has tried to justify the booked expenditure of Rs. 5,11,882. He has taken it for granted the valuation of Rs. 4,76,775 made by the University Engineer as correct and has attempted to justify the expenditure of (Rs. 5,11,882 minus Rs. 4,76,775) Rs. 35,107 over and above the Special Engineer's valuation *vide* paras 16 & 17 of his report. He has furnished three statements of expenditure, namely B(1), B(2) & B(3) covering the amount of Rs. 35,107.

16. Statement B(1) gives details of expenditure said to have been incurred in respect of the following items :—

	Rs.	as.	p.
(1) Dismantling and cutting with chisel	5369	6	6
(2) Removal of earth and rubbish	3152	4	9
(3) Filling earth	1802	5	0
(4) Labourers Quarters	769	10	0
(5) Machine shed	6093	10	0
(6) Cement godown	3156	4	0
(7) Storm water drain and open surface drain	5730	8	0
Total	26074	0	3

17. Statement B(2) contains the details of expenditure said to have been incurred in respect of the following items :—

		Rs.	as.	p.
(1)	Miscellaneous	1977	5	0
(2)	Carriage of material from one place to another. ..	1017	2	6
(3)	Fixing window and door frames after cutting blocks.	215	0	0
(4)	Regrading the roof	70	4	0
(5)	Raising approach roads and making culverts. ..	406	0	0
(6)	Putting earth on roofs for temporary protection. ..	652	8	0
	Total	4338	3	6

18. Statement B(3) gives details of expenditure said to have been incurred in respect of the following items :—

		Rs.	as.	p.
(1)	Brick flooring	132	12	9
(2)	Wastage in cutting blocks and removing the paints etc.	1341	0	0
(3)	Support to roof and temporary platform and tank. ..	516	7	0
(4)	Removing doors, windows, drain pipes, pegs and clamps etc.	421	1	0
(5)	Filling sand in trenches and hollow blocks. ..	2776	4	0
(6)	Steel (extra)	3515	15	0
(7)	Fencing	1200	0	0
	Total	9903	7	9
	Sum total B(1), B(2) & B(3) = Rs.	40,315	11	6

The following remarks are offered on the conclusions arrived at by Shri Ahmed Sardar Khan in respect of the various items referred to above.

19. It has been explained in detail in para 13 of this Report as to why the valuation made by the Special Engineer cannot be accepted. It has been shown that the Special Engineer's valuation is in excess of the fair valuation made by us by a sum of Rs. 59,575. Therefore, Shri Ahmed Sardar Khan's justification by placing reliance on the Special Engineer's valuation in respect of this expenditure, i.e. Rs. 59,575 falls through.

20. Now on the items of expenditure indicated in Statement B1, B2 & B3 the following remarks are offered :—

Against the 7 items of expenditure shown against statement B(1), the position is as follows :—

Items 1, 2 & 7. The sum of Rs. 5369-6-6, 3152-4-9 & 5730-8-0 said to have been incurred in 'Dismantling and cutting with chisel', 'Removal of earth and rubbish' and 'Storm water drain and open surface drain', are admissible, provided it can be established satisfactorily with documentary proof that the work was actually done.

Item 3. Work done against this item has already been included in the valuation.

Items 4, 5 & 6. Items of expenditure against such items are generally expected to be covered under 'Profits and Overheads'. The CPWD Schedule

of Rates, based on which our valuation has been made, allows 8¾% for Overheads and 6¼% for profits. Therefore, the expenditure incurred against these items has been taken into our valuation.

21. The following remarks are offered in respect of 6 items of expenditure shown in statement B(2) :—

Item 1. A sum of Rs. 1977-5-0 is shown against Miscellaneous expenditure. Most of these items are already covered by the rates allowed in our valuation.

Item 2 refers to an expenditure of Rs. 1017-2-6 due to cartage of material from one place to another. This has already been accounted for in our valuation.

Items 3, 4 & 6 are contingent on the work and will be deemed to be included in the rates allowed in the valuation.

Item 5 which indicates an expenditure of Rs. 406|- may be admitted if the work has been actually executed and supported by documentary evidence.

22. The following remarks are offered in respect of the seven items of expenditure shown in the statement B(3):—

Items 1 to 6 referred to in the statement can be deemed to be covered in the valuation made by us.

Items 7 is admissible provided the work has been actually executed and supported by documentary evidence.

23. The only expenditure that can be allowed extra is the Insurance charges of Rs. 337-8-0 for hollow block machine shown against item 7 of statement B(2), Rs. 430|- against item 9 for packing of hollow block machine and Rs. 52|-, 104|-, 36 and 180|- for grassing courts and Flower studio photo of the building.

24. From the particulars furnished above, it will be seen that against a sum of Rs. 40316|- shown by Shri Ahmed Sardar Khan in statements B(1), B(2) and B(3), only a sum of Rs. 14,252-3-3 against B(1), Rs. 1545-8-0 against B(2) and Rs. 1200|- against B(3) would be admissible, even assuming the expenditure has actually been incurred and is supported by documentary proof. This figure of Rs. 16998|- is approximately 4% of the estimated cost as against 3% allowed generally in the estimates towards contingencies. Even after admitting a sum of Rs. 16,998 as likely to have been incurred, an expenditure of Rs. 77,684 still remains unaccounted for, i.e. Rs. 59,575 on account of difference in valuation between ours and that of the Special Engineer's and Rs. 18,109|-, the difference between the Engineer's valuation of Rs. 4,76,775 plus the value of admissible items amounting to Rs. 16,998 not included in the valuation and the total expenditure of Rs. 5,11,882.

25. In para 17 of his Report, Shri Ahmed Sardar Khan has referred to an expenditure of Rs. 15,812 relating to Water Supply and Sanitary fittings as having wrongly been debited to the building work and has argued that this sum of Rs. 15,812 should be deducted from the sum of Rs. 5,11,882, while arriving at the nett booked expenditure on the building work. Evaluation of the Sanitary and Water supply work as actually done has been made by us and it amounts to Rs. 20,000 as against the booked expenditure of Rs. 22,985 as indicated in the statement 'A' attached to Shri Ahmed Sardar Khan's Report. If it is accepted that a sum of Rs. 15812 as referred to earlier has been wrongly

booked to the building work and that it should be counted towards Sanitary and Water Supply work, then the cost of Sanitary and Water Supply work would amount to Rs. 22,985 plus 15,812=Rs. 38,797. It may, however, be stated that the evaluation of the Sanitary and Water Supply work has also been made by the Special Engineer of the University as is evident from column 6 of Statement 'A' attached to Shri Ahmed Sardar Khan's Report and this amounts to Rs. 24,664. It will, therefore, be seen that on the basis of our valuation, a sum of Rs. 18,797 remains unaccounted for and on the basis of the Special Engineer's own valuation, a sum of Rs. 14,133 remains unaccounted for.

In the circumstances, the total amount of expenditure unaccounted for, even taking into consideration the Sanitary and Water Supply work would remain approximately the same figures as Rs. 77,684 as referred to in the previous paragraph.

26. It appears that the booking of the expenditure of Rs. 15,812 said to have been incurred on Sanitary and Water Supply installation work against the building work has not been done wrongly, but *deliberately* in order to keep down the expenditure against the Sanitary and Water Supply work near about the estimate amount of Rs. 21,000, Para (ix) of the Audit Report for 51 to 52 and 52-53 reveals that a sum of Rs. 14,650 was advanced to a building contractor, Shri Mohan Lal Chaddha for procuring sanitary stores from a firm in Bombay. This amount was advanced on the special recommendations of the Supervising Engineer, Shri Abbasi, on the strength of building materials alleged to have been brought by this contractor to the site of work. Later on, it turned out that the materials available at the site towards security was very nominal and that the money advanced was also not realised. This wrong booking has presumably been done deliberately to escape detection by audit in order not to show a large difference between the estimated amount of the Sanitary & Water Supply work and the actual expenditure incurred.

27. From the various details furnished above, it would appear that an amount of approximately Rs. 77,684/- out of a total expenditure of Rs. 5,11,882 on the building portion of the work alone has to be properly accounted for. The note dealing with the Special Engineer's valuation and that of ours (Annexure III) was made available to the present University Engineers, Shri Jabbar and Shri Ovaise during our visit to Aligarh on the 4th & 5th Oct. 1960 in order to give them an opportunity to comment on the same. They were not in a position either to comment upon or contradict our findings.

28. There can be only 2 reasons for the excess expenditure:—

(i) either the contractors who executed the work were paid unduly high rates ; or

(ii) several fraudulent transactions, bogus payments, non-recovery of advances etc. could have contributed to excess expenditure.

There is not much evidence in support of the first possibility, as the works were got done through several agencies. The details of the rates paid for labour and materials to the various petty labour rate contractors are not readily available, except in the case of one main contractor who did work to the extent of about Rs. 82,841 and backed out thereafter. But on the other hand, existing documents and other evidences such as audit objections go to indicate that there have been several fraudulent transactions and irrecoverable advances, and other irregularities, the author of all of which appears to be Shri Abbasi, the then Honorary Supervising Engineer, as would be evident from some of the cases referred to below :—

(1) Just before his appointment as the Honorary Supervising Engineer of the University, Shri Abbasi, made the University authorities change the specification of brick masonry proposed by the Architect to one of using hollow blocks, by making out that the latter construction was much stronger, more durable and free from various other defects as compared with brick masonry, and that it was also much cheaper. In point of fact, all the superior qualities claimed by Shri Abbasi for hollow block masonry over that of brick masonry is not a correct statement of fact; neither the cost of the hollow block masonry was cheaper than brick masonry.

(2) His intention in changing the brick masonry to hollow block masonry appears to be that he wanted to dispose of the hollow block making machine, which was available with the Jamia Milia at Delhi. It appears from para 6, page 4 of the Audit Report for the period 1951-52 & 1952-53 that the Supervising Engineer of the Jamia Milia Delhi (Shri Abbasi himself) wrote on 23-9-50 to negotiate with the authorities of the Aligarh University for the sale of the hollow block making machine and that the institute offered a sum of Rs. 55,000, less 15% discount. On behalf of the Aligarh University this offer was accepted by the Supervising Engineer (Shri Abbasi himself in this case also) on 1st October, 1950. It is, however, reported that the same machine was sold later to the Orissa Govt. without any loss to the University. No motive can be attached to this transaction but the fact, however, remains that for reasons best known to himself, Shri Abbasi was anxious to dispose of this machine by making incorrect and false recommendations to the University authorities.

(3) One contractor, Shri Mohan Lal Chaddha (a representative of M|s. New India Builders) was imported into Aligarh on the recommendation of the Supervising Engineer, Shri Abbasi and the main work of the contract was awarded to him. The favours shown to this contractor are (a) several advances made to him without proper security, and in some cases with fictitious security; (b) unusual procedure of remitting money to a firm in Bombay through Shri Mohan Lal Chaddha, and which never reached Bombay. Later on, the contractor, Shri Mohan Lal Chaddha appears to have made allegations against Shri Abbasi that he demanded money for payment of his personal dues at Bombay. The contractor appears to have made a written complaint to the Vice-Chancellor in this regard. Later on, the contract of this man was cancelled and a criminal suit filed against him for breach of trust, was ultimately lost.

(4) After the exit of Shri Mohan Lal Chaddha, another contractor by the name of Mathradas came into the scene. Several transactions appear to have been got done through the agency of this contractor. The total payment made to him on all accounts from July 1951 to January 1953 amounts to about Rs. 90,000 (Rs. 30,000 towards supply of labour and miscellaneous materials, Rs. 30,000 towards work done and Rs. 30,000 towards Sanitary articles). Miscellaneous supplies have been obtained on commission through this man and these amount to more than Rs. 20,000. The irregular and fictitious transactions cannot be expressed in better terms than, as they are contained in the audit report, the relevant extract of which is reproduced below:—

> " .... The vouchers containing the claims of this man under this account are a collection of cash memos, from the local suppliers and others, payments made by this man in cash to labourers pur-

ported to be engaged on behalf of the University and other chits of paper. To what extent the claims presented by him are real or Farzi is difficult of verification."

" .... The Hony. S. E. hardly ever made purchases direct from the market or original suppliers. He generally engaged one of the labour rate contractors to do the job on his behalf and to collect the cash memos on payment of 10% commission. Many of the orders for supply do not appear to have been issued to the supplier, nor have copies thereof been sent to the Treasurer's Office prior to the receipt of the suppliers' bills. As no proper stock account showing day to day receipts, issues and consumption supported with recipients acknowledgements was ever maintained and everything was shown as issued to the work on the same day under the plea of direct charge to the work, there is absolutely no means to detect the real from the unreal transactions. To what extent the financial interests of the University have been harmed by this procedure can well be imagined by the fact that about Rs. 2,00,000|- has been spent in this manner for purchase of miscellaneous supplies like sand, stone, grit, cinder, ash, nuts, bolts and sanitary fittings, freightage and cartage etc ....."

Details of the various other irregular transactions are contained in the Audit Report for 1951-52 & 1952-53, relevant extracts of which have been taken and form Annexure IV to this Report.

It appears from the Audit Report that detailed scrutiny of the accounts of expenditure which revealed a number of irregularities, were embodied in a note and forwarded to Shri Abbasi in February 1953, by which time he had migrated to Orissa. No reply was furnished by Shri Abbasi to the Audit note. It appears that several requests made to Shri Abbasi by the University authorities asking him to go over to Aligarh to reply to the Audit objections did not meet with any response.

A statement showing the list of documents required in connection with this investigation was furnished by us to the University authorities requesting them to make the same available for perusal. Very few of the documents were made available and the rest were reported to be not readily available or traceable. We had, therefore, to conduct this enquiry on the basis of the valuation made by us and other piece-meal information collected from the available records and on the basis of the irregularities brought out in the Audit Report. The University authorities have not made available to us the parawise replies sent to the Audit, if such a reply was sent at all. They, however, supplied us with a typed statement indicating only the amounts of the outstanding objections. This does not serve any purpose in regard to outstanding objections.

Conclusion—The unaccounted for expenditure of Rs. 77,684, the shady manner in which several transactions have taken place, as brought out in the Audit report, irregular and incomplete manner of maintaining accounts, non-reply to the audit objections and decamping from the scene of occurrence leads me to the irresistable conclusion that Shri Abbasi has been the main Villain of the show, as he appears to have had his way in every respect without any check whatsoever.

L. G. SELVAM,
Chief Technical Examiner.
7-x-60

ANNEXURE I

SPECIFICATIONS ADOPTED FOR THE WORK OF ADDITIONS AND ALTERATIONS TO THE ENGINEERING COLLEGE

Foundations :—

The two new blocks put up are supported on R.C.C. strip footing 12" thick and 3'—6" wide in 1:2:4 mix. The R.C.C. strip footing was laid over a levelling course of 12" thick concrete with brick ballast and kankar lime. No extra foundations were provided for the vertical expansion made for a portion since the existing foundations were found to be adequate to take the additional floor.

Superstructure :—

Superstructure consists of R.C.C. frame construction with R.C.C. columns 12" x 12" at 7 feet centres with beams and slabs at floor levels. The mix for all R.C.C. work has been assumed to be the normal one viz. 1:2:4: (one cement to 2 Badarpur sand and 4 stone ballast 3|4" guage down graded).

12" wide hollow cement block masonry filler panels were constructed between the columns and for the large partitions. For other partitions and minor parapets, hollow cement block 8" and 4" wide were used. The mix for the hollow blocks has been assumed to be given in the estimate prepared by the Honorary Supervising Engineer namely 1 cement and 8 coarse aggregate consisting of 60% Badarpur sand and 40% cinder or stone grit. It has been assumed that the blocks are set in cement sand mortar 1:8 (one cement and 8 sand) as given in the said estimate.

Certain exterior walls in the first floor now added are constructed out of brick work in cement mortar 1:6 (assumed) to match with the rest of the building.

Doors and Windows :—

Doors :—1½" thick flush shutters made of hard board fixed on to teak wood frame work with brass fittings and teak wood 2" x 4" section chowkats have been provided. A few doors in the old building portion where alterations were carried out are of panelled type in teak wood.

Windows :—1½" thick teak wood fully glazed shutters with brass fittings with 22" x 4" teak wood chowkats, have been provided.

Flooring:—1½" thick marble ships in situ flooring has been provided mostly. Lime, concrete base 3" thick was provided in ground floor. In the rest of the places 1½" thick cement concrete flooring was done. The then existed floors in the market building which were of bricks laid flat, were got dismantled and replaced with cement concrete floors, as has been confirmed by local enquiries.

Roofing:—The roof of the ground floor of the additional wing consists of R.C.C. Tee beam at 22" centres and 4" thick R.C.C. slab with hollow cement block filling between the ribs. In the First floor this roof consists mostly of R.C.C. Tee beams resting on columns and slabs without hollow block filling.

For the front rooms on west side, reinforced brick slab 4½" thick has been provided for the ground floor roof. The R.B. slab is supported on

R.S. Joists 5" x 12" encased in cement concrete. Ceilings are finished with cement plaster and washed white.

Terracing :—Fine lime concrete with 1" gauge brick ballast and lime was laid on the roof slab to an assumed average thickness of 4½" and to slopes.

4" A.C. down take rain water pipes have been provided at regular intervals to conduct the rain water from terrace to ground.

Finishing:—Internal plaster has been assumed to have been done with cement sand 1:6 mortar to a thickness of ½" and white washed.

Flush pointing was done for the external surfaces of the hollow block masonry during the process of laying the block. For the external surface of brick work and R.C.C. work, cement plaster 3|4" thick has been done and grooves made in order to match with the hollow block work. The proportion of the cement mortar has been assumed to be 1 cement, 5 sand. The external surface was finished with cement paint.

For the exterior facing central inner courtyard, brick work in the additions was pointed to match with rest. Doors and windows have been assumed to have been given varnish finish.

L. G. SELVAM,
Chief Technical Examiner.
7-x-60

ANNEXURE II

REPORT

Name of work:— Additions and Alterations to the Engineering College Building—Valuation Statement.

Situation:— Muslim University, Aligarh.

HISTORY:—

In connection with an enquiry into the affairs of the Aligarh Muslim University, the Deputy Secretary, Ministry of Education, Government of India, in his D.O. No. 2214|60 O & M dated 4-6-1960 requested the C.T.E. Organisation, Ministry of Works, Housing & Supply to technically examine whether the Additions and Alterations carried out by the University to the Engineering College building at Aligarh is commensurate with the expenditure actually incurred. Accordingly this valuation statement of Additions and Alterations to the Engineering College Building at Aligarh, amounting to Rs. 4,17,200|- has been prepared.

SCOPE:—

The evaluation covers the following additions and alterations and special repairs carried out to the College of Engineering under the superintendence of one Mr. Abbasi, Ex-Supervising Engineer, Aligarh University.

Additions:—The additions carried out to the building are shown in red in the key plan attached and the blocks concerned are the following—

(i) The two main blocks one in the North and the other in the South. The block in the North is two storeyed and that in the South is single storeyed.

(ii) Canteen block on the Eastern side.

(iii) The first floor over the front wing (Western wing) of the old building.

(iv) The record and statistics store and the Lavatory block in the first floor.

Alterations :—The portions of the old building where alterations have been carried out are shown in blue in the key plan attached. The alterations carried out are the following:

(i) Widening of the rooms in the ground floor in the front wing.

(ii) Providing an additional R.B. slab in the verandah in the front wing and portions of the North and South wings.

(iii) Replacing the bricks flooring by cement concrete flooring in the verandahs in ground floor.

Apart from the Additions and Alterations referred to above, certain special repairs were carried out to the roof of the Electric Laboratory and the class room near the Northern staircase and these portions are shown hatched in the key plan attached.

SPECIFICATIONS:— As per Annexure 1 of this Report.

METHOD:—

The valuation is based on detailed measurements of all the items of work involved.

RATES:—

The Additions and Alterations and Special Repairs were carried out during the years 1950 to 1954. As the rates for many of the items involved are not available in the U.P. P.W.D. printed Schedule of Rates 1936—1937 corrected up to 1950, the Central P.W.D. Schedule of Rates for Delhi 1950 which was in force from 1950 to 1955, has been adopted in the evaluation. In order to allow for the difference in the cost of building materials and labour between Aligarh and Delhi, the valuation prepared using the Delhi Schedule of Rates, has been enhanced by 7% as the cost index of Aligarh for the period 1950 to 1955 calculated based on the Delhi rates 1950, is 107%.

For the items of hollow block masonry and flush doors with hard board facing for which rates are not available in Delhi Schedule of Rates (1950), market rates have been adopted.

Cost :—The abstract of the valuation is attached and the most works out to Rs. 4,17,220.

L. G. SELVAM
Chief Technical Examiner.
7-x-60

ABSTRACT OF COST

Item No.	Sub-heads and Items of work	Quantity or No.	Rate	Per	Amount
1	2	3	4	5	6
					Rs.nP
1.	Earth work in excavation in foundation trenches in ordinary soil lift up to 5 feet and depositing the excavated earth nearby.	24600 Cft.	18.00	1000 Cft.	443.00
2.	Lime concrete in foundation with brick ballast.	6250 Cft.	88.00	100 Cft.	5500.00
3.	R.C.C. 1:2:4 in strip footings including shuttering & fabrication.	4680 Cft.	4.29	1 Cft.	20077.00
4.	Hollow block masonry 12" thick in foundation & plinth.	5040 Sft.	1.50	Sft.	7560.00
5.	Hollow block masonry 8" thick in foundation & plinth.	350 Sft.	1.00	Sft.	350.00
6.	Refilling excavated earth in plinth including ramming and watering.	28230 Cft.	17.00	1000 Cft.	480.00
7.	Supplying and filling sand in trenches including watering & consolidation.	9073 Cft.	22.50	100 Cft.	2041.00
8.	Painting lime concrete surface with bitumen.	6038 Sft.	10.50	100 Sft.	634.00
9.	Painting sides of R.C.C. footing.	1864 Sft.	9.50	100 Sft.	177.00
10.	Hollow block masonry 12" in superstructure.	28780 Sft.	1.50	Sft.	43170.00
11.	,, 8"	5540 Sft.	1.00	Sft.	5540.00
12.	,, 4"	2850 Sft.	0.50	Sft.	1425.00
13.	First class Brick work in cement mortar 1:6 in superstructure.	15150 Cft.	111.00	100 Cft.	16817.00
14.	R.C.C. 1:2:4 in lintels including fabrication & centering.	1400 Cft.	4.15	Cft.	5810.00
15.	Reinforced brick work in lintel using 4 Lbs. Cft. steel	100 Cft.	3.00	Cft.	300.00
16.	R.C.C. 1: 2: 4 in louvers to windows 3" thick and 1'—9" projection including centering fabrication and finishing the exposed surface.	290 Rft.	2.54	Rft.	737.00

1	2	3	4	5	6
17.	C.C. 1:2:4: in window sill including necessary form work.	280 Cft.	3.40	Cft.	952.00
18.	R.C.C. 1:2:4 in columns including centering, shuttering and fabrications.	4650 Cft.	5.14	Cft.	23901.00
19.	Extra for R. C. C. 1:2:4 in round columns.	290 Cft.	0.25	Cft.	73.00
20.	R.C.C. 1:2:4 in beams including centering, shuttering, fabrication and finishing the exposed surfaces.	1600 Cft.	4.75	Cft.	7600.00
21.	R.C.C. 1:2:4 in wall beams including centering, shuttering and fabrication.	2320 Cft.	3.83	Cft.	8886.00
22.	Providing and fixing R.S. beams 12" x 5" for a clear span of 19'—9" including encasing with C.C. 1:2:4 and finishing the exposed surface.	15 Nos.	240.00	Each	3600.00
23.	R.C.C. 1:2:4 T-beam roofing with hollow block filling including reinforcement shuttering & centering and finishing the bottom with C M 1:3 for clear spans of				
a)	25 to 30' span	7790	384.00	100 Sft.	29914.00
b)	20 to 25' span	7360	323.00	,,	23773.00
c)	15 to 20' span	5680	259.00	,,	14711.00
d)	12 to 15' span	2820	224.00	,,	6317.00
e)	10 to 12' span	800	202.00	,,	1778.00
24.	R.C.C. 1: 2: 4 in slabs 4" thick including centering fabrication and finishing the bottom.	8510	1.67	Sft.	14379.00
25.	Reinforced brick slab 4½" thick in C.M. 1:3 including centering, reinforcement at 4 Lbs|Cft. and plastering the bottom with CM 1:3.	4010 Sft.	132.50	100 Sft.	5313.00
26.	R.C.C. 1:2:4 in chajja including necessary form work reinforcement and finishing the exposed surface.	1020 Rft.	4.05	Rft.	4131.00
27.	R.C.C. 1:2:4 in stairs and steps with railing including necessary form work reinforcement and finishing the treads risers and sides with marble chips plaster etc. complete.				

1	2	3	4	5	6
a)	6'—9" wide stair G.F. to F.F.	1	1600.00	Each	1600.00
b)	5'—6" wide stair G.F. to F.F.	1	1300.00	Each	1300.00
c)	4'—0" wide stair G.F. to F.F.	1	800.00	Each	800.00
28.	Providing and fixing 1½" thick flush panel doors using hard board including T.W. chaukats and brass hinges and tower bolts.	1660 Sft.	3.35	Sft.	5561.00
29.	1½" teak wood panelled doors including frames and brass fittings.	340 Sft.	3.75	Sft.	1275.00
30.	P|F 1½" thick teak wood fully glazed windows with frames including brass fittings.	4500 Sft.	4.62	Sft.	20790.00
31.	P|F ½" thick T.W. wire gauze fly proof shutters including fittings.	30	3.37	Sft.	101.00
32.	P|F glazed teak wood counter with ¼" sheet glass with cup board.	Rft.	50.00	Rft.	1875.00
33.	P|F Indian Mortice Locks to doors.	20 Nos	25.00	Each	500.00
34.	1½" thick marble chip flooring.				
a)	With a base of 3" lime concrete in G.F.	11860 Sft.	115.00	100 Sft.	13639.00
b)	Without base lean concrete in F.F.	7700 Sft.	93.00	100 Sft.	7161.00
35.	3|4" thick marble chip skirting.	3120 Sft.	93.75	100 Sft.	2925.00
36.	1½" C.C. 1:2:4 flooring including 3" lime concrete base.	32150 Sft.	62.00	100 Sft.	19933.00
37.	3|4" thick cement plaster skirting.	2060 Sft.	37.00	100 Sft.	762.00
38.	Dismantling old brick floor including base concrete.	19000 Sft.	2.50	100 Sft.	457.00
39.	1½" marble chips floor with white cement.	420 Sft.	139.00	100 Sft.	584.00
40.	Picking up lime concrete in first floor before laying floor.	1320 Sft.	2.00	100 Sft.	26.00
41.	½" cement plaster 1:6.	70000 Sft.	13.50	100 Sft.	9450.00
42.	3|4" cement plaster 1:5 including making grooves.	8730 Sft.	27.50	100 Sft.	2401.00
43.	3|4" marble chip plaster with white cement.	2270 Sft.	106.00	100 Sft.	2406.00
44.	Varnishing new wood work.	10900 Sft.	6.62	100 Sft.	722.00

1	2	3	4	5	6
45.	White washing three coats.	103900 Sft.	1.25	100 Sft.	1299.00
46.	Finishing the walls with three coats of snowcem or equivalent.	33600 Sft.	12.50	100 Sft.	4200.00
47.	Terracing with lime concrete laid to slopes..	14900 Sft.	57.00	100 Sft.	8493.00
48.	S|F asbestos cement rain water pipes 4" dia.	2260 Rft.	2.00	Rft.	4520.00
49.	Hollow block coping to parapets.	790 Rft.	1.80	Rft.	1422.00
50.	Wall black boards.	525 Sft.	1.50	Sft.	788.00
51.	Ground lass black boards.	61 Sft.	5.50	Sft.	336.00
52.	Providing Red sand stone foundations.				
a)	6' dia.	3. No.	200.00	Each	600.00
b)	36' dia.	1. No.	1000.00	Each	1000.00
53.	1½" Red stone apron laid over 3" lime concrete.	5660 Sft.	1.72	Sft.	9735.00
54.	1½" Red stone in steps.	130 Sft.	1.50	Sft.	195.00
55.	1½" Red stone in skirting.	54 Sft.	1.75	Sft.	95.00
56.	Red stone veneering 1½" thick.	320 Sft.	3.50	Sft.	1120.00
57.	Pointing with cement mortar on brick work.	4630 Sft.	10.00	100 Sft.	463.00
	Add 7% for cost Index at Aligarh over Delhi Schedule on above items excluding items 4, 5, 10, 11, 12, 49, 50, 51 & 52.				384941.00 22593.00
			Total		407534.00

REPAIRS TO THE ROOF OF THE ELECTRICAL LABORATORY OF THE ENGINEERING COLLEGE, MUSLIM UNIVERSITY, ALIGARH.

Item No.	*Sub-heads and Items of work*	*Quantity or No.*	*Rate*	*Per*	*Amount*
1	2	3	4	5	6
1.	Dismantling brick work in lime mortar.	1362 Cft.	5.00	100 Cft.	68.00
2.	Dismantling R B roof including terracing.	2670 Sft.	6.00	100 Sft.	160.00
3.	R.C.C. 1:2:4 in 4" thick slab.	2670 Sft.	1.67	Sft.	4459.00
4.	R.C.C. 1:2:4 in beams.	273 Cft.	4.75	Cft.	1297.00
5.	Brick work in cement mortar 1:6 using 50% old bricks.	1522 Cft.	83.00	100 Cft.	1263.00
6.	Lime concrete terracing.	2300 Sft.	57.00	100 Sft.	1311.00
7.	Cement plastering with cement mortar 1:6.	1364 Sft.	13.50	100 Sft.	184.00
8.	Cement pointing on brick work 1:2.	1126 Sft.	10.50	100 Sft.	118.00
9.	Making cement parnallahs along walls with cement mortar 1:4.	118 Rft.	30.00	100 Rft.	35.00
10.	9" cornice work in brick with cement mortar.	250 Rft.	0.56	Rft.	140.00
					9035.00
	Add 7 per cent of above total				632.00
		Total			9667.00

S U M M A R Y

i) Additions and alterations to Engineering College Building.	=	Rs. 4,07,534.00
ii) Repairs to the roof of Electrical Laboratory.	=	Rs. 9.667.00
Total	=	Rs. 4,17,201.00
	Say Rs.	4,17,200

ANNEXURE III

CHIEF TECHNICAL EXAMINER'S REMARKS ON THE VALUATION DONE BY THE SPECIAL ENGINEER OF THE MUSLIM UNIVERSITY, ALIGARH FOR THE WORK OF ADDITIONS AND ALTERATIONS TO THE ENGINEERING COLLEGE.

Valuation of the work of Additions and Alterations to the Engineering College was got done by the University authorities through their Special Engineer in order to reply to the audit objections pending against this work for a long time. The valuation made by the Special Engineer was Rs. 4,76,775 against Rs. 4,17,200 arrived at by the C.T.E. Organisation, the difference being Rs. 59,575|-. The University Special Engineer's valuation was based on actual measurements of the various items of work executed except that his measurements for that part of the structure below the ground level was based on the assumption that the foundation consisted of traditional type of brick masonry footings over a base of lime concrete. But on opening out the foundation, it was noticed that the actual foundation sections provided were quite different from the sections assumed in the Special Engineer's valuation. Further though the vertical expansion of one more storey in a portion of the old building was carried out on the existing old foundations, the Special Engineers valuation included the cost of this old foundation also. This mistake, however, does not contribute to the huge difference of Rs. 59,575|- as R.C.C. strip footings were actually provided for the additional blocks, which are costlier than the normal plain concrete foundation and which, therefore, compensates for the Special Engineer's inclusion of cost of a portion of the old foundation also in his measurements. The rest of his measurements, that is measurements for the superstructure are found to be correct except in certain items like R C C. Columns, distempering etc. dealt in detail below. It, therefore, follows that the rates adopted for the various items of work alone account for the huge difference. It will not be out of place, before going into the detail of the various items of work, which account for the difference to mention the following. Rates for many of the items were either available or could be derived from the local P.W.D. Schedule of Rates for the period under consideration. It would have been more appropriate to adopt the local P.W.D. Schedule of Rates in this valuation. As, however, the U.P. P.W.D. Schedule of rates for Aligarh are considered to be low for reasons explained in the main Report, the Central P.W.D. Schedule of Rates for Delhi 1950 with an addition of 7% which reflects more closely the market condition than the local P.W.D. rates and is more reasonable has been adopted in the valuation done by this Organisation. The items which mainly contribute to a difference of Rs. 59,575|- between the figure arrived at by the Special Engineer and that arrived at by us are dealt with below, item-wise:—

1. EARTH WORK:

The Special Engineer in his valuation has adopted a quantity of 37,200 cft. of earth work in excavation at the rate of Rs. 24|- per 1,000 cft. According to the measurements taken by the C.T.E. Organisation, the quantity of earth work involved works out to only 24,600 cft. and a rate of Rs. 18|- per 1,000 cft. based on C.P.W.D. Schedule of Rates has been adopted. The difference in quantity between the two measurements is due to the fact that the University Engineer has also taken into consideration areas

for excavation, where the building was actually constructed on the old existing foundation.

As regards the rate, it is not known on what basis he has adopted a rate of Rs. 24|- whereas the rate admissible according to Delhi C.P.W.D. Schedule of Rates is only Rs. 18|-.

It may also be of interest to note that the quantity of excavation and the rate proposed in the original estimate was 13,000 cft. at Rs. 15|- per 1,000 cft. and that the quantity actually paid to the contractor, M|s. New India Builders vide Bill No. 69 dt 4 5/6 —51) was only 17,606 cft. at the rate of Rs. 15|- per 1,000 cft. It will, therefore, be seen that the quantity and the rate adopted by the C.T.E. Organisation is more than fair. The difference in amount between the Special Engineer's valuation and the C.T.E. in this case is Rs. 449|-.

2. REFILLING OF EXCAVATED EARTH.

The Special Engineer in his valuation has adopted a quantity of 67,596 cft. of earth at Rs. 70|- per 1000 cft. for filling in the plinth (floor), whereas in the valuation done by the C.T.E. Organisation, a quantity of 28,230 cft. at Rs. 17|- per 1000 cft. has been adopted. Thus, the Special Engineer's valuation is in excess of the C.T.E.'s valuation by a sum of Rs. 4252|-, the reasons for the variation being:

The Special Engineer has arrived at a quantity of 67,596 cft. by assuming the depth of filling under the floor to be 1'—7½", whereas the depth of filling assumed by the C.T.E. Organisation is only 6", because the existing plinth height is 1'—3" and after deducting 3" thickness of floor concrete and 6" sand filling only 6" of space is left for earth filling below the sand. The Special Engineer appears to have overlooked the depth of filling involved due to the base concrete and sand filling.

The quantity of earth filling provided in the estimate originally prepared by the University authorities was only 13,000 cft. and the quantity shown in the bill paid to the contractor, M|s. New India Builders (Bill No. 69 dt. 4 5/6 —51) was only 17,636 cft. It would, therefore, be seen that the quantity of 28,230 cft. adopted by the C.T.E. Organisation is more than fair, unless the University Engineer produces any documentary proof in support of the quantity of 67,596 cft. assumed in valuation.

As regards the rate, the University has adopted a figure of Rs. 70|- per 1,000 cft. assuming that the earth had been brought from a distance of half a mile. The rate provided in the estimate prepared by the University is only Rs. 10|- per 1,000 cft. and the rate paid to the contractor, M|s. New India Builders, is also only Rs. 10|- per 1,000 cft. It will, therefore be seen that the rate of Rs. 17|- per 1,000 cft. adopted by the C.T.E. Organisation in their valuation is more than fair, unless the Special Engineer can prove otherwise by documentary evidence that a sum of Rs. 70|- per 1,000 cft. was actually incurred.

3. LIME CONCRETE IN FOUNDATIONS.

For this item, the Special Engineer has adopted a quantity of 12,413|cft. at a rate of Rs. 91|- per 100 cft. in his valuation, and this gives a figure of Rs. 11,296. In arriving at the quantity of 12,413 cft. the Special Engineer has taken into consideration areas over which no lime concrete work was actually done, but where the building was constructed on the existing founda-

tions. Therefore, the actual quantity works out to only 6250 cft. and only this quantity has been taken in the C.T.E's valuation adopting a rate of Rs. 88|- per 100 cft (which is based on C.P.W.D. Schedule of Rates). The difference between the two valuations, therefore, amounts to Rs. 5976|-..

It may also be of interest to note that the quantity shown in the University Estimate was only 5200 cft. at the rate of Rs. 80|- per 100 cft. and that the quantity paid to the contractor, M|s. New India Builders, vide bill No. 69 of $4\frac{5}{6}$ — 51, was only 6035 cft. at Rs. 80|- per 100 cft. It will, therefore, be seen that the C.T.E.'s valuation has been quite liberal in the matter of quantity as well as rate.

4. FIRST CLASS BRICK WORK IN CEMENT MORTAR IN FOUNDATION AND PLINTH.

The Special Engineer in his valuation has adopted a quantity of 9956 cft. of First Class brick work in cement mortar 1:6 in foundation and plinth at Rs. 101|- per 100 cft. This works out to Rs. 10,055|-. Examination of the foundation and plinth revealed that no first class brick work in cement mortar 1:6 was involved and the work done consisted of hollow blocks. The hollow blocks work actually done has already been taken into consideration in the C.T.E's valuation. Therefore, this accounts for a difference of Rs. 10,055 minus Rs. 7910|- = Rs. 2145 (Rs. 7910 represents the value of the hollow block masonry work in foundation and plinth worked out by the C.T.E.).

5. SAND FILLING UNDER FLOORS.

Under this item, a quantity of 18134 cft. was arrived at by the Special Engineer and his value for this item was Rs. 4080 at the rate of Rs. 22.50 per 100 cft. The Special Engineer in his measurements had assumed 6" sand filling even for the old building where the then existed brick flooring was replaced by cement concrete flooring. On opening out the floor in the old building, it was found that there was no sand filling at all. Therefore, in our valuation the quantity was restricted to 9073 cft. as shown in the bill paid to M|s. New India Builders and adopting a rate of Rs. 22.50 per 100 cft. based on the C.P.W.D. Schedule of Rates the difference between the two valuations works out to Rs. 2038|-.

6. R.C.C. 1:2:4 IN RECTANGULAR AND ROUND COLUMNS.

Under this item the Special Engineer has arrived at a quantity of 7234 plus 362=7569 cft. and an amount of Rs. 30745 plus 6174=Rs. 32419 at the rates of Rs. 4.25 and 4.62 per cft. respectively for rectangular and round columns. His measurements were found to be not correct. Therefore, measurements have been taken by technical staff of this Organisation jointly with the Special Engineer and the quantity works to 4650 cft. and the value at a rate of Rs. 5 14 based on C.P.W.D. Schedule (which is more than that adopted by the Special Engineer works out to only Rs. 23,974. Thus in this item, the Special Engineer's assessment is higher by (Rs. 32419—23974) = Rs. 8445|-.

7. R.C.C. 1:2:4 IN CHAJJA.

There is not much difference in the quantities. The Special Engineer had adopted a rate of Rs. 4.75 per rft. which in rather high. A rate of Rs. 4.05 per rft. has been adopted for the item and the difference in amount works out to Rs. 590.00.

8. A) R C C T. beam roofing, with hollow block filling between the ribs etc. for spans from 10 ft. to 30 ft.

and

B) R.C.C. 1:2:4 in slabs 5" thick.

In his valuation the University Special Engineer adopted an area of 36,819 rft. in all, under various spans and has arrived at the cost of Rs. 1,10,938.00. The measurements have been found to be mostly correct except that the 4½" Reinforced Brick slabs had also been included under the item of R.C.C. slab 5" thick. The total after checking of his measurements comes to 37,150 sft. including reinforced brick slabs and the value arrived at now is Rs. 93,185.00. The difference is partly due to higher rates adopted by the Special Engineer as explained below and partly due to his treating of the R.B. slab also as R C C. slab. For spans, say between 25 ft. to 30 ft. the Special Engineer instead of taking the average rate for the two limits had adopted the rate for the higher span which is not correct. These items, therefore, account for a considerable difference of Rs. 1,10,938— 93,185 = Rs. 17,753|-.

9. PROVIDING TEAK WOOD FULLY GLAZED WINDOWS.

There is not much difference between the quantities arrived at by the Special Engineer and the C.T.E. Organisation. The Special Engineer had adopted a rate of Rs. 5.19 per sft for this item which is rather high. A rate of Rs. 4.62 per sft would only be admissible for the type of work done. This, therefore, accounts for a difference of Rs. 23,089 — 20,790=Rs. 2,299|-

10. *Providing flush type doors with hard-board including teak wood chaukats.*

Against this item, the Special Engineer had adopted a quantity of 1671 sft. at Rs. 6.75 per sft. Total value comes to Rs. 11,279|. The measurements adopted by the University Engineer are in order but the rate adopted by him is very high for the type of work done. This item has been analysed and a rate of Rs. 3.35 per sft only would be admissible. This item, therefore, accounts for difference of Rs. 11,279 — 5,561 = Rs. 5,718|-.

11. *Polishing or varnishing to doors and windows*:

Under this item, the Special Engineer had arrived at a quantity of 13,330 sft. and cost of Rs. 1,866|- at the rate of Rs. 14.00 per 100 sft. The area and rate admissible is only 10,900 sft. and Rs. 6.62 per 100 sft. respectively. This accounts for a difference of Rs. 1,144|-.

12. 1|2" *cement plaster* 1.6 *to walls*:

Against this item, the Special Engineer has adopted a quantity of 1,24,655 sft. and a rate of Rs. 13.50 per 100 sft. which works out to Rs. 16,828|-. The measurements have been checked and only a quantity of 70,000 sft. is admissible. The Special Engineer's measurements include old room where neither any additions nor any alterations were carried out and hence these measurements have not been accepted. The value of works done comes to only Rs. 9450|-, thus accounting for a difference of Rs.16,828 — 9.450 = Rs. 7,378|-.

13. i) *Distempering.*

ii) *Snowcem work.*

The Special Engineer in his valuation has adopted a quantity of 1,20,396 sft. of distempering and 55,052 sft. or Snowcem, to ceilings and walls at rates of Rs. 6.50 and Rs. 12.50 per 100 sft. respectively and the total amount for these two items works out to Rs. 14,708|-. Examination of the building revealed that the walls and ceilings have been only white washed and, therefore, the same has been taken into consideration in the valuation made by the C.T.E. Organisation. Against a total area of 1,20,396 sft. plus 55,052 sft. = 1,75,448 sft. adopted by the Special Engineer for the distempering and Snowcem item, the area of white washing admissible is only 1,03,900 sft. The Special Engineer's measurements include old rooms and verandahs where neither any additions nor any alterations were carried out and hence these measurements have not been accepted in the absence of any documentary evidence from the Special Engineer. The value of white washing at a rate of Rs. 1 25 per 100 sft. comes to only Rs. 1,299|-. These items, therefore, account for a difference of Rs. 14,708 — 1,229 = Rs. 13,409|-.

14. *Cement pointing to brick walls.*

Against this item, the Special Engineer has adopted an area of 13,896 sft. at a rate of Rs. 10.50 per 100 sft. and the cost works out to Rs. 1,459|-. According to the measurements taken by us, the area of cement pointing is only 4,630 sft. and a sum of Rs. 10|- per 100 sft. based on C.P.W.D. Schedule of Rates has been adopted. The difference in area between the two measurements is due to the fact that the Special Engineer has taken into consideration some old walls also in his measurements, which does not appear to be new work. The difference in amount between the two valuations works out to Rs. 996|-.

15. *Repairs to the roof of the Electrical Laboratory.*

The Special Engineer's assessment for this is Rs. 14,079 against Rs. 9,667|- assessed by us. The roofing consists of R C C. inverted beams and slabs but the Special Engineer in his valuation has taken this as R C C. Tee beam roof with hollow block filling between the ribs, which mainly accounts for the difference of Rs. 14,079 minus Rs. 9,667|- = Rs. 4,412|- between the two assessments.

It may also be of interest to note that the University authorities had originally estimated the cost of the repairs at Rs. 7,048 and the actual amount spent on these repairs shown in the statement of expenditure furnished by the University was only Rs. 10,690|-. It will, therefore, be seen that the assessment made by us is not far out.

16. i) *Carriage of Badarpur sand from Delhi to Aligarh.*
ii) *Carriage of 1|2" to 3|4" stone ballast from Delhi to Aligarh.*
iii) *Extra due to rise in price of cement.*

Against the first item, the Special Engineer in his valuation had adopted a quantity of 32,612 cft. and a rate of Rs. 35|- per 100 cft. and the amount works out to Rs. 11,414|-.

Against item (ii), he had adopted a quantity of 33,331 cft. and a rate of Rs. 35|- per 100 cft. The amount for this works out to Rs. 11,316|-.

Against item (iii), the Special Engineer has adopted a quantity of 609.5 tons and a rate of Rs. 14|- per ton. The amount works out to Rs. 8,519|- and the total amount for the three items comes to Rs. 31,249|-.

As explained in para 1 of this Annexure, the Central P.W.D. Schedule of Rates for Delhi 1950, with an addition of 7%, which, on the work as a whole, accounts for the difference in price of building materials and cost of labour between Delhi and Aligarh, has been adopted in the valuation done by us. In view of this, extra provision for the above items is not admissible.

Items 1 to 16 dealt with above are those major items, the valuation of which made by the University is higher than that made by us and the gross difference in the two valuations totals up to Rs. 1,08,253. In addition, there are other items which have either not been included in the valuation of the University or in which the University's valuation is lower than ours. The main items which have not been included in the valuation of the University are the following:—

(a) Reinforced cement concrete strip footings in foundation, which has been evaluated by us to cost Rs. 20,077|-.

(b) The additional provision of Rs. 22,593|- made by us over the C.P.W.D. Schedule of rates for Delhi to take care of the Building cost index at Aligarh.

(c) In the rest of the items, which have not been covered above, the variations in the two evaluations are minor and the net under-valuation of the University is Rs. 6,008|-.

The total of these undervaluations referred to at (a), (b) and (c) adds up to Rs. 48,678|-. Therefore, the net difference between the excess valuation and under-valuation made by the University is thus Rs. 1,08,253|- minus Rs. 48,678|- = Rs. 59,575|-. In other words, the valuation made by the University Engineer is in excess of our valuation by Rs. 59,575|- and no convincing reason in support of the same has been advanced. Hence the Special Engineer's valuation cannot be accepted.

L. G. SELVAM
Chief Technical Examiner.
7-x-60.

ANNEXURE IV

Extracts from the Audit Report on the accounts of the Aligarh Muslim University for the years 1951-52 *and* 1952-53.

(xix) *Wood Work*:

It is observed that 216.79 cft. of teak wood was purchased through Mathuradas in September 1951 vide voucher No. 3679|51-52 for Rs. 4,579|8|- (voucher is not in the Vouchers File) and the entire quantity has been shown as issued to the work. Particulars as regards the person to whom it was issued and what quantity of work has been done and the relevant contractor's bill (whether labour rate of full rate) may be specified.

(2) It is observed that the work for providing teak wood doors and windows was given to Sri Abdul Majid of M|s. Waziruddin and Sons at the estimated rates, since probably January 1952. No dates are given in piece work agreement. It is noticed that estimate rate provided for complete supply including nuts, bolts and hinges etc. fully penalled and glazed. In the piece work agreement with this contractor the items nuts, bolts and hinges have been struck off by the Hony S. E. himself. The circumstances under which this has been done should be elucidated. It should also be stated why no tenders were called for this item work where estimated cost was more than Rs. 30,000|-. Further, striking off of certain items from the prescribed specifications has undoubtedly prejudiced the financial interest of the University which needs justification. The contractor has not signed the final bill and is demanding extra payment for these items. Further, it is observed that although the work was being done by the contractor on full rate, including labour and material, side by side purchase of materials for this purpose have also been continued departmentally during the same period and the following payments have been made on this account:

Voucher No.	*Supplier*	*Amount*	
5321|51-52	Habibur Rehman	Rs. 1375-10-0	glass
5547|51-52	Waziruddin & Sons	1109- 8-0	sheets
5546|51-52	Resh Prashad	101- 0-0	
6678|51-51	Waziruddin & Sons	155-12-0	
7315|51-52	Habibur Rehman	1876- 3-0	teak wood
Bill No. 268| 51-51	Waziruddin & Sons	357- 8-0	
288|52-53	Imperial glass works	1928- 0-0	
737|52-53	,, ,, ,,	589-14-0	
1894|52-53	Waziruddin & Sons	1248- 6-0	
2072|52-53	Niranji Lal & Sons	1169- 0-0	
3440|52-53	,, ,, ,,	2751-12-0	teak wood
6548|52-53	Waziruddin & Sons	284- 4-0	
		Rs. 12241-13-0	
6549	Waziruddin & Sons	592-13-0	
,,	Mathuradas	860- 0-0	
		Rs. 13294- 5-0	

Their purchase at the cost of the University was quite uncalled for and if the purchases were made for issue to the contractor, his proper acknowledgements should have been obtained and recoveries made from his running bills. Nothing of this sort has been done. Further, the same contractor under the name of Abdul Majid was doing the work and under the name of Waziruddin and Sons was making supplies of nuts bolts, hinges etc. As no recovery has been made nor any acknowledgements of the contractor for the receipt of the supplies exist on record, the financial interest of the University stand seriously jeopardised. This is brought to notice of the University authorities.

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(xxi) *Water supply & Sanitary installations*

The provision in the estimate was only for Rs. 21,300|- but it is noticed that more than Rs. 40,000|- have been spent over this item of work. It is noticed that the plan and loyout was revised after the estimate was sanctioned and reduced to Rs. 8,991|- and the work was given to one Mr. Saghir Ahmad by personal negotiation. The work was given to this contractor for both labour and material, but side by side, quite a lot of miscellaneous sanitary fittings, such as pipes, elbows, sockets, toes etc. was purchased departmentally, vide suppliers' bills as indicated below:

Voucher No.			
587	51-52	Waziruddin & Sons	202-15-0
387	,,	New India Builders	306- 7-3
387	,,	Saghir Ahmad	306-15-0
2851	,,	Basant Lal	241- 6-0
3016	,,	Mathuradas	1,664- 0-0
3477	,,	Waziruddin & Sons	133- 0-0
335	52-53	Niranji Lal & Sons	215- 2-6
604	,,	,, ,,	257- 6-0
1912	,,	Waziruddin & Sons	761-14-0
4265	,,	Basant Lal	,181- 7-3
			5,260-12-0

Apart from the above small miscellaneous sanitary fittings have been regularly purchased from imprest. There is no detailed account of consumption beyond "issued for the work". The contractor, Saghir Ahmad, has althrough used his own material and a very little quantity of material has been actually issued and cost recovered from him. To audit, it appears that material much more than actually shown, has been issued to the contractor but recovery has not been made in full as would be evident from the following instances:

(1) Mathuradas was ordered to supply sanitary goods costing about Rs. 2,500|- chargeable to the estimate of Rs. 8,911|- on which Mr. Saghir Ahmed was working Honorary S.E. letter No. 550 dated 11-7-51. Mathuradas supplied articles worth Rs. 1,669|- vide voucher No. 3016|51-52. His bill was not paid by the contractor Saghir Ahmad but was paid by the University. The Office endorsed on the bill as follows: "Recoverable from Mr. Saghir Ahmad" (i.e., Builders Corporation). It was struck off by the Hony S.E. and no recovery has been made from Saghir Ahmad's bill for these articles.

In view of the above, audit considers that either most of bills for supply of small sanitary fittings which are not warranted by the volume of work done are either bogus ones or the supplies obtained have been directed to other

channels. As there is no account of the issue of materials, it is not possible to verify their proper disposal. The plea of direct charge to work without any proper stock or material at site account, is not acceptable.

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(xxiv) *Other transactions with Narotam Singh*

It is observed that in respect of this particular contractor two final bills have been prepared and paid. A third bill was also prepared but it has been held up by audit. The first final bill was paid under voucher No. 2170 dated 20-6-52 for Rs. 2,270|10|-. This was against the piece work agreement No. 6|3. A week later, his security deposit amounting to Rs. 2,223|6|- was also refunded with a certificate by the Hony. S.E. that all the work given to him had been satisfactorily completed. It is, however, noticed that immediately another piece work order was drawn in his name. This piece work agreement is not at all signed by the contractor and two bills had been paid for against this work order. The total value of work paid against this work order is Rs. 3,776|13|6. There was no valid justification to finalise the claims of the contractor and to refund this security deposit when he was still working on the same estimate and doing similar work.

(1) Credit due to excess recovery of cement Rs. 518|-:

From the contractor's previous bills recovery has been made for 514 bags of cement actually issued to him. Now it is reduced to 400 bags only on a theoretical calculation of the quantity of cement estimated to be consumed in the quantity of work done. Recoveries of the cost of material are made on the basis of actual issues and not any theoretical calculations.

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(3) Credit due to scaffolding charges Rs. 147|5|-:

Hire charges on scaffolding material recovered from his previous bill amounting to Rs. 147|- are sought to be refunded to him on the ground that it was not provided in the tender. Scaffolding charges at full rate are always recoverable from labour-rate contractors. It is always inherent in any agreement that the hire charges of T & P will be recovered.

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(xxv) *Purchase of Stone grit and Stone dust* :

It is noticed that almost the entire quantity of stone dust and stone grit has been purchased from a single contractor Sri Tirath Ram Ahuja of Delhi without calling for tenders or quotations. Purchases from his contractor alone amount to move than Rs. 25,000|-. The following points in this connection need to be brought to the notice of the University authorities:

(1) Payment of Rs. 1,124|- was made to Sri Tirath Ram under voucher No. 2460 dated 23-7-51 for supply of 2 wagons of stone dust and two wagons of stone grit. The supplier included a sum of Rs. 262|1|- as Railway freight in his invoice for two wagons of dust costing Rs. 342|14|-. The suppliers bill is not supported with the R|R. In fact the term laid down the rate F.O.R. Delhi and the supplier has never paid the Railway freight himself. It is, however, noticed that a Railway receipt for exactly the same amount of Rs. 262|1|-

is attached with Mathuradas's bill, vide voucher No. 2505 of July 1951 for payment of freight in respect of the other two wagons of stone grit. It is strange that the freightage for two wagons of stone grit and two wagons of stone dust is exactly the same. Further, the R.R. quoted for the two consignments despatched from the same Station on the same date are very divergent i.e., (stone dust R.R. No. 73892 and stone grit R.R. No. 323103).

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It is, however, noticed that a sum of Rs. 1,840|4|- was drawn vide voucher No. 3650|51-52 for payment of Railway freight but the R.R. for Rs. 1,316|2|- only is attached. The disposal of the remaining sum of Rs. 524|2|- withdrawn from the bank should be pointed out to audit.

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Further, from the report of the man who went to take delivery of these wagons at the Aligarh Station, it is noticed that the weight of all the six wagons whose delivery was taken on 23-9-51 was short by six tons each and on the next day all the eight wagons had been unloaded all at once even before the Treasurer's man reached the spot. Thus, according to the Treasurer's man's report, the 6 wagons alone were short by 36 tons. It is, however, noticed that the supplier has been paid for the full invoiced quantity or even more as below:

Quantity	Stone grit	Stone dust
As per invoice	6,377	6,368
Quantity paid	6,358	6,574

36 tons is equivalent to about 972 cft. (3,627). The quantity measures should have been short by this quantity at least. It seems the wagons were being received short weight regularly as indicated below but the payments were being made for the full invoiced quantity or even more.

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(xxvi) *Purchase of Parmacem through Narotam Singh*

It is observed that 22 cwt of parmacem has been purchased from a Calcutta firm at rates ranging between Rs. 67|4|- to Rs. 74|12|- with 10% discount. An amount of 424|14|- was spent on freightage and demurrage. As usual, although the supply was obtained direct, it was shown as channelled through Narottam Singh and a commission of Rs. 198|- has been paid. The payment of commission to the contractor in this case was entirely uncalled for, and obviously irregular.

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(xxviii) *Muster Roll payments*

Total payment made from August 1951 to December 1952 comes to about Rs. 6,600|-. There is no record of the work which has been done by this muster roll labour although all categories of labour, including mason, mistries, skilled and unskilled beldars have been engaged. The vague remark 'note susceptible of measurement' without full justification cannot be accepted by audit.

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(xxxi) *Temporary Imprest*

(3) An advance of Rs. 1,000|- on 10-11-50 and another of Rs. 1,000|- on 6-2-51 were given to Shri Abbasi for specific purposes. No account of the same was furnished by him and his allowance was stopped by the Treasurer in May 1951. Later on, these amounts were adjusted by payment of a sum of Rs. 6,000|- to him for preparation of the estimate of the Building for Physics Lab. vide voucher No. 4955 dated 30-11-51.

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(xxxv) *Measurement Books*

Measurement books for supply and for work give unmistakably evidence of manipulations. It has already been pointed out how on his own admission, the Hony. S.E. had overpaid M|s New India Builders to the extent of Rs. 5,603|3|- by recording incorrect measurements and Rs. 25,300 in cash by giving entirely false certificate.

* * * *

(d) *Page* 26—*M.B. No.* 161 *A*

There entries were made originally in the name of Narotam Singh by the Overseer on 19-7-1952. The name of Narotam Singh was struck off subsequently and replaced by 'Ladu' and Payment made in the month of August, 1952 vide bill No. 371 for Rs. 108|3|-. On the same page, yet another entry was recorded by the same man first in the name of Yad Ram. His name was struck off and replaced by Ladu, which was again struck off and replaced by Yad Ram and payment made vide Bill No. 391 for Rs. 342|1|6 in August 1952.

* * * *

(h) *Page* 62 *M.B. No.* 161

Entry was made by the Accountant on 9-5-52 in the name of M|s Basant Lal & Co. for the amount of Rs. 267|7|9 but it has not been signed by the Hony. S.E. Payment has, however, been made to the contractor in August '52.

* * * *

(xxxvi) *Register of Works and Contractor's Ledger*

No register of Works Expenditure showing the estimated quantities of work to be done against each item sanctioned in the estimate and the progress of work done in juxtaposition to the progress of expenditure has been maintained either by the Hony. S.E.'s Office or the Treasurer's Office, with the result that there was absolutely no control over expenditure.

* * * *

(xxxvii) *Rise of expenditure and consequent revision of estimate*

3. FICTITIOUS ADJUSTMENT OF OUTSTANDING ADVANCES

The Accounts Organisation of the University was also functioning to suite the convenience of the Supervising Engineer. He was paying regular allowances to the university Store-keeper, Bill clerk and to the cashier of the Treasurer's Office for some time till it was stopped by the Treasurer. All his indents for steel and cement etc. were promptly attended to and no check was exercised over the limit of issue. All his bills were passed for payment without

the least delay or scrutiny. To cap all the aforesaid irregularities, an entirely fictitious journal entry was passed and incorporated in the account of 1951-52, adjusting all the advances amounting to Rs. 39,942|14|- sanctioned from time to time to or on the recommendation of the S.E. without any adjustment account thereof supported with details of expenditure and relevant vouchers. This sum of Rs. 39,942|14|- contained advances to M|s International Syndicate, Bombay, M|s New India Builders, Mr. Sangram Singh etc. These advances were cleared off from the suspense head 'Advances' in the Ledger and charged to 'Building' and the accounts closed.

REPORT OF THE CHIEF TECHNICAL EXAMINER ON THE CONSTRUCTION OF GEOLOGY LABORATORY AT MUSLIM UNIVERSITY, ALIGARH.

Terms of reference:

"To examine the quality and quantity of work done and correctness of payment made thereof".

The various particulars of the work, which is now nearing completion, are furnished below:

Name of contractor:	M/s Ford and Macdonald Private Ltd., Kanpur.
Amount of contract:	Rs. 2,86,145 less 5%.
Total amount paid up to date according to the last running bill:	Rs. 2,84,199.
Date of commencement:	24-12-1957
Time limit:	12 months from the date of commencement.
Present progress:	Nearing completion.

(a) *Observations regarding quality*:

An inspection of the work done so far revealed the following defects:

i) The lime mortar in first class brick is of poor quality and has not hardened.

ii) As per specifications, first class teak wood has to be used for doors and windows. But the wood used is not of first class. Several frames, styles and architraves have already cracked. The joinery is poor.

iii) The lime concrete terracing has cracked at a number of places. The quality of lime concrete by the side of the mumty and in the rear portion of the terrace is poor and the mortar powders off when lightly tapped.

iv) The finish of plaster on the walls is not uniform. The bottom of RCC chajjas is rough.

v) The recesses provided in the floor for door-mats is not of proper size and is not exactly in the middle of the opening.

vi) The paint applied to windows is of poor quality and has already started fading.

(b) *Technical Examination of Bills in regard to the quantities and correctness of amount paid.*

The quantities paid were test checked and found to be in order except that the mode of measurement for RCC work flooring were incorrect. The defects noticed in the case of this work are identical to those enumerated in the case of Physics Laboratory. However, in this case, the exact amount of over-payment could not be worked out for want of details.

(c) *Extra Items*:

For extra items of 4½" thick lime concrete in roof terracing, rates of Rs. 42|79 per 100 sft. for the ground floor and Rs. 44|67 per 100 sft. for the first floor were paid. The reasonable rate for these items is only Rs. 33|63 per 100 sft. and on this score, an overpayment of Rs. 991|- has been made, as per details given in Annexure I.

(d) *Consumption of Cement*:

The theoretical consumption of cement required for the work executed so far works out to 350.0 tons, but the actual quantity issued to the contractor is only 315.5 tons. Thus, a quantity of 17 tons of cement, after allowing for 5% variation, has been less used on the work. This has benefited the contractor to the extent of Rs. 2,210|-, apart from affecting the quality of the work to that extent.

(e) *Conclusion*:

As mentioned under the observations regarding quality of work, there were a number of defects in the several items of work executed. It has not been possible to work out the exact overpayment involved on this account. But, due to the adoption of Second Class teak wood as against First Class specified for the doors and windows, an overpayment of Rs. 722|- has been made as per details given in Annexure I.

The total financial benefit to the contractor works out to:

1) Less use of cement	Rs. 2,210|-
2) Excessive rates for extra items	Rs. 991|-
3) Use of inferior quality of wood	Rs. 722|-
	Rs. 3,923|-

The above figure of Rs. 3,923|- does not include the overpayment involved due to wrong mode of measurement of RCC work, as full particulars were not available in respect of the same.

The various defects in construction could have been avoided if the work had been properly supervised and use of proper quality of materials had been insisted upon by the Engineers at site.

L. G. SELVAM
Chief Technical Examiner.
7-x-60.

ANNEXURE I TO THE REPORT ON THE CONSTRUCTION OF GEOLOGY LABORATORY AT MUSLIM UNIVERSITY, ALIGARH

Abstract Of Overpayment

S. No.	Item No. of the Running Bill	Brief description of the item	Quantity	Excess rate paid	Amount of excess payment
		(A) Due to Extra items			
1.	37 for Block A	Lime concrete terracing	6848 Sft.	7.16 per 100 Sft.	490.31
2.	38(a) for Block B	—do—	2178 Sft.	7.16 per 100 Sft.	155.94
3.	38(b) for Block B	—do—	3813 Sft.	9.04 per 100 Sft.	344.70
			Total		990.95
		(B) Due to use of Second Class Teak Wood			
1.	41(a) for Block B	T.W. Windows	913 Sft.		
2.	41(b) for Block B	—do—	531 Sft.		
			1444 Sft.	0.50 per sft	722.00

REPORT OF THE CHIEF TECHNICAL EXAMINER ON THE CONSTRUCTION OF PHYSICS LABORATORY AT MUSLIM UNIVERSITY, ALIGARH

Terms of reference:

To examine the quality and quantity of work done and correctness of payment made thereof up to date.

The various particulars in respect of this work which is still in progress, are furnished below:

Name of contractor: Ford & MacDonald Private Ltd., Kanpur.

Amount of contract:	Rs. 5,01,543|-
Amount sanctioned for the Project:	Rs. 8,50,000|-
Total amount paid up to date according to the last running bill.	Rs. 3,89,268|-
Percentage progress: at the time of inspection.	74% approximately
Date of commencement	18-12-57 for Blocks A, B & D 18-9-59 for Library Seminar Block
Time limit	12 months from the date of commencement.

Date of payment of running bills:

(a) 10th running bill for Block A (Rs. 2,85,838) paid on 2-3-60 vide M.B. No. 314 pages 148-186.

(b) 3rd running bill for Block B (Rs. 28,116) paid on 17-1-59, M.B. No. 265.

(c) 5th R.B. for Block D (Rs. 63,429\|-) paid on 28-5-60, vide M.B. 297 page 79.

(d) 1st R.B. for Library & Seminar Block (Rs. 11,885) paid on 25-1-60, vide M.B. 345, pages 1 to 80.

Observations regarding quality :

An inspection of the work done so far has revealed the following defects:

(1) Hair cracks have appeared in the rendering done on R.C.C. Columns, because the surface of columns were not hacked before plastering.

(2) Cement plaster of walls in the lecture theatre is poor. Cracks have appeared on the surface.

(3) Ceiling plaster in the verandahs is also showing hair cracks. Finish of plaster is not uniform.

(4) Sand does not appear to have been screened and it contains lumps of clay.

(5) Along the passage, a few patches of plaster were found to be loose due to presence of lumps of clay.

(6) Timber used in chowkhats is not first-class as specified in the agreement. The joinery is poor. Dead knots and cracks are present in the wood work.

(7) Lime terracing at the eastern end of the building was found to be of poor quality. Lime surkhi mortar was coming out easily when tapped.

(8) Centering of R.C.C. slab over the false ceiling of corridor is poor with the result that finished concrete has depressions.

(9) Ceiling plaster of false ceiling is cracking. The surface was not properly hacked before applying ceiling plaster.

(10) Through cracks have appeared in the walls of Lecture Theatre due to defective design. R.C.C. band of architraves of openings have been abruptly stopped at the centre of the wall and the cracks have developed at this point of least resistance. The University Engineer has been advised to refer this point to the Structural Engineer with a view to take remedial action.

Technical Examination of Bills in regard to quantities and correctness of amount paid.

Quantities paid in the last running bills were test checked and were found to be in order, except for the measurements of R.C.C. work and flooring. The mode of measurement in the case of R.C.C. work and flooring were found to be defective.

According to the conditions of contract, (vide page 22 of agreement), the following mode of measurement for R.C.C. work should have been followed:

(1) The columns should be measured in cft. of the actual work done, between the slabs.

(2) All beams should be measured below the slab in cft. of the actual work done.

(3) Where beams and columns meet, the columns shall be measured between the slabs, beams being measured from column to column.

Actually while recording measurements for the running bills, the measurements of columns were wrongly recorded up to the bottom of the beams and the measurements of beams were recorded inclusive of bearing in the columns. The measurements were based on the dimensions found in the drawings. Actual measurements were taken at site.

For a sample check, the entire measurements of R.C.C. items were got remeasured and checked at site to check the difference between the quantities payable according to the terms of the contract and those recorded in the 10th running bill (last running) for Block A. A comparative statement showing the difference in quantities in the various items of R.C.C. is attached. (Appendix I). This statement will show that R.C.C. beams and R.C.C. slabs 4" and 5" thick were over-measured resulting in excess payment to the extent of Rs. 2,770.31 and that R.C.C. rectangular columns were wrongly measured resulting in under payment to the extent of Rs. 1,393|60.

The measurements of 1-1|2" thick cement: concrete flooring were also recorded on the basis of dimensions given in the Plan and not on the basis of actual measurements at site. Deductions were not made for channels, ducts and column projections. Revised measurements of flooring on the basis of actuals differ from those recorded in the 10th running bill to the following extent:

Ground floor:

As recorded in the 10th R.B.	..	..	..	=10,258 sft.
As per actuals at site	..	..	..	=10,695 sft.

First floor :

As recorded in the 10th R.B.	..	..	..	=10,505 sft.
As per actuals at site	..	..	..	=10,004 sft.

These differences indicate that the measurements were not actually taken at site, but copied from the plans.

The following irregularities in recording measurements were also noticed:

Measurements for steel are recorded after the measurements for R.C.C. work are recorded, vide M.B. No. 314 pages 176, which shows that the measurements for steel were not actually recorded at site but entered in the M.B. after the steel was covered, which is irregular. These measurements have been recorded by the Overseer. But they have not been test checked by any other higher officer before they were covered. At the time of inspection, the Engineers concerned could not produce any authentic initial records showing the entries made for steel measurements before they were recovered.

A number of over-writings are noticed in the neasurement books, vide M.B No. 265, pages 20 and 26. This is irregular.

Apart from the items of work entered in the agreement, other items cropped during execution and payment for such items have been made to the contractors. The rates paid for some of these items are excessive resulting in an overpayment to the extent of Rs. 1488 as given in Annexure II.

The theoretical requirement of cement for the work carried out upto 17-6-60 works out to 420 tons after allowing 5 per cent variation. But the actual quantity of cement issued to the contractor upto that date is 389 tons only which indicates that about 31 tons of cement have been consumed less on the work. Therefore the contractor had benefitted to the extent of Rs. 4030|- and the quality of work done is poor to this extent.

Conclusion

The various defects pointed out in the quality of the work; less use of cement, wrong and irregular mode of recording measurements, and the overpayments to the extent of Rs. 6,895|- would not have occurred, had there been proper check on the work at various levels and rules regarding recording of measurements had been observed. No check on the quality of work appears to have been exercised by higher officers as is evident from the lack of test check of measurements though they are expected to exercise a percentage test check. However, the higher officers have been quite liberal in sanctioning rates for extra items.

L. G. SELVAM
Chief Technical Examiner
7=×=60.

APPENDIX I TO THE REPORT ON THE CONSTRUCTION OF PHYSICS LABORATORY AT MUSLIM UNIVERSITY, ALIGARH

Comparative statement showing difference in quantities in the various items of R.C.C.

	Brief description of item	As paid in the 10th running bill				As per actual measurement.					
		Unit	Quantity	Rate	Amount.	Quantity	Rate	Amount.	Excess	Less.	
1.	R.C.C. Columns (Rectangular) G.F. (A)	Cft.	1635 cft.	3.75	6131.25	1854.62 cft.	3.75	6954.82		823.57	
	F.F. (b)	,,	1128 cft.	3.80	4284.40	1261.32 cft.	3.80	4793.01		508.61	1393.60
	S.F. (c)	,,	136 cft.	3.85	524.66	152.23 cft.	3.85	586.08		61.42	
2.	R.C.C. round or elliptical Col.	,,	Nil	—	—	98.47 cft.	4.00	393.88		393.88	
3.	R.C.C. Beams (a)	,,	3650 cft.	4.75	17337.50	3348.42 cft.	4.75	15904.99	1432.51		
	(b)	,,	3174.55 cft	4.85	15396.56	3031.87 cft.	4.85	14704.76	691.80		
	(c)	,,	507 cft.	4.95	2509.65	506.64 cft.	4.95	2507.86	1.79		
4.	R.C.C. Slabs (a) Ground Floor Sft.										
	i) 4" thick slab	,,	14748 sft.	1.40	20647.20	13622.80 sft.	1.40	19071.92	1575.28		
	ii) 6" ,,	,,	Nil	—	—	508.17 sft.	2.25	1143.38		1143.38	
	iii) 6½" ,,	,,	Nil	—	—	94.96 sft.	2.40	227.90		227.90	
	iv) 4" Plenum slab	,,	Included in item		(1)	2531.67 sft.	1.40	3544.33		3544.33	
	(b) First floor : i) 4" thick slab	,,	14165 sft.	1.45	20539.25	10000.51 sft.	1.45	14500.78	6038.47		
	ii) 6" ,,	,,	Nil	—	—	506.46 sft.	2.30	1164.85		1164.85	
	iii) 6½ ,,	,,	Nil	—	—	112.50 sft.	2.45	275.62		275.62	
	iv) 4" Plenum slab	,,	Included in item		(i)	2926.75 sft.	1.45	4243.78		4243.78	
	(c) Second floor i) 5" thick slab	,,	1025 sft.	1.75	1793.75	557.25 sft.	1.75	975.18	818.57		
	ii) 4" ,,	,,	Nil	—	—	1597.92 sft.	1.50	2396.88		2396.88	
	iii) 3½" ,,	,,	Nil	—	—	80.00 sft.	1.20	96.00		96.00	
									10558.42	14880.22	
	Deduct for measurements of 4" Plenum slab-included in 4" R.C.C. slabs in the measurements. of running bill (i.e. 3544.33 plus 4243.78=7788.11).								7788.11	7788.11	
	Net excess payment.								2770.31		
	Net under payment for R.C.C. columns.								Rs. 1393.60		

ANNEXURE II TO THE REPORT ON THE CONSTRUCTION OF

PHYSICS LABORATORY AT MUSLIM UNIVERSITY, ALIGARH.

Abstract of Government

S. No.	Item No. of the Running bill	Brief description of item	Quantity	Excess rate paid	Amount of Excess payment
1.	25 of Block A.	Roof terracing	9759 sft	7.16 per 100 sft	698.74
2.	13(b) of Block B.	R.C.C. slab 5" thick	2071 sft	4.70 per 100 sft	97.34
3.	13 of Block C.	R.C.C. slab 4½" thick	1279 sft	16.46 per 100 sft	210.52
4.	8 of Block D.	R.C.C. Cills 1:3:6	102 sft	2.11 sft	215.22
5.	28 of Block D.	Roof terracing	3721 sft	1.16 per 100 sft	266.42
				Total :	1,488.24

REPORT OF THE CHIEF TECHNICAL EXAMINER ON THE CONSTRUCTION OF THE LIBRARY BUILDING, MUSLIM UNIVERSITY, ALIGARH

Terms Of Reference :

"To examine the quality and quanity of work dond and correctness of payments made thereof upto date".

The various particulars of this work are furnished below:

Name of contractor:	M|s. Gannor & Dunkerley Ltd.
Amount of contract:	Rs. 8,93,875 less 2% = Rs. 8,75,802.
Amount of sanctioned estimate for the project:	Rs. 16,49,800.
Provision in the sanctioned estimate for the building work.	Rs. 8,94,000.
Total amount paid up to date according to the last running bill:	Rs. 8,06,456|51.
Date of commencement of work:	13.11.1956
Date of completion:	31.5.1959
Date of payment of last bill (XI Running bill):	19.10.59
Amount of final bill as anticipated by the University:	Rs. 8,22,077 plus 83,183|- expenditure incurred separately towards supply and fixing of steel doors and windows.

The tender of M\|s. Gannon & Dunkerley included the following items also:

Item	Quantity	Rate
Providing & Fixing steel doors & glass partitions	253 sq. ft.	Rs. 9|8|- per sq ft.
Steel windows	8203 sq. ft.	Rs. 7|4|- per sq. ft.

The total amount of the contract for these two items was Rs. 61,876|-. For reasons, which the University Engineers could not explain, these two items were deleted from the contract of M|s. Gannon & Dunkerley. Orders for supply of the doors and windows were placed directly by the University on M|s. India Galvanising Co. and the fixing of the same in position was done through another agency. As against Gannon & Dunkerley's average contract rate of 7,32 per sq. ft., the University got the work done through other agencies mentioned above on an average rate of Rs. 9.45 per sq. ft. (Vide Appendix I). The loss incurred by the University on this account works out to Rs. 18,738|-.

a) *Observations on quality of work* :

An inspection of the work excepting those which had been covered over, revealed that the construction and finish of the building were generally satisfactory except for the following:

1. The joints between the panels of the concrete pavement at the entrance are finished crudely.

2. In the rear platform the joints of the Agra stone slab flooring have not been filled properly.

3. The marble steps of the main staircase have cracked in the middle.

4. The pink marble veneering on the wall of the main hall do not have proper matching grains and fractures were noticed.

5. The finish of the snowcem on the external faces was uneven and patchy.

6. The slope of the patent stone flooring provided on the first-floor terrace is inadequate for effective drainage.

b) *Measurements.*

The test check of the measurements entered in the Measurement Book revealed that they were generally in order.

c) *Extra Item.*

The rate paid for an extra item consisting of 1½" of C.C. flooring is Rs. 62.50 per 100 sq. ft as against a fair rate of Rs. 44|- per 100 sft. The total extent of work involved is 3972 sq ft. Therefore an excess payment of Rs. 734|82 less 2% rebate=Rs. 720.12 has been made to the contractor.

34 tons of cement has been issued to the contractor in excess of the theoretical requirements for the work after making due allowance for 5% variation. According to the terms of the contract, the excess cement issued should have been recovered at double the issue rate. A sum of Rs. 3128 is therefore recoverable from the contractor on this account.

Electrical Installation :

The Electrical installation work has been got done through two agencies:

1) M|s. B.N. Arora & Co. Total amount of work awarded to this contractor is Rs. 53,974.

2) M|s. General Electric Co. Total amount of work awarded—Rs. 71,893|25.

Examination of this work did not reveal any serious defects. A note prepared in this connection is attached (Annexure II).

Conclusion.

The defect pointed out in the quality of the work is not very serious and could have been avoided had there been proper check and supervision on the work. It would, however, appear that there had been utter lack of aesthetic sense on the part of the Engineers for having allowed the marble veneering work in the main hall to proceed without matching grains and for not rejecting stones with the defects and fractures. After all the marble veneering work was to serve as a feature. Therefore a defective work of this nature is worse than not providing it at all. The contractor would have had to spend more money if he had to select stones with matching grains. It is presumably on this score the contractor was allowed to proceed with the work with whatever stones he had brought to the site of the work. It is not possible to arrive at the amount which the contractor would have saved on this account in the absence of cost of materials at the source. Apart from the overpayment of Rs. 3848|- on account of non-recovery of cost of cement excess issued and excess amount of Rs. 720.12 paid for the extra item, the University had to incur an extra expenditure of Rs. 18738|- due to deletion of the steel door and window

items from the main contract and getting it done through other agencies. Total financial implication is Rs. 18738 plus 3848=Rs. 22,586 excluding the unassessed amount on account of marble veneering work.

From the particulars furnished above it would appear that there had not been proper appreciation of the contract conditions and that decisions had been taken without examining financial implications.

L. G. SELVAM
Chief Technical Examiner
7-x-60.

ANNEXURE I TO REPORT ON LIBRARY BUILDING—STEEL DOORS AND WINDOWS

Deleted from Agreement of M|s Gannon Dunkerley

Item no.	Brief Description	Qty.	Rate	Amount
IX|1	P & I Steel doors & glass partitions	253 Sft	Rs. 9|8 sft.	Rs. 2,404
X|I	P & I steel windows	8203 sft.	Rs. 7|4 sft.	Rs. 59,472
	Total	8456		Rs. 61.876
		Rs. 7.32 (Average rate)		

Executed through M|s Galvanising Co. & Others

Item	Brief Description	Qty	Rate	Amount
	Expenditure incurred towards supply	..	Rs.	77,435
	Expenditure towards fixing	..		5,748
	Total Expenditure	..	Rs.	83,183

Total area of doors and windows
(As per page 201 of M.B. 264) = 8797 sft.
Therefore Average rate = Rs. 9.45|sft.

Excess cost = 8797 x (9.45 — 7.32)
= Rs. 18,738|-

ANNEXURE II

Library Building—Electrical Installations.

The work was found to be generally satisfactory except for the following minor defects.

Work carried out by M|s. B.N. Arora & Co.

(a) One switch board in the general Reading Room on ground floor was not earthed with a loop earth wire as required according to the contract conditions.

(b) Two circuits should have been drawn for the lights and fan points controlled from this board but only one circuit was actually drawn from the distribution board. Approximate reduction on these accounts [(a) & (b)] would work out to not more than Rs. 50|- approximately.

(c) Under item 7 of the contract Phillips T.M.C. 50|240 fittings with two 40 wtts tubes etc were required to be provided. These fittings have been provided in the main entrance hall with louvre arrangement. The fittings provided are not Phillips T.M.C. inasmuch as the base on which holders tubes etc. have been mounted is not the same as in case of the Phillips fittings. 56 such fittings have been provided and payment for the same has already been made. It was stated by the Electricity Officer, Aligarh Muslim University that the base of the Phillips T.M.C. fittings was suitably modified and the depth was reduced to avoid undesirable shadow effect by providing more gap between the louvres and the tubes. It was also stated that this arrangement required special ballasts which are more costly than the normal chokes provided in TMC fittings. On account of the deviations effected, there would be no financial benefit to the contractor, but the deviations should have been properly recorded in the M.Bs. And the rates for the deviated items should have been checked before making payment. The should atleast be done now since the final payment has not been made as yet.

As the wiring has been carried out in recessed conduit system no comments can be offered about the quality of work which is not visible now.

Payments amounting to Rs. 1774|50 for additional|substituted items were made in the last running bill (4th running bill) as detailed below:

a) 6 way (4 circuits) Boards for power line with 15 amp MEM switch .. 5 Nos. 180|-	900|-
b) i. Down rod for fans 122 ft. @ 2|-	244|-
ii. Fan wiring charges 45 @ 1|-	45|-
iii. Nippling charges 45 @ 1|-	45|-
c) Down rod for light fittings 154 @ 2|-	308|-
d) Conduit laying for telephone pts. 186 ft @ 1|25 ft	232|50
	1774	50

The rates for items (a) and (b) (i), (c) and (d) are derived from the tendered rates and are reasonable. These items account for Rs. 1684|50. The rate for b (ii) is reasonable as per market rates. As regards b (iii) the rate is Rs. 1|- per ft. against CPWD rates of Rs. 1|1 (as per Schedule of Rates 1955) and is reasonable.

Work carried out by M/s General Electric Co.

The work has generally been carried out according to contract specifications. No defects worth mention were noticed.

The quantities of work paid for in respect of the Library building are less than the actual work done. Final payments have not been made as yet for any of the two contract works mentioned above.

REPORT OF THE CHIEF TECHNICAL EXAMINER, MINISTRY OF WORKS, HOUSING & SUPPLY ON THE WORK OF ADDITIONS & ALTERATIONS TO THE VICE-CHANCELLOR'S RESIDENCE (UNIVERSITY SENIOR STAFF BUNGALOW NO. 11) ALIGARH

Terms of reference :

"To examine the equality and quantity of work done and correctness of payments made thereof upto date."

History : Bungalow No. 11, University Road, which is now being used as the Vice-Chancellor's residence, is said to have originally consisted of mud walls and thatched roofs over a large portion of the building. An estimate amounting to Rs. 30,000 was, therefore, prepared for re-roofing and some other items of work and was placed before the Building Committee in May, 1957, for their consideration. It appears that the Building Committee suggested certain modifications, such as changing of the proposed R.B. roof to R.C. roof and construction of pucca walls etc. In compliance with the above decision, M|s Master Sathe & Kothari, Architects of Delhi, were requested on 2-9-57 to inspect the building and give their suggestions. The Architects after examination of the building suggested reconstruction of the existing foundations to more permanent specifications as the existing foundation was built with sun-dried bricks. A revised estimate amounting to Rs. 81,800 covering the proposals made by the Architects was prepared and this was ultimately sanctioned by the Executive Council in its meeting on 18-11-57.

2. In the meantime tenders for re-roofing of the building according to the original proposal appear to have been called in April 1957 and 4 contractors responded. The lowest tenderer appears to have backed out and the other tenders were not considered by the University authorities. Ultimately one Shri Kazmi, who also tendered earlier, but was not the lowest, was asked to do the work by negotiation on the basis of rates to be fixed by the Architects later.

3. Shri Kazmi gave his quotations in October 1957 and these were examined by the local expert committee and found to be high. It was suggested that the contractor might be prevailed upon to reduce his rates for items for which he had quoted high rates. Presumably, the contractor was not agreeable to this and, therefore, the Building Committee decided that his rates should be referred to the Architects for their opinion. However, ultimately the rates as recommended by the Honorary Treasurer, Shri Rauf were accepted by the Vice-Chancellor for an amount of Rs. 39,930 in respect of the building portion of the work on 20-3-58, and on the basis of this, an agreement was entered into, excluding wood work, stone facing and mosaic flooring items, as the rates quoted by this contractor for these items were considered high.

4. With a view to inspect the work done by this contractor, the 4th and last running bill paid to this contractor was examined and it was found that the contractor had been paid a sum of Rs. 73,465-11-0 against the contract amount of Rs. 39,930. While the contract included only 24 items, the total number of items according to the 4th running bill is 103. The large number of extra items is attributed to the change from the original proposals and revision of specifications. It is not possible to check in detail the difference between the work as originally contemplated and as actually executed, as detailed

drawings in respect of the same is not forthcoming. However, the work as actually executed has been examined and it has been found that the quantities of work actually done generally tally with the quantities entered in the 4th running bill, except for petty differences in respect of the mode of measurement of brick work and slight errors in measurement of RCC work, which account for a total difference of about Rs. 400|. It may, however, be mentioned that several irregularities exist in the manner of recording measurements and maintenance of measurement books. Entries have been made in the measurement book in black lead pencil, instead of copying pencil or ink. Blank spaces have been left between measurements. Measurements have not been recorded chronologically, indicating that they were not actually entered at site. Unattested corrections and over-writings exist in the measurements. Measurements entered by the subordinates are not test-checked by higher officers and certificates given to this effect. (Measurement Book No. 243 refers). Maintenance of Measurement Book in this fashion leaves scope for interpolations and enhancement of quanities and other malpractices, and is totally opposed to the various rules governing the maintenance of M. Bs.

5. Examination of the rates sanctioned for the 79 extra items revealed that an amount of approximately Rs. 3250|- has been paid in excess than what is considered reasonable by us. The details of the excess payment worked out in respect of the various items are attached and forms Annexure I to this report.

6. An examination of the consumption of cement on this work reveals that as against the theoretical requirements of 97.87 tons, only 81.25 tons has been issued on the work, thus indicating a short consumption of 12% over and above the permissible variation of 5%. The contractor has, therefore, benefited to an extent of Rs. 1600|-.

7. The quality of the work that could be examined at this stage, excluding those which are covered over, is generally satisfactory. Though the quality and quantity are generally satisfactory, the contractor appears to have benefited to an extent of Rs. 3250|- on account of high rates for extra items, and Rs. 1600|- on account of short use of cement, i.e. in all, a sum of Rs. 4850|-, excluding a sum of Rs. 400|- on account of wrong mode of measurements.

8. *Wood Work*: For the item of wood work, which covers doors, windows, cupboards etc., an amount of Rs. 20,680|- was provided in the estimate. It appears from the records that there was no response to the tenders called at the outset. The work was, therefore, entrusted to one Shri Ajit Singh in May 1958 on negotiation at the rates recommended by the Architects. The contractor was asked to start this work on 13th May 1958. The details of the work awarded are:

Ballarshah teakwood frame and flush Sitapur shutters	.. ..	Rs. 10|50 per s. ft.
Ballarshah teakwood frame and wire gauge shutters	.. ..	6|50 ,,
Ballarshah teakwood frame and glazed windows	.. ..	8|75 ,,
Ballarhah teakwood frame and glazed doors with plate glass	.. ..	9|75 ,,

On 15th May itself, the contractor wrote to the University authorities that:

"The wood work is now being done in Burma teak instead of Ballarshah teak, which was not available in sufficient supplies, and in good quality. In consequence of this, the rate increase would be 0-10-0 per s.ft. in each of the items. This may kindly be confirmed so that there is no misunderstanding at a later date."

The change appears to have been approved by the University Engineer without verifying whether Bullarshah teak was actually available or not, and also withiut finding out whether the timber actually supplied by the contractor was Burma teak.

9. The work actually done at site was examined with reference to the final bill paid to Shri Ajit Singh. The total amount of the final bill works out to Rs. 25,776 as against the estimated amount of Rs. 23,930 and it contained several deviated and extra items, which included certain stone facing work also. The rates for the deviated and extra items have been analysed by us and it is found that the rate actually paid to the contractor is in excess of the fair rate worked out on the basis of the Schedule of Rates applicable for the relevant period, by an amount of Rs. 7282|82 nP., as per abstract attached (Annexure II). (The sum of Rs. 7282|82 includes a figure of Rs. 1233|54 paid to the contractor towards use of Burma teak. This has not been admitted as the work actually done does not appear to be that of Burma teak).

10. Measurements were generally in order except in the case of measurements for stone facing, where due to wrong mode of measurement adopted, the contractor has benefited to the extend of approximately Rs. 250|-.

11. It would appear that had open tenders been called and proper rates fixed before commencement of the work, the excess expenditure of Rs. 7282 now incurred due to award of work by negotiation without proper settlement of rates could have been avoided.

Water Supply and Sanitary Installations— Vice-Chancellor's residence.

12. The amount provided in the estimate to cover the cost of Sanitary and Water Supply installations was Rs. 3260|-, arrived at on the basis of 5% of the cost of the building. It is seen from the records that the Architects for the work, M|s. Master Sathe & Kothari invited Delhi firms to see the site of the work and submit their quotations direct to the Vice-Chancellor for the supply and installation of the Sanitary and Water Supply fittings. 3 quotations were received and the lowest of one M|s. Textile Stores for Rs. 6399|- was accepted and the work was proceeded with. It appears that additional works were awarded to them subsequently and the amount of the final bill works out to Rs. 9996|58 as against the original estimated amount of Rs 3260|-. A scrutiny of the bill reveals that the huge difference in expenditure is due to very high rates paid for fittings of foreign manufacture. Rates paid for some of the items are:

P. & F.	C.P. Towel rail	Rs. 50|- each
"	Built in type soap dish	50|- "
"	European type W.C. with low level cistern.	825|- "
"	Hot and cold mixing fitting with shower	275|- "
""	22" x 16" wash hand basin with pedestal	505|- "

13. The rates paid for the above items would go to indicate that the fittings have been purchased at fancy prices prevailing in the market due to total ban on the import of such foreign goods. The work could have been got done at much cheaper rates by adopting Indian substitutes, though they have not yet come up to the standard of foreign fittings.

14. *Electrical Installations.* An amount of Rs. 8334|- was spent on this work and examination of the various items of work actually done compares favourably with payment made. The expenditure of Rs. 8334|- works out to 12.8% of the building cost and compares favourably with the percentage normally allowed for electrical installations in the Central P.W.D.

15. *Conclusion.* From the particulars furnished above, it would appear that there was no proper appreciation of the scope of the work to be done at the outset. Estimates have been revised from time to time due to change in requirements and specifications adopted. As a result of award of work based on negotiations, without open call of tenders, and non-fixation of rates before commencement of the work, a sum of Rs 10,534 would appear to have spent in excess, excluding the cost of the Sanitary fittings purchased at high rates. A further sum of Rs. 500|- has been paid in excess due to defects in mode of measurements.

L. G. SELVAM
Chief Technical Examiner
7—X—60.

ANNEXURE I TO REPORT ON VICE-CHANCELLOR'S RESIDENCE

Abstract of excess payment due to Extra items.

S.No.	Item No. of 4th Running A|c Bill.	Brief Description of the item.	Quantity	Excess Rate paid.	Amount of Excess payment.
1	2		3	4	5	6
1	11	R.C.C. in beams	532.83 Cft.	0.72 per Cft.	384.00
2	23	Tile Brick masonry in lime surkhi mortar 1:2	162 Cft.	80.50 per % Cft.	130.41
3	35	Filling of cinders over roof.	1678 Cft.	80.75 per % Cft.	482.43
4	37	Lime concrete in terracing.	1785 Cft.	4.45 per % Cft.	79.43
5	40	4" dia. C.I. Rain water pipes	168 Rft.	1.20 per Rft.	201.60
6	47	Cement plaster of wall 1 : 6	8695 Sft.	9.00 per % Sft.	782.55
7	67	1¼" teak wood shutters with 3" x 4" frame	222 Sft.	2.19 per Sft.	486.18
8	68	P|F wire gauge shutters	197 Sft.	0.25 per Sft.	49.25
9	70	R.S. joists-fixing labour.	17.17 Cwt.	6.00 per Cwt.	103.00
10	72	Burmah Teak wood door frame 6" x 2½" with panelled-shutters 1½"	51 Sft.	3.02 per Sft.	154.00
11	73	—do—wire shutters alone	48.96 Sft.	2.37 per Sft.	116.00
12	74	Burmah Teakwood frame 6" x 2½" with 1¼" thick fully glazed shutters	18.12 Sft.	3.02 per Sft.	54.72
13	90	Polishing old mosaic floor	720 Sft.	18.00 per % Sft.	129.60
14	67	Teak wood frame 3"x4" and 1½" thick fully glazed shutter.	222 Sft.	0.44 per Sft.	97.68
				Total =	3258.85

ANNEXURE II TO REPORT ON VICE-CHANCELLOR'S RESIDENCE

Abstract of Excess payment on wood work, (Contractor: Ajit Singh) due to Excessive Rates.

S.No.	Item No. of final Bill	Description of the item.	Quantity	Unit	Rate paid	Rate admissible	Excess Rate paid.	Excess amount paid.
1.	1	Providing and fixing 1st Cl. teakwood frame 6"x2½" fully panelled shutters with brass fittings and polishing.	601.52 Sft.	Each sft.	12 00	9 60	2 40	1443.65
2.	2	Providing & fixing 1½" wire gauge shutters, teak wood frame with 3 coats of french polishing and brass fittings.	596.73 sft.	Each sft.	6 50	4 75	1 75	1044.28
3.	3	First class teak wood frame 6"x2½" with shutter fully glazed with brass fittings and polishing:—	669.35 sft.	Each sft.	8 75	6 35	2 40	1606.40
		(b) fixed glazing work	53.75 sft.	Each sft.	8.75	5 25	3 50	188.13
		(c) fixed shutter work.	52.25 sft.	Each sft.	8 75	5 50	3 25	169.81
4.	5	Teak wood panelling & shelves	67 sft.	Each sft.	8 00	4 35	3 65	244 55
5.	6	Stone facing at the front face of the Bldg.	558 sft.	Each sft.	5 75	4 50	1 25	697 50
6.	8	Providing & fixing wrought iron grill as per design ling between	38 sft.	Each sft.	10 00	6.00	4 00	152 00
7.	9	Teak wood panel- drawing & dining room with moulding and polishing etc. complete including fixing.	125 74 sft.	Each sft	11 00	7 00	4 00	502 96
8.	11	Add extra for Burma teak.	1973 66 sft.	Each sft.	0-10-0	Nil	0-10-0	1233 54
								Rs. 7282.82

APPENDIX VIII

(Reference paragraph 89, page 104, Chapter VII).

SECRET

R. P. Naik
Secretary,
Aligarh Muslim University
Enquiry Committee.

No.D. 164|60-AMUECU
New Delhi
October 24, 1960

Dear Col. Zaidi,

I enclose a list (Annexure) of persons employed in the University who are, it is said, closely related to one another (groupwise). The Committee will be grateful for information regarding the exact relationship, if any, among persons mentioned in the list and the date of their entry into the service of the University.

I shall be grateful if your reply is forwarded to me at your earliest convenience.

With kind regards,

Yours sincerely,
Sd|- (R. P. Naik)

Col. B H. Zaidi,
Vice-Chancellor,
Muslim University,
ALIGARH.

ANNEXURE I

1. *List of relations in the University*

A—COL. B. H. ZAIDI

1. Mr. Q.H. Zaidi (Deputy Registrar and Officiating Registrar) Nephew of the above A.
2. Mrs. Sajida Zaidi (Lecturer in Education) Wife of 1.
3. Miss S. K. Zaidi (Lecturer in Education) Sister of 2.
4. Miss Zahida Zaidi (Lecturer in Women's College) Sister of 2 and 3.
5. Dr Abid Hussain (Director General Education) Uncle of 2, 3, 4.
6. Mr. Qaiser Husain Naqvi (Social Education Service) Close relation of 5.
7. Mr. Moonis Raza (Lecturer in General Education) related to 5.
8. Mr. Mehdi Raza (Lecturer in Geography) Brother of 7.
9. Mrs. Shahla Raza (Tibbiya College) Wife of 7.
10. Mr. Ali Mahdi (Chief Accountant) related to 5, 7, 9.
11. Mr. Shahid Mehdi (Lecturer in History) Son of 10.

12. Mr. Iqtidar Husain (Public Relation Officer) related to A, 5, 6.
13. Mr. Hasnain Zaidi related to A and 1.
14. Mr. Wamiq Jaunpuri (Office Supdtt. Engg. College) related to 5, 10.
15. Mr. Zakiul Hasan Zaidi (Lecturer in Genl. Education) related to 10, 14.
16. Mr. Sibtul Hasan Jafri, related to 10.
17. Mr. Qaim Husain Zaidi (Library Clerk), related to 5, 6.
18. Mr. Ali Amir, Building Dept., related to 1.
19. Mr. Jawad Husain Zaidi, Building Deptt., related to A, and 1.

B—Dr. A. Aleem.

1. Mr. Akhtar Hasan (Lecturer in Botany), related to B.
2. Mr. Obaidul Haq Siddiqi (Lecturer in Botany), related to B, 1.
3. Mr. Anwar Ansari (Reader in Psychology), related to B.
4. Mrs. Gazala Ansari, wife of 3 and related to B, 1, 2.
5. Mr. Mehdi Ansari, Cousin of 3.
6. Mr. Abdul Majid Siddiqi (Lecturer in Tibb. College), Son-in-law of B.
7. Mrs Saira Irfan Habib (Lecturer in Economics), related to B and sister of 2, niece of 1.
8. Dr. Irfan Habib (History), Husband of 7.
9. Mrs. Asiya Obaid (Lecturer in History), wife of 2 and cousin of 10.
10. Dr. Nurul Hasan (Prof. History), Cousin of 9.
11. Dr. Zahoor Qasim (Reader in Zoology), Brother-in-law of 10.
12. Mr. Mohd. Mohsin (Lecturer in Maths.), son of 1.
13. Hakim M. Aslam (Unani Dawakhana), related to B and brother of 15.
14. Mr. M. Iqbal Ansari, related to B.
15. Mr. Akram Siddiqi, related to B and brother of 13.
16. Mr. Raghib Husain, related to B, 13, 15.
17. Mr. Raza Husain, related to B.
18. Dr. Nasim Ansari (Registrar, Ophthalmic Instt.), related to B.
19. Mr. Wasim Siddiqi (Zoology), related to B.
20. Mr. Mohsin Ali Shah, related to B.

C—Prof. Mahmood Hosain.

1. Dr. K A. Naqvi (Economics), son-in-law of C.
2. Mr. Rafiq Naqvi (English), brother of 1.
3. Mr. S. Saeed Ahmad (Asstt. Registrar), Uncle of 1.
4. Mr. Muthahir Abbas Zaidi—close relation of 1.
5. Mr. Murid Ahmad (Secretary to V.C.), related to C. through marriage of son.
6. Mr. Farid Ahmed (Engg. College), son of 5.
7. Mrs. Farid Ahmed (Women's College), wife of 6.
8. Mrs. Moid A. Siddiqi (Women's College), daughter-in-law of 5.
9. Mr. Mujeeb A. Siddiqi (Proctor Office), brother of 5.

D—Prof. A. A. Suroor.

1. Dr. Aulad Ahmad Siddiqi, Lecturer in Economics, brother of B.
2. Hakim A. Latif, Principal of Tibbiya College, father-in-law of 1.
3. Hakim A. Hasib, Nephew of 2.
4. Mr. Faarooque, Tibbia College.
5. Dr. A. Jalil, University Hospital, son-in-law of D.

E—Dr. A.R. Kidwai. Reader and Head of Deptt. of Chemistry.

1. Dr. Naseeiuddin, Lect. Geology—related to E.
2. Dr. A. Aziz, Lect. Zoology—related to E.
3. Mr. Hashim Kidwai, Lect. Political Science—related to E.
4. Mr. Ch. Mohd. Sultan, Political Science—related to E.
5. Mr. Al-Hashmi, Polytechnic—related to E.
6. Mrs. Saeeda Waheed Kidwai, Geography (Women's College)—related to E through marriage.
7. Miss Shnaz Hasmi, Lect. English, Women's College, related to E through marriage.
8. Mr. Z.M. Kidwai, Registrar Office, related to E.

Vice-Chancellor

Muslim University
Aligarh,
November 8, 1960.

Dear Shri Naik,

In reply to your Secret D.O. letter No. D. 164|60-AMUECU of October 24, 1960, asking me for information about the exact relationship among the persons mentioned in the list received with the letter, along with the dates of their entry into University service, I write to enclose a (Annexure) statement containing information groupwise about the relationship among the various persons concerned as far as it could be ascertained.

I may add that in considering a question of this nature there are certain basic facts which need to be borne in mind. With the partition of the country in 1947, a large proportion of Muslim families have migrated to Pakistan. A good number of such families were well-to-do and educated. With the migration of a large number of families in the upper income brackets and in generally well-to-do circumstances, there has been a considerable diminution in the supply of well-educated young men and women among Muslim families in India, who are eligible for marriage. As a result of this many people who never wanted to leave India felt compelled to migrate to Pakistan because they could not secure suitable match for their daughters. Aligarh is the only centre where there is a fairly large number of well-educated Muslim families, who are, on the whole, fairly well-to-do. Muslim families all over the country therefore naturally and understandably try to explore the possibilities of marriage for their sons and daughters in Aligarh. Some of them arrange for their sons and daughters to be educated at this place, where they come into contact with a large number of students and this naturally sometimes leads to marriage alliances also.

The teachers employed at Aligarh and other employees have their own sons and daughters who are, as a rule, well-educated and marriages among them often take place.

It would have been difficult to ascertain the dates of marriages in all the cases referred to, although such dates have been given in some cases where the information could be readily obtained.

The allegations received by the Committee of Enquiry about relationship among certain employees of the University are based upon the insinuation that persons holding positions of trust in the University organisation have used their influence in getting their relations employed in the University service. This insinuation is altogether baseless and mischievous. In many cases, appointments were made long before persons related to appointees concerned came to occupy the positions of trust. For example, my nephew happened to be appointed in this University in the thirties long before my appointment as Vice-Chancellor in October, 1956, and his wife was appointed as a lecturer in the Department of Education in 1955 and her sisters, who cannot be said to be my relations were appointed in 1950 and 1952.

It should also be remembered that the Aligarh University has a campus of its own, quite separate from holding posts in University service. I am sending copies of this letter to the members of the Committee.

Yours sincerely

Sd|- (Col. B H. Zaidi)

Shri R. P. Naik, ICS
Secretary, Aligarh Muslim University Enquiry Committee & Joint Secretary, Government of India, Ministry of Education,
NEW DELHI.

ANNEXURE II

List of alleged Relations in the University

A—Col. B. H. Zaidi, Vice-Chancellor
(Assumed Office on 7-10-56)

1. Mr. Q.H. Zaidi (Deputy Registrar & Off. Registrar), Nephew of?
   Yes, Nephew. First appointed in the Deptt. of Education in September, 1956. Break in service from Jan, 1947 to October, 1947. Second continuous service since 30th October, 1947.
2. Mrs. Sajida Zaidi (Lecturer in Education). Wife of Q.H. Zaidi?
   Yes. Date of first continuous appointment 10th December, 1955.
3. Miss S. K. Zaidi (Lecturer in Education), Sister of Mrs. Sajida Zaidi?
   Yes. But related to Col. Zaidi. Continuous appointment since 3rd November, 1950.
4. Miss Zahida Zaidi (Lecturer in English, Women's College). Sister of Mrs. Sajida Zaidi?
   Yes. But not related to Col. Zaidi. Continuous appointment since 24th November, 1952.
5. Dr. S. Abid Husain (Director of General Education, Reading Material Project).
   Uncle of Zaidi sisters?
   Yes, Married to Zaidi sisters' aunt.

Appointed on contract basis for three years in the Project from May, 1957 till the end of April, 1960. Has left the University service after completion of the period of contract.

6. Mr. Qaiser Husain Naqvi (Social Education Officer), Related to Dr. Abid Husain?
Yes. Married to Dr. Abid Husain's sister's daughter. Continuous appointment since 16-5-1957.

7. Mr. Moonis Raza (Reader in General Education)
Not related to Dr. Abid Husain or to COL. ZAIDI.

8. Mr. Mehdi Raza (Lecturer in Geography) Brother of Mr. Moonis Raza? Yes.
9. Mrs. Shahla Raza (formerly in Research Scheme in Tibbiya College). Wife of Mr. Moonis Raza? Yes.
10. Mr. Ali Mehdi (former Chief Accountant). Related to Mr. Moonis Raza and his wife? Yes.
11. Mr. Shahid Mehdi (Lecturer in History). Son of Mr. Ali Mehdi? Yes.
12. Mr. Wamiq Jaunpuri (Office Supdt., Engg. College). Related to Mr. Ali Mehdi? Yes. Distant relations.
13. Mr. Zakiul Hasan Zaidi (Lect. in Gen. Education). Related to Mr. Ali Mehdi and Mr. Wamiq Jaunpuri? Not related to either.)
14. Mr. Sibtul Hasan Jafri (University Library). Related to Mr. Ali Mehdi.

Since Mr. Moonis Raza (No. 7) is not related to Dr. Abid Husain or to Col. Zaidi, none of the persons from 8 to 14 are, therefore, related to Dr. Abid Husain and to any one of his relations.

15. Mr. Iqtadar Husain (Public Relations Officer). Not related to Col. Zaidi or Dr. S Abid Husain or Mr. Q. Naqvi.

16. Mr. Nazar Hasnain Zaidi (Clerk, Registrar's office). Not related to Col. Zaidi but a distant relation of Mr. Q H. Zaidi from his mother's side.

17. Mr. Ali Ameer Zaidi (Building Department). Not related to Col. Zaidi or Mr. Q.H. Zaidi.

18. Mr. Qaim Hussain Zaidi (Library Clerk). No such person is on the staff of the University Library.

19. Mr. Jawwad Husain Zaidi. Not related to Col. Zaidi or Mr. Q. H. Zaidi.

B—Dr. A Aleem (*Date of first appointment* 21-8-50)

1. Mr. Akhtar Hasan (Lecturer in Botany). Related to B?
Not related.

2. Mr. Obaidul Haq Siddiqi (Lecturer in Botany). Related to B?
Distant relation. His mother is second cousin of Prof. Aleem. Appointed on 7-8-53.

3. Dr. Anwar Ansari (Reader in Psychology). Related to B.
Husband of No. 4. Appointed on 2-8-54. First worked in the Deptt. of Urdu on a temporary basis from July, 1946 to April 1948. Not related to B.

4. Mrs. Ghazala Ansari, wife of 3 and related to B, 1, 2. Distant relation of Prof. Aleem. Appointed on 2-8-54. First appointed in M.U. Girls' High School in 1946, continued upto September, 1949.
5. Mr. Mehdi Ansari, (Cousin of 3).
Not related to Prof. Aleem but distant relation of Dr. Anwar Ansari. Appointed on 4-8-56.
6. Mr. Abdul Majid Siddiqi (Lecturer in Tibbya College). On-in-law of Prof. Aleem. Married to Prof. Aleem's daughter in 1958. Appointed on 16-7-53.
7. Mrs. Saira Irfan Habib (temporary lecturer in Economics).
Related to B and sister of 2, niece of 1? Distant relation of Prof. Aleem. Appointed temporarily on 1-10-1958.
8. Dr. Irfan Habib (History). Husband of 7.
Yes. Appointed on 27-7-53. Married to 7 in 1955.
9. Mrs. Asiya Obaid Siddiqi (Lecturer in History). Wife of 2 and cousin of 10.
Yes. Appointed on 12-10-53. Married to 2 in 1956.
10. Dr. S. Nurul Hasan (Prof. of History). Cousin of 9.
No relation of Prof. Aleem.
11. Dr. Zahoor Qasim (Reader in Zoology) Brother-in-law of 10.
No relation of Prof. Aleem.
12. Mr. Mohd. Mohsin (Lectuter in Maths.) Son of 1.
Not related to Prof. Aleem.
13. Hakim M. Aslam (Unani Dawakhana). Related to B & Brother of 15?
Not related.
14. Mr. Iqbal Ansari, related to B?
Not related to Prof. Aleem.
15. Mr. Akram Siddiqi, related to B and brother of 13? Not related.
16. Mr. Raghib Husain, related to B, 13, 15?
The person not traceable.
18. Dr. Nasim Ansari (Registrar, Ophthalmic Institute), related to B?
Not related. Worked in a temporary capacity for a short period. Has left the University.
19. Mr. Wasim Ahmad Siddiqi (Zoology), related to B?
Not related.
20. Mr. Mohsin Ali Shah, related to B?
Distant relation of Prof. Aleem. Date of appointment 20-3-56.

C—Prof. Mahmud Hosain.

1. Dr. K.A. Naqvi (Economics). Son-in-law of C?
Appointed on 5-8-1954. Married to Prof. Mahmud Hosain's daughter in 1957.
2. Mr. Rafiq Naqvi (English), brother of 1?
Yes, but no relation of C.
3. Mr. S. Saeed Ahmad (Asstt. Registrar). Uncle of 1?
Yes, but no relation of C.
4. Mr. Muthir Abbas Rizvi, close relation of 1?

Not related.

5. Mr. Murid Ahmad (Secretary to V.C.)—related to C? through marriage of son? Marriage held last week on 4-11-60.

6. Mr. Farid Ahmad (Engg. College), son of 5.)
7. Mrs. Farid Ahmad (Women's College), wife of 6.) These are Mr. Murid
8. Mrs. Moid A. Siddiqi (Women's College).) Ahmad's relations but
Daughter-in-law of 5.) not of Prof. Mahmud
9. Mr. Mujib A. Siddiqi (Proctor Office),) Hosain.
brother of 5.)

D—Prof. A.A. Suroor.

(Appointed on 1-9-1958)

1. Dr. Aulad Ahmad Siddiqi, Lecturer in Economics, brother of D.
Yes. Appointed on 10-1-51.
2. Hakim A Latif, Principal of Tibbya College, Father-in-law of Dr. Siddiqi.
Hakim A. Latif was appointed in 1928. Daughter married to Dr. Siddiqi in 1958.
3. Hakim A. Hasib (Nephew of 2).
Yes. Not related to D.
4. Mr. Farooquee, Tibbiya College.
Yes. Brother-in-law of Prof. Suroor. Worked temporarily in the Tibbiya Dawakhana. No longer employed.
5. Dr. A. Jalil, University Hospital. Son-in-law of D.
Yes. Married Prof. Suroor's daughter in 1959. He was appointed on 1-8-1952.

E—Dr. A. R. Kidwai, Head of the Deptt. of Chemistry

(Appointed on 1-5-51)

1. Dr. Naseeruddin, Lecturer in Geology—related to E?
Distant relation. Appointed on 9-5-50.
2. Dr. S A. Aziz, Lecturer, Zoology—related to E?
Not related.
3. Mr. Hashim Kidwai, Lecturer in Pol. Science—related to E?
No relation of E.
4. Mr. Ch Mohd. Sultan, Pol. Sc.—related to E?
No relation of E.
5. Mr. Al Hashmi, Polytechnic—related to E?
Not related.
6. Mrs. Saeeda Waheed Kidwai (Women's College)—related to E? through marriage?
Not related.
7. Miss Shahnaz Hashmi, Lecturer in Eng. Women's College—related to E?
Not related.
8. Mr. Z. M. Kidwai, Registrar's Office—related to E?

No relation to E.

[Reference paragraph 51,
Chapter IX]

Note by Mr. M. A. Shahmiri, member, Aligarh Muslim University Enquiry Committee.

While fully agreeing with the view that teaching and research are twin aspects of University education between which there should be the closest co-ordination and that the Executive Council should not have taken any action in the matter of separating the Department of Arabic & Islamic Studies and the Institute of Islamic Studies until the report of this Committee was received by them, I am of the opinion that the Department of Arabic and Islamic Studies and the Institute of Islamic Studies are not co-extensive and it is not indispensible that all the three should be placed under the same Head of the Department. The Institute of Islamic Studies was apparently established for purposes of intensive research in Islamic Culture and civilisation and the study of the conditions and problems of Asian and North African countries. The subject of Islamic Studies is, therefore, not confined to the study of the conditions and problems of the Arab World, their language and culture, but it embraces a much wider field. In my opinion, the Executive Council would be well within its right to come to a suitable decision in this matter on the merits of the case.

(M. A. SHAHMIRI)

APPENDIX X

(Reference paragraph 54,
Chapter IX).

Secret

D.O. N. Secy|100|60. AMUECU
Dated the 6th September, 60.

Dear Dr. Mitra,

You are perhaps aware that the Aligarh Muslim University Enquiry Committee are at present engaged in the examination of the University affairs. During the course of the enquiry an allegation has been made before the Committee that Dr. P.S. Gill, Professor of Physics at the Aligarh Muslim University, has made use of the contents of an unpublished thesis of Dr. Naqvi for Ph.D. Dr. Naqvi is a member of the Physics Department at the Aligarh University and was working under Dr Gill.

The Committee wishes to know whether *prima facie* this allegation is true or not. Dr. Gill has categorised the complaint as totally false and mischievous.

The Committee have approached us to request you to give your opinion in the matter. Any detailed enquiry can later be the responsibility of the University itself. The Committee merely wish to know whether *prima facie* a case exists for further investigation or not.

We are aware of the demands on your time. The Committee, however, attaches considerable importance to this matter, not as an isolated case, but as a case reflecting an aspect which is often recipient of criticism in our universities. I am, therefore, desired to request you to kindly entertain this request as a special case.

On hearing from you in the matter I shall request the Committee to forward to you the paper published by Dr. Gill and an associate and the unpublished thesis of Dr. Naqvi. If you feel that you should hear both Dr. Gill and Dr. Naqvi before you given an opinion then you could fly over to Delhi for a day and the Committee will arrange a meeting at Delhi. In the alternative if you cannot come away then Dr. Gill and Dr. Naqvi can be requested to meet you at Calcutta. The intention is not to burden you with any detailed investigation but to secure your opinion whether a *prima facie* case exists for detailed enquiry by the appropriate authorities.

I trust you will be able to assist the Committee in this matter. I append a paper giving the personnel of the Committee and its terms of reference.

With kindest regards,

Yours sincerely,

Sd|- P. N. KIRPAL

Dr. S.K. Mitra, F.R.S,
Institute of Radio Physics,
92, Upper Circular Road (P.C. Ray Road),
Calcutta.

Secret

9, Hindusthan Road,
Calcutta—29.

September 21, 1960.

Dr. S. K. Mitra, F.R.S.

Dear Sri Kirpal,

I acknowledge receipt of your D.O. No. Secy.|100|60|AMUECU dated September 5, 1960.

I shall be glad to give my opinion on the matter referred to in your letter. The relevant papers may be sent to me. Kindly, however, note that it will not be possible for me to go to Delhi. If it be necessary to meet Dr. Gill and Dr. Naqvi, the meeting may be arranged at Calcutta.

Kindly forward all future communication to my residential address as given above.

With best regards,

Yours sincerely,
Sd|- S.K. MITRA

Sri Prem Kirpal,
Education Secretary,
Government of India,
New Delhi.

Secret

REGISTERED ACK. DUE
New Delhi.

B. N. Malhan, IAS.
Deputy Secretary &
Jt. Secy, Aligarh
Muslim University
Enquiry Committee.

सत्यमेव जयते

D.O. No. 134|60-AMUECU

September 27, 1960.

Dear Dr. Mitra,

I am desired to refer to your letter of September 21, 1960 to Shri Kirpal wherein you have been good enough to agree to give your opinion on the matter under reference.

The Committee are grateful to you for your acceptance.

I am enclosing two documents as follows :

(i) The unpublished thesis of Dr. Naqvi, and

(ii) The printed paper written under the joint authorship of Dr. Gill and Dr. Mitra.

I shall also send in a day or two the statements in this regard made by Dr. Gill before the Enquiry Committee.

The Committee request you that in accordance with the principles of natural justice and fair play you may please give both Dr. Gill and Dr. Naqvi an opportunity to place their respective points of view before you. Upon

hearing from you, the University will be requested to direct Dr. Gill and Dr. Naqvi to proceed to Calcutta on the date to be indicated by you.

Wih kindest regards,

Yours sincerely,

Encl: as above

Sd|- B.N. Malhan

Dr. S.K. Mitra, F.R.S.,
9, Hindusthan Road,
Calcutta—29.

B.N. Malhan, IAS,
Deputy Secretary.

SECRET|IMMEDIATE
No. D. 173|60-AMUEC
New Delhi—2
Dated the 27th October, 60

Dear Dr. Mitra,

Will you kindly refer to the correspondence resting with my d.o. letter No. 148|60-AMUECU dated the 10th October, 1960 regarding the allegations of plagiarism against Dr. P.S. Gill, Head of the Department of Physics, Aligarh Muslim University?

I hope, on the basis of the material placed before you, it will be possible for you now to give us an indication whether it will be necessary for Prof. Gill and Dr. Naqvi to present their points of view personally before you. On hearing from you we shall move the University authorities to direct Prof. Gill and Dr. Naqvi to meet you at your convenience. Alternatively, if on the basis of the available material it is possible to come to some definite conclusions without meeting the persons concerned personally, you may kindly formulate your views accordingly and communicate them to us.

Since the Committee is nearing the end of its deliberations and is scheduled to undergo the finalisation of its report within the next fortnight, it will be of great assistance to the Committee if your advice in the matter is furnished to us at your early convenience.

With kindest regards,

Yours sincerely,

Sd|- B. N. Malhan

Dr. S.K. Mitra, F.R.S.,
No. 9, Hindusthan Road,
CALCUTTA—29

SECRET

9, Hindusthan Road,
CALCUTTA—29
October 31, 1960

Professor S K. Mitra,
D.Sc., R.N.I., F.R S.

Dear Shri Malhan,

Please refer to your letter No. D. 173|60-AMUECU dated 27th October, 1960. I give below my opinion.

I have perused Dr Naqvi's thesis on "A Study of the Azimuthal and the Zenithal Distribution of Cosmic Rays at Gulmarg (Kashmir)" along with the controversial paper by Professor P.S. Gill and Dr. A.N. Mitra on "Hemispherical Distribution of Cosmic Rays at 25 degrees Geomagnetic Latitude" (Nuovo Cimento 1958, 9, 400-11). It is a fact that the last named authors have made use of certain materials from Dr. Naqvi's thesis. This particularly refers to the graphical representation (theoretical and experimental plots) of azimuthal distribution of cosmic ray intensity at various zenithal angles and the concomitant east-west asymmetry effects.

The situation, however, has to be judged in its proper perspective, particularly with reference to the complaint and statement respectively of Dr. Naqvi and Professor Gill which I received as enclosures of your D.O. No. 148|60-AMUECU dated 10th October, 1960.

The situation, however, has to be judged in its proper perspective, partiprior to the present incident, been engaged in studying the azimuthal effects of cosmic rays. He had already published seven papers on the subject. (Professor Gill is well known as a pioneer worker in this field in India). He was now anxious to extend his observations to include the geomagnetic latitude (25^0N) of Gulmarg, the high altitude (9000 ft.) of which minimised atmospheric effects and facilitated the comparison of his results with those of other western workers in the field. For this purpose Professor Gill secured appropriate grants and appointed Dr. Naqvi as his research assistant. Dr. Naqvi carried out routine observations under his direction and guidance. Subsequently, Professor Gill gave Dr. Naqvi permission to make use of the results so obtained for the preparation of his doctorate thesis. Dr. Naqvi acknowledged in his thesis that he had worked under the direction and guidance of Professor Gill, that he also had the benefit of helpful discussions with Dr. A.N. Mitra and that the latter read through the manuscript of the thesis.

The question now, is after having once permitted Dr. Naqvi to utilise for his thesis the observational material collected in his (Professor Gill's) laboratory, was Professor Gill justified in making use of the same material in a joint paper of which Dr. Naqvi is not a co-author? In my opinion, Professor Gill was not unjustified in doing so, and that for the following reason. The observations in question were really a continuation of a long series of observation started by Professor Gill many years ago. The material collected—the collection on being made in his laboratory under his direction and guidance—could, therefore, be considered as belonging to Professor Gill, or at least to the laboratory as a whole. It was, therefore, within the discretion of Professor Gill, as Director, to decide who was to be the joint author of any paper on the subject published from his laboratory. This depended upon the relative importance of the contributions made by any particular person or group of persons concerned. In the present case the other person, besides Professor Gill, who was directly concerned with Dr. Naqvi's work, is Dr. A.N. Mitra.

(This, as mentioned above, has been acknowledged by Dr. Naqvi.) And, from the facts of the case as are before me, I have the strongest impression that the credit for the most critical part of the work, namely, interpretation of observational data and the direction as to how they are to be analysed and presented are due to Dr. A.N. Mitra. Dr. Naqvi no doubt handled the apparatus; this is acknowledged in the paper in the Nuovo Cimento. Also, he had carried out the actual observation and drew the graphs; for this he had been amply compensated by being allowed to use the material for his thesis. There is no semblance of discovery of new facts or relations which may be regarded as Dr. Naqvi's independent contribution, made without advice and guidance of Professor Gill and/or Dr. A.N. Mitra. As such, Professor Gill, if he has erred, has erred on the side of generosity by allowing Dr. Naqvi to describe as his own (in his thesis) results which are not strictly so.

However, it would have been more correct on the part of Professor Gill and Dr. A.N. Mitra to have mentioned in their paper that the curves and some of the materials (though the work in connection with the same had been suggested and inspired by them) had originally been presented in the unpublished thesis of Dr. Naqvi. But the insinuation (as made in Dr. Naqvi's complaint) that by the omission the authors have been guilty of plagiarism, describing as their own some work for which the whole credit is due to Dr. Naqvi, is totally unjustified. I am, therefore, of opinion that there is really no case for further investigation.

I do not think any useful purpose will be served by my interviewing Professor Gill and Dr. Naqvi.

Yours sincerely,
Sd/- S.K. Mitra

Shri B.N. Malhan, I.A.S.,
Deputy Secretary,
Ministry of Education,
Government of India,
NEW DELHI—2.

SECRET

B.N. Malhan, I.A.S.
Deputy Secretary.

New Delhi—2,
Dated the 10th November, 1960.

D.O. No.-195/60-AMUECU

Dear Dr. Mitra,

Thank you very much for your letter dated the 31st October, 1960.

2. The Aligarh Muslim University Enquiry Committee are very grateful to you for your lucid opinion in the case of Professor Gill and Dr. Naqvi.

3. As you will have noticed from the papers sent to you in this connection, the case is still pending disposal before the University authorities. The Vice-Chancellor feels that your opinion will be of great assistance to the University in disposing of the case and has, therefore, requested the Committee for a copy thereof. Before passing on a copy to the University, however, the Committee are anxious to ascertain your wishes in the matter. I shall be grateful if you could kindly let me know whether you would have any objection to the University's request being complied with.

4. The Committee also desired me to find out from you whether they could quote your opinion, *in extenso*, as an Appendix to their report. This, however, is also subject to your permission and I shall be grateful if you could let me know whether the Committee could make use of your opinion in the manner suggested above.

5. Would you, also kindly, at your convenience, return all the papers sent to you in connection with the case?

With kindest regards,

Yours sincerely,

Sd|- B. N. Malhan

Dr. S. K. Mitra, D.Sc.,
F.N.I., F.R.S.,

No. 9, Hindustan Road,
Calcutta—29.

SECRET

9, Hindusthan Road,
Calcutta—29

November 18, 1960

Professor S. K. Mitra,
D.Sc., F.N.I., F.R.S.

Dear Shri Malhan,

Please refer to your D.O. No. 195|60-AMUECU dated 10th November, 1960.

2. I have no objection to a copy of my last letter to you dated October 31, 1960 being sent to the Vice-Chancellor of the Aligarh Muslim University. Also, my opinion, as given in it may be quoted *in extenso* as an Appendix to the report of the Enquiry Committee.

3. If there is no objection to my offering some general remark, I would like the following to go as an Addendum to the opinion I have already given:

"The practice of making use of the same research material for more than one purpose (publication of a paper and for thesis work) by different authors or sets of authors should be discouraged. If in a joint endeavour the contribution of a junior worker is not sufficiently important, the best course is to acknowledge it at the end of any communication that may be made on the subject, e.g. "Mr. so-and-so has helped in carrying out the calculations, or in making such-and-such observations, etc). It is not desirable, and is also unethical, to give the worker concerned more credit than is due to him to enable him to gain some advantage. And, if for any reason, rightly or wrongly, he has once been given the credit, the relevant research material should not be utilized by any other person even if they were inspirers and|or real authors of the work."

4. I have sent you under separate cover the thesis of Dr. Naqvi together with the following papers:

(i) Copy of report from Dr. Nielson, Durban University.
(ii) —do— —do— Prof. Chatterjee, Jadavpur University.
(iii) —do— —do— Prof. Gill, Aligarh University.
(iv) Viva-voce examination report.

Yours sincerely,

Sd|- S. K. Mitra

Shri B.N. Malhan, I.A.S.,
Deputy Secretary,
Ministry of Education,
Government of India,
New Delhi—2.

NOTE BY MR. P. N. SAPRU, MEMBER, ALIGARH MUSLIM UNIVERSITY ENQUIRY COMMITTEE (REFERENCE PARAGRAPH 61—, CHAPTER IX).

One of the questions which we have had to consider is that of the participation of teachers and also, to some extent of students, in the political life of this country. It has been sought to make out that the politics of the teachers is either of a communalist or Communist variety. It is said that even those who call themselves Communists are at heart Communalists and that Communism or Leftism is only a cloak to conceal their real views. I propose to consider the question of (a) Communalism, (b) Communism and (c) the general attitude that should be adopted by the University towards the political activities of their teachers separately.

First let me consider the question of Communalism. There is an understandable anxiety that a university, such as Aligarh, which was the centre of much Muslim league activity in the years 1940 to 1947, should not get back to its former mood. While accepting the secession of certain parts of the country as a matter of political arrangement, this country did not accept the two-nation theory. Our Constitution has assured equal rights for all our citizens. They are, irrespective of creed, caste or sex, entitled to participate on equal terms in the functions of citizenship. Our founding fathers held firmly that religions could not be the basis of nationality. Partition could not and did not diminish their faith in the capacity of our people to develop, despite differences in religious beliefs, a civil consciousness, which transcends caste and creed. Nothing can be more sacred from the point of view of Indian nationalism than the secular character of our Constitution. For Secularism is the only way in which the people can be helped to weld themselves into the unity called a nation. A clear understanding of what it means is important for all educationists and I make no apologies for making a brief reference to it.

Our Secular Republic, such as our founding fathers have established, stands in the first place for a separation between the State and the church. Consequently we have no established church. The State observes an attitude of strict impartiality towards all religions. In the second place, individuals in our Republic are free to worship God in their own way and to practise, profess and propagate their respective faiths, consistently with due regard, *inter alia*, for public order, morality and health. In the third place, while the State itself cannot provide religious education even in aided denominational institutions established by them it can be done by the denominations concerned consistently with due observance of the conscience clause which is a part of our Constitution. Implicit in this concept of secularism is the view that politics should not get mixed up with religion.

Before considering whether communalism and, if so, in what sense of the term is a feature of the life of the University, it is desirable to have a clear idea of what that term does not imply. That word should not be confused with traditionalism or revivalism, or orthodox ways of thinking in matters of religious or social belief. In the governing bodies as also in the staff of the

university there are, as was to be expected, many men, who have a deep reverence for their traditional values, and who would like them to be preserved. That does not necessarily make them anti-national or communal in the sense that they have any extra territorial loyalties or that they would, in the changed circumstances of today, still give allegiance to the two-nation theory. We cannot however shut our eyes to the fact, that a too exclusive pre-occupation with the distinctive characteristics of one's particular community, if carried to excessive limits, can create problems for our young Republic. It is imperative for those, who are guiding the policy of the University to remember that in our country, there should be no such emphasis on the anti-thesis between different ways of life as to make emotional integration difficult. This does not mean that our citizens are not free to derive inspiration for their social, economic or political activities from the ethical code supplied to them by their religions, but this does mean that their political, economic, and social activities should not get mixed up with religious issues. The question of religious or social reform in so far as it is affected by some religious belief is essentially one, which can be tackled by the Muslim community itself. Something has to be left to the development of forces and movements, which are in harmony with the time spirit. There is some evidence to suggest that some organisations like the Jamiat Islamia, have carried religious revivalism to an extent, which needs vigilance on the part of the University. I am not, however, prepared to say that it constitutes at the moment, a challenge to the foundations on which the policy of this country rests. In the governing bodies of the University there are many Muslims, who played a worthy part in the national struggle for freedom. They may not be radical in the sense that they are deeply attached to some of their traditional values. They are not, however, for that reason, to be looked upon as persons whose loyalty must be suspect. There is no credible evidence, which would justify us in holding that groups of persons have been carrying on an anti-national propaganda in the sense of undermining loyalty to our Constitution and I feel that given time and large heartedness on the part of all concerned, progressive forces will assert themselves and that it will become increasingly clear to the so-called traditionalists that a separation of the church and the State is desirable in the interests of not only the majority, but the so-called minority communities themselves. This does not mean that one should be completely oblivious of the dangers inherent in philosophies, which emphasise the two exclusive characters of their separate cultures. This, however, does mean that one should have faith in the liberalizing ideals, which a university in a free country releases. For one of the noblest functions of higher education is to broaden one's outlook and make one tolerant of the viewpoint of others. In a temple of learning such as a university, there is bound to be a competition among those studying or researching in it for the attainment of new knowledge in every sphere of life. I would like to quote, in this connection, the following observations of Lord Haldane in his address on "The Dedicated Life" as they sum up my own attitude towards this matter.

"The University", he goes on to observe "is a place of research where new and necessary knowledge is to be developed. It is a place of training where the exponents of that knowledge—the men who are to seek authority based on it—are to be nurtured and receive their spiritual baptism. Such a university cannot be dependent in its spirit. It cannot live and thrive under the domination either of the Government of the Church. Freedom and development are the breath of its nostrils, and it can recognise no authority except that which rests on the right of the Truth to command obedience. Religion,

art, science—these are, for the body of teachers of the true university type, but special and therefore restricted avenues towards that Truth—many sided as it is, and never standing still. It was Lessing who declared that were God to offer him the Truth in one hand and the Search for Truth in the other, he would choose the Search. He meant that, the Truth never stands still. Only in the process of daily conquering them anew do we, in this region also, gain life and freedom. And it is in the devotion to this search after the Most High, a search which may assume an infinity of varied form—that the dedicated life consists ; the life dedicated to the noblest of quests, and not to be judged by apparent failure to reach some fixed and rigid goal, but rather by the quality of its striving."

Problems of law and order created by any anti-national activity can be left to be dealt with by those responsible for its maintenance. They are entitled to full support from University authorities in doing so and I am satisfied that even the so-called traditionalists do not wish to create situations, which will be inimical to the harmony existing between Muslims and non-Muslims in this country. It may be that in the actual administration of the University and in matters of dealing with their non-Muslim staff there is on occasions a bias in favour of their own community, but this is an evil, the magnitude of which should not be exaggerated. I would suggest the establishment of a chair in Islamic law so that Muslim opinion may gradually become as advanced in social matters as is the case with some other Islamic countries.

I shall now come to the question of Communism. There is evidence to show that some of the teachers of the University are steeped in Marxist thought and indeed hold what most people would call Communist beliefs. There is no evidence whatsoever, which would justify us in coming to the conclusion that these leftist beliefs are a cloak for communalism or that they have been misusing their power, authority or influence as teachers to form or to carry on an active Communist propaganda among the students of the University. In my opinion, there can be and there should be no inquisition into the political and personal beliefs of teachers or students. In a university there should be what I would call complete academic freedom. I would in this connection quote the observations of two great American judges in a case in which the question of what is meant by Academic freedom was considered by the U.S. Supreme Court. After holding on the facts before him that there was unquestionably an evasion of the Petitioner's liberty in the areas of academic freedom and political expression, Chief Justice Earl Warren went on to make the following[1] observations :—

> "The essentiality of freedom in the community of American universities is almost self-evident. No one should underestimate the vital role in a democracy that is played by those who guide and train our youth. To impose any strait jacket upon the intellectual leaders in our colleges and universities would imperil the future of our Nation. No field of education is so thoroughly comprehended by man that new discoveries cannot yet be made. Particularly is that true in the social sciences, where few, if any, principles are accepted as absolutes. Scholarship cannot flourish in an atmosphere of suspicion and distrust. Teachers and students must always remain free to inquire, to study and to evaluate, to gain new

1. United States Reports, Vol. 354, October Term, 1956, pp. 250-251.

maturity and understanding ; otherwise our civilization will stagnate and die."

"Equally manifest as a fundamental principle of a democratic society is political freedom of the individual. Our form of government is built on the premise that every citizen shall have the right to engage in political expression and association. This right was enshrined in the First Amendment of the Bill of Rights. Exercise of these basic freedoms in America has traditionally been through the media of political associations. Any interference with the freedom of a party is simultaneously an interference with the freedom of its adherents. All political ideas cannot and should not be channelled into the programs of our two major parties. History has amply proved the virtue of political activity by minority, dissident groups, who in innumerable times have been in the vanguard of democratic thought and whose programs were ultimately accepted. Mere unorthodoxy or dissent from the prevailing more is not to be condemned. The absence of such voices would be a sympton of grave illness in our society".

In a concurrent [1] opinion, in the same case, Mr. Justice Frank Furter observed as follows :—

"Progress in the natural sciences is not remotely confined to findings made in the laboratory. Insights into the mysteries of nature are born of hypothesis and speculation. The more so is this true in the pursuit of understanding in the groping endeavours of what are called the social sciences, the concern of which is man and society. The problems that are the respective preoccupation of anthropology, economics, law, psychology, sociology and related areas of scholarship are merely departmentalized dealing, by way of manageable division of analysis, with interpenetrating aspects of holistic perplexities. For society's good—if understanding be an assential need of society—inquiries into these problems, speculations about them, stimulation in others of reflection upon them, must be left as unfettered as possible. Political power must abstain from intrusion into this activity of freedom, pursued in the interest of wise government and the people's well-being, except for reasons that are exigent and obviously compelling.

"These pages need not be burdened with proof, based on the testimony of a cloud of impressive witnesses, of the dependence of a free society on free universities. This means the exclusion of governmental intervention in the intellectual life of auniversity. It matters little whether such intervention occurs avowedly or through action that inevitably tends to check the ardor and fearlessness of scholars, qualities at once so fragile and so indispensable for fruitful academic labor. One need only refer to the address of T. H. Huxley at the opening of Johns Hopkins University, the Annual Reports of President A. Lawrence Lowell of Harvard, the Reports of the University Grants Committee in Great Britain, as illustrative items in a vast body of literature. Suffice it to quote the latest expression on this subject. It is also perhaps the most poignant because its plea on behalf of continuing the free spirit of the open universities of South Africa has gone unheeded.

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1. United States Reports, Vol. 354, October Term, 1956, p. 261-263,

"In a university knowledge is its own end, not merely a means to an end. A university ceases to be true to is own nature if it becomes the tool of Church or State or any sectional interest. A university is characterized by the spirit of free inquiry, its ideal being the ideal of Socrates—'to follow the argument where it leads.' This implies the right to examine, question, modify or reject traditional ideas and beliefs. Dogma and hypothesis are incompatible, and the concept of an immutable doctrine is repugnant to the spirit of a University. The concern of its scholars is not merely to add and revise facts in relation to an accepted framework, but to be ever examining and modifying the framework itself.

* * * *

"Freedom to reason and freedom for disputation on the basis of observation and experiment are the necessary conditions for the advancement of scientific knowledge. A sense of freedom is also necessary for creative work in the arts which, equally with scientific research, is the concern of the university".

I would also like to quote in this connection a striking passage from Mr. Joseph Grimond's 'The Liberal Future' :—

"If Liberals are then asked if they would allow communism or free love (whatever may be understood by that) to be taught, I think we must squeeze the emotional bias out of the question. Liberals are rational. They believe in Liberalism, which is essentially bound up with democracy and personal morality, because they think it right, morally right and practically correct. They believe this can be demonstrated to the reason. Therefore, if Liberalism is explained as well as Communism they have nothing to fear from the latter. In fact, Marxism must in liberal eyes be explained at some stage. For one thing it is an important strand in European thought and without it modern politics cannot be understood. Secondly, Liberals can learn from it. Thirdly, it is the mainspring of the Russian revolution and without some knowledge of it we shall not understand half the world".

I hope I have made it clear that in my opinion it would be completely wrong to ban political speculation, thought or activity in a University. Professors in western countries have made important contributions to social theory. Who can deny that Sydney Webb, Graham Wallas, T. H. Greene, R. L. Tawney, L. T. Hobhouse, Ramsay Muir, Alfred Marshall, J. M. Keynes, Harold Laski, G. D. H. Cole, A. V. Dicey, F. W. Maitland, and A. C. Pigou, to mention only a few among a host of thinkers, are honoured names in British political and economic thought? They influenced the thinking and the programmes of British political parties. It is essential that in the universities of this country too our teachers should take a leading part in the development of political, social and economic thought. It is to these centres of learning that we must turn for intellectual leadership and nourishment in the realm of thought, which is certainly bound to influence action.

Their contributions should be helpful to political parties and social workers in formulating their objectives and programmes. They have the equipment for giving new direction to our thought and they should not be denied the opportunity to do so, either individually or collectively. No university can or should be free from politics in this higher sense. An agitational approach to questions

is basically inconsistent with the true spirit of a university. This does not, however, mean that teachers and students should have no political convictions or should have restrictions placed upon the free expression of them. University teachers have made valuable contributions to Parliamentary and political life in western countries. They have supplied to their countries many men of eminence in the world of political action. It would be unfortunate if we were to order things differently in our country.

A Lecturer's duty is undoubtedly to be objective in his approach in the class rooms, in his lectures, tutorials, conferences and in Seminars. Objectivity, however, must not be confused with a lack of point of view and it is not humanly possible for a lecturer or teacher holding certain beliefs to conceal them from his students.

The question may be raised whether lecturers should be allowed to participate in political activities and join political parties. I can see no valid objection to their doing so. Indeed university teachers have supplied valuable leadership in economic and social matters in other countries. The Constitution allows young men to vote on reaching the age of 21 and even a conservative writer like Lord Altringham holds that in Britain the age limit should be lowered to 18.

Obviously one cannot exercise one's vote without thinking about political matters and discussing them. In British universities it is permissible for students, subject to the over-riding authority of the Vice-Chancellor, to form themselves into clubs or societies expressing their political affiliations. There are conservative, labour and liberal clubs in the great Universities of Oxford and Cambridge. Summer schools are held by various political parties in these centres of learning. Statesmen of all parties consider it a duty to keep themselves in touch with those, who will be the leaders of tomorrow. There is, however, no exploitation of Youth for party or political end. Great movements of thought which have influenced life in many ways, have emanated from the universities and the nation has benefitted from them. There is no reason, therefore, why there should be no political activity of this type in our universities. What is not permissible is direct action aiming at the overthrow of the established social order. What is not permissible is fasting for purposes of putting pressure on university authorities to do something they would like to be done. I would like healthy conventions to be developed in these matters and it is for teachers, students and leaders of political and social thought to help in the development of these conventions. Our independence has brought with it certain responsibilities and it is incumbent on us not to forget them. It was said in the course of our investigation that some teachers of the University had supported the Kerala Education Bill or had been critical of the manner in which the Kerala situation had been handled by the Union Government. Now whatever may be one's views as regards the correctness of their stand, I can see no disloyalty in any of these acts. The duty of a citizen is loyalty to the State. Criticism of the Government of the day is permitted by the Constitution. Indeed, no democracy is conceivable without it. Within the limits permitted by constitutional activity I see no objection to the participation in public activities of teachers and students. I may point out that the Constitution has specially provided for the representation in State Upper Houses of teachers and graduates. It is quite clear that the founding fathers did not intend to impose a ban upon all political activity in the University. It will be an evil day for this country when thought on social, economic or political matters ceases to emanate from our universities. We have, therefore, to

approach this question from the point of view of certain fundamentals. In my view, to exclude political activity completely from the universities would be to deny them one of their basic functions, which is to help to examine old ideas and create new ideas pertaining to all spheres of life. Thought and its free expression in the universities should not and cannot be controlled without destroying the academic freedom of the universities. So far as political activity is concerned, it flows from political thought. No impediment should, therefore, be placed in the way of any political or social activity provided it is carried on in our Universities in such a way that it is not subversive of the purposes for which they exist, namely—the search after truth. Of course, it should always be kept in mind that the university is not a place for agitational activities or for furthering activities, which would pollute the atmosphere of that free enquiry, which should permeate a place of learning.