

APPENDIX – VIII

DEPARTMENT OF APPLIED MATHEMATICS
ZAKIR HUSAIN COLLEGE OF ENGG. & TECH.
A.M.U., ALIGARH.

मत लख्या/R.No. 2752
 दिनांक/Date..... 07/11/21
 प्रवेश अनुक्रम/Admissions Section
 अलीगढ़ मुस्लिम विश्वविद्यालय
 Aligarh Muslim University

D. No. 16 /AMD

Dated: 07.01.2021

Joint The Controller
 (Exams and Adms.)
 AMU, Aligarh.

Subject: New course M.Sc. (Applied Mathematics) proposal to put in Admission Committee.

With reference to your letter D. No. 1985/ADMS dated 15.12.2020, it is to inform you that a new course of M.Sc. (Applied Mathematics) is proposed in our Department for the session 2021-22. The proposal duly passed from B.O.S. and faculty meetings has been referred to Admission Committee through A.C. meeting held on 17.08.2020.

I therefore request you to include our proposal in the agenda of the forthcoming meeting of Admission Committee.

Shamshad Husain
 7.1.2021
 (Prof. Shamshad Husain)
 Chairperson
 Chairperson/ विभाग अध्यक्ष
 Deptt. of Applied Mathematics
 डिपार्टमेंट ऑफ एप्लाइड मैथमेटिक्स
 अमुंवि०, अलीगढ़/A.M.U., Aligarh

- Encls: 1. Proposal (Annexure-I)
 2. Test Syllabus(Annexure-II)
 3. Tentative Details of the proposed program for Guide to admission.

Mr. Usman
Mr. Mukhtar
And
 Officer
 (Admissions)
 07/11/21

Annexure-I

No. 99(A)/AMD

Department of Applied Mathematics
Faculty of Engineering & Technology
Aligarh Muslim University, Aligarh

22.01.2019

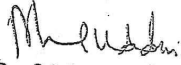
Minutes

of the special meeting of the Board of Studies held on 21.01.2019 (Monday) at 1.00 PM in the Committee Room of the Department.

The following were present.

1. Prof. Mohammad Saleem
2. Prof. Abdul Hakim Khan
3. Prof. Shamsad Husain
4. Prof. Mohammad Kamarujjama
5. Dr. Aijaz Ahamad Khan
6. Dr. Rafiquddin
7. Dr. Nabiullah Khan
8. Dr. Ghazala Yasmin
9. Dr. Sabiha Tabassum
10. Dr. Kamran Khan
11. Dr. Mohammad Salahuddin Khan
12. Dr. Haider Abbas Rizvi
13. Prof. Merajuddin (In Chair)

The board discussed the proposal of the Department for a new program M.Sc. (Applied Mathematics) in detail and recommended to send it to the Dean, F/o Engineering & Technology for its approval in the Meeting of the Faculty of Engineering & Technology. (Proposal attached as annexure. I)


(Prof. Merajuddin)
Chairperson

- Chairperson
Department of Applied Mathematics
AMU, Aligarh

Annexure-I

B.O.S.- 21.01.19

Proposal

For

M.Sc. (Applied Mathematics)



**Department of Applied Mathematics
Aligarh Muslim University, Aligarh**

2019-2020

Objective

Applied Mathematics has largely developed in response to the need to formulate and solve problems in diverse fields of science, technology, industry and lately in medicine. In short, Applied Mathematics is the language of scientific communication par excellence. This programme comprises courses in different areas of mathematics, computer applications, statistics, operation research and mechanics. With a rigorous exposure in these areas, it is aimed to equip the students with analytical ability and expertise in techniques desired for handling diverse-nature problems. A Master's degree in Applied Mathematics will help students secure jobs in different organizations, consulting firms, research institutes or universities.

Feasibility of the course

This course aims to create a force of resource persons who can deal with challenging present day multidisciplinary problems as mathematician and computer expert and be a part of the nation building. Similar course is being successfully run in the University of Calcutta, IIT Roorkee, IIT Dhanbad, Andhra University, Osmania University and other places in the country. This programme is providing opportunities to degree holders in various industries and organizations. Present time can be easily said to be the time of computers. In almost every field of knowledge, computer knowledge is a must and Mathematics is no exception. This programme has been designed to cover major areas of Applied Mathematics and Computers in demand. According to Bureau of Labor Statistics, overall employment of mathematicians and statisticians is projected to grow 33% from 2016 to 2026, much faster than the average for all occupations.

Name of the Program	: M.Sc. (Applied Mathematics)
Eligibility	: B.Sc. with Mathematics as main/major subject with 55% marks in Mathematics and 55 % in aggregate
Intake	: 18
Mode of Selection	: Entrance Test
Nature	: Regular (Full Time)
Duration	: Four Semesters (Two Years)

Requirements

None (The course will be run with the existing staff and facilities.)

DEPARTMENT OF APPLIED MATHEMATICS
ZAKIR HUSAIN COLLEGE OF ENGG. & TECH.
A.M.U., ALIGARH.

Annexure-II

D. No 15 /AMD

Dated: 07.01.2021

MINUTES

of the Special Meeting of the Board of Studies of the Department held on 06.01.2021 at 12:30 p.m. through Video Conferencing.

The following members were present

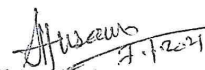
1. Prof. Qamrul Hasan Ansari (Assigned Member)
(Department of Mathematics)
2. Prof. Syed Moied Ahmed (Assigned Member)
(Department of Anesthesiology)
3. Prof. Merajuddin
4. Prof. Mohd. Kamarujjama
5. Prof. Nabiullah Khan
6. Dr. Aijaz Ahmad Khan
7. Dr. Rafiquddin
8. Dr. Zubair Khan
9. Dr. Ghazala Yasmin
10. Dr. Kamran Khan
11. Dr. Mohammad Salahuddin Khan
12. Dr. Haider Abbas Rizvi
13. Dr. Mumtaz Riyasat
14. Prof. Shamshad Husain (**Chairperson**)

Before the agenda items taken, Prof. Merajuddin welcomed newly nominated assigned members Prof. Qamrul Hasan Ansari, D/o Mathematics and Prof. Syed Moied Ahmed, D/o Anesthesiology.

Item No. 1. Syllabus for M.Sc. (Applied Mathematics) Entrance Test discussed and passed (**Annexure-I**).

Item No. 2. Appointed examiners of M.Tech./B.Tech./B.E.(Evening) courses for winter Semester 2020-2021. Also appointed examiners for re-evaluation and moderators (**Annexure II & III**)

The Chairperson was authorized for minor changes as and when required.


 (Prof. Shamshad Husain)
Chairperson

Chairperson/Board of Studies
 Dept. of Applied Mathematics
 Zakir Husain College of Engineering & Technology
 Aligarh Muslim University, Aligarh

Faculty of Engineering & Technology**M.Sc. (Applied Mathematics)****Syllabus for Entrance Test****1. Abstract Algebra**

Groups, subgroups and their Properties, Normal subgroups and Cyclic groups, generators, Properties of Cyclic groups. Cosets, Lagrange's theorem, Euler theorem, Fermat's theorem, Isomorphism and homomorphism of groups, Quotient group. Isomorphism theorems, Direct product of group and its related results. Permutations, transportation, disjoint cycles, permutation groups, Cayley's theorem, Cauchy's theorem. Rings, Zero divisors, Integral domains, Division Rings, Field, Subrings and Ideals, Simple ring, Algebra of ideals, Ideal generated by a subset, Nilpotent ideals, Quotient rings, Prime and Maximal ideals. Homomorphism in rings, Natural homomorphism, Kernel of a homomorphism, Fundamental theorem homomorphism, First, Second isomorphism theorems, Field of quotients, Ring of endomorphism of an abelian group. Principal ideal domains, Different relation between principal ideal domains, Polynomials rings, algebraic and transcendental elements over a ring.

2. Vector Space

vector spaces, subspaces, span of a set, sum of subspaces, Linear dependence and independence, dimensions and basis, coordinates of a vector relative to the ordered basis, dimension theorem.

Linear transformation and its properties, range and kernel of a linear transformation, rank and nullity of linear transformation, rank-nullity theorem, inverse of linear transformation.

The vector space $L(U, V)$ and its dimension, composition of linear transformations, matrix associated with a linear transformation, linear transformation associated with a matrix, matrix as a linear transformation and its rank and nullity. Elementary row operation, solution of a system of linear equations, Eigen-values, Eigen-vectors and Diagonalization of matrix.

3. Real Analysis

Limit and continuity, Theorems on continuity, Properties of continuous functions on closed intervals, Uniform continuous functions and related results. Definitions of derivatives and related results, Increasing and decreasing functions, Rolle's theorem, mean value theorems of differential calculus and their applications, Taylor's theorem with various forms of remainder, Taylor's and Maclaurin's infinite series expansion. Functions of bounded variation and their properties, Jordan theorem, Vector valued function, functions of bounded variation and related results.

Sequence, Limit points of a sequence, Convergent and divergent sequence, Cauchy's general principle of convergence, Monotonic increasing and decreasing sequence. Introduction of infinite series, convergence of infinite series, Necessary condition for the convergence of an infinite series with various tests for convergence, Alternating series, Leibnitz test, Absolute and conditional convergence, Series of arbitrary terms, Abel's and Dirichlet's tests.

Definition and existence of Riemann integral, Inequalities for Riemann integrals, Refinement of partitions, Darboux's theorem, Theorems on condition of integrability, Theorems on integrability of the sum, difference, quotient and product of integrable functions, Theorems on integrability of the modulus and square of integrable functions, The Riemann integral as a limit of sums, Theorems on integrable functions and related results. Theorems of integral calculus: Integration by parts, Change of variables, Second mean value theorem.

4. Complex Analysis

Functions of a complex variable; Limits, Continuity & differentiability, Cauchy-Riemann (CR) equations; in Cartesian and polar form, Analytic functions, Determination of conjugate function, harmonic functions, Polar form of Laplace equation; Complex integration; Cauchy-Goursat theorem, Cauchy's integral formula, Morera's theorem, Cauchy's inequality, Liouville's theorem. Fundamental theorem of Algebra, Gauss' mean value theorem. Power series, Taylor's series, Laurent's series, Singular points, Classifications of singularities, Zeros and poles of order m , Residues, Residue theorem and its application. Evaluation of real definite integrals.

5. Set Theory & Number Theory

Sets, Cartesian product of sets, Equivalence relation and partition, Fundamental theorem of equivalence relation, Functions, their restrictions and extensions, Characteristic functions and choice functions, Equivalent sets, Infinite sets, Denumerable sets, Countable sets, The continuum, Cardinal arithmetic, Inequalities of cardinal numbers, Cantor theorem.

Partially ordered sets, First and last elements, Maximal and Minimal elements, Upper and Lower bounds, Similar sets and ordered types, Well ordered sets, Limit elements, Initial segments, Similarity between well-ordered sets, Ordinal numbers and their properties. The division algorithm and derived results, Least common multiple, Greatest common divisor, Euclid's algorithm, prime numbers and related results, Fundamental theorem of arithmetic, Relatively prime integers, Euler's function, Multiplicative arithmetical functions, Convergences, Euler's theorem, Fermat's theorem, order of an integer mod m , linear convergences, Chinese remainder theorem, algebraic congruence mod m , Lagrange's theorem, Wilson's theorem, Algebraic congruence modulo a composite modules.

6. Calculus

Successive differentiation and its applications, Leibnitz's theorem, Expansion of functions, Maclaurin's theorem and Taylor's theorem, Indeterminate forms, Asymptotes of the algebraic curves, Curvature: Angle between radius vector and tangent, derivative of arc length in Cartesian, parametric and polar form, Radius of curvature in the three forms, Multiple points, convexity and concavity of a curve, points of inflexion, Tracing of Cartesian curves, Idea of some well-known polar curves, Functions of two or more variables, partial differential coefficients, Homogenous functions, Euler's theorem. Gamma function and Beta function, Length of curves and Intrinsic equation, Volume and Surfaces of solids of revolution of Cartesian, parametric and polar curves.

7. Advanced Calculus

Functions of several variables; Contour lines, Level curves and Level surface, Limits and continuity for functions of two or more variables, Partial derivatives, continuity and differentiability, chain rule for functions of two and three variables. Directional derivatives, Gradient vectors, Tangent planes, Linearization and differentials, Extreme values and saddle points, Local and Absolute maxima or minima, Lagrange's multipliers method, Taylor's series for function of two variables Partial derivatives with constrained variables.

Double integrals and its applications, Transformation of double integral from Cartesian to polar co-ordinates and vice-versa, Spherical and cylindrical co-ordinates, Triple integral in Cartesian, Cylindrical and Spherical co-ordinates. Line Integral, Gradient field, Green's theorem in a plane, Evaluation of line integral using Green's theorem, Surface Integral, Stoke's theorem.

8. Geometry

General Equations, pair of straight lines, Conic section, Intersection of a straight line and a conic. Equation of a tangent to a conic. Pole and Polar, Conjugate points. Conjugate lines. The condition of conjugacy. Chord of contact of a pair of tangents to a conic. Centre of a conic and diameter. Nature of conic, Summary. Tracing of Parabola, The asymptotes of hyperbola. Conjugate hyperbola. Asymptotes. Polar equation of a conic when focus is at the pole. Directrix, Tracing of the conic. Equation of the tangent at the point whose vectorial angle is α . Normal, Polar. Direction cosines of a line. Equation of a plane. Length of perpendicular from a point to a plane. Cylinder and its equation of a cone and right circular cone. Condition for general equation of second degree to represent a cone. Tangent plane to a cone, a property of the tangent plane to a cone. Condition of tangency. Reciprocal cone. Cone with three mutually perpendicular generators, the standard equation of central conicoids. The tangent plane. Condition of tangency of a plane. Section with a given centre. Locus of the mid-points of a system of parallel chords. The Polar plane, Polar lines. Enveloping cone. Classification of central conicoids. Normals from a given point. Conjugate diametral plane and diameters of Ellipsoid. Paraboloid (elliptic and hyperbolic). Tangent plane to a paraboloid.

9. Ordinary Differential Equations

Exact differential equations, Integrating factors. Differential equations of first order but not of first degree. Equations solvable for p , y and x , Clairaut's equations. Linear differential equation of order n . Homogeneous and non-homogeneous differential equations of order n with constant coefficients. Complementary functions. Different forms of particular integrals. Linear differential equations with variable coefficients. Reduction of order methods of undetermined coefficients and variation of parameters. Series solution of differential equations. Frobenius method. Bessel's, Legendre and hypergeometric differential equations and their solutions. Equations of the form $dx/P=dy/Q=dz/R$. Methods of grouping and multipliers. Solution of a system of linear differential equation with constant coefficients.

10. Partial Differential Equations

Formation and solution of a partial differential equations easily integrable. Linear Partial differential equations of first order. Non-linear partial differential equation of first order and their different forms, Charpit's method. Homogeneous & Non-homogeneous linear partial differential equations with constant coefficients, Different cases for complementary functions and particular integrals. Classification of second order linear partial differential equations. Method of separation of variables. Solutions of Laplace equation, Heat equation (one & two dimension).

Laplace transforms. Inverse Laplace transforms and its properties. Laplace transforms of the derivative and integral. Laplace transforms of unit impulsive function and periodic function. Convolution theorem. Laplace transforms method to solve I.V.P. and B.V.P.

11. Numerical Analysis

Errors, General error formula, Error in series approximation, solution of algebraic and transcendental equations, The bisection and Regula Falsi method, Iteration methods namely, Newton-Raphson method, Generalized Newton's method, Solution of system of linear equations using direct methods such as Matrix inversion, Gauss-elimination and LU decomposition including some iteration methods namely, Jacobi and Gauss-Siedel methods, The algebraic eigen value problems using iterative and Householder methods. Difference operators, Interpolation with equal and unequal intervals. Numerical differentiation, Numerical Aintegration using Gauss quadrature formulae, Curve fitting and approximations, least squares method, Different types of approximations, least squares polynomial approximation, Chebyshev polynomials and its application in various approximations. Ordinary

differential equations; modified Euler's, Picard's, Taylor series methods, Runge-Kutta methods of 2nd and 4th order, Multi-step methods, Boundary value problems using finite difference method.

12. Mechanics

Moment of a force and Varignon's Theorem, Resultant of a couple, Resultant of coplanar forces, Equation of line of action of the resultant. Equilibrium of a rigid body, Conditions of equilibrium of three forces body. Friction, Laws of friction, Equilibrium of a rigid body on rough plane. Cables, Suspension and parabolic cables, Cartesian and intrinsic equation of a catenary, Virtual work, Principle of virtual work and related problems. Centre of gravity (C.G), C.G of arcs, areas, solids of revolution and surfaces of revolution.

Kinematics and Kinetics, Tangential, normal, radial and transverse components of velocity and acceleration. Motion of projectile without resistance. Projectile motion up and down inclined plane. Tangent problems. Motion in resisting medium including projectiles. Upward and downward motion in a resisting medium. Motion of particles in central orbits. Stability of circular orbits. Kepler's laws of planetary motion. Plane impulsive motion. Direct and oblique impact. Loss of energy during impact. Impact against a fixed plane. Simple harmonic motion. Motion of a simple pendulum.

13. Differential Geometry

Space curves, Plane Curves, Parameterization of curves (Generalized and natural parameters) Change of parameter, regular curves and singularities. Contact of curves. Contact of a curve and a plane. Frenet trihedron. Osculating plane. Serret-Frenet formulae. Involute and Evolute, Fundamental theorem for space curves. Surface in R^3 , Implicit and explicit forms of the equation of a surface, Parametric curves on surfaces. Tangent plane. First fundamental form. Angle between two curves on a surface. Area of a surface. Invariance under co-ordinate transformation.

Second fundamental form on a surface, Gauss map and Gaussian curvature. Gauss and Weingarten formulae. Christoffel symbols and their properties. Coddazi equation and Gauss equation. Fundamental theorem of surface Theory. Curvature of a curve on a surface. Geodesic curvature and normal curvature. Geodesics. Principal directions and lines of curvature. Rodrigue's formula. Asymptote lines. Conjugate Directions. Developable surfaces.

14. Discrete Mathematics & Computer

Mathematical logic (Propositional and first order logic). Partial orders, Lattice, Boolean algebra. Permutations and Combinations, Counting, Generating functions, Recurrence relations. Graph theory: Connectivity, spanning trees, cut vertices & edges, covering, matching, independent sets, colouring, planarity, isomorphism. Probability: Introduction to probability, Conditional probability, Bayes' theorem. Mean, Median, Mode and Standard deviation. Random variables, Distributions – Uniform, Binomial, Poisson & Normal.

Introduction to computer: Introduction to Software (MATLAB & MATHEMATICA) and Mathematical concepts. Computer programming (Basic, C & C++).

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DEPARTMENT OF APPLIED MATHEMATICS
Aligarh Muslim University, Aligarh
Course Structure
M.Sc. (Applied Mathematics)
Choice Based Credit System

Course No.	Course Title	Course Type	Contact Periods per week			Credits	Marks		
			Lecture L	Tutorial T	Practical P		Sessio- nal	End- sem exam	Total
Semester I									
AMC-7101	Applied Algebra	C	3	1	0	4	30	70	100
AMC-7102	Ordinary Differential Equations	C	3	1	0	4	30	70	100
AMC-7103	Applied Mathematical Methods	C	3	1	0	4	30	70	100
AMC-7104	Discrete Mathematical Structures	C	3	1	0	4	30	70	100
AMC-7105	Real Analysis	C	3	1	0	4	30	70	100
AML-7106	Programming Language C	L	2	1	1	4	30	70	100
	Total		17	6	1	24			
Semester-II									
AMC-7201	Complex Analysis with Applications	C	3	1	0	4	30	70	100
AMC-7202	Numerical Techniques	C	3	1	0	4	30	70	100
AMC-7203	Linear Algebra and Field Theory	C	3	1	0	4	30	70	100
AMC-7204	Partial Differential Equations with Applications	C	3	1	0	4	30	70	100
AMC-7205	Applied Statistical Methods	C	3	1	0	4	30	70	100
AML-7206	Data Structures	L	2	1	1	4	30	70	100
	Total		17	6	1	24			
Semester-III									
AMC-7301	Classical Mechanics and Special Theory of Relativity	C	3	1	0	4	30	70	100
AMC-7302	Applied Functional Analysis	C	3	1	0	4	30	70	100
AMC-7303	Operation Research	C	3	1	0	4	30	70	100
AMC-7304	Topology	C	3	1	0	4	30	70	100
AMC-7305	Special Functions and Integral Transforms	C	3	1	0	4	30	70	100
AML-7306	Analysis and Design of Algorithms	L	2	1	1	4	30	70	100
	Total		17	6	1	24			
Semester-IV									
AMC-7401	Fluid Dynamics	C	3	1	0	4	30	70	100
AME-74**	Departmental Electives-I	E	3	1	0	4	30	70	100
AME-74**	Departmental Electives-II	E	3	1	0	4	30	70	100
AML-7412	Programming in Mat lab	L	2	1	1	4	30	70	100
AMP-7413	Project	P	0	0	0	4	00	00	100
AMV-7414	Viva-Voce	V	0	0	0	4	00	00	100
	Total		11	4	1	24			
	Grand Total					96			

C=Core, L=Lab, E=Departmental Elective, P=Project, V=Viva- Voce

****List of Electives:**

1. Algebraic Structures(AME-7402)
2. Advanced Graph Theory(AME-7403)
3. Coding Theory(AME-7404)
4. Differential Geometry(AME-7405)
5. Lie Group Theory and Fractional Calculus(AME-7406)
6. Linear Dynamical Systems (AME-7407)
7. Non Linear Dynamical Systems (AME-7408)
8. Sequence Spaces and Summability Methods(AME-7409)
9. Theory of Rings and Modules(AME-7410)
10. Variational Inequalities (AME-7411)

Annexure-III

Tentative Details of the proposed program for Guide to Admission 2021-2022

Course of Study M.Sc. (Applied Mathematics)

Course Details

Duration	Course Code	Intake
4 Semester	???	18

Qualifying Examination

B.Sc. with Mathematics as main/major subject with 55% marks in Mathematics and 55 % in aggregate.

Note: Candidate should refer to 'Allowed Courses' under 'Important Information & Rules' to ascertain whether He/she is permitted to apply for the course of study.

Age Limit

Not more than 27 years as on 01st July in the year of admission.

Selection Process

Through Departmental Test.

Test Paper Details

There shall be one objective type paper comprising 100 questions.

Test Centre(s)

The Departmental Test shall be held at Aligarh (U.P.) only.

Application Form Details

Form Submission	Last Date of applying	Processing Charges	Form handling Office
Without late Fee	???	Rs. 500.00	Department of Applied Mathematics, AMU, Aligarh- 202002
With Late Fee	???	Rs. 800.00	

Corrections in Application Form

any

Correction in particulars of Application Form is permissible on website only from-----??----- to ----??-----, No corrections shall be permissible under

circumstances after this period.

Admit Card

Collect from the Form handling Office 1-2 days before the scheduled date of test. The test centre shall be as indicated on the Admit Card.

Test Schedule

Date	Duration	Scheduled Start
???	2 hours	???

Item 6 on Page 9
attached

ALIGARH MUSLIM UNIVERSITY
ALIGARH

MINUTES

OF

THE ORDINARY MEETING OF THE

ACADEMIC COUNCIL

(No. 809)

HELD ON

MONDAY, THE 17TH AUG., 2020

AT 11:00 a.m.

THROUGH VIDEO CONFERENCING

Item No.7 : TO CONSIDER THE MINUTES OF THE SPECIAL MEETING OF THE FACULTY OF THE FACULTY OF ENGINEERING & TECHNOLOGY HELD ON 03.06.2020

The house considered the minutes of the Special meeting of the Faculty of Engg. & Tech. made at its meeting held on 03.06.2020:-

Item No. 2

Approved the revised Academic (Ordinances) and Regulations for Diploma Engineering Programmes running in University Polytechnic & Women's Polytechnic.

Item No.3

The Vice-Chancellor apprised the members about the rules for conversion of the teaching posts from specialized to General. The Chairman, Department of Mechanical Engineering informed that due to non-availability of the suitable candidate, the decision for conversion of the specialized post to General was taken. After detail deliberations, the house did not approve the matter of the conversion of the following two specialized posts, Department of Mechanical Engineering to General Posts:-

1. Professor in Fluid Mechanics
2. Associate Professor in Combustion

These posts can, however be considered for conversion to Aerospace Engineering to start New B.Tech. Programme for Aerospace Engineering as recommended by the Faculty of Engg. & Tech. in its Special Meeting held on 06.05.2020 under Item No.03.

Item No.4

The house agreed to establish/Convert the Department of Architecture into separate Faculty of Architecture & Planning, Aligarh Muslim University, Aligarh, and directed to the Chairman, Department of Architecture to prepare a detailed proposal mentioning full details i.e. Expenditure, Teaching Positions, Infrastructure, Departments and Grants (Recurring and Non-Recurring) along with Statutory Amendments.

The house further authorized the Vice-Chancellor to approve the proposal on behalf of the Academic Council after examining the same and send it to the Finance Committee and Executive Council for consideration.

Item No.5

Referred to the Admission Committee Ordinances (Academic) Committee for starting Ph.D. Program in the Department of Architecture,

Item No.6

Referred to the Admission Committee the proposal of the Department of Applied Mathematics for starting new program "M.Sc. (Applied Mathematics)".

OFFICE OF THE DEAN

FACULTY OF ENGINEERING & TECHNOLOGY

ALIGARH MUSLIM UNIVERSITY, ALIGARH - 202 002

Ref. No. 284/FE

Dated: 11.06.2020

DRAFT MINUTES

of the Special Meeting of the Faculty of Engineering & Technology held online on 03.06.2020 at 10.30 a.m.

Following were present:

S.No.	Name	Designation	Department
1.	Prof. Pervez Mustajab	Dean	Faculty of Engg & Tech
2.	Prof. Badrul Hasan Khan	Professor	Electrical Engineering
3.	Prof. M. M. Sufyan Beg	Principal	ZHCET
4.	Mr. Nawab Ahmad	Chairperson	Architecture
5.	Prof. Abdul Baqi	Chairperson	Civil Engineering
6.	Mr. Naseem Ahmad Khan	Chairperson	Chemical Engineering
7.	Prof. M. Sarosh Umar	Chairperson	Computer Engineering
8.	Prof. Imtiaz Ashraf	Chairperson	Electrical Engineering
9.	Prof. Omar Farooq	Chairperson	Electronics Engineering
10.	Prof. M. Faisal S. Baig	Chairperson	Mechanical Engineering
11.	Dr. Mrs. Najam Sardar	Chairperson	Petroleum Studies
12.	Prof. Mohammad Mobin	Chairperson	Applied Chemistry
13.	Prof. Shamshad Hussain	Chairperson	Applied Mathematics
14.	Prof. Absar Ah:nad	Director	INC
15.	Prof. Arshad Umar	Principal	University Polytechnic
16.	Dr. (Mrs.) Salma Shaheen	Principal	Women's Polytechnic
17.	Prof. Mubeen Beg	Coordinator BE (Spl. Invitee)	Civil Engg. /BE (Eve) Courses
18.	Prof. Nesar Ahmad	Professor	Computer Engineering
19.	Prof. Hafizur Rahman	Professor	Electrical Engineering
20.	Prof. M. Altamush Siddiqui	Professor	Mechanical Engineering
21.	Prof. Mohd Muzammil	Professor	Mechanical Engineering
22.	Prof. Ahmad Ali Khan	Professor	Mechanical Engineering
23.	Prof. Abid Ali Khan	Professor	Mechanical Engineering
24.	Prof. Abu Tariq	Professor	Electrical Engineering
25.	Prof. Mohammad Kamil	Professor	Petroleum Studies
26.	Prof. R. A. Khan Rao	Professor	Applied Chemistry
27.	Prof. M. Z. A. Rafiquee	Professor	Applied Chemistry
28.	Prof. Abdul Hakim Khan	Professor	Applied Mathematics
29.	Prof. Shamshad Husain	Professor	Applied Mathematics
30.	Dr. S. Akhlaq Ahmad	Associate Professor	Chemical Engineering
31.	Dr. Faisal Talib	Associate Professor	Mechanical Engineering
32.	Prof. M. S. Alam	Professor	Electronics Engineering
33.	Prof. Raisuddin Ansari	Professor	Mechanical Engineering
34.	Prof. Tazyeen Ahmad	Professor	Civil Engineering
35.	Prof. I.H. Farooqi	Professor	Civil Engineering
36.	Prof. Mujib Ahmad Ansari	Professor	Civil Engineering
37.	Dr. Aijaz A. Khan	Associate Professor	Applied Mathematics
38.	Dr. Azhar Jameel	Associate Professor	University Polytechnic
39.	Prof. Naiem Akhtar	Professor	Mechanical Engineering
40.	Prof. Talib Mansoor	Professor	Civil Engineering
41.	Ms. Sharmin Khan	Assistant Professor	Architecture

Contd....2nd

File
Approved
13-6-2020
Chairperson/Principal
Dept. of Applied Mathematics
Aligarh Muslim University, Aligarh

INCOMING MEMBERS:

1. Prof. Pervez Mustajab, Professor, ELED as Dean F/o Engg. & Technology
2. Prof. Abul Baqi, Chairperson, Civil Engg. Dept. vice Prof. M. Muzammil
3. Dr. Sanjeev Maheshwari, Associate Professor, Dept. of Architecture
4. Dr. Saif Said, Associate Professor, Dept. of Civil Engg.
5. Dr. Aiman Ahmad, Assistant Professor, Dept. of Applied Chemistry
6. Dr. Adil Sarwar, Assistant Professor, Dept. of Electrical Engg.
7. Dr. Mohd. Yusuf Ansari, Assistant Professor, Dept. of Petroleum Studies

Further, the Dean also appreciated the services rendered by the following outgoing members of the Faculty of Engineering & Technology;

OUTGOING MEMBERS:

1. Prof. Badrul Hasan Khan, Dept. of Electrical Engg. As DEAN
2. Prof. M. Muzammil, as Chairperson, Dept. of Civil Engineering
3. Mr. Tahsinur Rahman Warsi, Associate Professor, Dept. of Architecture
4. Dr. Syed Danish Hasan, Associate Professor, Dept. of Civil Engg.
5. Dr. Musheer Ahmad, Dept. of Applied Chemistry
6. Mr. Mohd. Anas Anees, Assistant Professor, Dept. of Electrical Engg.
7. Dr. Shaeikh Zaffar Hassan, Assistant Professor, Dept. of Petroleum Studies
8. Mr. Shahnawazuddin, Assistant Professor, Women's Polytechnic

Following members not connected with University having experts knowledge of the subjects or subject concerned co-opted by the Faculty one from each Department of the Faculty from outside the university:

9. Prof. Anurag Khandelwal, House No. 142, Nehru Nagar, Agra
10. Prof. Ch. Wali Mohammad, JMI, New Delhi
11. Prof. Bikash Mohanty, IIT, Roorkee
12. Prof. M.N. Doja, JMI, New Delhi
13. Prof. Zainul Abidin Jaffery, JMI, New Delhi
14. Prof. Anil K. Saroha, IIT, Delhi
15. Prof. Masood Alam, JMI, New Delhi
16. Prof. Mohd. Mudassir Husain, JMI, New Delhi
17. Prof. Mohammad Shakeel, JMI, New Delhi
18. Prof. A. Chandra, New Delhi

Contd...4th

Item No.5	To consider and approve the recommendation of BOS of the Department of Architecture under any other item No.4 held on 25.05.2019 regarding starting Ph.D. Program in the Department of Architecture.
Decision Taken	Approved the recommendation of BOS of the Department of Architecture under any other item No.4 held on 25.05.2019 regarding starting Ph.D. Program in the Department of Architecture and recommended to AC/EC for further necessary action.
Item No.6	To consider and approve the recommendation of Item of the BOS of the Dept. of Applied Mathematics held on 21.01.2019 regarding proposal of the department for a new program M.Sc. (Applied Mathematics).
Decision Taken	Considered and approved the recommendation of Item of the BOS of the Dept. of Applied Mathematics held on 21.01.2019 regarding proposal of the department for a new program M.Sc. (Applied Mathematics) and recommended to AC/EC.
Item No.7	To consider and approve the recommendation of BOS of the Department of Applied Physics held on 12.10.2019 under Any other item(s) regarding recommended syllabus of the Departmental Entrance Test for New P.G. Programme (M.Tech. in Materials Science & Technology) to be started in forthcoming Session 2020-21
Decision Taken	The faculty approved the recommendation of Board of Studies of the Department of Applied Physics held on 12.10.2019 regarding the Syllabus of the Departmental Entrance Test for New PG Program (M.Tech. in Material Science & Technology.) and recommended to AC/EC for further necessary action.
Item No.8	To consider and approve the ordinances for the "Centre for Integrated Green and Renewable Energy" proposed by a Committee constituted by the Dean, Faculty of Engg. & Technology for this purpose.
Decision Taken	Considered and approved the Ordinances for the "Centre for Integrated Green and Renewable Energy" proposed by a Committee constituted by the Dean, Faculty of Engg. & Technology for this purpose and recommended to AC/EC for further necessary action.
Item No.9	To consider and approve the ordinances for M.Tech. by research course in the Faculty of Engg. & Tech.
Decision Taken	The faculty after detailed consideration has approved the proposed submitted Ordinances and regulations for M.Tech. (Research) programme by the constituted Committee. The faculty formed a Committee comprising of the following to suggest modification in the proposed Nomenclature of M.Tech. (Research) programmes and submit its report within two weeks; 1. Prof. Sarosh Umar, Dept. of Computer Engg. (Convener) 2. Prof. M. Altamush Siddiqui, Dept. of Mechanical Engg. 3. Prof. Yusuf Uzzaman Khan, Dept. of Electrical Engg. 4. Controller of Examination & Admissions 5. Prof. Abu Tariq, Chief Tabulator, ZHCET 6. Prof. Iqbal Khalil, Dept. of Civil Engg.

The meeting comes to ends with vote of thanks.

Prof. Pervez Mustajab

DEAN

Faculty of Engineering & Technology
A.M.U. Aligarh 202002

DISTRIBUTION:

1. All faculty members with the request to send necessary correction or suggestions, ready within one week to the undersigned otherwise it will be treated as final.
2. Office Record, Dean's Office

Office of Controller of Examination - AMU

Form/R. No.

Date

09/11/21

PROFORMA FOR**INTRODUCTION OF A NEW COURSE**

D.No → 20/AMD

11.1.2021

प्रारंभ संख्या/R.No. 2026

दिनांक/Date 12/1/21

प्रस्ताव अनुमति/Admission Section

अधीनस्थ/Under the supervision of

Aligarh Muslim University

Name of Course	M.Sc. (Applied Mathematics)
Intake (Specially mention general category or NRI Category)	18
Duration of the Course	2 years
Age Limit (if any)	Note more than 27 years as on 01 st July in the year of admission.
Qualifying Examination	B.Sc. with Mathematics as main/major subject with 55% marks in Mathematics and 55 % in aggregate.
Selection Procedure(Mode of Selection i.e. Test Course/ Department Test/Non Test Courses) with Details	Through Departmental Test
Test Paper Details	One Objective type paper comprising 100 questions
Test Schedule	Two hours
Application Form Details	Online
Registration and Admission Test Fee/ Processing Charges	As per rule
Test/ Departmental Test Syllabus	Departmental Test Syllabus
Admission Charges*(Both for Internal and External with separation of Male and Female in consultation with the DFO (Student)	As per rule
Status: Approval of the BOS/Faculty/Admission Committee/ AC/EC/ Regulatory Bodies etc.	Approved: BOS, Faculty Meeting and AC
Development Charges/ Special Development Charges(if any)	As per rule
Required Teaching and Infrastructure facilities in details (please attached separate sheet)	No
Date of Approval in the Meeting of BOS/Faculty along with minutes of the Meetings.	BOS AMD: 21.01.2019 Faculty Meeting: 03.06.2020
Admission Test/ Departmental Test Syllabus in case Test/ Departmental Test Course	Attached
Whether Ordinances are framed. If yes furnish a copy of the same.	Not Yet(to be framed soon)

*Admission Charges

BOYS				GIRLS			
RESIDENT		NON RESIDENT		RESIDENT		NON RESIDENT	
EXT	INT	EXT	INT	EXT	INT	EXT	INT

Mr. Usman

J.C.(Adms)

Section Officer

Admission

12/1/21

Chairperson/ विभागाध्यक्ष
Deptt. of Applied Mathematics
डिपार्टमेंट ऑफ एप्लाइड मैथमेटिक्स
अंमुंवि०, अलीगढ़/A.M.U., Aligarh

11.1.2021