MINUTES

of the Special Board of Studies meeting held on 08-08-2017 in the Committee Room of the Department of Electronics Engineering. The following members were present.

1. Prof. Mohammad Idrees, Dean, Faculty of Engineering and Technology, AMU
2. Prof. Mirza Mohd. Sufyan Beg, Principal, ZH College of Engineering and Technology, AMU
3. Prof. Manjari Tripathi, Department of Neurology, AIIMS, New Delhi
4. Prof. Mohammad Muzammil, Department of Mechanical Engineering, AMU
5. Prof. Yusuf U Khan, Department of Electrical Engineering, AMU
6. Prof. Asfar Ali Khan, Department of Electrical Engineering, AMU
7. Prof. Sangeeta Singhal, Department of Physiology, AMU
8. Mr. Naseem Ahmad Khan, Department of Chemical Engineering, AMU
9. Prof. Abid Ali Khan, Department of Mechanical Engineering, AMU
10. Dr. Mehdi Hayat Shahi, Interdisciplinary Brain Research Centre, AMU
11. Dr. Fazalur Rehman, Department of Anatomy, AMU
12. Prof. Omar Farooq, Department of Electronics Engineering, AMU (Coordinator)

The Coordinator welcomed the members to the Special meeting of BOS of the Centre of Interdisciplinary Biomedical and Human Factors Engineering. The following decisions were taken:

Item No. 1: The syllabus of PhD admission test 2017-18 was discussed and approved (Appendix A). Since two streams Engineering and well as Medicine students will be eligible for the PhD admission to this centre it was decided to have 10 MCQs in Section A which will be common to both the streams. The Section B will have TWO PARTS, PART I for the Engineering stream and PART II for Medicine stream.

Item No. 2: Eligibility for admission to the PhD programme of the Centre of Interdisciplinary Biomedical and Human Factors Engineering was discussed in detail. The house agreed upon the following criteria. Candidates with MTech/MS/MD/MDS in relevant branch/specialization with minimum marks as specified by the Ordinance Chapter XXV (C).

Item No. 3: It was decided to offer 3 PhD admission vacancies for the session 2017-18, TWO from the Engineering stream and ONE from the Medicine stream.
APPENDIX A

SECTION A

Research Methodology Syllabus (40 marks, objective):
Basic understanding of technical report/paper writing; Impact factor, Citations, Research aptitude, Logical reasoning, Research ethics.
Probability Theory: Conditional probability; discrete and continuous distributions, expected values (mean, variance, covariance)
Tabulation, Organization, and Graphical Representation of Quantitative data Measures of Central Tendencies: Mean, Median, Mode Measures of Variability: Range, Quartile Deviation, Standard Deviation.
Programming skills

Subject Specific (Common to both stream 10 marks, objective):
Linear, quadratic, exponential and logarithmic functions, Complex numbers, Sequences, Basic Statistics

SECTION B

PART I: ENGINEERING STREAM

Syllabus (30 marks, subjective):
Eigen-values and Eigen vectors of a matrix, Asymptotes and curve tracing, Applications of integration to lengths of curves, surfaces and volumes of solids of revolution, Solution of differential equations, Partial differentiation, Double and triple integrals
MASERS and LASERS, Wave packet, Heisenberg’s uncertainty principle, Crystal structure, electron energy bands in solids, Basics of quantum mechanics
Green Chemistry, methods of chemical analysis, corrosion and its prevention, polymers

PART II: MEDICINE STREAM

Syllabus (30 marks, subjective):
CARDIOVASCULAR SYSTEM: Structure of Heart, Cardiac Muscle Structure and its Functions, Conducting System of Heart, Cardiac Cycle, Heart Sounds, Regulation of Blood Pressure, ECG.
RESPIRATORY SYSTEM: Structure and Functions of Respiratory System, Static and Dynamic Lung Volumes, Gas transfer, Sleep studies