Syllabus for M. Tech. (Atmospheric Science) Entrance Test 2023

Section A: Total Marks 20

Numerical reasoning, Alphabetic sequences, English grammer basics, General Knowledge, Current affairs.

Section B: Total Marks 80

Questions will be of multiple choice types from Physics, Mathematics and Statistics at the Bachelor degree level and Basic Atmospheric Sciences.

Unit 1, Physics: Properties of Matter, Equations of motion, Gravitation, Keplers laws, Heat and Thermodynamics, Statistical Mechanics, Electrodynamics, Optics, Electricity and Magnetism, Basics of Quantum Mechanics, Modern Physics and Laws of Radiation.

Unit 2, Mathematics and Statistics: Ordinary differential equation and their solution, determinants and matrices (Fundamentals), Fourier series, Laplace Transform, Conic Section, Polynomial equations, Partial differential equations, Set theory, Complex Variables, Eigen values and Eigen vectors, Fourier transform inverse Fourier transform and double Fourier transform.

Measures of central tendency, dispersion. Significance tests and linear correlation. Multiple Correlation, Principal Component Analysis.

Unit 3, General idea of Atmospheric Science. Structure and composition of the Atmosphere, Green House gases, General awareness of Weather, Climate and Monsoon, Application of Physics in Atmospheric Science.

Unit-wise weightage of marks:

Unit 1 Physics: 50%, Unit 2 Mathematics and Statistics: 30%, Unit 3 Basic Atmospheric Sciences: 20 %.

Type of questions for the entrance: Multiple Choice Questions (MCQ)

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