

Note-4: Candidates are not permitted to use Mobile Phone or any other electronic / electrical device other than those specifically permitted in Note-2. Candidates must not, therefore, bring Mobile Phone or any other electronic /electrical device not specifically permitted inside the Examination premises. Possession of these items, whether in use or not, will be considered as “use of unfair means” in the Examination and candidature of such candidates will be cancelled forthwith. Such candidates are also liable for debarment upto a period of 5 years and/or criminal prosecution.

Note-5: There will be negative marking of 0.25 marks for each wrong answer in Paper-I. Candidates are, therefore, advised to keep this in mind while answering the questions.

Note-6: Commission will place the answer keys of Paper-I on its website in about 7 days of the Examination. Objections and claims if any, received within the time limit specified while placing answer keys will be examined by the Commission with the help of experts, if necessary.

B. Personality Test (Interview):

100 marks

NOTE-I: Only those candidates who secure at least the minimum qualifying marks in the written examination as may be fixed by the Commission at its discretion, will be eligible to appear in the Interview. The interview will be held at places as may be decided by the Commission.

NOTE-II: SC/ST candidates called for interview will be paid TA as per Government Orders. However, no TA is payable to any candidate for appearing in the written examination.

NOTE-III: **Canvassing in any form whatsoever will lead to cancellation of the candidates.**

Note-IV: The Commission may, its discretion fix minimum qualifying standards in interview.

9. **SYLLABUS**

The standard of the questions in Engineering subjects will be approximately of the level of Diploma in Engineering (Civil/ Electrical/ Mechanical) from a recognized Institute, Board or University recognized by All India Board of Technical Education. All the questions will be set in SI units. The details of the syllabus are given below:

Paper-I

(i) **General Intelligence & Reasoning:** The Syllabus for General Intelligence would include questions of both verbal and non-verbal type. The test may include questions on analogies, similarities, differences, space visualization, problem solving, analysis, judgement, decision making, visual memory, discrimination, observation, relationship concepts, arithmetical reasoning, verbal and figure classification, arithmetical number series etc. The test will also include questions designed to test the candidate's abilities to deal with abstract ideas and symbols and their relationships, arithmetical computations and other analytical functions.

(ii) **General Awareness:** Questions will be aimed at testing the candidate's general awareness of the environment around him/her and its application to society. Questions will also be designed to test knowledge of current events and of such matters of everyday observations and experience in their scientific aspect as may be expected of any educated person. The test will also include questions

relating to India and its neighbouring countries especially pertaining to History, Culture, Geography, Economic Scene, General Polity and Scientific Research, etc. These questions will be such that they do not require a special study of any discipline.

(iii) **General Engineering (Civil and Structural), (Electrical & Mechanical):**

Part-A

Civil Engineering

Building Materials, Estimating, Costing and Valuation, Surveying, Soil Mechanics, Hydraulics, Irrigation Engineering, Transportation Engineering, Environmental Engineering.

Structural Engineering – Theory of Structures, Concrete Technology, RCC Design, Steel Design.

Part-B

Electrical Engineering

Basic concepts, Circuit law, Magnetic Circuit, AC Fundamentals, Measurement and Measuring instruments, Electrical Machines, Fractional Kilowatt Motors and single phase induction Motors, Synchronous Machines, Generation, Transmission and Distribution, Estimation and Costing, Utilization and Electrical Energy, Basic Electronics.

Part-C

Mechanical Engineering – Theory of Machines and Machine Design, Engineering Mechanics and Strength of Materials,

Properties of Pure Substances, 1st Law of Thermodynamics, 2nd Law of Thermodynamics, Air standard Cycles for IC Engines, IC Engine Performance, IC Engines Combustion, IC Engine Cooling & Lubrication, Rankine cycle of System, Boilers, Classification, Specification, Fitting & Accessories, Air Compressors & their cycles, Refrigeration cycles, Principle of Refrigeration Plant, Nozzles & Steam Turbines.

Properties & Classification of Fluids, Fluid Statics, Measurement of Fluid Pressure, Fluid kinematics, Dynamics of Ideal fluids, Measurement of Flow rate, basic principles, Hydraulic Turbines, Centrifugal Pumps, Classification of steels.

Paper II

Part-A

Civil & Structural Engineering