

- 12.2 A candidate may give an option for three Centres, in the order of priority, within the same region. No request for a change of Centre of Examination will be considered later under any circumstances. Hence, the candidates should select the Centres carefully and indicate the same correctly in their applications.
- 12.3 The Commission reserves the right to cancel any Centre and ask the candidates of that Centre to appear from another Centre. The commission also reserves the right to divert candidates from any Centre to some other Centre to take the examination.
- 12.4 The Regional Office, having jurisdiction over the Examination Centres opted by the candidate, will issue an Admission Certificate to the candidate for the examinations.

13. **Scheme of Examination:**

- 13.1 The Computer Based Examination will be conducted in two papers as indicated below:

13.1.1 Paper-I

13.1.2 Paper-II

Papers	Mode of Examination	Subject	Number of Questions /Maximum Marks	Duration
Paper-I	Computer Based Examination	(i) General Intelligence and Reasoning	50/ 50	2 Hours (2 hours and 40 minutes for the candidates who are eligible for scribe as per <b>Para-9.1, 9.2 and 9.3</b> )
		(ii) General Awareness	50/ 50	
		(iii) Part-A: General Engineering (Civil & Structural) or Part-B: General Engineering (Electrical) or Part-C: General Engineering (Mechanical)	100/ 100	
Paper-II	Computer Based Examination	Part-A: General Engineering (Civil & Structural) or Part-B: General Engineering (Electrical) or Part-C: General Engineering (Mechanical)	100/ 300	2 Hours (2 hours and 40 minutes for the candidates who are eligible for scribe as per <b>Para 9.1, 9.2 and 9.3</b> )

- 13.2 The candidates will be required to attempt the General Engineering part (i.e., Part-A, Part-B or Part-C) in Paper-I and Paper-II, which has been selected by them, on the basis of their Stream/ Subject of Educational Qualification, in the online application form. In other words, the candidates appearing from Civil Stream are required to attempt Part-A (Civil & Structural) of Paper-I and Paper-II and the candidates appearing from Electrical are required to attempt Part-B

(Electrical) and the candidates appearing from Mechanical Stream are required to attempt Part-C (Mechanical) of Paper-I and Paper-II failing which their candidature will be rejected.

- 13.3 Paper-I & Paper-II will consist of Objective Type, Multiple-choice questions only. The questions will be set both in Hindi & English.
- 13.4 There will be a negative marking of 0.25 marks for each wrong answer in Paper-I and one (01) mark for each wrong answer in Paper-II. Candidates are, therefore, advised to keep this in mind while answering the questions.
- 13.5 Candidates are allowed to bring their own Slide–Rule, Logarithm Table and Steam Table for Paper-II only. The facility of Scientific Calculator will be available in CBE Software. They are not allowed to use such aids for Paper-I.
- 13.6 Tentative Answer Keys of Paper-I and Paper-II will be placed on the website of the Commission after the Examination. Candidates may go through the Answer Keys and submit online representations, if any, within the time limit given by the Commission, on payment of Rs. 100/- per question which is non-refundable. Representations on the matter received through any other modalities; i.e., letter, application, email, etc. will not be entertained. Representation regarding the Answer Keys will be scrutinized before finalization of the Answer Keys and the decision of the Commission in this regard will be final.
- 13.7 Marks scored by candidates in Computer Based Examination, if conducted in multiple shifts, will be normalized by using the formula published by the Commission through Notice No: 1-1/2018-P&P-I dated 07-02-2019 and such normalized scores will be used to determine final merit and cut-off marks.
- 13.8 In this Examination, a few posts are common for Mechanical and Electrical Engineering. Since the engineering branches are different, different question papers are served to the candidates of Mechanical and Electrical Engineering. Because of altogether different disciplines/question papers, difficulty levels between the two question papers may vary. Accordingly, scores of Mechanical and Electrical Engineering in Paper-II of this Examination shall also be normalized with each other for determining the final merit and cut-off marks.
- 13.9 The dates of examinations indicated in the Notice are tentative. Any change in the schedule of examinations will be informed to candidates only through the website of the Commission.
- 13.10 There shall be no provision for re-evaluation/ re-checking of scores of any stage/ paper(s) of the Examination. No correspondence in this regard shall be entertained.

#### 14 **Indicative Syllabus**

14.1 The standard of the questions in Engineering subjects will be approximately of the level of a Diploma in Engineering (Civil/ Mechanical/ Electrical). The details of the syllabus are given below:

##### 14.2 **Paper-I:**

14.2.1 **General Intelligence & Reasoning:** The Syllabus for General Intelligence would include questions of both verbal and non-verbal types. The test may include questions on analogies, similarities, differences, space visualization, problem-solving, analysis, judgment, 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.

14.2.2 **General Awareness:** Questions will be aimed at testing the candidate's general awareness of the environment around him and its application to society. Questions will also be designed to test knowledge of current events and 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 neighboring 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.

### 14.2.3 General Engineering: Civil & Structural, Electrical and Mechanical:

#### 14.2.3.1 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.

#### 14.2.3.2 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.

#### 14.2.3.3 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 Steel.

### 14.3 Paper II:

#### 14.3.1 Part-A (Civil & Structural Engineering):

**Building Materials:** Physical and Chemical properties, classification, standard tests, uses and manufacture/quarrying of materials e.g., building stones, silicate-based materials, cement (Portland), asbestos products, timber and wood-based products, laminates, bituminous materials, paints, varnishes.

**Estimating, Costing and Valuation:** estimate, glossary of technical terms, analysis of rates, methods and unit of measurement, Items of work  
– earthwork, Brick work (Modular & Traditional bricks), RCC work, Shuttering, Timber work, Painting, Flooring, Plastering, Boundary wall, Brick building,