

General Instructions :

- i) The Question-cum-Answer Booklet consists of objective and subjective types of questions having 7 questions.
- ii) Space has been provided against each objective type question. You have to choose the correct choice and write the complete answer in the space provided.
- iii) For subjective type questions enough space for each question has been provided. You have to answer the questions in the space.
- iv) Follow the instructions given against both the objective and subjective types of questions.
- v) Candidate should not write the answer with pencil. Answers written in pencil will not be evaluated. (Except Graphs, Diagrams & Maps)
- vi) In case of Multiple Choice, Fill in the blanks and Matching questions, scratching / rewriting / marking is not permitted, thereby rendering to disqualification for evaluation.
- vii) For reading the questions 15 minutes of extra time has been provided.

Note : Answer questions from Sections **A** & **B** as per the instructions given under them.

SECTION – A

Instruction : Answer Question **No. 1** and any *two* full questions of the remaining.

1. Fill in the blanks with the appropriate word(s) selecting from the choices given in the brackets :

10 × 1 = 10

- a) The motor which is used to drive the electric trains is

(*dc series motor, dc shunt motor, dc compound motor*)

Ans : _____

- b) Transformers are rated in

(*kW, kVA, kV*)

Ans : _____

c) A 3 Phase squirrel cage induction motor has

(*high starting torque, very high starting torque, low starting torque*)

Ans : _____

d) The wiring is suitable in places where chemicals are present is
..... wiring.

(*PVC conduit, lead sheathed, CTS*)

Ans : _____

e) Wattmeter consists of

(*current coil & inductive coil, current coil & pressure coil, current coil & resistive coil*)

Ans : _____

f) is used to save the boiler against the overheating caused due to
the low water level.

(*Fusible plug, Blow-of-valve, Safety valve*)

Ans : _____

g) Atomiser is used in engines.

(*gas, petrol, diesel*)

Ans : _____

h) pulley is used to increase the arc of contact.

(*Stepped cone, Jockey, Fast and loose*)

Ans : _____

[Turn over

i) pump is a positive displacement pump.

(*Centrifugal, Gear, Reciprocating*)

Ans : _____

j) is the ratio of load to effort.

(*Mechanical advantage, Efficiency, Velocity ratio*)

Ans : _____

2. a) What is a generator ? On what principle does it work ? 2

b) With a neat sketch explain briefly the working principle of a *dc* motor. 5

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b) List any two advantages of cleat wiring.

2

c) Write a neat sketch of mercury vapour lamp and label its parts.

4

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4. a) Draw a neat diagram of electric bell and label the parts.

4

b) Name two atomic power stations in our nation.

2

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b) List out the boiler mountings. 2

c) Sketch and describe the Babcock and Wilcox boiler. 6

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b) Explain the function of a simple carburetor.

2

c) Explain with neat line diagram the working of four-stroke petrol engine.

6

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b) Write down the classification of pumps.

2

c) Describe with a line diagram the working of a single acting reciprocating pump.

6

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