

17585

16117

2 Hours / 50 Marks

Seat No.

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- Instructions :** (1) All Questions are *compulsory*.
(2) Figures to the right indicate full marks.
(3) Assume suitable data, if necessary.

Marks

1. Attempt any SEVEN :

14

- (a) Define positive displacement pumps.
- (b) State the function of foot valve in centrifugal pump.
- (c) State two applications of submersible pump.
- (d) State necessity of IC engine.
- (e) List various fuels that can be used in IC engine.
- (f) State function of any two main parts of wind turbine.
- (g) Write the specification of Gas turbine.
- (h) Define Free Air Delivered by compressor.
- (i) State types of vibrators.
- (j) State the types of flow control valve.

2. Attempt any FOUR :

12

- (a) Explain :
 - (i) Suction lift
 - (ii) Delivery head
 - (iii) Capacity of pump
- (b) Draw a neat and well labelled sketch of centrifugal pump.
- (c) State the need and procedure of maintenance of centrifugal pump.
- (d) Compare centrifugal pump and rotary pump.
- (e) Describe the factors considered for selection of submersible pump.
- (f) Explain how the Water Horse Power (WHP) and the efficiency of centrifugal pump is calculated.

3. Attempt any FOUR : 12

- (a) Compare petrol and diesel engines.
- (b) State the criteria to select the engine for portable electrical generator.
- (c) State working, principle and applications of 4 stroke petrol engine.
- (d) Classify steam turbine. State its applications.
- (e) Discuss any three factors considered for selection of steam turbine.
- (f) Show with a neat sketch, main parts of hydroturbine.

4. Attempt any FOUR : 12

- (a) How hydroturbines are selected based on available head ?
 - (b) State the types and applications of Gas turbine.
 - (c) Draw figure and state working of reciprocating air compressor.
 - (d) State with example, applications of vibrators.
 - (e) State the need of valve to control water and steam flow.
 - (f) State the uses of conveyors with example.
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