

DAY - 16

SEAT NUMBER

2022

VIII

10

1030

V - 338

(E)

MECHANICAL MAINTENANCE
PAPER - II (A-2)

Time : 2½ Hours

2 Pages

Max. Marks : 40

Instructions : (1) All questions are compulsory.

(2) Figures to the right indicates full marks.

(3) Illustrate your answers with neat sketches wherever necessary.

(4) Use of drawing instruments, mathematical tables etc. is permitted.

(5) Assume suitable data, if necessary.

1. Answer the following : (Any Four)

Fill in the blanks :

(a) Multistage pumps are used to obtain _____ Delivery Head.

☒ (i) High

(ii) Low

(iii) Same

(b) _____ is used for holding pipes during threading.

(i) Pipe Cutter

☒ (ii) Pipe Vice

☒ (iii) Pipe Wrench

State 'true' or 'false' and correct it; if false :

☒ (c) Air vessels are used in centrifugal pump. F

☒ (d) Gear Drive is a Negative Drive. T

Match the pairs :

- | | |
|-------------------|-----------------------------|
| (e) Diesel Engine | (i) Constant Pressure Cycle |
| (f) Petrol Engine | (ii) Dual Cycle |
| | (iii) Constant Volume Cycle |

2. Answer the following in about 8 to 10 lines each : (Any Two)

6

- ☒ (a) What are the advantages and disadvantages of Chain Drive ? *1/2 each*
- ☒ (b) Differentiate the Centrifugal Pump and Reciprocating Pump.
- ☒ (c) Explain in brief the Open Belt Drive and Crossed Belt Drive with neat sketches.

3. Answer the following in about 8 to 10 lines each : (Any Two)

6

- ☒ (a) Compare Petrol Engine with Diesel Engine.
- ☒ (b) Explain working of Reciprocating Air Compressor with neat sketch. | /
- ☒ (c) State advantages and disadvantages of four stroke cycle engine over the two stroke cycle engine.

4. Answer the following in about 5 to 6 lines each : (Any Three)

6

- ☒ (a) Write short note : Connecting Rod
- ☒ (b) Give Reason : Centrifugal Pumps Needs Priming.
- ☒ (c) List the equipments commonly used in Plumbing Shop.
- ☒ (d) Write short note : Rope Drive
- ☒ (e) What are the functions of Foundation ?

5. Answer the following in about 5 to 6 lines each : (Any Three)

6

- ☒ (a) Write the general rules for Safe Material Handling.
- ☒ (b) What are the purposes of Lubricants ?
- ☒ (c) Draw a simple labeled diagram of Pillar Crane.
- ☒ (d) What are the functions of stainer and foot valve on suction side of pumps ? |
- ☒ (e) Why does internal combustion engines needs cooling of cylinder ?

6. Attempt any two of the following :

12

- ☒ (a) Which are the various types of gears used for Mechanical Power Transmission ? Explain any one of them with a neat sketch.
- ☒ (b) Explain working of Reciprocating Pump with neat diagram.
- ☒ (c) Explain working of Four-Stroke Petrol Engine with P-V Diagram.