

|                                                          |     |         |      |                 |     |
|----------------------------------------------------------|-----|---------|------|-----------------|-----|
| 2012                                                     | III | 16      | 1100 | V - 638         | (E) |
| <b>MECHANICAL MAINTENANCE</b><br><b>PAPER - II (A-2)</b> |     |         |      |                 |     |
| Time : 2½ Hours                                          |     | 3 Pages |      | Max. Marks : 40 |     |

- Instructions :
- (1) All questions are compulsory.
  - (2) Figures to the right indicate 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)

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Fill in the blanks by choosing appropriate words :

(a) \_\_\_\_\_ is used to connect two pipes at right angle.

(i) Reducing Socket

(ii) Elbow

(iii) Nipple

(b) A good lubricant has \_\_\_\_\_ flash point.

(i) High

(ii) Low

(iii) Medium

State true or false and correct it, if false :

(c) In Petrol Engine, Fuel is ignited by high temperature air.

(d) Centrifugal Pump needs priming.

Match the pairs :

'A'

'B'

- (e) Oldham's Coupling (i) Connecting two shafts in correct alignment  
(f) Universal Coupling (ii) Connecting two shafts whose axes are parallel and at a short distance apart  
(iii) Connecting two shafts whose axes are intersecting

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

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- (a) Explain working of 4-stroke Petrol Engine with the help of 'P-V' diagram.  
(b) Give any three differences between Centrifugal Pump and Reciprocating Pump.  
(c) List different materials used for Manufacturing Pipes.

3. Answer any two of the following :

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- (a) Explain with a neat sketch working of a Simple Carburettor.  
(b) Write a short note on 'Belt Conveyor' with neat sketch.  
(c) Explain working of 'Open Belt Drive' and 'Cross Belt Drive' with neat sketches. <https://www.maharashtrastudy.com>

4. Answer the following in about 6-8 lines each : (Any Three)

6

- (a) Why Cooling of I.C. Engine is necessary ?  
(b) Write a short note on 'Foot Valve and Strainer'.  
(c) How Air Compressors are classified ?  
(d) Explain Pillar Crane with neat sketch.



(e) Why foundation is essential for Machine Tools ?

5. Answer in short : (Any Three)

6

- (a) Name types of Impellers and state their uses.  
(b) Why Spark Plug is used in Petrol Engine ?  
(c) What are the causes of Vibrations ?  
(d) Write proper process of Mounting of Bearing on a Shaft.  
(e) List different Material Handling Equipments.

Attempt any two :

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- (a) Differentiate between Petrol Engine and Diesel Engine.  
(b) Explain working and construction of Reciprocating Pump with neat sketch.