

FIRST SEMESTER EXAMINATION 2023-2024

MECHANICAL MAINTENANCE

PAPER-2

STD : XII

DATE : 08/10/2023

ROLL No. : _____

MARKS: 40

TIME : 2 ½

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.

Q.1 Answer the following (any four)

(4)

Fill in the blanks with appropriate words from those given below.

- (a) Carburettor is used into vaporize and to produce homogeneous air fuel mixture.

(petrol, diesel , gas)

- (b) _____ is used to avoid the back flow of water from to the pump
(strainer , foot valve, impeller)

State True or False and correct it if False:

- (a) Engine is a mechanical device to increase the pressure energy of a liquid.....
(b) Heat engine in which the combustion of fuel takes place in the engine cylinder is known as internal combustion engine.....

Match the pairs:

'A'

- (a) Petrol engine
(b) Diesel engine

'B'

1. CI ENGINE
2. SI ENGINE
3. PI ENGINE

Q.2 Answer the following in about 8 to 10 lines each (any two)

(6)

- (a) Differentiate between petrol engine and diesel engine..
(b) What are the advantages of maintenance.
(c) Define clearance and swept volume with neat sketch.

Q.3 Answer the following in about 8 to 10 lines each (any two)

(6)

- (a) Explain the working principles of reciprocating pump with neat sketch
(b) Enlist the principle parts of I.C.Engine and Explain any four of them.
(c) Describe the working of Air compressor with the help of neat sketch.

Q.4 Answer the following (any three)

(6)

- (a) Explain any four pipe fitting with neat sketch.
- (b) What is knocking in case of IC engine
- (c) What are the functions of Air Vessel
- (d) Explain Belt conveyor with neat sketch

Q.5 Answer the following in about 5 to 6 lines each (any three)

(6)

- (a) Give classification of Material handling devices.
- (b) Why does knocking occur in an IC engine, Explain with neat sketch?
- (c) Give application of compressed air.
- (d) Give classification of centrifugal pump.

Q.6 Answer the following (any two)

(12)

- (a) Explain four stroke petrol engine with neat sketch.
- (b) Differentiate between centrifugal pump and reciprocating pump.
- (c) Explain general rules for material handling.