DAY - 16 SEAT NUMBER | | | | | | |

2013	X	17	1430	V – 338	(E)

MECHANICAL MAINTENANCE
PAPER - II (A-2)

Time : $2^1/_2$ 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. are permitted.
(5) Assume suitable data, if necessary.

1. Answer the following : **(Any Four)** 4

Fill in the blanks by choosing appropriate word :

(a) _____ is used to connect two pipes whose axes are coinciding.

(i) Socket
(ii) Elbow
(iii) Bend

(b) _____ pump is called positive displacement pump.

(i) Centrifugal
(ii) Rotodynamic
(iii) Reciprocating

State 'True' or 'False' and correct it, if false :

(c) Centrifugal Pump works on Centripetal Force.

(d) Jacks are used to Lift Heavy Loads.

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Match the pairs :

'A'	'B'
(e) Diesel Engine	(i) Combustion at Constant Volume
(f) Petrol Engine	(ii) Combustion at Constant Pressure Volume
	(iii) Combustion of Constant Pressure

2. Answer the following in about 8 to 10 lines each : **(Any Two)** 6

   (a) What are different types of Impellers ? Describe any one of them with neat sketch.

   (b) Classify material handling equipments used in industries and list any four devices.

   (c) Explain Splash or Bath Lubrication System with neat sketch.

3. Answer the following in about 8 to 10 lines each : **(Any Two)** 6

   (a) Draw neat sketches of any six Pipe Fittings.

   (b) Differentiate between 2-stroke and 4-stroke Engines.

   (c) State, why Multistaging of Pump is necessary ? Draw a simple sketch of Multistage Pump.

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

   (a) Why Spark Plug is used in Petrol Engine ?

   (b) Differentiate between Rigid Coupling and Flexible Coupling with examples.

   (c) State functions of Foundation.

   (d) Write a short note on Piston used in I.C. Engines with sketch.

   (e) Explain Hydraulic Jack with neat sketch.

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5. Answer in short : **(Any Three)** 6

   (a) State the functions of a Carburettor.

   (b) Draw a labelled diagram of Single Stage, Single Acting Reciprocating Type Air Compressor.

   (c) State advantages of Chain Drive.

   (d) What precautions should be taken to avoid Vibrations ?

   (e) State the advantages of Gear Drive.

6. Attempt any two : 12

   (a) Explain the working and construction of a Centrifugal Pump with neat sketch.

   (b) Explain the working of 4-stroke Diesel Engine with neat sketch.

   (c) State different types of Drives. Explain any two of them with neat sketches.

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