

[5254]-33
B.E. (Mechanical)
INDUSTRIAL FLUID POWER
(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 100

Instructions to the candidates:

- 1) Answer any 3 questions from each section.*
- 2) Answer to the two sections should be written in the separate answer books.*
- 3) Neat diagrams must be drawn wherever necessary.*
- 4) Figures to the right indicate full marks.*
- 5) Assume suitable data, if necessary.*

SECTION - I

- Q1)** a) Draw a simple hydraulic circuit showing all its essential components. State functions of each component. **[8]**
- b) Explain six important properties of a hydraulic fluid. **[6]**
- c) Compare static and dynamic seals. **[4]**

OR

- Q2)** a) What are the locations where filters are typically installed in hydraulic circuits? What are their advantages? **[6]**
- b) What are the effects of contaminants on different components of hydraulic systems? **[6]**
- c) Compare hose connections with pipe connections. **[6]**

OR

- Q3)** a) Draw a neat sketch and explain working of a fixed delivery axial piston pump. **[10]**
- b) What are the different accessories used in hydraulic systems? What are their functions? **[6]**
- Q4)** a) Explain with a sketch the different parts of a typical reservoir assembly. **[8]**
- b) Explain with sketch the operation of a balanced vane pump. **[8]**

P.T.O.

- Q5) a)** Draw a sketch and explain working of a sequence valve. [8]
b) What are the different centre positions used in DCV. Give advantages and disadvantages of each. [8]

OR

- Q6) a)** What is a accumulator? State different types of accumulators. Explain any one accumulator with a sketch. [8]
b) Explain with a sketch the working of a pressure and temperature compensated flow control valve. [8]

SECTION - II

- Q7) a)** Write a short note on “Hydraulic Motors”. [8]
b) Write a short note on “Types of cylinders”. [8]

OR

- Q8) a)** Explain with neat sketch “Bleed off circuit”. [8]
b) Explain with neat sketch “Motor Braking circuit”. [8]

- Q9) a)** Write a short note on “Pneumatic valves”. [8]
b) Write a short note on “Types of Lubricators” for Pneumatic systems. [8]

OR

- Q10) a)** Explain with Ckt working of a “Time Delay Valve”. [8]
b) Write a short note on “Types of Air dryers” for a Pneumatic system. [8]

- Q11) a)** What is the manufacture’s catalogue? How does the Designer select component from it? [9]
b) What are the factors considered, while Designing of a “Pneumatic System”. [9]

OR

- Q12) a)** What are factors considered, while Designing of a “Hydraulic System”. [9]
b) Write a short note on “Trouble shooting methods of” Hydraulic Systems. [9]

