

Total No. of Printed Pages:02

**SUBJECT CODE NO:- H-266**  
**FACULTY OF ENGINEERING AND TECHNOLOGY**  
**T.E. (Mechanical)**  
**Industrial Hydraulics and Pneumatics**  
**(REVISED)**

[Time: Three Hours]

[Max. Marks: 80]

Please check whether you have got the right question paper.

- N.B
- i) Solve any three questions from each section.
  - ii) Assume suitable data wherever necessary.

**Section A**

- |     |  |          |
|-----|--|----------|
| Q.1 | a) What do you mean by fluid technology and explain desirable properties of oils used in hydraulic system.   | 08       |
|     | b) Explain continuity equation and Bernoulli's theorem in detail.  | 05       |
| Q.2 | Draw the following symbols<br>i) Hydraulic pump and motor<br>ii) Pneumatic compressor<br>iii) Hydraulic unloading valve<br>iv) Sequence valve<br>v) Double ended cylinder<br>vi) Quick exhaust valve | 13       |
| Q.3 | a) What is a pump? What are different types of pump. Explain any one<br>b) With a neat sketch explain the construction and working of screw compressor.  | 08<br>05 |
| Q.4 | a) Explain construction and working of Double acting cylinder & single acting cylinders<br>b) Write a short note on lobe compressor  | 08<br>05 |
| Q.5 | Write a short note on (any three)<br>i) Difference between pump and motor<br>ii) Gerotor pump<br>iii) Hydraulic sump<br>iv) Accumulators   | 14       |

**Section B**

- Q.6 a) Explain different types of flow control valve used in pneumatic system. 05
- b) What are the different type of DCV? State their application by using symbolic representation 08
- Q.7 In a production process , work piece are to be fed into a jig from a gravity magazine by using a double acting cylinder feeding takes place when a push button is pressed and return automatically to it's start position after the work piece has reached the jig position. Explain the working of the circuit. 13
- Q.8 A huge steel door is installed in a deep mining tunnel . This door may be opened or closed by two push buttons , either from outside or inside . Explain the working of the circuit. 13
- Q.9 What is PLC ? How is it used in electrohydraulic and electropneumatic system? state it's advantages and limitation. 13
- Q.10 Write short note on (any three) 14
- Meter in & meter out circuit.
  - Piping in hydraulic ( and pneumatic)
  - Limit switches
  - Refrigeration air drier separation
  - Relays