

Total No. of Printed Pages:02

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

[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) Draw a basic hydraulic showing various components of a circuit .Explain the function and working of each of the component 08
- b) What are different types of hydraulic fluid used in hydraulic system. 05
- Q.2 Draw the following symbols along with it's application 13
- i) FRL
 - ii) Solenoid operated four way three position DCV
 - iii) Hydraulic unloading valve
 - iv) Sequence valve
 - v) Pressure booster
- Q.3 a) With neat sketch explain the construction and working of a radial piston pump. 08
- b) What is an air compressor ? What are different types of air compressor? 05
- Q.4 a) With neat sketch explain the construction and working of Lobe type compressor. 05
- b) With a neat sketch explain the construction and working of an air filter, regulator and lubricator unit used in pneumatics. 08
- Q.5 Write a short note on (any three) 14
- i) Laws governing the hydraulic and pneumatic system
 - ii) Gerotor pump
 - iii) Hydraulic sump
 - iv) Accumulators
 - v) Gear pump

Section B

- Q.6 a) What is a pressure booster? With a simple circuit the use of pressure booster in a circuit. 05
 b) What are different types of DCV? State their application by using symbolic representation 08
- Q.7 Draw the sequencing circuit for operating two double cylinder in a sequence in both strokes use appropriate component for the circuit and Explain it's working for hydraulic system. 13
- Q.8 Draw a circuit for hydraulic press where, for safety , the operator is required to engage his both the hands to operate the stroke of the press consider a double activity cylinder ,press button operated control valves and other standard components explain the working of the circuit 13
- Q.9 In a chemical plant ,an indicating lamp will be lighted when the pressure and temp rise above certain level . These two conditions are simulated by using push button switch PB1 and PB2 Draw the circuit. 13
- Q.10 Write a short note on (any three) 14
 a) Meter in & meter out circuits
 b) Piping in hydraulic & pneumatics
 c) OR valve
 d) Limits switches used in circuit
 e) AND valve.