Total No. of Questions : 12]

SEAT No. :

P1523

[Total No. of Pages : 3

[4759] - 33
B.E. (Mech.)
INDUSTRIAL FLUID POWER
(2008 Course) (Semester - I) (402043)

Time : 3 Hours] *[Max. Marks : 100*

Instructions to the candidates:

1) ***Answer any 3 questions from section I and 3 question from section II.***
2) ***Answers to the two sections should be written in separate answer books.***
3) ***Neat figures must be drawn wherever necessary.***
4) ***Figures to the right indicate full marks.***
5) ***Use of electronic pocket calculator is allowed.***
6) ***Assume suitable data, if necessary.***

SECTION - I

Q1) a) Explain the applications of Hydraulic system. **[8]**

b) Explain different types of filters used in Hydraulic system. **[8]**

OR

Q2) a) Explain different types of contaminations & their control in Hydraulic system. **[8]**

b) Write a short note on "Types of seals". **[8]**

Q3) a) Describe with neat sketch the construction and working of "Bent Axis Pump". **[8]**

b) Explain with neat sketch working of a "Radial piston pump". **[8]**

OR

Q4) a) Explain with neat sketch working of a "Bladder type Accumulator". **[8]**

b) Write a short note on "Pressure Intensifiers". **[8]**

P.T.O.

Q5) a) Compare advantages and disadvantages of Meter-In, Meter-Out & Bleed off ckt. **[10]**

b) Explain with neat sketch working of "Unloading valve". **[8]**

OR

Q6) Write short note on (Any Three). **[18]**

a) Pressure compensated flow control valve

b) Pressure sequence valve

c) Counter balance valve

d) Pilot operated check valve

SECTION - II

Q7) a) Write a short note on "Cylinder Mountings". **[8]**

b) Explain with neat sketch working of "vane motor". **[8]**

OR

Q8) a) Explain with neat sketch working of "Fail Safe Circuit". **[8]**

b) Explain with neat sketch working of "Motor Braking Circuit". **[8]**

Q9) a) Draw circuits to show applications of **[12]**

i) Shuttle valve

ii) Twin pressure valve

iii) Quick Exhaust valve

iv) Time Delay valve

b) Write a short note on "FRL" unit for a pneumatic system. **[4]**

OR

Q10)a) Write a short note on "Airdryers" used in pneumatic system with sketches. **[10]**

b) Explain in detail selection criteria for compressors. **[6]**

Q11)a) What are the steps involved in designing of a Hydraulic & pneumatic system. Explain in details. **[10]**

b) Write a short note on "Trouble" shooting & maintenance of a Hydraulic and pneumatic systems". **[8]**

OR

Q12)a) Draw and Explain a Typical "sequencing circuit" in Details. **[9]**

b) Draw & Explain a Typical "synchronization circuit" in Details. **[9]**

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