

Seat No.	
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SV-88
Total No. of Pages : 2

T.E. (Mechanical) (Semester - VI) (Revised)
Examination, May - 2018
INDUSTRIAL FLUID POWER
Sub. Code : 66838

Day and Date : Saturday, 05 - 05 - 2018
Time : 2.30 p.m. to 5.30 p.m.

Total Marks : 100

- Instructions :
- 1) All questions are compulsory.
 - 2) Make suitable assumptions if required and state it clearly.
 - 3) Draw neat diagrams/sketches wherever necessary.
 - 4) Figures to the right indicate full marks.

Q1) Solve any two:

- a) Differentiate between hydraulics and pneumatics. [7]
- b) List applications of fluid power systems. [7]
- c) Draw the symbols for the following elements: [7]
 - i) Sequence Valve.
 - ii) Four way, three position-open centre pilot operated D. C. valve.
 - iii) Muffler.
 - iv) Single acting intensifier.
 - v) Single acting spring return actuator.
 - vi) Twin pressure valve.
 - vii) Air motor.

Q2) Solve any three:

- a) What is the difference between a fixed displacement pump and a variable displacement pump? Draw a neat sketch of balanced vane pump. [6]
- b) Mention the different types of mountings used in fixing the hydraulic cylinders. [6]
- c) What are the important locations of filters? Explain the advantages and disadvantages of each location. [6]
- d) Explain with neat sketch working of Double acting Intensifiers. [6]

P.T.O.

Q3) Solve any three:

- Explain different actuation mechanisms for D.C. valve in hydraulic systems. [6]
- Draw schematically a Pressure reducing valve and explain its working. [6]
- Explain the working of Pressure compensated flow control valve with neat sketch. [6]
- Explain the requirements of pressure control, direction control and flow control valves used in hydraulic systems. [6]

Q4) Solve any three:

- Compare air motor with electric motor. [6]
- With the help of neat sketch explain the working of air lubricator. [6]
- Explain with the help of neat sketch the construction and working of time delay valve. [6]
- Explain the working of 4/2 seat type Direction control valve with a neat sketch. [6]

Q5) Solve any three:

- Explain rapid traverse and feed circuit in hydraulic system. [6]
- Explain the Meter-in circuit used in hydraulic system. [6]
- With the aid of circuit diagram explain the working principle of impulse operation circuit in pneumatics. [6]
- Explain sequence circuit of type A+B+ A-B- in pneumatic system. [6]

Q6) Solve any two:

- Explain Hydraulic servo system for linear motion with neat sketch. [7]
- Explain Troubleshooting of Pneumatic system. [7]
- What is general principle of fluidic gate? Explain proportional amplifier. [7]

