



# P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belagavi)

**Eighth Semester, B.E. – Industrial and production Engineering**

**Semester End Examination; July / August - 2022**

**Hydraulic and pneumatic Systems**

Time: 3 hrs

Max. Marks: 100

*Note: Answer FIVE full questions, selecting ONE full question from each unit..*

Q. No.	Questions	
<b>UNIT - I</b>		
1 a.	With help of a diagram, explain the working of Gear pump.	10
b.	With help of a diagram, explain the structure working of hydraulic power system.	10
2 a.	With help of a diagram, explain the working of Vane pump.	10
b.	With help of a diagram, explain the working of Double acting cylinder.	10
<b>UNIT - II</b>		
3 a.	With help of a diagram, explain the working and constructional 3/2 and 4/3 Directional control valve.	10
b.	With help of a diagram, explain the working and constructional of pressure relief valve.	10
4 a.	With help of a diagram, explain the working and constructional of pressure reducing valve.	10
b.	With help of a diagram, explain the working and constructional of pilot operated valve.	10
<b>UNIT - III</b>		
5 a.	With help of a circuit diagram, explain the regenerative hydraulic system.	10
b.	With help of a circuit diagram, explain the counter balance valve application in hydraulic system.	10
6 a.	With help of a circuit diagram, explain the speed control of a hydraulic cylinder.	10
b.	With help of a circuit diagram, explain the accumulator as emergency power source.	10
<b>UNIT - IV</b>		
7 a.	With help of a diagram, explain the reservoir system in hydraulic system.	10
b.	With help of a diagram, explain the dynamic sealing system used in hydraulic system.	10
8 a.	With help of a diagram, explain the reservoir system in hydraulic system.	10
b.	Explain the desirable properties of hydraulic fluid.	10
<b>UNIT - V</b>		
9 a.	With help of a diagram, explain the construction and working of pneumatic control system.	10
b.	With help of a diagram, explain the preparation of compressed air sin pneumatic control system.	10
10 a.	With help of a diagram, explain the Adsorption Dryers in Pneumatic system.	10
b.	With help of a diagram, explain the reciprocating compressor in pneumatic system.	10