

**GUJARAT TECHNOLOGICAL UNIVERSITY****DIPLOMA ENGINEERING – SEMESTER – 4(NEW) • EXAMINATION – SUMMER 2018****Subject Code: 3342303****Date: 04-May-2018****Subject Name: Hydraulic & Pneumatic Systems****Time: 10:30 AM TO 01:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make Suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Use of programmable & Communication aids are strictly prohibited.
5. Use of only simple calculator is permitted in Mathematics.
6. English version is authentic.

- Q.1** Answer any seven out of ten. **14**
1. Define Hydraulic System.
  2. Define pneumatic system.
  3. Make list types of connectors.
  4. Draw Hydraulic Symbols of Three way and Four way valve.
  5. Make list types of accumulator.
  6. Give two advantages of radial piston pump
  7. Make list types of motor use in hydraulic system.
  8. Draw only oil filtration circuit
  9. Draw Hydraulic Symbols of check valve and filter.
  10. Make list types of pumps use in hydraulic system..
- Q.2** (a) Short note Bernoulli's Principle **03**
- OR
- (a) Write Purpose of Hydraulic Oil **03**
- (b) Write short note on Packing & Seals **03**
- OR
- (b) **03**
- (c) Write Pascal's Law and its Application to Hydraulics **04**
- OR
- (c) Write Advantages and Disadvantages of Hydraulic System. **04**
- (d) List the Ideal Characteristics of Hydraulic Oil **04**
- OR
- (d) Define: Pressure, Force **04**
- Q.3** (a) Draw neat sketch of hydraulic Tank and label all parts **03**
- OR
- (a) Describe any one directional control valve **03**
- (b) Write short note on any one accumulator **03**
- OR
- (b) Draw neat sketch of any pressure control valve. **03**
- (c) Explain any one pressure intensifier **04**
- OR
- (c) Describe gear pump. **04**
- (d) Draw oil filtration circuit **04**
- OR
- (d) Draw neat sketch of radial piston pump. **04**

<b>Q.4</b>	(a) Draw and explain Reciprocating Screw Circuit	<b>07</b>
	OR	
	(a) Draw and explain Hi-Low Pump Circuit	<b>07</b>
	(b) Explain Hydraulic Motor Circuit	<b>07</b>
	OR	
	(b) Write short note on cartridge valves.	<b>07</b>
<b>Q.5</b>	(a) Write short note on Intercooler	<b>04</b>
	(b) Write short note on Air dryer	<b>03</b>
	(c) Explain air compressor	<b>07</b>

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