

GUJARAT TECHNOLOGICAL UNIVERSITY
DIPLOMA ENGINEERING – SEMESTER-4 EXAMINATION –WINTER- 2019

Subject Code:3342303**Date: 16-11-2019****Subject Name: Hydraulic & Pneumatic Systems****Time:02:30 PM TO 05:00 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.

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| Q.1 | Answer any seven out of ten. | 14 |
| | <ol style="list-style-type: none"> 1. Write Pascal's law. 2. List various types of accumulators. 3. Draw symbols: (1) Pump (2) Filter 4. List various types of Direction control valves. 5. Draw symbol for two way and four way direction control valve. 6. Write function of filter in hydraulic system. 7. Define "Air receiver". 8. Write two disadvantages of hydraulic system. 9. Define Pneumatic system. 10. Write two advantages of pneumatic system. | |
| Q.2 | (a) Write advantages of hydraulic system. <p style="text-align: center;">OR</p> (a) Explain characteristics of hydraulic oil.
(b) Write short note on packings and seals. <p style="text-align: center;">OR</p> (b) Explain oil filtration circuit. | 07

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| Q.3 | (a) Explain any one pressure control valve with a neat sketch. <p style="text-align: center;">OR</p> (a) Explain popet type check valve with a neat sketch.
(b) List various types of pressure intensifiers. Explain single stage pressure intensifier with a neat sketch. <p style="text-align: center;">OR</p> (b) Explain Vane pump. | 07

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| Q.4 | (a) Draw and Explain Clamp control circuit. <p style="text-align: center;">OR</p> (a) List various components of pneumatic system. Explain any one in detail.
(b) Explain Hydraulic Jack with figure. | 07

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| Q.5 | (a) Give comparison between hydraulic and pneumatic system.
(b) Explain two way direction control valve with a neat sketch. | 07
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