



**PART – B**

- 5 a. Write any five desirable properties of a hydraulic fluid. (05 Marks)  
b. Explain three basic types of filtering methods used in hydraulic system. (06 Marks)  
c. Explain static seals and dynamic seals with examples. (05 Marks)  
d. Identify the most common causes of hydraulic system break down. (04 Marks)
- 6 a. State five disadvantages of using air instead of hydraulic oil. (05 Marks)  
b. Explain with schematic sketch of FRL unit with ANSI symbol. (09 Marks)  
c. Explain the characteristics of compressed air. (06 Marks)
- 7 a. Explain with a neat circuit diagram, the working of two step speed control system. (10 Marks)  
b. Explain the pressure dependent control of circuit with a  $\frac{5}{2}$  double pilot operated DCV, two  $\frac{3}{2}$  spring return and double acting cylinder. (10 Marks)
- 8 a. Write a brief note on SPST-NO, SPST-NC, DPST-NO/NC, DPDT-NO/NC and LS-NO with symbol of these switches. (10 Marks)  
b. Explain with neat sketch of circuit of sequencing of two pneumatic cylinder that can be done by using Solenoids, limit switches and valves. (10 Marks)

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