

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(Automation & Robotics) (2011 & Onward) (Sem.-5)

HYDRAULIC AND PNEUMATICS

Subject Code : BTAR-501

M.Code : 70475

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A**1. Answer briefly :**

- a) Write the advantages of fluid power.
- b) Mention the characteristics of hydraulic cylinder.
- c) Write the applications of hydrostatic transmission.
- d) List the effects of dirt on hydraulic components.
- e) What is pump ripple?
- f) Write types of reservoirs.
- g) What are regenerative circuits?
- h) Define Compressibility.
- i) Write different pneumatic controls.
- j) What is flow resistance?

SECTION-B

2. What are fluid power systems? Write the types and properties of hydraulic fluids.
3. Write the classification of hydraulic pumps and write the application of each.
4. Differentiate between manual and automatic hydraulic system.
5. Discuss the need and working of hydraulic check unit.
6. Explain the use of functional diagram in pneumatic circuit.

SECTION-C

7. Draw and discuss the construction and working of a hydraulic cylinder.
8. Discuss how hydraulic accumulators are selected and work in circuits?
9. Discuss the common problems and their maintenance schedule in pneumatic system.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.