Roll No. | | | | | | | | | | | | | Total No. of Pages :02

Total No. of Questions : 09

B.Tech. (AE) (2011 Onwards) (Sem.–7,8)

HYDRAULIC & PNEUMATICS SYSTEM FOR AUTOMOBILE

Subject Code : BTAE-701

M.Code : 71817

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

Q1. Write briefly :

a) Which properties of fluid are taken care when used for hydraulic system?

b) State Pascal's law.

c) Brief about solenoid operation.

d) Name different types of lubricators used in hydraulic systems.

e) Draw the symbol of quick exhaust valve.

f) Compare direct and inverse analog.

g) What are different types of heat exchangers used in hydraulic systems?

h) Define PI.

i) Write short Note on Modes of control.

j) What are the applications of pneumatic motor circuit?

SECTION-B

Q2. How much horsepower does the hydraulic cylinder deliver?

Q3. Explain effect of temperature on fluid power.

Q4. Discuss construction and working of four ways three positions DCV.

Q5. Describe block diagram algebra.

Q6. Write briefly:

a) Air motors

b) Filter.

SECTION-C

Q7. Illustrate the operation of Vane pump with its analysis.

Q8. Describe pneumatic circuit for impulse operation.

Q9. Explain the mathematical conversion of combination of helical spring and viscous damper with example.

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.