

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

Paper ID : [A2932]

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. Write briefly :**

- a. Write at least four applications of hydraulics in various fields of engineering.
- b. Draw the symbol of two-way valve for pneumatic system.
- c. What is purpose of strainer?
- d. Name different types of heat exchangers.
- e. Define solenoid.
- f. What are different types of filters?
- g. What is difference between open loop and closed loop control?
- h. Write the demerits of automatic control.
- i. Compare air motors with electric motors.
- j. Write briefly on fluid temperature control.

SECTION-B

2. What are advantages and disadvantages of pneumatic system?
3. Explain in detail working of both way reciprocating actuator with neat diagram and symbol.
4. Design circuit for speed control.
5. Explain viscous damper and its combination with helical spring.
6. Write briefly about Quick exhaust valves in terms of pneumatic and hydraulic system.

SECTION-C

7. What are generalized control systems? Briefly explain them.
8. Design booster and intensifier circuit using hydraulic elements.
9. Write briefly about :
 - a) Fluid power plumbing
 - b) PID controller