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

Total No. of Questions : 09

B.Tech.(AE)(2011 Batch)(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 has to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.**

SECTION-A

1. **Write briefly:**

    a) List advantages of fluid power system.

    b) Draw the symbol of pressure relief valve.

    c) What is meant by sizing of accumulator?

    d) What is the function of intensifier?

    e) Where is speed control circuits used?

    f) List the advantages of automatic loop.

    g) What is pressure compensated flow control? How a variable vane can provide this feature?

    h) What are advantages of servo system?

    i) What are the basic requirements of pneumatic system?

    j) What are inductors and resisters?

SECTION-B

2. Explain the constructional features of filter, regulator & lubricator.

3. What are essential and desirable properties of a hydraulic fluid?

4. Explain how positive displacement pumps build pressure compared to rotadynamic pumps. What are advantages of positive displacement pumps?

5. Explain various locations where filters & strainers are fitted giving reasons.

6. Explain loop system in piping layout.

SECTION-C

7. Classify different types of hydraulic cylinders. Describe the working of double acting tandem cylinder and gear motor. Give its graphical symbol.

8. Explain the working of quick exhaust and solenoid valves with the help of neat sketch.

9. Explain rules of block diagram algebra, reduction of block diagram and block diagram transfer function representation of speed.