



C14-M-505

4653

BOARD DIPLOMA EXAMINATION, (C-14)
OCT/NOV—2017
DME—FIFTH SEMESTER EXAMINATION
FLUID POWER CONTROL SYSTEMS

Time : 3 hours]

[Total Marks : 80

PART—A

3×10=30

Instructions : (1) Answer **all** questions.

(2) Each question carries **three** marks.

(3) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.

1. Write any four applications of fluid power systems.
2. Draw a neat sketch of hydraulic system and label the basic components.
3. What is the function of cushioning in hydraulic cylinders?
4. State the function and types of flow control valves.
5. Draw the graphic symbol of pressure relief valve and explain its functions.
6. Write any four applications of accumulators.
7. What is the function of receiver in a pneumatic system?

- * 8. Write the uses of (a) pressure relief valve and (b) compressor.
9. List various types of pneumatic actuators.
10. List the causes for leakage of compressed air in pneumatic systems.

PART—B

10×5=50

Instructions : (1) Answer *any five* questions.

(2) Each question carries **ten** marks.

(3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

11. Explain the working and construction of gear pump with a neat sketch.
12. Explain the following hydraulic motors :
(a) Gear motor
(b) Vane motor
13. Explain any two types of hydraulic cylinders with neat sketches.
14. What is a check valve? Explain ball-type check valve with a neat sketch.
15. Explain the simple pressure relief valve with a neat sketch.
16. Explain the hydraulic circuit to control single-acting cylinders.
17. Explain the working and applications of air motors.
18. Explain the following :
(a) Speed control of double-acting cylinder
(b) Time-independent controls
