



C14-M-505

4653

BOARD DIPLOMA EXAMINATION, (C-14)

OCT/NOV—2018

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. List out any six applications of fluid power systems.
2. Write any three differences between Hydraulic and Pneumatic Power systems.
3. Give the classification of Hydraulic Actuators.
4. Write any three functions of flow Control Valves.
5. Draw a line daigram of Gate valve.
6. What is the use of safety circuit in Hydraulic systems?
7. Write any six advantages of pneumattic Systems.
8. State Boyle's law and charles law.
9. Write any six applications of Air Motors.
10. Write the function of 'AND' value for control of single acting cylinder.

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PART-B

10×5=50

- Instructions :** (1) Answer *any five* questions.
(2) Each questions carries **ten** marks.
(3) Answers should be comprehensive and the criteria for valuation are the content but not the length of the answer.

11. Explain briefly the construction and working of external gear pump with a neat sketch.
12. Explain Radial-Piston Motor with a neat diagram.
13. Explain first class lever system used with hydraulic cylinder to drive loads.
14. Draw a neat diagram of pilot operated check valve. Explain its working briefly.
15. Explain the construction and working of direct pressure-relief valve with a neat sketch.
16. Explain the working of pump unloading circuit with the help of a neat sketch.
17. (a) Explain the working of diaphragm cylinder with a neat sketch.
(b) Explain the working of spring return single acting cylinder with a neat sketch.
- * 18. Explain the working of Direct control of double acting cylinder with a neat diagram.

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