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4653**BOARD DIPLOMA EXAMINATION, (C-14)****MARCH /APRIL-2019****DME - FIFTH SEMESTER EXAMINATION****FLUID POWER CONTROL SYSTEMS**

Time : 3 hours

Max. Marks: 80

PART-A**10x3=30M****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 the six basic components used in a Hydraulic system.
- 2) Write any six application of Fluid power system.
- 3) Draw line diagram of second class lever system used in hydraulic cylinders.
- 4) Write any three types of Flow control valves.
- 5) Give three application of Flow control valves.
- 6) Draw any three graphical representations of accumulators used in hydraulic fluid power system.
- 7) Write six advantages of pneumatic systems.
- 8) Write any three comparisons between Hydraulic and pneumatic power transmission system.
- 9) Give any three classifications of pneumatic cylinders.
- 10) Write any three functions of pneumatic circuit.

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PART-B

5x10=50M

Instructions : 1) ^{*} Answer any **five** questions.

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

3) The answers should be comprehensive and the criteria for valuation is the content but not the length of the answer.

- 11) Explain briefly the construction and working of Radial piston pump with a neat sketch.
- 12) Explain Gear Motor with a neat diagram.
- 13) Explain the construction and working of cushion assembly provided in Hydraulic cylinder with a neat sketch.
- 14) Draw a neat diagram of three-way directional control valve. Explain its working briefly.
- 15) Explain the construction and working of pilot- operated pressure reducing valve with a neat sketch.
- 16) Explain the working of overload protection circuit with the help of a neat sketch.
- 17) Explain the followings
 - (a) Tandem cylinder
 - (b) Cable cylinder
- 18) Explain the working of Direct control of a single acting cylinder with a neat diagram.

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