1478 **Code : 15AT41T**

Register Number | | | | | | | | | | |

IV Semester Diploma Examination, April/May-2019

FLUID POWER TRANSMISSION & CONTROL SYSTEM

Time : 3 Hours] **[Max. Marks : 100**

Instruction : (i) Answer any **six** questions from PART – **A**.
(ii) Answer any **seven** questions from PART – **B**.
(iii) PART – **A** carries **Five** marks each and PART – **B** carries **Ten** marks each.

PART – A

1. List the applications of fluid power engineering in industrial automation. **5**

2. Explain Pascal's law with examples. **5**

3. What are the functions of valves ? How they are classified ? **5**

4. With a neat sketch, explain the spring loaded accumulator. **5**

5. List the different areas of applications of pneumatics in industries. **5**

6. Draw the block diagram of pneumatic system and label its parts. **5**

7. Explain the functions of air-lubricator. **5**

8. List the difference between pneumatics and hydraulics. **5**

9. What is combination system ? What are its advantages ? **5**

PART – B

10. With a neat sketch, explain the working of 4/2 discretion control valve. **10**

11. Explain the working of a pressure relief value with neat diagram. **10**

12. What is an actuator ? Explain the working of double acting actuator with a sketch. **10**

13. With a neat sketch, explain the working of lobe pump. **10**

14. (a) Write the symbols for the following hydraulic components : **3**
    (i) Pump
    (ii) Double acting cylinder
    (iii) Check valve

    (b) Explain the working of meter-in circuit. **7**

15. (a) Explain the working of regenerative circuit. **7**
    (b) What are the common problems in hydraulic system ? **3**

16. (a) What is pneumatics ? **2**
    (b) Explain the working of a single stage, single cylinder reciprocating air compressor with a neat sketch. **8**

17. (a) Draw the neat sketch of a radial piston motor and name the parts. **5**
    (b) Draw the circuit diagram for controlling double acting cylinder using 4/2 D.C. valve. **5**

18. Explain the working of semi-automatic material handling circuit with diagram. **10**

19. Explain the working of air over oil circuit with a diagram and write its application in automobiles. **10**