

2107096

**BACHELOR OF VOCATION**  
**Tool and Die Manufacturing**  
**Subject: Pneumatics and Hydraulics**  
**Subject Code: CBME-305**  
**Semester: Fifth**  
**July 2021**  
**Theory (External): 35 Marks**  
**Time: 03 Hours**

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**Instructions to the Students**

1. This Question paper consists of two Sections. All sections are compulsory.
2. Section A comprises 10 questions of objective type in nature. All questions are compulsory. Each question carries 1 mark.
3. Section B comprises 8 essay type questions out of which students need to do any 5. Each question carries 5 marks.
4. Read the questions carefully and write the answers in the answer sheets provided.
5. Do not write anything on the question paper.
6. Wherever necessary, the diagram drawn should be neat and properly labelled

Roll Number									

**SECTION –A (SHORT/OBJECTIVE TYPE QUESTIONS)**  
(10x1=10 Marks)

- A. Define the concept of pipe layout
- B. Define pressure rating
- C. Discuss the function of regulator
- D. Discuss the function of lubricator
- E. Discuss mass flow rate
- F. Define compressive fluid flow
- G. Define the function of pneumatic cylinder
- H. Describe compressive fluid flow
- I. Define the function of connector
- J. Define the function of air motor

**SECTION –B (ESSAY TYPE QUESTIONS)**  
(5x5=25 Marks)

1. Derive and explain continuity equation and also discuss its industrial applications.
2. Explain the construction and working of control valve with neat diagram along with its merits and demerits.
3. Describe the concept of filter with neat diagram.
4. Explain the properties of fluid with its applications.
5. Explain the construction and working of rotary compressor with neat diagram along with its merits and demerits.
6. Differentiate between hydrostatic and hydrodynamic process with suitable example.
7. Discuss the different types of materials used in hydraulic pipes.
8. Describe the working of Air receiver with neat diagram.

==END OF PAPER==