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**200965**

**BACHELOR OF VOCATION**  
**Automotive Manufacturing**  
**Subject: Hydraulics and Pneumatics**  
**Subject Code: BBME-305**  
**Semester: Fifth**  
**September 2020**  
**Theory (External): 35 Marks**  
**Time: 03 hours**

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**INSTRUCTIONS TO THE STUDENTS**

1. Read the questions carefully and write the answers in the answer sheets.
2. Wherever necessary, the diagram drawn should be neat and properly labelled.
3. This questions paper comprises of 6 questions out of which student need to attempt any 3 questions.
4. All questions carry equal marks.
5. The time allotted will be 3 hours for examinations including time of downloading of question paper to emailing of answer books to the concerned Dean/IC.

## ESSAY TYPE QUESTIONS

1. Derive and explain Bernoulli's equation with applications related to manufacturing industries.
2. Discuss the working of control valve with neat diagram and applications.
3. Describe the Working principle of various components used for hydraulic & pneumatic systems.
4. Explain the construction and working of Hydraulic Actuator with neat and clean diagram along with suitable diagram and applications.
5. Describe the working of reciprocating air compressor with neat diagram along with suitable applications.
6. Describe the Rules/ Norms for designing the hydraulic and pneumatic circuits with examples.

\*\*\*\*\*END OF PAPER\*\*\*\*\*