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**200920**

**BACHELOR OF VOCATION**  
**Automotive Mechatronics**  
**Subject: Applied Mechatronics**  
**Subject Code: ABME-302**  
**Semester: Sixth**  
**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. Explain the construction, working and principle of Three phase AC voltage controller along with applications related to manufacturing industries.
2. Differentiate between Power Electronics Vs Linear Electronics and its applications related to manufacturing industries.
3. Describe the construction and working of Buck Converter with neat diagram along with applications related to industries.
4. Explain the advantages, limitations and applications of Matrix converters related to manufacturing industry.
5. Describe the working of Three Phase Converters with neat and clean diagram along with applications related to manufacturing industries.
6. Discuss the characteristics of Power Diodes with suitable example.

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