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201022

BACHELOR OF VOCATION
Automotive Mechatronics
Subject: Basics of Mechatronics
Subject Code: ABME-106
Semester: Second
October 2020
Theory (External): 35 Marks
Time: 03 hours

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 8 questions out of which student need to attempt any 4 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. Write the scope of mechatronics in industrial sector. Also explain the major components of a mechatronics system.

2. What is the principle on which strain gauge work? Explain briefly the errors encountered in a transducer.

3. Explain with a neat diagram the architecture of a programmable logic controller (PLC).

4. With a neat diagram discuss the construction and working of Linear variable differential transformer (LVDT). Also write its application.

5. What are servo motors. Explain the types of servo motor.

6. Explain with the help of a block diagram the elements of mechatronic design.

7. Discuss the stages of design process by taking example.

8. Write about the static and dynamic characteristics of sensors.

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