2112E024

BACHELOR OF VOCATION
Mechatronics
Subject: Design of Mechatronics
Subject Code: MTE-702
Semester: Fifth
December 2021
Theory (External): 35 Marks
Time: 03 Hours

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. What is Mechatronics?

B. Discuss Automation.

C. Explain the concept of interfacing.

D. Discuss model validation.

E. Define the function of control system.

F. Explain the function of solenoid.

G. Define the working of autofocus camera.

H. Define the concept of condition monitoring.

I. What do you meant by motion?

J. Discuss the fuzzy logic applications in Mechatronics.

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

1. What is Mechatronics approach? Explain the challenges before R&D in Mechatronics.
2. Explain the integrated design issues in Mechatronics with suitable examples.
3. Differentiate between simulators and simulation with neat diagram.
4. Differentiate between structural modeling and Physical modeling with neat diagram.
5. Discuss the working of basic system models with their industrial applications.
6. Discuss the working of pick and place robot with neat diagram along with suitable applications.
7. Explain the role of Artificial intelligence in Mechatronics with suitable example.
8. Explain the working of Micro sensors in Mechatronics with suitable applications.

==END OF PAPER==