2107025

BACHELOR OF VOCATION
Robotics and Automation
Subject: Automation System Design
Subject Code: DBEE-310
Semester: Sixth
July 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. How will you define term manufacturing?

B. What do you mean by production?

C. Define cutting force in lathe machine.

D. What is swing diameter?

E. What are the functions of feed rod and lead screw?

F. List out any two advantage using NC?

G. Write the main function of CNC.

H. What are the benefits of CIM?

I. What is the difference between flow and pressure?

J. Define buffer.

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

1. What are automated assembly systems? What system configurations can automate assembly systems?

2. Explain the role of CMM in computer aided quality control. What are the different elements of CMM?

3. What are the advantages and hurdles in implementation of group technology?

4. Discuss the design of parts for high speed feeding.

5. List performance metrics associated with multi-station assembly machines

6. What are the disadvantages of NC over CNC?

7. Discuss
   a) Discuss drive system for CNC machine tool.
   b) Discuss partial automation

8. Discuss the construction details of valves used in hydraulic system.

===END OF PAPER===