

B.Voc Mechatronics
Subject: Manufacturing Automation & Ergonomics
Subject Code: ME-705
Semester: Fifth
September 2022
Theory (External): 70 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 2 marks.
3. Section B comprises 8 essay type questions out of which students need to do any 5. Each question carries 10 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

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SECTION –A (SHORT/OBJECTIVE TYPE QUESTIONS)
(10x2=20 Marks)

- A. Define automation
- B. Discuss the applications of work study
- C. Discuss manufacturing execution system
- D. Define the function and application of pneumatic circuit
- E. Define the function of Hydraulic system
- F. Define the function of Robots
- G. Define the function of automated flow lines
- H. Discuss the concept of productivity
- I. Define the application areas of ergonomics
- J. Discuss the applications buffer storage

SECTION –B (ESSAY TYPE QUESTIONS)
(5x10=50 Marks)

1. Explain the general functioning of automation system with neat and clean diagram.
2. Explain the techniques of flexible manufacturing system with suitable example.
3. Describe the concept of automation in machine tool with suitable example.

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4. Explain the Manufacturing automation principle and elements in product realization with suitable example.
5. Discuss the latest technologies being employed in industry 4.0 era for achieving higher efficiency with suitable example.
6. Describe the concept of handling and storage system with neat and clean diagram.
7. Describe the objectives of motion study and discuss its procedure with example.
8. Discuss the concept and scope of ergonomics in the industries with suitable example.

===END OF PAPER===

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