

2112E051

**BACHELOR OF VOCATION**  
**Mechanical Manufacturing**  
**Subject: Work Study and Ergonomics**  
**Subject Code: IMS-701**  
**Semester: Fifth**  
**December 2021**  
**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

**Roll Number**

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

- A. Define the role of management in work study
- B. Define scheduling
- C. Define work measurement
- D. Discuss the principle of motion economy
- E. Describe the concept of work simplification
- F. Define the application of time study equipment
- G. Define the meaning of observed rating
- H. Describe the meaning of standard rating
- I. Define the concept of performance rating
- J. Define application areas of ergonomics

- 3. Explain the human factors consideration in the application of work study with example.
- 4. Explain the objectives and procedure of Method study with suitable examples.
- 5. Explain therbligs with their symbol and color and also discuss their applications.
- 6. Explain the working of stop watch time study technique with neat diagram.
- 7. Define ergonomics. Explain its evaluation and scope of ergonomics with suitable example.
- 8. Describe the concept of man machine interaction with suitable example.

==END OF PAPER==

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

- 1. Differentiate between production and productivity with suitable example.
- 2. Discuss the objectives and procedure of work study with suitable industrial applications.