

2209T010

- Q2 a) Define the term 'work study'. Explain the purposes of using work study.
b) Discuss the role of management and supervisor in work study.
- Q3 a) Define method study. Explain the procedure for method study.
b) Differentiate between operation process chart and flow process chart mentioning their advantages and disadvantages.
- Q4 a) Explain the principles of motion economy.
b) What are therbligs? List any five therbligs along with their definition, symbols and colours.
- Q5 a) Define time study. State the objectives and essential requirements of time study.
b) Explain the various steps involved in time study.
- Q6 a) Discuss the various methods of performance rating.
b) What are the different equipment's used in time study? Discuss in detail.
- Q7 a) Define ergonomics. Enumerate the objectives and scope of ergonomics.
b) Discuss the areas of application of ergonomics.
- Q8 Write short notes on the following:
a) Work simplification
b) Man and machine interaction

END OF PAPER

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B.Voc Automotive Component Manufacturing
Subject: Work Study and Ergonomics
Subject Code: LBME-306
Semester: Sixth
Session: 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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Roll Number

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SECTION –A (OBJECTIVE TYPE QUESTIONS)
(10 x 2 = 20 Marks)

- A Which formula correctly describes productivity?
a) (Output–Input)/Output b) (Input–Output)/Input
c) Output/Input d) Input/output
- B Which of these factors affects productivity?
a) Methods and technology b) Workers
c) Management d) All of these
- C Work study is used in
a) Industries and hospitals b) Transport
c) Design d) All of these
- D The human factors consideration in work study will ensure
a) Active participation of workers b) Reduced fatigue to workers
c) Increased performance of operators d) All of these
- E Finding the most economical way of doing the work is the part of
a) Method study b) Time study
c) Fatigue study d) Training
- F SIMO chart stands for
a) Sinusoidal-Motion Operation Chart b) Sinusoidal-Motion Cycle Chart
c) Simultaneous-Motion Cycle Chart d) Simple-Harmonic Motion Chart

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- G _____ of work measurement is most widely used among all the techniques.
a) Stop watch time study b) Work sampling technique
c) Historical data method d) Predetermined motion time system
- H The applications of work measurement are
a) Preparation of budgets b) Make or buy decision
c) Determination of selling price d) All of these
- I Which one of the following is a work measurement technique?
a) Time study b) Cycle graph
c) Memo-motion study d) Micro-motion study
- J Ergonomics is related to human
a) Comfort b) Safety
c) Both comfort and safety d) None of these

SECTION –B (ESSAY TYPE QUESTIONS)

(5 x 10 = 50 Marks)

- Q1 a) What do you mean by productivity? Mention the reasons for poor productivity.
b) Discuss the various methods used to reduce the ineffective time.