

- Q.32 Write a short note on incentives for indirect labour. (CO-4)
- Q.33 Differentiate PERT and CPM. (CO-7)
- Q.34 Define store and give its types. (CO-9)
- Q.35 Explain the different layout and structures of store. (CO-9)

### Section-D

**Note:** Long answer questions. Attempt any two question out of three Questions. (2x10=20)

- Q.36 Write short notes on (CO-3)
- Relationship between of work study and work measurement.
  - Human aspect of work study.
- Q.37 Define the concept of standard time. Explain clearly the steps involved in arriving at standard time, starting with observed time. (CO-5)
- Q.38 Describe the objectives and components of production planning and production control. Write the advantages of planning and production control also. (CO-8)
- (Note Course outcome (CO) mentioned in the question paper is for official purpose only.)

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### 6th Sem / Mech. (T & D) Sub : Industrial Engineering

**Time : 3 Hrs.**

**M.M. : 100**

### SECTION-A

**Note:** Multiple Choice Questions. All Questions are compulsory. (10x1=10)

- Q.1 Productivity is the ratio of (CO-1)
- Output & input
  - Input & output
  - Production & output
  - None of these
- Q.2 Work study is widely known as (CO-2)
- Productivity development
  - Time and motion study method
  - Analytical estimating
  - Material handling study
- Q.3 Basic tool is work study is (CO-3)
- Graph paper
  - Process chart
  - Planning chart
  - Stop watch
- Q.4 The symbol 'O' stands for (CO-3)
- Operation
  - Transport
  - delay/temporary storage
  - Permanent storage
- Q.5 Percent idle time for men or machines is found by (CO-3)

- a) Method study      b) Time study  
c) Work sampling      d) Work study
- Q.6 Micro motion study involves following number of fundamental hand motions. (CO-5)  
a) 8      b) 12  
c) 16      d) 20
- Q.7 The time value of standard data is (CO-5)  
a) 0.1 s      b) 1s  
c) 1-2s      d) 3-4s
- Q.8 ABC analysis deals with (CO-6)  
a) Analysis of process chart  
b) Flow of material  
c) Ordering schedule of job  
d) Controlling inventory costs money
- Q.9 Total Float = \_\_\_\_\_. (CO-7)  
a) LST-EST      b) LFT-EFT  
c) Both A & B      d) None of these
- Q.10 \_\_\_\_\_ are used to represent activity in a network diagram. (CO-9)  
a) Circles      b) Squares  
c) Rectangles      d) Arrows

### Section-B

**Note:** Objective type questions. All questions are compulsory. (10x1=10)

- Q.11 Define productivity. (CO-1)  
Q.12 What is a flow process chart. (CO-2)

- Q.13 What is a multiple activity chart? (CO-3)  
Q.14 Define ergonomics. (CO-3)  
Q.15 Define standard time. (CO-3)  
Q.16 Define batch production. (CO-8)  
Q.17 Define wage. (CO-4)  
Q.18 Explain the term 'Follow-up'. (CO-6)  
Q.19 Define routing. (CO-7)  
Q.20 Define inventory. (CO-9)

### Section-C

**Note:** Short answer type Question. Attempt any twelve questions out of fifteen Questions. (12x5=60)

- Q.21 How the productivity is measured? Explain. (CO-1)  
Q.22 Explain the methods of improving productivity. (CO-2)  
Q.23 Write a short note on role of work study in improving productivity. (CO-3)  
Q.24 Explain the scope of work-study. (CO-2)  
Q.25 Draw a men type flow process chart. (CO-3)  
Q.26 Explain the procedure of method study. (CO-3)  
Q.27 Write the objective the Therbligs. (CO-5)  
Q.28 Explain the principles of motion economy. (CO-5)  
Q.29 Explain the objective of work measurement. (CO-6)  
Q.30 Write the uses of standard data. (CO-5)  
Q.31 Enlist the essential requirements of a good wage system. (CO-4)