

TED (15) 5022  
(Revision-2015)

**A20-00298**

Reg.No.....  
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DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/  
MANAGEMENT/COMMERCIAL PRACTICE, APRIL-2020

**INDUSTRIAL ENGINEERING**

[Maximum marks: 75]

(Time: 2.15 Hours)

**PART – A**

(Answer any *three* questions in one or two sentences. Each question carries 2 marks)

- I. (1). What is Productivity.  
(2). Explain about Therbligs.  
(3). Define quality.  
(4). Explain the term depreciation.  
(5). Explain Value Engineering. (3 x 2 = 6)

**PART – B**

(Answer any *four* of the following questions. Each question carries 6 marks)

- II. (1). List the Principles of material handling.  
(2). Mention the various method of increasing productivity.  
(3). List the objectives for the conduct of method study.  
(4). Explain the term variable data and attribute data with example.  
(5). List the objectives of Quality control.  
(6). Distinguish between estimating and costing.  
(7). List the function of estimating department in an industry. (4 x 6= 24)

**PART – C**

(Answer *any of the three units* from the following. Each question carries 15 marks)

**UNIT –I**

- III. (a). Identify various functions of Production Planning and Control. (8)  
(b). Explain the functions of material handling. (7)

**OR**

- IV. (a). List different types of Plant layouts and explain process layout and product layout. (8)  
(b). Describe Preventive and Predictive Maintenance. (7)

**UNIT-II**

- V. (a). State the applications of work sampling. (8)  
(b). Describe the procedure for the conduct of method study. (7)

**OR**

- VI. (a). Explain the procedure for conduct of stop watch time study. (8)  
(b). Explain Analytical Estimating and its procedures. (7)

**UNIT-III**

- VII. (a). Compare inspection and quality control. (8)  
(b). Compare floor inspection and centralized inspection. (7)

**OR**

- VIII. (a). Illustrate and explain the significance of normal Distribution curve. (8)  
(b). Fine thermostatic controls are tested to determine the 'on' temperature. The measured values are  $344^{\circ}\text{C}$ ,  $338^{\circ}\text{C}$ ,  $342^{\circ}\text{C}$ ,  $355^{\circ}\text{C}$ ,  $336^{\circ}\text{C}$ . These values constitute the first subgroup for certain control chart. Compute arithmetic mean, median, Range standard deviation and variance of this subgroup. (7)

**UNIT-IV**

- IX. (a). Explain single and double, sampling plans. (8)  
(b). Explain the classification of costs. (7)

**OR**

- X. (a). List various methods of calculating depreciation and describe Straight line method and Reducing balance method. (8)  
(B). Describe the estimating procedures. (7)