TED (15)5022
(Revision – 2015)

A23-06268

Reg. No……
Signature …….

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/COMMERCIAL PRACTICE, APRIL – 2023

INDUSTRIAL ENGINEERING

[Maximum Marks: **100**] [Time: **3** Hours]

PART-A

[Maximum Marks: **10**]

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

1. Define industry.
2. List any four material handling equipment.
3. List any two objectives of method study.
4. State the measure of central tendency.
5. Define depreciation. (5 x 2 = 10)

PART-B

[Maximum Marks: **30**]

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

1. Explain Types of maintenance.
2. List different types of Plant Layout and Explain product layout.
3. Describe procedure for conducting method study.
4. List the objectives of quality control.
5. Compare floor inspection and centralised inspection.
6. Distinguish between estimating and costing.
7. Explain classification of cost using stepper diagram. (5 x 6 = 30)

PART-C

[Maximum Marks: **60**]

(Answer ***one*** full question from each Unit. Each full question carries **15** marks)

UNIT – I

III. a. Explain any four types of production. (8)

b. List various method of increasing productivity. (7)

OR

IV. a. Explain various functions of PPC. (8)

b. List various factors influencing plant layout. (7)

UNIT – II

V. a. Enumerate (show symbol, code, colour, and explanation) for following THERBLIGS? Search, find, select and grasp. (8)

b. List various steps to develop standard data. (7)

OR

VI. a. Describe the procedure of conducting stop watch time study. (8)

b. A cycle of operation have 6 elements are as follows in minutes.

1	2	3	4	5	6
0.12	0.15	0.20	0.16	0.12	0.25

If the rating factor is 110 and permissible allowance is 10%. Calculate standard time. (7)

UNIT- III

VII. a. List the steps for calculation of control limits and procedure for making X bar and R chart. (8)

b. Differentiate attribute chart and variable chart. (7)

OR

VIII. a. Ten samples of 100 items were subjected to inspection as follows. Construct P chart and comment. (8)

Sample	1	2	3	4	5	6	7	8	9	10
Number of defectives	4	10	10	8	6	5	6	3	3	5

b. Illustrate and explain the significance of Normal Distribution curve. (7)

UNIT - IV

IX. a. An industry produces a product in a bathes of 100. The direct labour cost is Rs.220/-, direct material cost is Rs.250/- and direct expenses is Rs.230 per batch. If 80% of direct material cost is consider as factory overheads. Find factory cost and selling price of each product, if profit is 10%. (8)

b. List the elements of costing. (7)

OR

X. a. A machine was purchased for Rs.28, 000/- , its Installation charges is Rs.2000/- . The assumed use full life is 15 years and salvage value is Rs,3000/-. Find the depreciation fund set aside at the end of three years and seven months by straight line method. (8)

b. Explain any four causes of depreciation. (7)

****