DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/
COMMERCIAL PRACTICE –APRIL -2022.

INDUSTRIAL ENGINEERING

(Maximum Marks : 100)   [Time : 3 hours]

PART–A
(Max. Marks:10)   Marks

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

1. Define productivity.

2. Define standard time.

3. Define quality.

4. What is meant by the term depreciation.

5. Explain estimation.

(5x2=10)

PART - B
(Max. Marks: 30)

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

1. Explain the benefits of P.P.C.

2. Explain value engineering.

3. List the various steps to develop standard data.

4. Explain the concept of THERBLIGS.

5. Explain the three components of Quality costs.

6. Illustrate and explain the significance of normal distribution curve.

7. Distinguish between estimating and costing.

(5x6 =30)

PART - C
(Max. Marks: 60)

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

UNIT I

III   a) Explain Plant layout. Mention objectives and types of plant layouts.   (8)

b) Describe Routing and Routing procedure.   (7)

OR

IV a) Explain the types of plant maintenance. (8)

b) Mention the various methods of increasing productivity. (7)

UNIT- II

V a) Describe the procedure for the conduct of method study. (8)

b) State the applications of work sampling. (7)

OR

VI a) Explain SIMO chart and give the advantages. (8)

b) Explain the procedure for the conduct of stop watch time study. (7)

UNIT- III

VII a) Compare floor inspection and centralized inspection. (8)

b) Fine thermostatic controls are tested to determine the 'on' temperature. The measured values are 344°, 338°, 342°, 335° and 336°. These values constitute the first sub-group for certain control chart. Compute the arithmetic mean, median, range, standard deviation and variance of this sub-group. (7)

OR

VIII a) Describe the Procedure of Constructing $\overline{X}$ and R Charts. (8)

b) Ten pieces of cloth out of different rolls of equal length contained the following number of defects. Draw the control chart for the defects and state whether the process is in a state of statistical control.

Roll No.	1	2	3	4	5	6	7	8	9	10
No. of defects	1	3	5	0	6	0	9	4	4	3

(7)

UNIT – IV

IX a) Explain single, double and multiple sampling plans. (8)

b) List the various causes for depreciation. (7)

OR

X a) Explain OC curve and it's different regions. (8)

b) Explain the principal constituents of estimating. (7)

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