4449

BOARD DIPLOMA EXAMINATION, (C-14)

MARCH / APRIL - 2019

DME - IV SEMESTER EXAMINATION

INDUSTRIAL ENGINEERING

Time : **3** Hours]   [Total Marks : **80**

PART - A   **3×10=30**

Instructions :   (1)   Answer **ALL** questions.
(2)   Each question carries **THREE** marks.
(3)   Answer should be brief and straight to the point and shall not exceed five simple sentences.

1   Explain briefly the role of work study in increasing productivity.

2   What are therbligs ? Give any six symbols of them.

3   Write any four uses of standard data.

4   Briefly explain rating scales.

5   What are the objectives of merit rating ?

6   Define the terms :

(a)   Job analysis

(b)   Job description

7   List the various methods of wage payments to workers.

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8 The standard time for completion of the job is 8 hours and the worker is paid Rs. 30/- for it. If the completes in 6 hours, calculate his earnings by centpercent premium system for the whole day of 8 hours work.

9 Define quality control.

10 What are the functions of Inspection Department ?

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PART - B   **10×5=50**
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Instructions :   *(1)   Answer any **FIVE** questions.*
*(2)   Each question carries **TEN** marks.*
(3)   Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.
(4)   SQC tables are allowed.

11 Explain the procedure to collect PMTS data and state its advantages.

12 (a)   What is critical examination in method study ?   **5+5**
Prepare the list of critical questions aimed at method improvement.

(b)   List the various recording techniques used in method study for recording activities.

13 Explain the procedure of Time study by stopwatch method.

14 Explain the procedure for job evaluation and list the techniques of job evaluation.

15 There are 5 workers manufacturing screws. The standard day rate is Rs. 10 per worker and the standard output is 80 screws. Calculate their daily earnings by Emersions efficiency plan. If they are manufacturing 48, 64, 72, 80 and 96 screws respectively.

16 Describe briefly Centralized Inspection system. Explain their advantages and disadvantages.

17 Measurements of surface roughness is taken to 5 rough turned pieces. On each piece 5 measurements are taken along its length. The pieces have been picked up randomly from a lot of 50. Compute the control limits. The table shown readings.

Sample	Five measurements per sample (x)				
	1	2	3	4	5
1	10.15	10.17	10.16	10.18	10.16
2	10.17	10.19	10.14	10.12	10.17
3	10.16	10.14	10.15	10.17	10.15
4	10.19	10.18	10.17	10.15	10.16
5	10.14	10.16	10.15	10.14	10.17

18 Write short note on :   5+5
   (a)   Halsey Premium Plan
   (b)   String diagram

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