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4479**BOARD DIPLOMA EXAMINATION, (C-14)****JUNE-2019****DME - FOURTH SEMESTER EXAMINATION****INDUSTRIAL ENGINEERING**

Time: 3 Hours

Max. Marks : 80

PART-A**10x3=30M**

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

- 1) State the objectives of method study.
- 2) Write the differences between operation process chart and flow process chart.
- 3) What is Standard Data? state its use.
- 4) Define the term Rating factor and write its purpose.
- 5) What are the objectives of job evaluation?
- 6) Write about Rating scale.
- 7) Name the different types of wages.
- 8) Write about Taylor's piece rate system.
- 9) What is the purpose of X- bar and R charts.
- 10) Write about Double sampling plan with a line diagram.

PART-B

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5x10= 50M

- Instructions:** 1) Answer **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.

- 11) Explain the following:
(a) Flow diagram (b) String diagram.
- 12) prepare a two handed process chart by taking suitable example.
- 13) What is standard time? What are its constituents? Define them briefly.
- 14) (a) What is work sampling? Give its objectives and advantages.
(b) Define Incentive and list the types of Incentives.
- 15) (a) What are the advantages and disadvantages of merit rating.
(b) Write about different types of merit rating methods.
- 16) Explain Bedaux premium plan. List out the advantages and limitations.
- 17) The values of sample means and range for 10 samples of size 5 each is given below Draw \bar{x} and R chart for the means and ranges. Comment on the state of control of the process.

Sample no.	1	2	3	4	5	6	7	8	9	10
Mean	42	49	38	44	45	37	51	46	43	48
Range	6	5	5	7	6	5	8	6	4	6

For $n=5$, take $A_2=0.58, D_3=0, D_4=2.11$.

- 18) Explain the following.
(a) Producer Risk (b) Consumer's Risk
(c) IQL (d) AQL (e) LTPD.

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