



C14-M-403

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BOARD DIPLOMA EXAMINATION, (C-14)  
OCT/NOV—2018  
DME—FOURTH SEMESTER EXAMINATION  
INDUSTRIAL ENGINEERING

Time : 3 Hours]

[Total Marks : 80

PART—A

10×3=30

- Instruction :** (1) Answer **all** questions. Each question carries **three** marks.  
(2) Answers should be brief and straight to the point and shall not exceed **five** simple sentences.  
(3) Printed **SQC tables** are allowed.

1. What is the method of conducting critical examination in method study?
2. Explain the method study symbols used in charting.
3. What are the objectives of work measurement?
4. Define:  
(a) Observed time (b) Normal time (c) Standard time
5. List out different methods of merit rating.
6. Define:  
(a) Job Analysis  
(b) Job Description  
(c) Job Specification.

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7. What are the objectives of minimum wages?  
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8. Compute the total wages of the worker per hour working in the factory based on following information with respect to 50-50 Halsey Premium Plan.

Time rate = ₹ 10 per hour

Time allowed = 100 hours

Time taken = 80 hours.

9. What are the objectives of Inspection?
10. Differentiate between control charts and sampling plans.

### PART—B

10×5=50

**Instruction :** (1) Answer any **five** questions and each question carries **ten** marks.  
(2) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer..

11. What is a Multiple Activity Chart? Draw a suitable multiple activity chart and explain it.
12. (a) What are the differences between Cycle graph and Chrono cycle graph.  
(b) Explain two hand process chart. Prepare a two hand process chart for assembling bolt and nut.
13. Explain about the time study equipment.
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14. (a) Find standard time for each operation performed by a drillman, if the work sampling shows that he was idle for 15% of the total working time of 8 hours and for the remainder of the duty he worked at 110% performance index. He drilled 200 items of acceptable quality during his total duty. Assume that 10% of total time is taken as fatigue and other personal allowances.  
(b) Describe the incentive schemes for managerial staff.

15. Explain Point Rating Method of Job evaluation. State its advantages and disadvantages.\*
16. Explain the various methods of wage payment.
17. (a) Compare between floor inspection and centralized inspection.  
(b) What are the advantages and disadvantages of sampling inspection?
18. 5000 lots are submitted for tightened inspection. But after inspection 3000 lots under tightened inspection, it is suggested that remaining lots should be examined by normal inspection. How many lots will be now accepted? The sampling plan under ABC standard with inspection level II and AQL 4% with lot size 2000.

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