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4E4144

Roll No. _____

Total No of Pages: **4**

4E4144

B.Tech. IV-Sem (Main & Back) Exam; June-July 2016

Automobile Engineering

4AE5A Industrial Engineering

AE, ME

Time: 3 Hours

Maximum Marks: 80

Min. Passing Marks (Main & Back): 26

Min. Passing Marks (Old Back): 24

Instructions to Candidates:-

Attempt any five questions, selecting one question from each unit. All Questions carry equal marks. Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly.

Units of quantities used/ calculated must be stated clearly.

Use of following supporting material is permitted during examination.

1. _____

2. _____

UNIT-I

Q.1 What are the principles of motion economy related to work place? If these principles are adopted in design of work place, what will be the advantages? [16]

OR

Q.1 (a) Discuss the functions of industrial engineering and the role it can play in raising industrial productivity. [8]

(b) Discuss the difference between time study and method study, with suitable example. [8]

UNIT-II

Q.2 (a) Discuss the contribution of following in the development of industrial management: [8]

(i) Henri Fayol

(ii) F. W. Taylor

(b) Define 'Standard Time' of an operation. Briefly describe the method used to obtain time standards. [8]

OR

Q.2 (a) Write the basic procedure for carrying out work measurement. [8]

(b) The observation is recorded to be 15 minutes for a job done by a worker whose is 80. Following allowances are recommended by the management. [8]

(i) Personal need allowance : 5% of Basic time (B. T.)

(ii) Basic fatigue allowance : 2% of B. T.

(iii) Contingency work allowance : 1% of B. T.

(iv) Contingency delay allowance : 2% of B. T.

(a) Determine B. T. standard time and work content for job.

(b) If 1500 articles are to be produced in an eight hour day at an estimated level of performance of 90% determine the number of workers required to do the work.

UNIT-III

- Q.3 (a) What are the objectives of financial management? Write in detail about the sources of finances? [8]
- (b) Differentiate between Joint Stock Company and Co-operative society, with suitable example. [8]

OR

- Q.3 (a) Discuss the following: [8]
- (i) Functional organization
- (ii) Line staff committee organization
- (b) Write short note on following: [8]
- (i) Borrowed capital
- (ii) Surplus profit

UNIT-IV

- Q.4 (a) Discuss the following: [8]
- (i) Profit investment ratio
- (ii) Inventory ratio
- (b) Explain the discounting and compounding technique of time value of money? [8]

OR

- Q.4 (a) Write short note with example on "Profit and loss statements" and "Balance sheet"? [12]

(b) Rs. 2,000 is invested at annual rate of 10%. What is the amount after 2 years if the compounding is done? [4]

(i) Annually

(ii) Semi annually

(iii) Monthly

(iv) Daily

UNIT-V

Q.5 (a) What do you understand by sinking Fund Method? Explain it briefly. [8]

(b) A mine was purchased for Rs. 20,00,000 on 1st Jan. 2000 and it was estimated content of being 1,00,000 tones. The actual quantity was 20,000 tonnes in 2001, 25,000 tonnes in 2002 and 30,000 tonnes in 2003. Prepare a Mine Account using Depletion Method of depreciation for the above said years. [8]

OR

Q.5 (a) Define Depletion and Amortization. What are the factors affecting the amount of depreciation? [10]

(b) A machine was purchased for a sum of Rs. 20,000 having useful life of 3 years. From the above particulars, calculate depreciation under Sum of Years Digits Method. [6]