KUMARAGURU
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Register Number: ………………..

B.E DEGREE EXAMINATIONS: NOV 2015

(Regulation 2009)

Seventh Semester

MECHANICAL ENGINEERING

MEC132**:** Process Planning and Cost Estimation

Time: Three Hours   **Maximum Marks: 100**

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. Ironically, work study equals
    a) Work measurement+method study
    b) Work study+method measurement
    c) Work study+method study
    d) Measurement of work+ study of work

2. CAPP stands for
    a) Computer aided production planning
    b) Computer aided process planning
    c) Computer assisted pre planning
    d) Computer assisted post planning

3. ILO stands for
    a) Indian labour organization
    b) International labour organization
    c) Indian layouts organization
    d) Indo-American labour overtone

4. Scientific study of man and his working environment is called as
    a) Ergonomics
    b) Human factors engineering
    c) Human engineering
    d) All of the above

5. Break-even point is characterized when
    a) Profit = sales
    b) Profit < sales
    c) Profit > sales
    d) None of the above

6. The aesthetic value of a product is associated with
    a) Cost
    b) Appearance
    c) Environment
    d) Function

7. Manufacturing cost is also called as _____ cost
    a) Making
    b) Construction
    c) Production
    d) Fabrication

8. Expenditure on depreciation of office building is a genuine case of _____ expense.

   a) Factory
   b) Selling
   c) Distribution
   d) Administrative

9. EPF can be grouped under

   a) Labour cost
   b) Factory cost
   c) Material cost
   d) Miscellaneous Expenses

10. Prime cost plus factory expenses equals

    a) Labour cost
    b) Factory cost
    c) Material cost
    d) Miscellaneous Expenses

PART B (10 x 2 = 20 Marks)

11. Summarize the advantages of generative CAPP systems.

12. Recall the approaches to process planning.

13. Define ergonomics.

14. Contrast the applications of human engineering.

15. What is a cost centre?

16. Infer the attributes of departmental costing.

17. Differentiate estimating and costing.

18. List the functions of cost estimation.

19. Spell examples of fatigue allowances.

20. The length of an edge of Cast iron cube with a density of 7.2gm/cc is 25cm.Calculate its weight.

PART C (5 x 14 = 70 Marks)

21. a) Organize the steps involved in process planning.

(OR)

    b) Outline the role of line balancing in improving shop floor effectiveness with cases.

22. a) Categorize the applications and scope of ergonomics on industrial engineering.

(OR)

    b) Interpret your knowledge level in

       i) Anthropometry (7)
       ii) Manual material handling (7)

23. a) For the process of manufacturing 1000 bolts and nuts per hour, a factory incurs following expenses. Determine whether the factory makes profit or loss in selling one set of bolt and nut for Rs. 1.

   Direct material cost: Rs. 350

   Direct labour cost: Rs. 200

   Direct expenses: Rs. 75

   Factory overheads: 150% of labour cost

   Office overheads: 30% of factory cost

   (OR)

   b) Illustrate production cost analysis procedure with an industrial example.

24. a) Develop the various models of cost estimation.

   (OR)

   b) Rephrase the major data sources for realistic cost estimation.

25. a) Build a model illustrating the elements of cost.

   (OR)

   b) A certain piece of work is produced by a firm in batches of 100. The direct materials cost for that 100 piece work is Rs. 160 and direct labour cost is Rs. 200. Factory on cost is 35% of the total material and labour cost. Overhead charges are 20% of factory cost. Calculate the prime cost and factory cost. If the management wants to make a profit of 10% on the gross cost, determine the selling price of each article.

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