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Question Paper Code: 59713

B.E. / B.Tech. DEGREE EXAMINATION, APRIL 2019

Elective

Mechanical Engineering

15UME913 – PROCESS PLANNING AND COST ESTIMATION

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. Work study is concerned with CO1- U
 - (a) Work study is concerned with
 - (b) Motivation of workers
 - (c) Improving production capability
 - (d) Improving production planning and control
2. The standard time for a job is CO1- U
 - (a) Base time + relaxation time
 - (b) Total work content + basic time
 - (c) Total work content
 - (d) Total work content + delay contingency allowance
3. Which is the type of process planning approaches? CO2-R
 - (a) Mechanical systems
 - (b) Manual and computer aided systems
 - (c) Management systems
 - (d) Process management systems
4. Production and process planning involves defining and in some cases optimizing following: CO2- R
 - (a) Methods and Materials
 - (b) Methods of production
 - (c) Processes, structures, and layouts
 - (d) Activities of production
5. Calculation of product cost, gathering information for planning and analyzing information for decisions making are features of CO3- U
 - (a) Information accounting
 - (b) Cost accounting
 - (c) Analyzing accounts
 - (d) Analyzing accounts

6. A costing system, which focuses on individual activities as particular cost object is classified as CO3- R
- (a) Activity based costing (b) Improved costing
(c) Learned improvements (d) Positive effectiveness
7. Cost estimation include(s) the following expenditure(s) CO4- U
- (a) Machine making (b) Tool making
(c) Selling expenses (d) Toll making and selling expenses
8. An analysis and estimation method of cost, by classifying cost accounts as fixed or variable with respect for specific output level is considered as CO4- R
- (a) IE Manufacturing analysis method (b) Price analysis method
(c) Unit analysis method (d) Account analysis method
9. To calculate the probable cost of the product, knowledge of following factors involves CO5- U
- (a) Production time is not required
(b) Unnecessary of previous estimates of comparable parts
(c) Effect of change in facilities on costing rates
(d) Machining time is not required
10. Expenditure incurred on material, labour, machinery, production and inspection are summed up to find the CO5- U
- (a) Total cost of product (b) Selling price of product
(c) Factory cost of product (d) Tool cost

PART – B (5 x 2= 10 Marks)

11. Mention any four objectives of work measurement. CO1- U
12. What is the material selection process? CO2- R
13. Give the various parameters considered in the material selection. CO3 -U
14. What is the purpose of estimating? CO4 -R
15. List out the losses to be considered in estimating the gross weight of a forging component. CO5 -U

PART – C (5 x 16= 80 Marks)

16. (a) Discuss in detail the vital role of Work Study in improving productivity. CO1- U (16)
- Or
- (b) (i) What do you mean by ERGONOMICS? CO1- U (4)
- Explain the applications of ergonomics in the following areas:
1. Working environments CO1- U (6)
2. The work place CO1- U (6)
17. (a) Discuss briefly about the Computer Aided Process Planning with their benefits. CO2- U (16)
- Or
- (b) Name and explain the commonly used tools, which are required for the development of manufacturing logic and knowledge. CO2- U (16)
18. (a) Describe the cost estimating with their objectives and functions. CO3- U (16)
- Or
- (b) What are the various elements of cost? Briefly explain each element in detail with suitable examples. CO3- U (16)
19. (a) What are the different methods of cost estimating? Explain. CO4- U (16)
- Or
- (b) Write short notes on CO4- U (16)
- (i) Collection of cost, and
- (ii) Allowances in estimation.
20. (a) Describe the Determination of Material Cost and Menstruation in Estimating. CO5- U (16)
- Or
- (b) (i) Discuss briefly the various elements considered while calculating the cost of a welded joint. CO5- U (8)
- (ii) Explain the direct material cost and direct other expenses in costing of welded joint. CO5- U (8)

