

B.E DEGREE EXAMINATIONS: NOV/DEC 2012

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. The process planning function bridges the gap between engineering design and _____.
 - a) Manufacturing
 - b) Cost
 - c) Labors
 - d) Customers
2. Computer Aided Process Planning is used for _____.
 - a) Improved Productivity
 - b) Lower Production cost
 - c) Consistency
 - d) All the above
3. Ergonomics implies 'Fitting the job to the _____.
 - a) Worker
 - b) Machine
 - c) Store
 - d) Correct Position
4. Daimler Benz cars are classic examples of
 - a) Cost value
 - b) Esteem value
 - c) Exchange value
 - d) Usage value
5. Break even analysis should be used to find _____.
 - a) Effective Worker
 - b) Cheaper Process
 - c) Machines
 - d) Cheaper Product
6. Market price is the sum of selling price and _____.
 - a) Discount
 - b) Profit
 - c) Expenses
 - d) Total Cost
7. In PPC, MRP stands for
 - a) Maximum retail price
 - b) Manufacturing resource planning
 - c) Material requirements planning
 - d) None of the above
8. Process capability ratio is the ratio of
 - a) LSL-USL
 - b) USL – LSL
 - c) $USL-LSL/6\delta$
 - d) $LSL-USL /6\delta$
9. Sum of Direct material cost + Direct labor cost + Direct expenses-----
 - a) Factory Cost
 - b) Prime Cost
 - c) Office Cost
 - d) Total Cost

10. Gantt charts were devised by
- | | |
|--------------|----------------|
| a) Gilbreth | b) FW. Taylor |
| c) Hawthorne | d) Henry Gantt |

PART B (10 x 2 = 20 Marks)

11. Enumerate the functions of PPC.
12. What are the factors should be considered for process and equipment selection?
13. What is meant by ergonomics?
14. Define Man-Machine system.
15. What are the limitations of break-even analysis?
16. State different types of cost to be considered while estimating total cost of a product?
17. Define Costing.
18. What do you understand by production cost estimating?
19. What is direct labor cost?
20. A manufacturing sector produces 5000 machines per year. If the total on costs during that year are Rs.2,00,000/-, calculate the overhead cost for each machine.

PART C (5 x 14 = 70 Marks)

21. a) Discuss the various process planning activities in detail
(OR)
b) Explain details about the Process and Equipment Selection Procedure.
22. a) Explain in details about the work place design.
(OR)
b) Discuss details about the anthropometry.
23. a) (i) What are different classifications of cost? Explain. (10)
(ii) Differentiate between estimation and costing. (4)

(OR)

- b) The following information is available for two machines:

Item	Capstan	Automatic(single spindle)
(i) Tooling cost	Rs.300	Rs.300
(ii) Cost of cams	-	Rs.1500
(iii) Material cost per piece	Rs.250	Rs.250
(iv) Operation labour cost	Rs.5 per hour	Rs.2 per hour

