COLLEGE OF ENGINEERING, PUNE

(An Autonomous Institute of Government of Maharashtra.)
SHIVAJI NAGAR, PUNE - 411 005

END Semester Examination

(PE-14004) Manufacturing Economics

Course: B.Tech Branch: Production S/w

Semester: Sem VII

Max.Marks:60

Year: 2014-2015

Date: 28/11/2014

Duration: 3 Hours Time:- 2 pm to 5 pm

Instructions:

MIS No. | | | | | | | | | |

1. Figures to the right indicate the full marks.
2. Mobile phones and programmable calculators are strictly prohibited.
3. Writing anything on question paper is not allowed.
4. Exchange/Sharing of anything like stationery, calculator is not allowed.
5. Assume suitable data if necessary.
6. Write your MIS Number on Question Paper

1.	Explain Marginal Costing? Give example	2
2.	What is difference between standard cost and absorption cost?	2
3.	What is variance analysis?	1
4.	What is Material Price and quantity variance, explain with formula	2
5.	What is throughput time and delivery cycle time, explain with diagram	2
6.	What is Cost reduction?	1
7.	What are the areas of cost reduction?	2
8.	Explain the difference between Cost Control and Cost Reduction	2
9	What are the techniques of cost reduction explain in brief	2
10	What is activity Based Cost management?	1

11. What is JIT? How JIT helps in cost reduction? 2

12. What is TQM? Explain in brief 2

13. What is SCM?Explain in brief 2

14. What is Cost Allocation? 1

15. What is direct cost and indirect cost? 2

16. What is Fixed cost and variable cost? 2

17. List the project evaluation techniques? Explain one of the technique in brief 2

18. List the sources of capital? 2

19. What is capital budgeting? What are the steps in capital budgeting? 2

20. Write a short note on Time Value of money? 2

21. Explain Cost Volume profit analysis with respect to following 3
    a. Mechanics of breakeven chart
    b. Profit planning and breakeven chart
    c. Margin of Safety

22. Define 2
    a. Non Current Liabilities
    b. Current Liabilities
    c. Non Current Assets
    d. Current Assets

23. State the objectives of Fund flow statement 2

24. Explain the types of Ration analysis along with formula 2

25. A project requires an initial investment of $225,000 and is expected to generate the following net cash inflows: 2

Year	1	2	3	4
Cash inflow	$95,000	$80,000	$60,000	$55,000

Compute net present value of the project if the minimum desired rate of return is 12%.

26. Choose the most desirable investment proposal from the following alternatives using profitability index method:

2

	Proposal X	Proposal Y	Proposal Z
Present value of net cash flow	$212,000	$171,800	$185,200
Amount required to invest	200,000	160,000	180,000
Net present value	12,000	11,800	5,200

27. LASANI Stone Crushing company is considering to purchase a new machine. The cost of the machine is $360,000 and the life of the machine is 10 years. The machine will reduce annual costs by $75,000.

The management uses payback period method to evaluate capital investments because the quick recovery of any capital investment is very important for the company.

Required: Compute the payback period for this proposal. Would the company purchase new machine if maximum desired payback period of the management is 4 years?

28. The National Food Company is comparing two proposals – proposal L and proposal M. Proposal L has a useful life of 7 years whereas proposal M has a useful life of 4 years. Both the proposals require an equal initial investment of $180,000. The information about cash inflow expected from proposal L and proposal M is given below:

2

Net Cash Flows

Year	Proposal L	Proposal M
1	$60,000	$60,000
2	$60,000	$60,000
3	$50,000	$60,000
4	$40,000	$60,000
5	$30,000	
6	$30,000	
7	$20,000	

The management of National Food Company wants a 10% rate of return on capital investments.

Required: Compare two proposals using net present value method.

29. Following is the contribution margin income statement of a single product company: 5

	Total	Per unit
Sales	$1,200,000	$80
Less variable expenses	$840,000	$56
Contribution margin	360,000	$24
Less fixed expenses	300,000	
Net operating income	$60,000	

Required:

1. Calculate break-even point in units and dollars.
2. What is the contribution margin at break-even point?
3. Compute the number of units to be sold to earn a profit of $36,000.
4. Compute the margin of safety using original data.
5. Compute CM ratio. Compute the expected increase in monthly net operating if sales increase by $160,000 and fixed expenses do not change.

30. Delta Woods Inc., manufactures wood products that are used in small and medium size offices. One of the products is a chair. 2

Last month Delta manufactured 4,000 chairs. The company purchased and used 11,000 feet of wood. The total cost of 11,000 feet of wood was $37,400.

According to direct materials price and quantity standards, one chair requires 2.5 feet of wood at a cost of $3.60.

Required:

1. Compute the standard cost of wood required to manufacture 4,000 chairs. Also compute the difference between actual cost incurred and standard cost.
2. Compute materials price and quantity variance.