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B.M.S COLLEGE FOR WOMEN, AUTONOMOUS
BENGALURU – 560004
SEMESTER END EXAMINATION – APRIL/MAY- 2023

M.Com. – III Semester

STRATEGIC COST MANAGEMENT – I

Course Code: MCM304T
Duration: 3 Hours

QP Code: 13012
Max. Marks: 70

SECTION – A

Answer any seven questions out of ten. Each question carries two marks. (7x2=14)

- Define strategic cost Management
- What is meant by cost driver?
- State any two characteristics of ABC
- State the phases of product life cycle
- What do you mean by Lean Cost Management?
- What is Kaizen Costing?
- Give the Meaning of Business Process Reengineering
- What is JIT?
- What is Bench Marking
- What is value Analysis?

SECTION – B

Answer any four questions out of six. Each question carries five marks. (4x5=20)

- Distinguish between cost management and cost accounting
- A house holder is looking at ways of producing hot water for domestic use and considers following two possibilities an electric immersion heater having an installation cost of Rs. 1600 and estimated annual electrical charge of Rs. 2000 and a gas boiler with an installation cost of Rs. 7,600 with annual fuel bills of Rs. 800.

You are required to advice the house holder by comparing two systems on the basis of

- Total expenditure and
 - Present value over a 5 year period. Assume interest at 9%.
- ABC Citizen company produces mathematical and financial calculators data related to two products are presented below.

Particulars	Mathematical calculators	Financial calculators
Annual production in units	50,000	1,00,000
Direct material cost Rs.	1,50,000	3,00,000
Direct manufacturing labour cost Rs.	50,000	1,00,000
Direct manufacturing labouring hours	2500 hrs	500 hrs
Machine hrs.	25000	50,000
No. of Production runs	50	50
Inspection hrs	1000	500

Both the products pass through department 1 and 2. The department combined manufacturing overhead cost are machine cost Rs. 3,75,000, set up cost –Rs.1,20,000, Inspection cost Rs.1,05,000

Using ABC costing

- 1) Compute the manufacturing overhead cost per unit for each product
- 2) Compute the manufacturing cost per unit for each product

5. In Organic chemicals Limited is about to replace its old boiler equipment, either by a coal fired system or by an oil fired system. Cost of capital 15% a year and other estimated cost are as follows:

Particulars	Coal (Rs. in '000)	Oil (Rs. in '000)
Initial cost of Boiler	70	100
Annual Operating Cost	60	45

If the Company expected the new boiler system to last at least 15 years which system to be chosen? (Present value of annuity Re1 @ 15% for 15 years = 5.847)

6. Enumerate the benefits in adapting JIT in manufacturing sector?
7. Explain the types of benchmarking

SECTION – C

Answer any two questions out of four. Each question carries twelve marks. (2x12=24)

8. Briefly explain the tools and techniques of cost management
9. A company manufactures several products of varying levels of designs and models. It uses a single overhead recovery rate based on direct labour hour. The overheads incurred by the company in the first half of the year are as under:

	(Rs.)
Machine operation expenses	10, 12,500
Machine maintenance expenses	1, 87,500
Salaries of technical staff	6, 37,500
Wages and salaries of stores staff	2, 62,500

During this period the company introduced activity-based costing system and the following significant activities are identified:

- Receiving materials and components
- Set up of machines for production runs
- Quality inspection

It is also determined that

-The machine operation and machine maintenance expenses should be apportioned between stores and production activity is 20: 80 ratio

-The technical staff balanced should be apportioned between machine maintenance, set up and quality inspection in 30:40:30 ratio

The consumption of activity during the period under review are as under:

- Direct labour hours worked 40,000
 - Direct wages rate Rs. 6 per hour
 - Production set ups 2040
 - Material and components received 1,960
- From suppliers

- Number of quality inspections carried out 1,280

The data relating to two products manufactured by the company during the period are as under:

	Products	
	P	Q
Direct material costs	Rs. 6,000	Rs. 4,000
Direct labour hours	960	100
Direct material consignments received	48	52
Production runs	36	24
No. of quality inspection done	30	10
Quality product (units)	15000	5000

Required:

- Calculate the cost of product P & Q based on the existing system overhead recovery rate.

Determine the cost of product P & Q using activity based costing

10. A machine used on a production line must be replaced at least every four years. The costs incurred in running the machine according to its age are:

Rs

Particulars	Age of the machinery (in years)				
	0	1	2	3	4
Purchase price	3000	-	-	-	-
Maintenance	-	800	900	1000	1000
Repairs	-	-	200	400	800
Net realisable value	-	1600	1200	800	400

Future replacement will be identical machines with the same costs. Revenue is unaffected by the age of the machine. The cost of capital is 15%. Determine optimum replacement cycle.

Present value factors at 15% for years 1,2,3,4 are 0.8696, 0.7561, 0.6575 and 0.5718 respectively. Present value of annuity at 15% for years 1,2,3,4 are 0.8696, 1.6257, 2.2832 and 2.8550 respectively.

11. Explain the different stages of product life cycle

SECTION – D

Compulsory Skill-based Question

(1x12=12)

Toyota is a Japanese multinational automotive manufacturer headquartered in Toyota City, Japan. The company is known for its innovative manufacturing techniques and production system, including the Toyota Production System (TPS). One of the key components of TPS is JIT manufacturing, which focuses on producing goods only when they are needed in the production process, reducing inventory and waste.

Case Study: In the early 1970s, Toyota was facing a challenge with its manufacturing process. The company had a large inventory of parts and vehicles that were taking up valuable space and tying up capital. The traditional manufacturing process was based on a "push" system, where production was based on forecasts of demand rather than actual customer orders. This resulted in overproduction and excess inventory, which increased costs and reduced efficiency.

To address this issue, Toyota implemented a JIT system in its manufacturing process. The new system was based on a "pull" system, where production was triggered by actual customer orders rather than forecasts. The company also developed a close relationship with its suppliers, ensuring that they would provide the necessary parts in small, frequent batches as and when required.

As a result of these changes, Toyota was able to reduce its inventory levels, improve production efficiency, and increase the speed of its manufacturing process. The company was also able to respond quickly to changes in customer demand, as it could easily adjust production levels based on actual orders.

The implementation of JIT had a significant impact on Toyota's profitability and market share. By reducing inventory levels, the company was able to free up capital, which it could use for other investments. The company also became more responsive to customer demand, which helped it to gain a competitive advantage over other automakers.

Conclusion: Toyota's implementation of JIT was a key factor in the company's success in the automotive industry. By focusing on producing goods only when they were needed, the company was able to reduce inventory levels, improve production efficiency, and respond quickly to changes in customer demand. These benefits helped Toyota to increase its profitability and gain a competitive advantage in the market.

1. How has the implementation of Just-in-Time (JIT) manufacturing improved the production process at Toyota company? Provide specific examples of the benefits observed.
2. What are the key principles of JIT manufacturing, and how do they differ from traditional manufacturing approaches? What are the advantages and disadvantages of JIT?

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