III Semester M.Com. Degree Examination, January 2018
(CBCS)
COMMERCE
Paper – 3.4 AT : Strategic Cost Management – I

Time : 3 Hours Max. Marks : 70

SECTION – A

1. Answer **any seven** sub-questions. **Each** sub-question carries **2** marks : **(7×2=14)**
   a) Define strategic cost management.
   b) What do you mean by value engineering ?
   c) What is meant by cost pool ? Give an example.
   d) What are cost phases of a mobile phone ?
   e) Define Kaizen costing.
   f) Distinguish between cost accounting and cost management.
   g) Define value.
   h) What is facility level cost ?
   i) What is the use of experience curve in SCM ?
   j) What is lean cost management ?

SECTION – B

Answer **any four** questions. **Each** sub-question carries **5** marks : **(4×5=20)**

2. Briefly explain the role of in strategic planning and management control.
3. Explain the uses of business process re-engineering in cost management.
4. XYZ Company Ltd. has six departments, A, B, C, D, E and F, and has allocated manufacturing overhead using one cost pool based on direct labor hours. The accounting staff has provided the following estimates applicable to traditional and ABC allocation of manufacturing costs for 2004 :

	Cost	**Allocation Base**	**Activity**
Setups	Rs. 16,500	Number of setups	250 setups
Quality Control	Rs. 24,000	Number of inspections	400 inspections
Fabrication	Rs. 36,000	Production runs	3,600 runs
Direct labor	Rs. 90,000	Direct labor hours	4,500 labor hours

P.T.O.

Management is assessing if ABC should be used, and has determined that Department B used the following : 24 setups, 60 inspections, 900 production runs and 900 direct labor hours during 2004..

You are required :

i) Determine how much overhead cost is allocated to Dept. B using traditional allocation.

ii) Using ABC, how much overhead cost is allocated to Dept. B ?

iii) Which items are cost drivers ?

iv) Which items are cost objects ?

5. What is total life cycle costing ? Why is it important ?

6. Bring out the procedure for implementation of kaizen costing.

7. Distinguish between cost management and cost accounting.

SECTION – C

Answer **any three** questions. **Each** sub-question carries **12** marks : **(3×12=36)**

8. "Survival of a business firm in today's business environment is possible only when they are able to identify the areas cost management and use of different methods of cost management in managing them". Do you agree with the statement ? Justify your answer with relevant examples.

9. Describe the strategic cost management issues in different elements of cost with suitable examples.

10. Fire Field Ltd., makes a single product - a fire resistant commercial filing cabinet - that it sells to office furniture distributors. The company has a simple ABC system that it uses for internal decision making. The company has two overhead departments whose costs are listed below :

Manufacturing overhead	Rs. 5,00,000
Selling and administrative overhead	Rs. 3,00,000
Total overhead costs	Rs. 8,00,000

The company's activity based costing system has the following activity cost pools and activity measures :

Activity Cost Pool	Activity Measures
Assembling units	Number of units
Processing orders	Number of orders
Supporting customers	Number of customers
Other	Not applicable

Costs assigned to the "other" activity cost pool have no activity measure; they consist of the costs of unused capacity and organization-sustaining costs - neither of which are assigned to products, orders or customers.

Fire field distributes the costs of manufacturing overhead and of selling and administrative overhead to the activity cost pools based on employee interviews, the results of which are reported below :

Distribution of Resource Consumption Across Activity Cost Pools					
	Assembling Units	Processing Orders	Supporting Customers	Other	Total
Manufacturing overhead	50%	35%	5%	10%	100%
Selling and administrative overhead	10%	45%	25%	20%	100%
Total activity	1,000 units	250 orders	100 customers	–	–

Required :

i) Perform the first stage allocation of overhead costs to the activity cost pools.

ii) Compute activity rates for the activity cost pools.

iii) Office Mart is one of the Ferris Corporation's customers. Last year OfficeMart ordered filing cabinet four different times. OfficeMart ordered a total of 80 cabinets during the year. Construct a table showing the overhead costs of these 80 units and four orders.

11. Computech Ltd., specializes in the manufacture of Computers. It is planning to introduce a new computer specially designed for children. Development of the New Computer is to begin shortly and Computech Ltd., is in the process of preparing a Product Life-Cycle Budget. It expects the new product to have a life-cycle of 3 years from the time of its introduction in the market before the computer becomes obsolete due to technological advancement of other competitive products.

Its expects the new product to have a life cycle of 3 years and estimates the following costs :

	Year 1	Year 2	Year 3
Units manufactured and Sold	25,000	1,00,000	75,000
Computers per batch	40	50	50
Price per Computer (Rs.)	4500	4000	3500
R&D Cost (Rs.) :	450 lakhs	50 lakhs	–
Production Cost :			
Variable cost per unit (Rs.)	1600	1500	1500
Variable cost per batch (Rs.)	7000	6000	6000
Fixed cost (Rs.)	300 lakhs	300 lakhs	300 lakhs
Marketing Cost :			
Variable cost per batch (Rs.)	360	320	280
Fixed cost (Rs.)	200 lakhs	150 lakhs	150 lakhs
Distribution Cost :			
Units produced per batch (Rs.)	20	16	12
Variable cost per unit (Rs.)	100	100	100
Variable cost per batch (Rs.)	1200	1200	1000
Fixed cost (Rs.)	120 lakhs	120 lakhs	120 lakhs
Customer service cost per unit (Rs.)	200	150	150

You are required to :

a) Calculate the budgeted life cycle operating profit for the new product.

b) Explain how an organization would benefit from a product life cycle costing exercise.

12. Answer the following questions :

a) Business process re-engineering

b) Value analysis

c) Lean cost management.

III Semester M.Com. Degree Examination, January 2019
(CBCS)
COMMERCE
Paper – 3.4 AT : Strategic Cost Management – I

Time : 3 Hours Max. Marks : 70

Instruction : *Answer **all** the sub-Sections.*

SECTION – A

Answer **any seven** of the following. **Each** question carries **two** marks. **(7×2=14)**

1. a) What are the techniques of cost control ?
   b) What is value engineering ?
   c) What is cost pool and cost object ?
   d) Distinguish between Kaizen Costing and Value Engineering.
   e) Define cost and value.
   f) What are the categories of project life cycle ?
   g) What is lean cost management ?
   h) What is bench marking ?
   i) State any four benefits of PLCC.
   j) What are cost drivers ?

SECTION – B

Answer **any four** questions. **Each** question carries **five** marks. **(4×5=20)**

2. Company X is forced to choose between two machines A and B. The two machines are designed differently, but have identical capacity and do exactly the same job. Machine A costs Rs 1,50,000 and will last for 3 years. It costs Rs. 40,000 per year to run. Machine B is an 'economy' model costing only Rs. 1,00,000, but will last only for 2 years, and costs Rs 60,000 per year to run. These are real cash flows. The costs are forecasted in rupees of constant purchasing power. Ignore tax. Opportunity cost of capital is 10%. Which machine should Company X buy ?

3. Ever Forward Ltd. is manufacturing and selling two products : Splash and Flash, at selling prices of Rs. 3 and Rs. 4 respectively. The following sales strategy has been outlined for the year 2018.

   - Sales planned for year will be Rs. 7.20 lakhs in the case of Splash and Rs. 3.50 lakhs in the case of Flash.
   - Break-even is planned at 60% of-the total sales of each product.
   - Profit for the year to be achieved is planned at Rs. 69,120 in the case of Splash and Rs. 17,500 in the case of Flash. This would be possible by launching a cost reduction programme and reducing the present annual fixed expenses of Rs. 1,35,000 allocated as Rs. 1,08,000 to Splash and Rs. 27,000 to Flash.
   - The selling price of Splash and Flash will be reduced by 20% and 12.5% respectively to meet the competition.

   You are required to present the proposal in financial terms giving clearly the following information.

   - Reduction in fixed expenses product-wise that is envisaged by the cost Reduction Program.

4. A company is considering the purchase of a new machine for Rs. 3,50,000. It feels quite confident that it can sell the goods produced by the machine so as to yield an annual cash surplus of Rs. 1,00,000. There is however some uncertainty as to the machine's working life. A recently publish Trade Association Survey shows that members of the Association have between them owned 250 of these machines and have found the lives of the machines vary as under :

No. of year of Machine life	3	4	5	6	7	Total
Total No. of machines having given life	20	50	100	70	10	250

   Assuming a discount rate of 10% the net present value for each different machine life is as follows :

Machine life	3	4	5	6	7
N.P.V. (Rs.)	(1,01,000)	(33,000)	29,000	86,000	1, 37,000

   You are required to advice whether the company should purchase a new machine or not.

5. Explain the role of cost accounting in strategic planning.

6. Explain the problems of overhead absorption in traditional system.

7. What are the drawbacks of lean cost management ?

SECTION – C

Answer **any three** questions. **Each** question carries **twelve** marks. **(3×12=36)**

8. Altra Video Company sells package of blank Video tapes to its customers. It purchases video tapes from Yash Tape Company at Rs. 150 per packet. Yash Tape Company pays all freight to Altra Video Company. No incoming inspection is necessary because Yash Tape Company has a superb reputation for delivery of quality merchandise. Annual demand of Altra Video Company is 15,600 packages. Altra Video Company requires 10% annual return on its investment. The purchase order Lead time is 2 weeks. The purchase order is passed through internet and it costs Rs. 20 per order. The relevant insurance, material handling etc. is Rs. 10 per package per year.

   Altra Video has to decide whether or not to shift to JIT purchasing. Yash Tape Company agrees to deliver 100 packages of Video tapes 156 times per year (6 times every 2 weeks) instead of existing delivery system of 1,200 packages 13 times a year, with additional amount of Re.0.05 per package. Altra Video Company incurs no stock out under its current purchasing policy. It is estimated that Altra Video Company will incur stock out cost on 50 video tape packages under a JIT purchasing policy. In the event of stock out, Altra video company has to rush order tape packages, which costs Rs. 8 per package. Comment whether Altra Video Company should implement JIT purchasing system.

   Ram Co. also supplies video tapes. It agrees to supply at Rs. 145 per package under JIT delivery system. If video tape is purchased from Ram Co. relevant carrying cost, would be Rs. 9 per package against Rs. 10 in case of purchasing from Yash Tape Company. However Ram Co. does not enjoy a sterling reputation for quality; Altra Video Company anticipates the following negative aspects of purchasing tapes from Ram Co.

   1) Incurring additional inspection cost of Rs. 0.05 per package.

   2) Average stock out of 360 tape packages per year would occur, largely resulting from late deliveries. Ram Co. cannot rush order at short notice. Altra Video Company anticipates lost contribution margin per package of Rs. 10 from stock out.

   3) Customers would likely return 2% of all packages due to poor quality of the tape and to handle this return, an additional cost of Rs. 25 per package would be incurred.

   Comment on whether Altra Video Company can place an order with Ram Co.

9. A company produces four products, viz. P, Q, R and S. The data relating to production activity are as under

Product	Quantity of production	Material Cost/Unit (Rs.)	Direct labour hours/ unit	Machine hours/unit	Direct Labour cost/unit (Rs.)
P	1000	10	1	0.50	6
Q	10000	10	1	0.50	6
R	1200	32	4	2.00	24
S	14000	34	3	3.00	18

Production overheads are as under :

	Rs.
Overheads applicable to machine oriented activity	1,49,700
Overheads relating to ordering materials	7,680
Set up costs	17,400
Administration overheads for spare parts	34,380
Material handling costs	30,294

The following further information has been compiled :

Product	No. of set up	No. of materials orders	No. of times materials handled	No. of spare parts
P	3	3	6	6
Q	18	12	30	15
R	5	3	9	3
S	24	12	36	12

Required :

- Select a suitable cost driver for each item of overhead expense and calculate the cost per unit of cost driver.
- Using the concept of activity based costing, compute the factory cost per unit of each product.

10. Critically evaluate strategic cost management issues in different elements of cost.

11. Elucidate the procedure for implementation and evaluation of kaizen costing.

12. Explain the benefits and problems of adoption of ABC system compared to traditional system.

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Reg. No. | | | | | | | | |

III Semester M.Com. Degree Examination, March/April - 2021
COMMERCE
Strategic Cost Management - I
(CBCS Scheme 2018-19)
Paper : 3.4

Time : 3 Hours **Maximum Marks : 70**

Instructions to Candidates:

Answer **ALL** the sub-sections.

SECTION - A

Answer any **Seven** of the following. Each question carries **two** marks. **(7×2=14)**

1. a) What is meant by Cost Pool?

   b) What is Target Costing?

   c) Give the meaning of Business process re-engineering.

   d) What is Benchmarking?

   e) What do you mean by LCC?

   f) State the different phases of product life cycle costing.

   g) State the difference between Kaizen costing and Standard costing.

   h) Define Lean cost management.

   i) Define the term Activity based costing?

   j) What are cost drivers?

SECTION - B

Answer any **four** questions. Each question carries **five** marks. **(4×5=20)**

2. Distinguish between cost control and cost reduction.

3. Explain the reasons for the adoption of ABC by manufacturing and non - manufacturing industries.

4. Explain the important features of JIT system.

[P.T.O.

5. X company is considering the purchase of a new machine for Rs. 4,00,000. It feels quite confident that it can sell the goods produced by the machine so as to yield an annual cash surplus of Rs. 1,50,000. There is however some uncertainty as to the machine's working life. Recently publish Trade Association Survey shows that members of the Association have between them owned 250 of these machines and have found the lives of the machines vary as under :

No. Of year of Machine life	3	4	5	6	7	Total
Total No. of machine having given life	20	50	100	70	10	250

Assuming a discount rate of 10% the net present value for each different machine life is as follows :

Machine life	3	4	5	6	7
N.P.V (Rs.)	(1,00,000)	(30,000)	25,000	85,000	1,30,000

You are required to advice whether the company should purchase a new machine or not.

6. Explain the different categories of Life Cycle Costs.

7. What is Kaizen costing? Bring out the benefits derived from kaizen.

SECTION - C

Answer any **Three** questions. Each question carries **twelve** marks. (3×12=36)

8. BEL has developed a special purpose Electronic Security Device and one introduced in the market, same expected to have a life cycle of 3 years from the time of its introduction in the market before the Device becomes obsolete due to technological advancement of other competitive products. You are required to prepare a Product life cycle budget.

The following information is available :

Particulars	Year 1	Year 2	Year 3
No. of units to be manufactured and sold	50,000	2,00,000	1,50,000
Price per device (Rs.)	500	400	350
R&D and Design cost	9,00,000	1,00,000	Nil
production cost :			
Variable cost per Device (Rs.)	200	150	150
Fixed cost (Rs.)	70,00,000	70,00,000	70,00,000
Marketing Cost :			
Variable cost per Device (Rs.)	100	70	60
Fixed Cost (Rs.)	30,00,000	25,00,000	25,00,000

Distribution Cost :

Variable cost per Device (Rs.)	50	50	50
Fixed Cost (Rs.)	10,00,000	10,00,000	10,00,000

Prepare the budgeted life cycle operating profit.

It has been further indicated that if a discount of 10% is given to customers, the units to be sold per year will increase by 5%. Would you recommend introduction of such discount?

9. Ramesh video company sells package of blank video tapes to its customer. It purchases video tapes from Mahesh Tape company at Rs. 140 a packet. Mahesh Tape company pays all freight to Ramesh video company. No incoming inspection is necessary because Mahesh tape company has a superb reputation for delivery quality merchandise. Annual demand of Ramesh Video Co. is 13,000 packages. Ramesh Video Co. requires 15% annual return on investment. The purchase order lead time is two weeks. The purchase order is passed through internet and it costs Rs. 2 per order. The relevant insurane, material handling etc. Rs. 3.10 per package per year. Ramesh Video Co. has to decide whether or not to shift JIT purchasing. Mahesh tape company agrees to deliver 100 packages of video tapes 130 times per year (5 times every two week) instead of existing delivery system, 1,000 packages 13 times a year with additional amount of Rs. 0.02 per package.

Ramesh Video Co. incurs no stockout under its current purchasing policy. It is estimated Ramesh Video Co. incurs stockout cost on 50 video tape packages under a JIT purchasing policy. In the event of a stockout Ramesh Video Co. has to rush order tape pacakges which costs Rs. 4 per package. Comment whether Ramesh Video co. to implement JIT purchasing system.

Suresh Co. also supply video tapes. It agrees to supply Rs. 13.60 per package under JIT delivery system. If video tape purchased from Suresh Co. relevant carrying cost would be Rs. 3 per package against Rs. 3.10 in case of purchasing from Mahesh tape Co. However, Suresh Co. doesn't enjoy so sterling reputation for quality. Ramesh Video Co. anticipates following negative aspects of purchasing tapes from Suresh co.

a. To incur additional inspection cost of 5 paisa per package.

b. Average stockout of 360 tapes packages per year would occur, largely resulting from late deliveries. Suresh Co. cannot rush order at short notic. Ramesh Video Co. anticipates lost contribution margin per package of Rs. 8 from stockout.

c. Customer would likely return 2% of all packages due to poor quality of the tape and to handle this return an additional cost of Rs. 25 per package.

Comment whether Ramesh Video Co. places order to Suresh Co.

10. What is JIT system? Explain briefly the merits and demerits of JIT.

11. A company produces four products viz P, Q, R and S. The data relating to production activity are as under

Product	Quantity of production	Material cost/unit (Rs.)	Direct labour hours/units	Machine hours/unit	Direct Labour cost/unit (Rs.)
P	1,000	10	1	0.50	6
Q	10,000	10	1	0.50	6
R	1,200	32	4	2.00	24
S	14,000	34	3	3.00	18

Production overheads are as under :	Rs.
Overheads applicable to machine - oriented activity	1,49,700
Overheads relating to ordering materials	7,680
Set up costs	17,400
Administration overheads for spare parts	34,380
Material handling costs	30,294

The following further informationi has been compiled:

Product	No. of set up.	No. of materials orders	No. of times materials handled	No. of spare parts
P	3	3	6	6
Q	18	12	30	15
R	5	3	9	3
S	24	12	36	12

Required :

1. Select a suitable cost driver for each item of overhead expense and calculate the cost per unit of cost driver.
2. Using the concept of activity - based costing, compute the factory cost per unit of each product.

12. What is Strategic Cost Management? Elucidate the recent trends in strategic cost management for business sustainability.

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Reg. No. | | | | | | | | |

III Semester M.Com Degree Examination, April/May - 2022

COMMERCE

Strategic Cost Management - I

(CBCS Scheme)

Paper - 3.4 A T

Time : 3 Hours

Maximum Marks : 70

SECTION - A

Answer any Seven Questions out of Ten. Each question carries 2 marks. (7×2=14)

1. a) What are the techniques of cost reduction?

   b) What is management control?

   c) State the steps in ABC.

   d) What is meant by product Design?

   e) State the benefits of Product Life Cycle.

   f) Define kaizen costing?

   g) What is lean cost management?

   h) What do you meant by LCC?

   i) List out the benefits of JIT.

   j) What is Value Engineering?

SECTION - B

Answer any FOUR questions out of Six. Each question carries five marks.

(4×5=20)

2. Briefly explain the areas of cost management?

3. What are the benefits of adapting ABC system?

4. How Life Cycle Costing model is selected and developed?

[P.T.O.

5. The wages paid for an worker for an hour is Rs. 1500/- and he works 5 days in a week of 42 hours. The approved absence from his work place and maintenance of machine is 12 minutes and his job card show that his time chargeable during the week to various cost centers is as follows:

Job No. 125 : 20 Hours

Job No. 129 : 10 Hours

Job No. 132 : 8 Hours

Time unaccounted due to power failure. Show, how for it would dealt in the cost accounts.

6. "Money spent on installing a costing system is not an expenses but an investment". Comment.

7. Swathi automobiles is planning to replace its old trucks by new trucks either by Electric vehicles or Diesel engine vehicles. Finance cost 12% for a year, and other estimated costs are given below:

	Electric Vehicle (Rs in 00,000)'s	Diesel Engine Vehicle (Rs in 00,000)'s
Cost of Vehicle	65	45
Annual Operating Expenses	30 p.a.	75 p.a.

If company expects the Electric vehicles to last at 10 years which vehicle should be chosen? (PV of annuity for 10 years at 10% is 6. 144)

SECTION - C

Answer any Three questions out of Five. Each question carries Twelve marks

(3×12=36)

8. Explain how cost analysis statement is prepared, implemented and monitored. in a service industry.

9. What are the objectives of JIT approach? Can JIT bring the changes in the firms overall cost. Explain?

10. Ruder Ltd. is manufacturing two products and furnishes the following data for the year The following are the estimates for the year.

Products	Annual Outputs (Units)	Total Machine Hours	Total Number of Purchases	Total Numbers of Set ups
RD 126	10000	40000	320	40
RD 132	120000	240000	742	88

The annual overheads are as follows:

Particulars	Rs.
Volume related activity costs	550000
Set up related costs	820000
Purchase related costs	618000

You are required to calculate the overhead charge per unit of each product RD 126 and RD 132 based on:

1. Traditional method of charging overheads
2. Activity based costing method.

11. Nandi Farm Equipments are manufacturing the four components and cost related to that are given below:

Particulars	M (Rs.)	N (Rs.)	O(Rs.)	P(Rs.)
Direct material	80	100	100	120
Direct Labour	20	25	25	30
Variable Overheads	10	12	15	10
Fixed Overheads	15	23	20	20
Total	125	160	160	180
Output per Machine Hour (Unit)	4	2	3	3

The key factor is machine capacity.

You are required to advise the management whether to make or buy them from a supplier who quotes following prices:

M: Rs. 115/- N: Rs. 175/- O: Rs. 135/- P: Rs. 185/-

12. What do you mean by Benchmarking ? Describe main types of benchmarking of critical success factor.

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Reg. No. | | | | | | | | |

III Semester M.Com. Degree Examination, May - 2023

COMMERCE (Accounting and Taxation)

Strategic Cost Management - I

(CBCS Scheme)

Paper : 3.4

Time : 3 Hours **Maximum Marks : 70**

SECTION - A

Answer any Seven questions out of Ten. Each question carries 2 marks.(7×2=14)

1. a) What is value engineering?

   b) What are cost drivers?

   c) What is Activity Based costing?

   d) What is meant by Kaizen costing?

   e) Differentiate cost control and cost reduction.

   f) State the objectives of JIT.

   g) What do you mean by Lean cost management?

   h) What are Bench marking codes of conduct?

   i) What do you mean by LCC?

   j) State any four limitations of traditional costing system.

SECTION - B

Answer any Four questions out of Six. Each question carries 5 marks. **(4×5=20)**

2. Discuss briefly the steps to implement activity based costing.

3. Describe the characteristics and benefits of Product Life Cycle costing.

[P.T.O.

4. The relevant information for two alternative systems of internal transportation are given below:

Particulars	System 1	System 2
Initial investment	6	4
Annual operating costs	1	0.9
Life	6 years	4 years
Salvage value at the end	2	1.5

Which system would you prefer if the cost of capital is 6% ? Justify your recommendation with appropriate analysis.

(present value of annuity

at 6% for 6 years = 4.917 and for 4 years = 3.465. present value of Rs.1.00 at 6% at the end of 6^{th} year 0.705 and at the end of 4^{th} year 0.792)

5. Kumar enterprises has decided to adopt JIT policy for materials. The following effects of JIT policy are identified-

(i) To implement JIT company has to modify its production and material receipt facilities at a capital cost of Rs.6,00,000. The new facilities will require a cash operating cost of Rs.48,000 p.a. The capital cost will be depreciated over 5 years.

(ii) Raw material stockholding will be reduced from Rs. 28,00,000 to Rs.8,00,000.

(iii) The company can earn 15% on long term investments.

(iv) The company can avoid rental expenditure on storage facilities amounting to Rs.30,000 p.a. Property taxes and insurance amounting to Rs.12,000 will be saved due to JIT programme.

(v) Presently there are 7 workers in the stores department at a salary of Rs.3,000 each per month. After implementing JIT scheme, only 2 workers will be required in this department. Of the balance 5 workers, 3 will be transferred to other departments, while 2 workers employment will be terminated.

(vi) Due to receipt of smaller lots of Raw materials, there will be some disruption of production. The costs of stock-out is estimated at Rs.66,000 per annum.

6. Explain the role of cost accounting in strategic planning.

7. What are the benefits of Kaizen costing?

SECTION - C

Answer any Two questions out of Five. Each question carries 12 marks. (2×12=24)

8. 'Business process Reengineering is a continuous process of rethinking, reassessment, redesign, evaluation of each element of business process and consequent improvement in work place'. Explain.

9. Describe the tools/techniques of cost management.

10. The Vedaant Techno company produces only two products: a major computer part and cell phones. The company uses a normal cost system and overhead costs are currently allocated using a plantwide overhead rate based on direct labour hour. Outside cost consultants have recommended, however the company use activity based costing to charge overhead to products.

The company expects to produce 4,000 computer parts and 2,000 cell phones in 2021. Each computer part requires two direct labour hours to produce and each cell phone requires one-half to produce. The direct material and direct labour costs included in the two products are as follows:

Item	Computer part	Cell phone
Direct material (per unit)	30	17
Direct labour cost per unit	16	4

Budgeted (estimated) total factory overhead data for 2021:

Activity	Budgeted overhead	Estimated volume
Production setups	80,000	20 setups
Material handling	70,000	5,000 lbs
Packaging and shipping	1,20,000	6,000 boxes
Total factory overhead	2,70,000	

Based on an analysis of the three overhead activities, it was estimated that the two product would require these activites as follows in 2021:

Activity	Computer part	Cell phone	Total
Production setups	5	15	20
Material handling(lbs)	1,000	4,000	4,000
Packaging and shipping boxes	4,000	2,000	6,000

(i) Calculate the cost of each product using plant-wide rate based on direct labour hour.

(ii) Calculate the activity cost rates for

(a) Set-ups

(b) Material handling

(c) Packaging and shipping

(iii) Cost of the two products using activity based costing systems.

11. Critically evaluate strategic cost management issues in different elements of cost.

12. Innovation Ltd has entered into a contract to supply a component to a company which manufactures electronic equipments. Expected demand for the component will be 70,000 units totally for all the periods. Expected sales and production costs will be

Period	1	2	3	4
Sales (units)	9,500	17,000	18,500	25,000
Variable cost per unit	Rs.30	Rs.30	Rs.32.50	Rs.35

Total fixed overheads are expected to be Rs. 14 lakhs for all the periods. The production manger has to decide about the production plan. The choices are-

Plan 1 : Produce at a constant rate of 17,500 units per period. Inventory holding costs will be Rs.6.50 per unit of average inventory period.

Plan 2 : Use a Just -in-time (JIT) system.

Maximum capacity per period normally 18,000 units

It can produce further upto 10,000 units per period in overtime.

Each unit produced in overtime would incur additional cost equal to 30% of the expected variable cost per unit of that period.

Assume zero opening inventory.

(i) Calculate the incremental production cost and the savings in inventory holding costs by JIT production system.

(ii) Advise the company on the choice of the plan.

SECTION - D

Skill based question (Compulsory) (1×12=12)

13. A and Co is contemplating whether to replace an existing machine or to spend on overhauling it . A and Co currently pays no taxes. The replacement machine costs Rs.90,000 now and requires maintenance of Rs. 10,000 at the end of every year for eight years. At the end of eight years it would have a salvage value of Rs.20,000 and would be sold. The existing machine requires increasing amounts of maintenance each year and its salvage value falls each year as follows:

Year	Maintenance	Salvage
Present	0	40,000
1	10,000	25,000
2	20,000	15,000
3	30,000	10,000
4	40,000	0

The opportunity cost of capital for A and Co is 15%

Required: When should the company replace the machine?

(Note: present value of an annuity of Rs.1 per period for 8 years at interest rate of 15% :4.4873: present value of Rs.1 to be received after 8 years at interest rate of 15%:0.3269)