



PG – 517

**II Semester M.Com. (F.A.) Examination, June/July 2018  
(Semester Scheme) (CBCS)**

**Paper – 2.5 : STRATEGIC COST AND MANAGEMENT ACCOUNTING**

Time : 3 Hours

Max. Marks : 70

**SECTION – A**

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

1. a) Define cost pool.
- b) What are differential costs ?
- c) What is Budgetary Control ?
- d) What is marginal costing ?
- e) Mention any two advantages of JIT.
- f) What is VED analysis ?
- g) What is target costing ?
- h) Which type of organizations adopt trans for pricing policy ?
- i) What is life cycle costing ?
- j) What are sunk costs ?

**SECTION – B**

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

2. Explain the differences between management accounting and cost accounting.
3. Explain briefly product life cycle.

P.T.O.



4. XYZ Ltd. sells ice cream in a variety of flavours. The following are the data available (relating to one week).

Revenue 5000 cones @ Rs. 5 each                      Rs. 25,000

Cost of ingredients

R. Materials                      Rs. 4,000

Salary of attendant              Rs. 6,000

Rent                                  Rs. 7,000                      Rs. 17,000

Profit before tax    Rs. 8,000

The manager estimates that if the selling price per cone is to be increased from Rs. 5 to Rs. 5.18 each, weekly volume would be cut to 4250 cones due to competition.

You are required to estimate the profit maximising price per cone.

5. Bring out the differences between cost control and cost reduction.
6. From the following particulars determine the Economic Order Quantity (EOQ) and the total annual inventory cost.

Annual demand                      2400 units

Unit price                              Rs. 2.40

Ordering cost per order              Rs. 4.00

Storage cost                              2%

Rate of interest                              10%

Lead time                                  ½ month

7. Explain the various steps involved in effective TQM.

#### SECTION – C

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

8. Explain the benefits of transfer pricing policy in MNCs. (Multi National Companies).



9. ABC Ltd. has furnished the following details :

Direct materials	Rs. 10.00 per unit.
Direct wages	Rs. 4.00 per unit.
Variable overheads	Rs. 1.00 per unit
Fixed factory overheads	Rs. 5,50,000
Fixed selling and distribution overheads	Rs. 3,00,000

Annual sales – 4,00,000 units.

Capital employed in fixed assets – Rs. 10,00,000.

Capital employed in current assets – 50% of sales.

Determine the selling price per unit to yield 20% return on capital.

10. The following particulars relate to ABC Ltd. which is engaged in the manufacture of electronic components.

	March	April
Sales (unit)	50,000	1,00,000
Production (units)	1,00,000	50,000
Selling price per unit Rs.	1,000	1,000
Variable production cost per unit Rs.	500	500
Fixed production overheads Rs.	10,00,000	10,00,000
Fixed production overheads cost per unit being the pre-determined overhead absorption rate Rs.	10	12
Selling and distribution and administration (cost) rate Rs.	5,00,000	5,00,000

Prepare comparative profit statements for each month using

- a) Absorption costing and
- b) Variable costing.

11. What is value chain analysis ? Explain the managerial benefits of the same.

12. Explain in detail the role of cost accounting in strategic planning.



PG – 547

**II Semester M.Com. (FA)/MFA Examination, July 2017  
(CBCS)**

**Paper – 2.5 : STRATEGIC COST AND MANAGEMENT ACCOUNTING**

Time : 3 Hours

Max. Marks : 70

**SECTION – A**

1. Answer **any seven** of the following sub-questions in about **3-4 lines each**. Each sub-questions carries **two** marks. **(7×2=14)**
- What is strategic cost management ?
  - What is imputed cost ?
  - What is meant by value chain ?
  - State the ways of achieving cost reduction under ABC system.
  - What is life cycle costing ?
  - Explain how product price is fixed under target costing.
  - Distinguish between cost control and cost reduction.
  - What is business process re-engineering ?
  - What are hidden costs under Project Life Cycle Costing ?
  - What is strategic analysis of cost ?

**SECTION – B**

Answer **any four** of the following in about **one page**. Each question carries **5** marks. **(4×5=20)**

- Difference between conventional method of absorbing overheads with ABC.
- How do you implement target costing in an organization ?
- Describe the methodology of life cycle costing.
- Compare value chain analysis from traditional management accounting system.

P.T.O.



6. B Ltd. has decided to adopt JIT policy for materials. The following effects of JIT policy are identified.
- To implement JIT, the company has to modify its production and material receipt facilities at a capital cost of Rs. 10,00,000. The new machine will require a cash operating cost Rs. 1,08,000 p.a. The capital cost will be depreciated over 5 years.
  - Raw material stockholding will be reduced from Rs. 40,00,000 to Rs. 10,00,000.
  - The company can earn 15% on its long-term investments.
  - The company can avoid rental expenditure on storage facilities amounting to Rs. 33,000 per annum.
  - Property taxes and insurance amounting to Rs. 22,000 will be saved due to JIT programme.
  - Presently there are 7 workers in the store department at a salary of Rs. 5,000 each per month. After implementing JIT scheme, only 5 workers will be required in this department, balance 2 workers' employment will be terminated.
  - Due to receipt of smaller lots of raw materials, there will be some disruption of production. The costs of stock outs are estimated at Rs. 77,000 per annum.

Determine the financial impact of the JIT policy. Is it advisable for the company to implement JIT system ?

7. In a purely competitive market, 10,000 pocket transistors can be manufactured and sold and a certain profit is generated. It is estimated that 2,000 pocket transistors need be manufactured and sold in monopoly market to earn the same profit ; profit under both the conditions is targeted at Rs. 2,00,000. The variable cost per transistor is Rs. 100 and the total fixed cost is Rs. 37,000. You are required to find out the unit selling price both under monopoly and competitive conditions.

### SECTION - C

Answer **any three** of the following. **Each** question carries 12 marks. **(3×12=36)**

- Explain the methodology involved in business process reengineering.
- Briefly explain the role of cost management in strategic planning and management control.



10. A and Co. is contemplating whether to replace an existing machine or to spend money 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

(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)

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

Required : When should the company replace the machine ?

11. Look Ahead Ltd. wants to fix proper selling prices for their products 'A' and 'B' which they are newly introducing in the market. Both these products will be manufactured in Department D, which is considered as a profit centre.

The estimated data are as under :

	A	B
Annual Production (Unit)	1,00,000	2,00,000
Direct materials per unit	Rs. 15.00	Rs. 14.00
Direct labour per unit	Rs. 9.00	Rs. 6.00

(Direct Labour hour rate = Rs. 3)

The proportion of overheads other than interest, chargeable to the two products are as under :

- a) Factory overheads (50% fixed) 100% of direct wages. Administration overheads (100% fixed) 10% of factory costs.
- b) Selling and distribution overheads (50% variable) Rs. 3 and Rs. 4 respectively per unit of products A and B.



c) The fixed capital investment in the Department is Rs. 50 lakhs. The working capital requirement is equivalent to 6 months stock of cost of sales of both the product. For this project a term loan amounting to Rs. 40 lakhs has been obtained from financial institutions on an interest rate of 14% per annum. 50% of the working capital needs are met by bank borrowing carrying interest at 18% per annum. The department is expected to give a return of 20% on capital employed.

You are required to : (a) Fix the selling price of products A and B such that the contribution per direct labour hour is the same for both the products.  
(b) Prepare a statement showing in details the overall profit that would be made by the department.

12. The budgeted overheads and cost driver volumes of XYZ are as follows :

Cost pool	Budgeted overheads (Rs.)	Cost Driver	Budgeted Value
Material procurement	5,80,000	No. of orders	1,100
Material handling	2,50,000	No. of movements	680
Set-up	4,15,000	No. of setups	520
Maintenance	9,70,000	Maintenance hours	8,400
Quality control	1,76,000	No. of inspection	900
Machinery	7,20,000	No. of machine hours	24,000

The company has produced a batch of 2,600 components of AX-15, its material cost was Rs. 1,30,000 and labor cost Rs. 2,45,000. The usage activities of the said batch are : material orders – 26, maintenance hours – 690, material movements – 18, inspection – 28, set ups – 25, machine hours – 1,800.

Calculate : Cost driver rates that are used for tracing appropriate amount of overheads to the said batch and ascertain the cost of batch of components using activity based costing.



PG – 534

II Semester M.Com. (Financial Accounting)/M.F.A. Examination, June 2016  
(CBCS)

Paper – 2.5 : STRATEGIC COST AND MANAGEMENT ACCOUNTING

Time : 3 Hours

Max. Marks : 70

SECTION – A

1. Answer **any seven** of the following sub-questions, in **3 or 4 lines each**. Each sub-question carries **two** marks. (7×2=14)
- Define Strategic cost.
  - What is the basic objective of strategic cost management ?
  - Define cost management.
  - What is strategic planning ?
  - Define value analysis.
  - What is BPR ?
  - What is a cost driver ?
  - Define a cost pool.
  - What is target costing ?
  - Define value chain analysis.

SECTION – B

Answer **any four** of the following in about **one page each**. Each question carries **5** marks. (4×5=20)

- Describe the areas of cost management.
- Distinguish between value analysis and value engineering.
- Determine the selling price per unit to earn a return of 12% on capital employed (net of tax @ 40%).

The cost of production and sales of 80000 units per annum are :

	₹
Material	4,80,000
Variable overhead	3,20,000
Labour	1,60,000
Fixed overhead	5,00,000

The fixed portion of capital employed is ₹ 12 lakh and the varying portion is 50% of sales turnover.

P.T.O.





5. Explain the uses and limitation of ABC system.
6. Division A is a profit centre, which produces four products P, Q, R and S. Each product is sold in the external market also. Data for the period are :

Particulars	Products			
	P	Q	R	S
Market price per unit (₹)	350	345	280	230
Variable production cost/unit (₹)	330	310	180	185
Labour Hrs. required per unit	3	4	2	3

Product S can be transferred to division B but maximum quantity that might be required for transfer is 2000 units of S.

The maximum sales in the external market are :

P	3000 units
Q	3500 units
R	2800 units
S	1800 units

Division B can purchase the same product at a slightly cheaper price of ₹ 225 per unit instead of receiving transfers of product S from division A.

What should be the transfer price for each unit for 2000 units of S, if the total labour hours available in Division A are :

- 24000 Hrs. ?
- 32000 Hrs. ?

7. Explain the objectives of JIT Philosophy. State its limitations also.

### SECTION – C

Answer **any three** questions. **Each** question carries **12** marks.

(3×12=36)

8. Describe the tools of cost management.
9. Critically examine the different approaches of product pricing policy.
10. The following are Product A's data for the next year budget :

A) Data for Activities :

Activity	Cost Driver	Cost Driver Volume/Year	Cost Pool ₹
Purchasing	Purchase orders	1500	75,000
Setting	Batches Produced	2800	1,12,000



Material			
Handling	Material Movements	8000	96,000
Inspection	Batches produced	2800	70,000
Machining			
Costs	Machine Hrs.	50000	1,50,000

B) Data of production requirements of Product Alpha.

Purchase orders	25
Output	15000 units
Production batch size	100 units
Material movements per batch	6
Machine Hrs. per unit	0.1

**Required :**

- Calculate the budgeted overhead costs using ABC system.
- Calculate the budgeted overhead costs using absorption costing (absorb overhead using machine hours)
- How can the company reduce the ABC for product Alpha ?

11. Maharishi Medical Instruments installed a JIT purchasing system in 2006 and selected Apollo Manufacturing Ltd., as its supplier. The annual demand for product XJ-200, a surgical scalpel is 20,000. If Maharishi implements JIT, the purchase price of scalpel is expected to increase from 100 to 100.5 because of frequent deliveries by Apollo Ltd. Apollo enjoys a sterling reputation for quality and reliability ordering costs will remain at ₹ 50 per. However, the annual number of orders placed will be 200 instead of the current 20. As a result of frequent ordering, Maharishi's order size will decrease proportionally. Maharishi's required rate of return on investment is 20%. Other carrying costs (insurance, material, handling and so on) will remain at ₹ 45 per unit. Currently, Maharishi has no stock-out costs. Lower inventory levels from implementing JIT will lead to ₹ 30 per unit stock-out costs on 100 units during the year.

**Required :**

- Calculate the estimated savings (loss) for Maharishi Medical Instruments from the adoption of JIT purchasing.
- Would you recommend for adoption of JIT ? Give the reasons for your answer.



12. Timex makes digital watches. It is preparing a product-life cycle budget for a new watch, MX-3. Development on the new watch is to start shortly. Estimates for MX-3 are as follows :

Life Cycle units manufactured and sold	4,00,000
Selling price per watch (₹)	400

**Life Cycle Costs :**

a) <u>R and D and design costs (₹)</u>	1,00,00,000
b) <u>Manufacturing costs :</u>	
i) Variable cost per watch (₹)	150
ii) Variable cost per batch (₹)	6,000
iii) Watches per batch (units)	500
iv) Fixed costs (₹)	1,80,00,000
c) <u>Marketing costs :</u>	
i) Variable cost per watch (₹)	32
ii) Fixed costs (₹)	1,00,00,000
d) <u>Distribution costs :</u>	
i) Variable cost per batch (₹)	2,800
ii) Watches per batch (units)	160
iii) Fixed cost (₹)	72,00,000
e) Customer-service cost per watch (₹)	15

**Note :** Ignore time value of money.

**Required :**

- Prepare the budgeted life cycle operating income statement for the new watch.
- What percentage of the budgeted total product life cycle costs will be incurred by the end of R and D and design stages ?
- Analysis reveals that 80% of the budgeted life cycle costs of the new watch will be locked-in at the R and D and design stage. What are the implications for managing MX-3's costs ?
- Timex's market Research Department estimates that the reduction of MX-3's price by ₹ 30 will increase life-cycle units by 10%. If the unit sales increase by 10%, Timex plans to increase manufacturing and distribution batch sizes by 10% as well. Assume that variable costs per watch, variable costs per batch and fixed costs will remain the same. Should Timex reduce MX-3's price by ₹ 30 ? Show your calculations.



## II Semester M.F.A. Examination, June 2015

## FINANCE AND ACCOUNTING

## Paper – 2.5 : Strategic Cost and Management Accounting

Time : 3 Hours

Max. Marks : 80

## SECTION – A

Answer **any ten** of the following sub-question. **Each** sub-question carries **2** marks. **(10x2=20)**

1. a) What is cost accounting ?
- b) Define the concept of re-engineering.
- c) What do you mean by transfer pricing ?
- d) What is JIT ?
- e) What do you mean by overheads ?
- f) Define the term value engineering.
- g) What is product design ?
- h) Write a short note on business process.
  - i) What is target costing ?
  - j) What is waste ?
- k) Define the concept of cost driver.
  - l) What is strategic planning ?

## SECTION – B

Answer **any three** questions. **Each** question carries **five** marks. **(3x5=15)**

2. Strategic management accounting is base for strategic business decision. Comment.
3. Write an analytical note on value chain analysis.

P.T.O.



4. The following are the details of the cost of manufacture of 4000 sewing machines.

Raw material :

Opening stock	70,000
Closing stock	9,800
Purchases	1,05,000
Factory wages	1,90,000
Factory expenses	35,000
Administrative expenses	10,000

If the cost of labour increased by 20% and that of material by 15%. What rate should be tendered for the supply of 2000 such machines so that profit earned is 10% on turnover.

5. A company is planning a new product market information suggest that the product should sell 10,000 units at Rs. 21 per unit. The company seeks to make a mark-up of 40% product cost. It is estimated that life time costs of the product will be as follows. Development costs – Rs. 50,000, Manufacturing cost Rs. 10 per unit and end of life cost Rs. 20,000.

You are require to calculate :

- 1) What is the target cost of the product ?
- 2) What is the original life cycle cost per unit of the product ?

6. Write a detail note on multinational pricing.

#### SECTION – C

Answer **any two** questions. **Each** question carries **15** marks. **(2×15=30)**

7. What are the difference between cost management and cost accounting ?
8. What are product cost categories ? Explain in detail.



9. X Ltd., manufactures four products A, B, C and D. Output and cost data is follows :

Products	Output (Unit)	No. of products runs in the period	Materials cost per unit	Direct Labour hours per unit	Machine hour per unit
A	20	2	10	1	1
B	20	2	50	3	3
C	200	5	20	1	1
D	200	5	80	3	3

Direct labour cost is 10 per hour over head cost are as follows :

Short run variable cost	10,560
Set-up cost	14,000
Scheduling cost	10,080
Material handling cost	7,840
<b>Total</b>	<b>42,480</b>

Calculate production cost under,

- 1) Activity base costing using machine hours rate as cost driver for recovering short run variable cost and number of production runs as cost driver for recovering other overheads and
- 2) Traditional volume based costing.

10. ABC Company is contemplating to introduce a new products having 3 years of life. The following costs are estimated to be incurred at different stages of its life cycle.

	Rs.
Research and development cost	3,00,000
Product design cost	2,00,000
Production cost :	
First year	1,00,000
Second year	1,50,000
Third year	2,00,000
Product disposal cost (At the end of third year)	10,000



Proposed revenue from the product :

I <sup>st</sup> year	1,00,000			
II <sup>nd</sup> year	4,00,000			
III <sup>rd</sup> year	8,00,000			
The ABC Company's target DCF rate of return is 10% present value factor for 1 rupee at 10%.				
1 <sup>st</sup> year	0.91			
2 <sup>nd</sup> year	0.83			
3 <sup>rd</sup> year	0.75			

You are required to determine :

- Total life cycle cost of the product
- Assess the viability of launching the product.

SECTION - D

11. Answer the following case properly and answer the question given at the end. **(1x15=15)**

Most of the modern organization having just in time approach technique in order to rescue from sluggish profit, poor quality and productive in efficiency. However, JIT often landed for its employees benefits like employees moral and self-esteem. In addition to this, JIT may also cause company to struggle and may produce a good deal of frustration. In some cases, JIT not ensure expected results.

Require :

- You are required to explain the problems which encounter by company while implementing a JIT System.



**II Semester M.F.A. Examination, June 2015  
(CBCS)**

**FINANCE AND ACCOUNTS**

**Paper – 2.5 : Strategic Cost and Management Accounting**

Time : 3 Hours

Max. Marks : 70

**SECTION – A**

1. Answer **any seven** of the following sub-questions in about **3-4 lines each**.

**Each** sub-question carries **two** marks. **(7×2=14)**

- a) What is Strategic Cost Management ?
- b) Define Value analysis.
- c) What is Maturity in Product life cycle ?
- d) What is penetration pricing policy ?
- e) Define Business Process Re-engineering ?
- f) What do you mean by target costing ?
- g) What is Strategic Analysis of Cost ?
- h) State any four objectives of JIT.
- i) What is pricing policy ?
- j) What is Target Rate of Return ?





## SECTION - B

Answer **any four** of the following in about **one** page. **Each** question carries **5** marks.

(4x5=20)

2. How can Business Process Re-engineering be applied to an organization ?
3. Briefly explain the methodology of Total Quality Management (TQM).
4. The Best Industries Ltd. has 2 divisions, A and B. Division A manufactures product X which it sells in outside market as well as to Division B which processed it to manufacture Z. The manager of Division B has expressed the opinion that the transfer price is too high.

The two divisional managers are about to enter into discussions to resolve the conflict, and the manager of Division A to supply him with some information prior to the discussions.

Division A has been selling 40000 units to outsiders and 10000 units to Division B, all at Rs. 20 per unit. It is not anticipated that these demand will change. The variable cost is Rs. 12 per unit and the fixed costs are Rs. 2 lakhs.

The manager of Division a anticipates that Division B will want a transfer price of Rs. 18. If he does not sell to Division B, Rs. 30,000 of fixed costs and Rs. 1,75,000 of assets can be avoided. The manager of Division A would have no control over the proceeds from the sale of the assets and is judged primarily on his rate of return.

- a) Should the manager of Division A transfer its products at Rs. 18 to Division B.
- b) What is the lowest price that the Division A should accept ? Support your decision.



5. Explain the different methods used in the fixation of transfer price in the organization.

6. Barclay Ltd. has decided to adopt JIT policy for materials. The following effects of JIT policy are identified :

a) To implement JIT, the company has to modify its production and material receipt facilities at a capital cost of Rs. 10 lakhs. The new machine will require a cash operating cost Rs. 1,08,000 p.a. The capital cost will be depreciated over 5 years.

b) Raw material stock holding will be reduced from Rs. 40 lakhs to Rs. 10 lakhs.

c) The company can earn 15% on its long-term investments.

d) The company can avoid rental expenditure on storage facilities amounting to Rs. 33,000 p.a. Property taxes and insurance amounting to Rs. 22,000 will be saved due to JIT programme.

e) Presently there are 7 workers in the store department at a salary of Rs. 5,000 each per month. After implementing JIT scheme, only 5 workers will be required in this department. Balance 2 workers' employment will be terminated.

f) Due to receipt of smaller lots of Raw materials, there will be some disruption of production. The cost of stock-outs are estimated at Rs. 77,000 per annum.

Determine the financial impact of the JIT policy. Is it advisable for the company to implement JIT system ?

7. Briefly explain the steps involved in the implementation of Activity Based Costing.



## SECTION - C

Answer any three of the following. Each question carries 12 marks. (3×12=36)

8. Relevant data relating to a company are :

Particulars	P	Q	R	Total
Production and Sales (units)	60000	40000	16000	
Raw/material usage in units	10	10	22	
Raw material costs (Rs.)	50	40	22	49,52,000
Direct labour hours	2.5	4	2	3,42,000
Machine hours	2.5	2	4	2,94,000
Direct labour costs (Rs.)	16	24	12	
No. of production runs	6	14	40	60
No. of deliveries	18	6	40	64
No. of receipts	60	140	880	1080
No. of production orders	30	20	50	100

## Overheads : (in Rs.)

Setup	60,000
Machines	15,20,000
Receiving	8,70,000
Packaging	5,00,000
Engineering	7,46,000

The company operates a JIT inventory policy and receives each component once per production run.



**Required :**

- i) Compute the product cost based on direct labour hour recovery rate of return.
  - ii) Compute the product cost using Activity Based Costing.
9. Briefly explain the role of cost accounting in strategic planning and management control.
10. A company has prepared the following budget for the year :

Particulars	60% Level of Activity (Rs.)	80% Level of Activity (Rs.)
Raw materials	30,00,000	40,00,000
Direct wages	18,00,000	24,00,000
Factory overheads	32,00,000	36,00,000
<b>Total</b>	<b>80,00,000</b>	<b>1,00,00,000</b>

The policy of the company is to charge 25% on variable costs to cover profit.

Raw material is in short supply and the company wants to utilize its available supply of raw materials in an optimum manner. Planned operating capacity is 80%. The company has to execute a job as per details given below :

Raw materials Rs. 40,000

Direct wages : Rs. 30,000

You are required to quote the price of the job in accordance with the policy of the company.

11. "Target costing forces an organization to 'Manage Upstream' during product planning and design strategy" explain the target costing methodology.



12. Polaris, a company engaged in decision support system (DSS), is examining the profitability and pricing policies of three of its recent engineering software packages viz., EE-46: package for electrical engineers, ME-83; package for mechanical engineers, and IE-17 : package for industrial engineers. Summary details on each package over their two-year 'infancy-to-grave' product lives are as follows .

Package	Selling price	Number of units of sales	
		Year -1	Year -2
EE-46	2500	2000	8000
ME-83	3000	2000	3000
IE-17	2000	5000	3000

Assume that no inventory remains on hand at the end of year 2. In the past two years, profitability has been mediocre. Polaris is particularly concerned with the increase in research and development costs. An analysis pointed out that for one of its most recent packages (viz., IE-17), major efforts has been made to reduce R and D costs. Praveen, the engineering software manager, collected the following life cycle revenue and cost information for EE-46, ME-83 and IE-17 packages.



II Semester M.F.A. Examination, June 2015  
(CBCS)

Particulars	EE-46 (Rs. in 000's)		ME-83(Rs. in 000's)		IE-17 (Rs. in '000's)	
	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2
Sales revenue	5,000	20,000	6,000	9,000	10,000	6,000
Research and development cost	7,000	0	4,500	0	2,400	0
Design of product	1,850	150	1,100	100	800	160
Manufacturing	750	2,250	1,050	1,050	1,430	650
Distribution	150	600	240	360	600	360
Customer care	500	3,250	450	1,050	2,200	3,880

**Required :**

- a) Present a product life cycle income statement for each software package.  
Which package is the most profitable and which is the least profitable ?  
Ignore the time value of money.
- b) How do the three software packages differ in their cost structure ?

