

DATE: 11.09.2016

BATCH : LI -9, LI-11

MAXIMUM MARKS: 60

TIMING: 2 Hours

ANSWER SHEET**COST ACCOUNTING****Question – 1 (4 Marks)**

A newspaper presently sells 1,00,000 copies of its morning daily. It wants to publish evening daily. Particulars are:

	Actual for Morning	Estimates for Evening
Sales price	Rs. 2 per paper	Rs. 0.50 per paper
Variable cost	Rs. 1.20 per paper	Rs. 0.22 per paper
Fixed cost	Rs. 2.4 lakh per week	Rs. 10,000 per week

Sale of morning daily will fall @ 1 copy for every 10 copies sold of evening daily. Calculate Break-even sales for evening daily per week.

'Solution

Fixed cost for evening news paper = ₹ 10,000

Variable cost: ₹

Cost to be incurred 0.22

Benefit lost due to 10

Contribution from 1 morning news paper, i.e. ₹ 0.80

∴ Contribution lost in 1 evening newspaper = $\frac{\text{Rs. } 0.80}{10} = 0.08$

Relevant variable cost 0.30

Break-even point = $\frac{\text{Fixed cost}}{\text{Contribution}} = \frac{10,000}{0.50 - 0.30} = \frac{10,000}{0.20} = 50,000$ copies

Hence, required break-even point = 50,000 copies.

Question 2: (8 Marks)

EPS is a Public School having 25 buses each plying in different directions for the transport of its school students. In view of large number of students availing of the bus service, the buses work two shifts daily both in the morning and in the afternoon. The buses are garaged in the school. The workload of the students has been so arranged that in the morning, the first trip picks up senior students and the second trip plying an hour later picks up junior students. Similarly, in the afternoon, the first trip takes the junior students and an hour later the second trip takes the senior students home.

The distance travelled by each bus, one way is 16 km. The school works 24 days in a month and remains closed for vacation in May and June. The bus fee, however, is payable by the students for all the 12 months in a year.

The details of expenses for the year 2013-2014 are as under:

Driver's salary – payable for all the 12 in months.	Rs. 5,000 per month per driver.
Cleaner's salary payable for all the 12 months (one cleaner has been employed for every five buses).	Rs. 3,000 per month per cleaner
Licence Fees, Taxes etc.	Rs. 2,300 per bus per annum
Insurance Premium	Rs. 15,600 per bus per annum
Repairs and Maintenance	Rs. 16,400 per bus per annum
Purchase price of the bus	Rs. 16,50,000 each
Life of the bus	16 years
Scrap value	Rs. 1,50,000
Diesel Cost	Rs. 18.50 per litre

Each bus gives an average of 10 km. per litre of diesel. The seating capacity of each bus is 60 students. The seating capacity is fully occupied during the whole year.

The school follows differential bus fees based on distance traveled as under:

Students picked up and dropped within the range of distance from the school	Bus fee	Percentage of students availing this facility
4 km.	25% of Full	15%
8 km.	50% of Full	30%
16 km.	Full	55%

Ignore interest. Since the bus fees has to be based on average cost, you are required to

- (i) Prepare a statement showing the expenses of operating a single bus and the fleet of 25 buses for a year.
- (ii) Work out average cost per student per month in respect of:
 - (a) Students coming from a distance of upto 4 km. from the school.
 - (b) Students coming from a distance of upto 8 km. from the school; and
 - (c) Students coming from a distance of upto 16 km. from the school.

Solution:

(a)(i)

EPS Public School

Statement showing the expenses of operating a single bus and the fleet of 25 buses for a year

Particulars	Per bus per annum (Rs.)	Fleet of 25 buses per annum (Rs.)
Running costs : (A)		
Diesel (Refer to working note 1)	56,832	14,20,800
Repairs & maintenance costs: (B)	16,400	4,10,000
Fixed charges:		
Driver's salary (Rs. 5,000 × 12 months)	60,000	15,00,000
Cleaners salary (Rs.3,000 × ¹ / ₅ th × 12 months)	7,200	1,80,000
Licence fee, taxes etc.	2,300	57,500
Insurance	15,600	3,90,000

Depreciation	93,750	23,43,750
Total fixed charges: (C)	1,78,850	44,71,250
Total expenses: (A+B+C)	2,52,082	63,02,050

(2 Marks)

(ii) Average cost per student per month in respect of students coming from a distance of:

(a) 4 km. from the school {Rs. 2,52,082 / (354 students × 12 months)} (Refer to Working Note 2)	Rs. 59.34
(b) 8 km. from the school (Rs. 59.34 × 2)	Rs. 118.68
(c) 16 km. from the school (Rs. 59.34 × 4)	Rs. 237.36

(2 Marks)

Working Notes:

1. Calculation of diesel cost per bus:

No. of trips made by a bus each day	4
Distance travelled in one trip both ways (16 km. × 2 trips)	32 km.
Distance traveled per day by a bus (32 km. × 4 shifts)	128 km.
Distance traveled during a month (128 km. × 24 days)	3,072 km.
Distance traveled per year (3,072 km. × 10 months)	30,720 km.
No. of litres of diesel required per bus per year (30,720 km. ÷ 10 km.)	3,072 litres
Cost of diesel per bus per year (3,072 litres × Rs. 18.50)	Rs. 56,832

(2 Marks)

2. Calculation of number of students per bus:

Bus capacity of 2 trips (60 students × 2 trips)	120 students
1/4 th fare students (15% × 120 students)	18 students
1/2 fare 30% students (equivalent to 1/4 th fare students)	72 students
Full fare 55% students (equivalent to 1/4 th fare students)	264 students
Total 1/4 th fare students	354 students

(2 Marks)

Question-3 (4 Marks)

Elaborate the practical application of Marginal Costing.

Solution: (1 marks for each point)

Practical applications of Marginal costing:

- (i) Pricing Policy: Since marginal cost per unit is constant from period to period, firm decisions on pricing policy can be taken particularly in short term.
- (ii) Decision Making: Marginal costing helps the management in taking a number of business decisions like make or buy, discontinuance of a particular product, replacement of machines, etc.
- (iii) Ascertaining Realistic Profit: Under the marginal costing technique, the stock of finished goods and work-in-progress are carried on marginal cost basis and the fixed expenses are written off to profit and loss account as period cost. This shows the true profit of the

period.

- (iv) Determination of production level: Marginal costing helps in the preparation of break-even analysis which shows the effect of increasing or decreasing production activity on the profitability of the company.

Question 4: (4 Marks)

What is inter-process profit? State its advantages and disadvantages.

Solution: (2 Marks)

In some process industries the output of one process is transferred to the next process not at cost but at market value or cost plus a percentage of profit. *The difference between cost and the transfer price is known as inter-process profits.*

The advantages and disadvantages of using inter-process profit, in the case of process type industries are as follows:

Advantages: (1 Marks)

1. Comparison between the cost of output and its market price at the stage of completion is facilitated.
2. Each process is made to stand by itself as to the profitability.

Disadvantages: (1 Marks)

- (v) The use of inter-process profits involves complication.
 (vi) The system shows profits which are not realised because of stock not sold out

Question 5: (8 Marks)

From the following Information for the month ending October, 2013, prepare Process Cost accounts for Process III. Use First-in-fist-out (FIFO) method to value equivalent production.

Direct materials added in Process III (Opening WIP)	2,000 units at Rs. 25,750
Transfer from Process II	53,000 units at Rs. 4,11,500
Transferred to Process IV	48,000 units
Closing stock of Process III	5,000 units
Units scrapped	2,000 units
Direct material added in Process III	Rs. 1,97,600
Direct wages	Rs. 97,600
Production Overheads	Rs. 48,800

Degree of completion:

	Opening Stock	Closing Stock	Scrap
Materials	80%	70%	100%
Labour	60%	50%	70%
Overheads	60%	50%	70%

The normal loss in the process was 5% of production and scrap was sold at Rs. 3 per unit.

Solution:

(a) Process III

Process Cost Sheet (FIFO Method)
Opening Stock: 2,000 units; Introduced: 53,000 units
Statement of Equivalent Production

Input		Output		Equivalent production					
Item	Units	Item	Units	Mat- A	(%)	Mat- B	(%)	Labour & OHs.	(%)
Opening stock	2,000	Work on opening WIP	2,000	-	-	400	20	800	40
Process II transfer	53,000	Introduced & completed during the period (48,000 – 2000)	46,000	46,000	100	46,000	100	46,000	100
			48,000						
		Normal Loss (2,000+53,000 – 5,000) x 5%	2,500	-	-	-	-	-	-
		Closing WIP	5,000	5,000	100	3,500	70	2,500	50
			55,500	51,000		49,900		49,300	
		Abnormal Gain	500	500	100	500	100	500	100
	55,000		55,000	50,500		49,400		48,800	

(2 Marks)

Statement of Cost for each Element

Element of cost	Cost (Rs.)	Equivalent Production	Cost per unit (Rs.)
Material A:			
Transfer from Process-II	4,11,500		
Less: Scrap value of Normal Loss (2,500 × Rs. 3)	7,500		
	4,04,000	50,500	8
Material B	1,97,600	49,400	4
Wages	97,600	48,800	2
Overheads	48,800	48,800	1
	7,48,000		15

(2 Marks)

Process Cost Sheet

	(Rs.)
Opening WIP (for completion):	
Material- B (400 units × Rs. 4)	1,600
Wages (800 units × Rs. 2)	1,600
Overheads (800 units × Rs. 1)	800
	4,000
Introduced and completely processed during the period (46,000 units × Rs. 15)	6,90,000

Closing WIP:	
Material- A (5,000 units × Rs. 8)	40,000
Material - B (3500 units × Rs. 4)	14,000
Wages (2,500 units × Rs. 2)	5,000
Overheads (2,500 units × Rs. 1)	2,500
	61,500
Abnormal Gain (500 units × Rs. 15)	7,500

(2 Marks)

Process III A/c

Particulars	Units	Amount	Particulars	Units	Amount
To Balance b/d	2,000	25,750	By Normal Loss	2,500	7,500
To Process II A/c	53,000	4,11,500	By Process IV A/c		
To Direct Material		1,97,600	(Rs. 6,90,000 + Rs.4000		
To Direct Wages		97,600	+Rs. 25,750)	48,000	7,19,750
To Production OH		48,800	By Balance c/d	5,000	61,500
To Abnormal Gain	500	7,500			
	55,500	7,88,750		55,500	7,88,750

(2 Marks)

TAXATION

Question: 1 (3 Marks)

Discuss the provisions relating to determination of residential status of Hindu undivided family, partnership firm and company.

Answer

Residential status of a HUF:

A HUF would be resident in India if the control and management of its affairs is situated wholly or partly in India during the relevant previous year. If the control and management of its affairs is situated wholly outside India during the relevant previous year, it would be considered as a non-resident.

Residential status of a firm:

A Firm would be resident in India if the control and management of its affairs is situated wholly or partly in India during the relevant previous year. Where the control and management of the affairs is situated wholly outside India during the relevant previous year, the firm would be considered as a non-resident.

Residential status of a company:

A company is said to be resident in India in any previous year if :

- (a) it is an Indian company, or
- (b) its place of effective management, in that year, is in India.

Question: 2 (3 Marks)

Explain the treatment of unrealized rent and its recovery in subsequent years under the provisions of Income-tax Act, 1961.

Answer

Unrealised rent refers to the rent payable but not paid by the tenant and which the owner is also not able to realize from the tenant. As per Explanation below section 23(1), the amount of rent which the owner cannot realize shall not be included in the actual rent while determining the annual value of the property, subject to fulfillment of following conditions prescribed under Rule 4 of the Income-tax Rules, 1962:

- (a) the tenancy must be bonafide;
- (b) the defaulting tenant has vacated the property or steps have been taken to compel him to vacate the property;
- (c) the defaulting tenant does not occupy any other property of the assessee; and
- (d) the assessee has taken all reasonable steps to institute legal proceedings for the recovery of unpaid rent or satisfies the Assessing Officer that the legal proceedings would be useless.

If the conditions mentioned above are satisfied, then, the actual rent should be reduced by the unrealized rent and thereafter, compared with the Expected rent (being the higher of fair rent and municipal value, but restricted to standard rent) for computing the gross annual value.

As per section 25AA, the unrealized rent, when realized in any subsequent year, shall be deemed to be the income chargeable under the head 'Income from house property' in the previous year in which such rent is realized, whether or not the assessee is the owner of the property in that previous year.

Question: 3 (4 Marks)

X is a businessman. His parents and grandparents were born in Canada. He was born in USA but later on he migrated to Karachi and took Indian citizenship on June 1, 1946. After division of India, he stayed in Pakistan and took Pakistani citizenship in December 1948. From the information given below, find out the residential status of X for the assessment year 2016-17.

Previous Year	Presence in India	Previous year	Presence in India
2016-17	20 days	2010-11	46 days
2015-16	70 days	2009-10	182 days
2014-15	60 days	2008-09	55 days
2013-14	40 days	2007-08	59 days
2012-13	5 days	2006-07	25 days
2011-12	260 days	2005-06	24 days

Solution : X is a foreign citizen. X, his parents and grandparents were not born in undivided India. He is not a person of Indian origin, even if he was Indian citizen between June 1946 and December 1948. He is in India for 70 days during the previous year 2015-16 and 365 days during the preceding 4 years. He is resident in India. However, he is unable to satisfy the 2 additional conditions given by section 6(6) (a), as is evident from the information given below -

Previous Year	Presence in India	Residential Status
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2014-15	60 days	Non-resident
2013-14	40 days	Non-resident
2012-13	5 days	Non-resident
2011-12	260 days	Resident
2010-11	46 days	Non-resident

Previous Year	Presence in India	Residential Status
2009-10	182 days	Resident
2008-09	55 days	Non-resident
2007-08	59 days	Non-resident
2006-07	25 days	Non-resident
2005-06	24 days	Non-resident

Out of Preceding 10 year, X is resident in India for 2 year. However, out of preceding 7 years, X is in India for 648 days. Consequently, X is resident but not ordinarily resident in India for the assessment year 2016-17.

Question: 4 (6 Marks)

X (age : 32 years) owns four houses which are used by him for his residential purposes -

	House I Rs.	House II Rs.	House III Rs.	House IV Rs.
Municipal valuation (MV)	60,000	2,00,000	45,000	1,10,000
Fair rent (FR)	70,000	2,60,000	46,000	1,17,000
Standard rent (SR)	80,000	2,58,000	50,000	1,16,000
Municipal tax paid by X	11,000	40,000	6,000	39,000
Interest on capital borrowed for purchase/construction (inclu-sive of one-fifth of pre-construction period's interest, wherever applicable) (capital was borrowed on April 1,1999 in the case of Houses III and IV. In the case of House I and II capital was borrowed on April 10, 1998)	29,000	9,00,000	22,000	3,70,000

Find out the net income and tax liability of X for the assessment year 2016-17 on the assumption that income of X from other sources is Rs. 27,50,000 and he deposits Rs. 1,80,000 in notified pension fund of National Housing Bank. Construction of these houses was completed within one year of taking loan.

Solution :

X has the following four options (income computation is given in Note 1 infra) : (In Rs.)

	Option 1	Option 2	Option 3	Option 4
House I	(-) 29,000 (SO)	12,300 (DLO)	12,300 (DLO)	12,300 (DLO)
House II	(-) 7,47,400 (DLO)	(-) 30,000 (SO)	(-) 7,47,400 (DLO)	(-) 7,47,400 (DLO)
House III	6,000 (DLO)	6,000 (DLO)	(-) 22,000 (SO)	6,000 (DLO)
House IV	(-) 3,16,100 (DLO)	(-) 3,16,100 (DLO)	(-) 3,16,100 (DLO)	(-) 2,00,000 (SO)
Income from House Property	(-) 10,86,500	(-) 3,27,800 27,50,000	(-) 10,73,200 27,50,000	(-) 9,29,100 27,50,000
Income from other sources	27,50,000		27,50,000	
Gross total income	16,63,500	24,22,200	16,76,800	18,20,900
Less: Deduction under section 80C	1,50,000	1,50,000	1,50,000	1,50,000
Net income	15,13,500	22,72,200	15,26,800	16,70,900

X should, therefore, opt for Option 1	RS.
Tax *	2,79,050
Add: Education cess	5,581
Add: Secondary and higher education cess	2,791
Tax liability (rounded off)	2,87,420

Notes -

1. Computation of income under different options -

	House I Rs.	House II Rs.	House III Rs.	House IV Rs.
If it is SO				
Net annual value under section 23(2)(a)	Nil	Nil	Nil	Nil
Less: Interest on capital borrowed for acquiring house property But subject to maximum of Rs. 30,000 (Rs. 2,00,000 in the case of House III and House IV)	29,000	30,000	22,000	2,00,000
Income if the house is treated as SO	(-) 29,000	(-) 30,000	(-) 22,000	(-) 2,00,000
If these houses are DLO				

Step I - Reasonable expected rent of the property [MV or FR, whichever is higher, but subject to maximum of SR]	70,000	2,58,000	46,000	1,16,000
Step II - Rent received/ receivable after deducting unrealized rent but before adjusting loss due to vacancy	Nil	Nil	Nil	Nil
Step III - Amount computed in Step I or Step II, whichever is higher	70,000	2,58,000	46,000	1,16,000
Step IV - Loss due to vacancy	Nil	Nil	Nil	Nil
Step V - Gross annual value is Step III minus Step IV	70,000	2,58,000	46,000	1,16,000
Less : Municipal taxes	11,000	40,000	6,000	39,000
Net annual value	59,000	2,18,000	40,000	77,000

	House I Rs.	House II Rs.	House III Rs.	House IV Rs.
Less: Deductions under section 24				
Standard deduction (30% of net annual value)	17,700	65,400	12,000	23,100
Interest on capital borrowed	29,000	9,00,000	22,000	3,70,000
Income if these houses are DLO	12,300	(-) 7,47,400	6,000	(-) 3,16,100

STRATEGIC MANAGEMENT

Question: 1

Write a short note on the strategic responses to business environment.

(5 Marks)

Answer 1:

A business organization and its many environments have innumerable interrelationship that at times it becomes difficult to determine exactly where the organization ends and where its environment begins. It is also difficult to determine exactly what the business organisation should do in response to a particular situation in the environment. Strategically, the business organisations should make efforts to exploit the opportunities and avoid the threats.

In this context following are the possible strategic responses of an organisation to its business environment:

- (i) **Least resistance:** Some organisations just manage to survive by way of coping with their changing external environments. They are simple goal-maintaining units. They are very passive in their behaviour and are solely guided by the signals of the external environment. They are not ambitious but are content with taking simple paths of least resistance in their goal-seeking and resource transforming behaviour.
- (ii) **Proceed with caution:** At the next level, are the organisations that take an intelligent interest to adapt with the changing external environment. They seek to monitor the changes in that environment, analyse their impact on their own goals and activities and

translate their assessment in terms of specific strategies for survival, stability and strength. This is a sophisticated strategy than to wait for changes to occur and then take corrective-adaptive action.

- (iii) **Dynamic response:** At a still higher sophisticated level, are those organisations that regard the external environmental forces as partially manageable and controllable by their actions. Their feedback systems are highly dynamic and powerful. They not merely recognise and ward off threats; they convert threats into opportunities. They are highly conscious and confident of their own strengths and the weaknesses of their external environmental 'adversaries'. They generate a contingent set of alternative courses of action to be picked up in tune with the changing environment.

State with reasons which of the following statements is correct/incorrect:

Question: 2

"Profit may not be a universal objective but business efficiency is definitely an objective common to all business".

(2 Marks)

Answer 2:

Correct: It is generally asserted that business enterprises are primarily motivated by the objective of profit. Organizations pursue multiple objectives rather than a single objective in which business efficiency is a very useful operational objective. Many organizations, particularly charitable and non-government do not aim for making profits. But in general, all organizations aim for optimum utilization of resources and economy in operational costs.

Distinguish between the following:

Question: 3

Concentric Diversification and Conglomerate Diversification.

(4 Marks)

Answer 3:

Concentric diversification occurs when a firm adds related products or markets. On the other hand conglomerate diversification occurs when a firm diversifies into areas that are unrelated to its current line of business. In concentric diversification, the new business is linked to the existing businesses through process, technology or marketing. In conglomerate diversification, no such linkages exist; the new business/product is disjointed from the existing businesses/products. The most common reasons for pursuing a concentric diversification are that opportunities in a firm's existing line of business are available. However, common reasons for pursuing a conglomerate growth strategy is that opportunities in a firm's current line of business are limited or opportunities outside are highly lucrative.

Question: 4

Divestment strategy and Liquidation strategy.

(4 Marks)

Answer 4:

Divestment Strategy: Divestment strategy involves the sale or liquidation of a portion of business, or a major division, profit centre or SBU. Divestment is usually a part of rehabilitation or restructuring plan and is adopted when a turnaround has been attempted but has proved to be unsuccessful. The option of a turnaround may even be ignored if it is obvious that divestment is the only answer.

Liquidation Strategy: Liquidation as a form of retrenchment strategy is considered as the most extreme and unattractive. It involves closing down a firm and selling its assets. It is

considered as the last resort because it leads to serious consequences such as loss of employment for workers and other employees, termination of opportunities a firm could pursue, and the stigma of failure.

State with reasons which of the following statements is correct/incorrect:

Question: 5

Not-for-profit organizations are not required to have a strategy.

(2 Marks)

Answer 5:

Incorrect: Similar to commercial organizations, 'not-for-profit' organizations must also have a strategy. It is required to give it direction, focus and efficient utilization of resources. In many 'not-for-profit' organizations surpluses are important for their survival and growth.

Briefly answer the following question:

Question: 6

Distinguish between DMAIC and DMADV Methodology of Six Sigma.

(3 Marks)

Answer 6:

For implementing six sigma, there are two separate key methodologies for existing and new processes. They are known as DMAIC and DMADV. DMAIC is an acronym for five different steps used in six sigma - Define, Measure, Analyze Improve, and Control. DMAIC methodology is directed towards improvement of existing product, process or service.

- Define: To begin with six sigma experts define the process improvement goals that are consistent with the strategy of the organization and customer demands. They discuss different issues with the senior managers so as to define what needs to done.
- Measure: The existing processes are measured to facilitate future comparison. Six sigma experts collect process data by mapping and measuring relevant processes.
- Analyze: Verify cause-and-effect relationship between the factors in the processes. Experts need to identify the relationship between the factors. They have to make a comprehensive analysis to identify hidden or not so obvious factor.
- Improve: On the basis of the analysis experts make a detailed plan to improve.
- Control: Initial trial or pilots are run to establish process capability and transition to production. Afterwards continuously measure the process to ensure that variances are identified and corrected before they result in defects.

DMADV is an acronym for Define, Measure, Analyze, Design, and Verify. DMADV is a strategy for designing new products, processes and services.

- Define: As in case of DMAIC six sigma experts have to formally define goals of the design activity that are consistent with strategy of the organization and the demands of the customer.
- Measure: Next identify the factors that are critical to quality (CTQs). Measure factors such as product capabilities and production process capability. Also assess the risks involved.
- Analyze: Develop and design alternatives. Create high-level design and evaluate to select the best design.
- Design: Develop details of design and optimise it. Verify designs may require using techniques such as simulations.
- Verify: Verify designs through simulations or pilot runs. Verified and implemented processes are handed over to the process owners.

However, in spite of different orientation in two methodologies, conceptually there is overlapping between the DMAIC and DMADV as both are essentially having similar objectives.