

# **SUGGESTED ANSWERS**

## **EXECUTIVE PROGRAMME**

### **COST AND MANAGEMENT ACCOUNTING (EP-CMA/2013)**



**THE INSTITUTE OF  
Company Secretaries of India**

**IN PURSUIT OF PROFESSIONAL EXCELLENCE**  
Statutory body under an Act of Parliament

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# THE INSTITUTE OF COMPANY SECRETARIES OF INDIA

EXECUTIVE PROGRAMME

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EXECUTIVE PROGRAMME  
**COST AND MANAGEMENT ACCOUNTING**  
**TEST PAPER 1/2013**

Time allowed : 3 hours

Max. Marks : 100

[Answer Question No.1 which is **COMPULSORY**  
and **ANY FIVE** of the rest from this part.]

**Question No. 1**

- (a) Define costing and discuss its objectives. (5 marks)
- (b) G Ltd. produces a product which has a monthly demand of 4,000 units. The product requires a component X which is purchased at Rs. 20. For every finished product, one unit of component is required. The ordering cost is Rs. 120 per order and the holding cost is 10 per cent per annum. You are required to calculate:
- (i) Economic order quantity.
- (ii) If the minimum lot size to be supplied is 4,000 units, what is the extra cost the company has to incur ?
- (iii) What is the minimum carrying cost, the company has to incur ?

(5 marks)

- (c) Calculate the estimated cost of production of by-products X and Y at the point of separation from the main product.

	By-Product X	By-Product Y
Selling price per unit	Rs.12	Rs. 24
Cost per unit after separation from the main product	Rs. 3	Rs. 5
Units produced	500	200

Selling expenses amount to 25 per cent of the total works cost, that is, including both pre-separation and post-separation works cost.

Selling prices are arrived at by adding 20 per cent of the total of all costs, that is, the sum of works costs and selling expenses. (5 marks)

- (d) What do you mean by master budget? How is it prepared ? (5 marks)
- (e) What is 'Fund Flow Statement'? How is it prepared ? (5 marks)

**Answer to Question No. 1(a)**

Costing is defined as the technique and process of ascertaining costs. The technique refers to principles, which are applied for ascertaining cost of products, jobs, processes and services. Costing involves the classifying, recording, and appropriate allocation of

expenditure for the determination of costs of products or services; the relation of these costs to sales values and the ascertainment of profitability.

In practice, the terms costing, cost accounting and cost accountancy are most often used interchangeably although they are defined differently. The main objectives of costing may be summarised as follows:

- (i) To analyse and classify all expenditures with reference to the cost of products and operations.
- (ii) To arrive at the cost of production of every unit, job, operation, process, department or service and to develop cost standard.
- (iii) To indicate to the management any inefficiencies and the extent of various forms of waste, whether of materials, time, expenses or in the use of machinery, equipment and tools. Analysis of the causes of unsatisfactory results may indicate remedial measures.
- (iv) To provide data for periodical profit and loss accounts and balance sheets and also, to explain in detail the exact reasons for profit or loss revealed in total in the profit and loss account.
- (v) To reveal sources of economies in production having regard to methods, types of equipment, design, output and layout.
- (vi) To provide actual figures of cost for comparison with estimates and to serve as guide for future estimates or quotations and to assist the management in their price fixing policy.
- (vii) To analyse the variance between budgeted and actuals so that corrective action may be taken.
- (viii) To present comparative cost data for different periods and various volumes of output.
- (ix) To record the relative production results of each unit of plant and machinery in use as a basis for examining its efficiency.
- (x) To provide information to enable management to make short-term decisions of various types.

**Answer to Question No. 1(b)**

$$(i) \text{ Economic Ordering Quantity} = \sqrt{\frac{2U \times P}{S}}$$

where,

U = Annual consumption (units) during the year

P = Cost of placing an order

S = Annual cost of storage of one unit.

Annual consumption = 4,000 units x 12 = 48,000 units

Ordering cost per order = Rs.120

Carrying cost per unit = 10% of Rs. 20 = Rs. 2

$$\begin{aligned} \text{EOQ} &= \sqrt{\frac{2 \times 48,000 \times 120}{2}} \\ &= 2,400 \text{ units} \end{aligned}$$

(ii) Calculation of extra costs when the order size is 4,000 units:

<i>Total cost when the order size is 4,000 units</i>	<i>Rs.</i>
Ordering cost (48,000/4,000) = 12 orders x Rs. 120	1,440
Carrying cost (1/2 x 4,000) x Rs. 2 per unit	4,000
	<u>5,440</u>
 <i>Total cost when the order size is 2,400 units</i>	
Ordering cost (48,000/2,400) = 20 orders x Rs. 120	2,400
Carrying cost (1/2 x 2,400) x Rs. 2 per unit	2,400
	<u>4,800</u>

Extra cost = Rs. 5,440 – Rs. 4,800 = Rs. 640

(iii) Calculation of minimum carrying cost (minimum lot size is to be purchased)

Monthly demand	=	4,000 units
Minimum carrying cost	=	(1/2 x 4,000 units x Rs. 2)
	=	Rs. 4,000

### Answer to Question No. 1(c)

#### Apportionment of Joint Costs of By-products X and Y

<i>Particulars</i>	<i>By-products</i>	
	<i>X</i>	<i>Y</i>
	<i>(Rs.)</i>	<i>(Rs.)</i>
Sales value	6,000	4,800
Less : Profit (20% of total costs or 1/6 of selling price)	1,000	800
Total cost of sales	<u>5,000</u>	<u>4,000</u>
Less : Selling expenses (25% of total works cost or 1/5 of cost of sales)	<u>1,000</u>	<u>800</u>
Works cost	4,000	3,200
Less : Separable costs	1,500	1,000
Joint Costs	<u>2,500</u>	<u>2,200</u>
Units produced (Nos.)	500	200
Cost of production per unit at split-off point	Rs. 5	Rs. 11

**Answer to Question No. 1(d)**

Master budget has been defined as the summary budget incorporating its component functional budgets and which is finally approved, adopted and employed. It is a consolidated summary of the various functional budgets. It is the culmination of the preparation of all other budgets like the sales budget, production budget, purchase budget etc. It consists of the budgeted profit and loss account and budgeted balance sheet.

The master budget is prepared by the budget committee on the basis of co-ordinated functional budgets and becomes the target of the company during the budget period when it is finally approved. In the master budget, costs are classified and summarised by types of expenses as well as by departments. It is considered as the best mode of understanding the company's micro- economic position relating to the forthcoming budget period. Following steps are involved in the preparation of master budget:

- (i) Preparation of functional budget incorporating the expected changes in the forthcoming budget period.
- (ii) Making adjustments to bring about harmony among different budgets.
- (iii) Preparation of summary budgets to produce: (a) budgeted profit and loss account and (b) budgeted balance sheet.
- (iv) Authentication of summary budget by the board of directors so that it can be accepted as master budget indicating the formal plans of action for the forthcoming budget period.

**Answer to Question No. 1(e)**

Fund flow statement also referred to as statement of "source and application of funds" presents the movement of funds and helps to understand the changes in the structure of assets, liabilities and equity capital. "Funds flow statement is a method by which we study changes in the financial position of a business enterprise between beginning and ending financial statement dates. It is a statement showing sources and uses of funds for a period of time."

**Steps for Preparation of Fund Flow Statement****1. To prepare statement of Changes of Working Capital**

For preparation of fund flow statement, the first step is to make statement of changes of working capital. Because net increase in working capital is use of fund and net decrease in working capital is source of fund. Relationship between current assets and working capital is positive and if any changes in current assets, working capital will change in same direction whereas relationship between working capital and current liabilities is inverse.

**2. Ascertain the funds from operation**

Funds from the operation may be ascertained from following two methods as under:

- (i) In statement form
- (ii) In account form

Fund from operation is required for preparation of fund flow statement for source of fund side. It can be shown on application of fund side when there is negative fund from operation. Operation means business activity and fund from operation means profit from business activity.

### Question No. 2

- (a) What do you mean by labour turnover? What remedial steps do you suggest to minimize its occurrence ? (5 marks)
- (b) Real Enterprises undertakes three different jobs A, B and C. All of them require the use of a special machine and also the use of a computer. The computer is hired and the hire charges work out to Rs. 4,20,000 per annum. The expenses regarding the machine are estimated as follows:

	Rs.
Rent for the quarter	17,500
Depreciation per annum	2,00,000
Indirect charges per annum	1,50,000

During the first month of operation, the following details were taken from the job register:

Job	A	B	C
Number of hours the machine was used:			
(a) Without the use of the computer	600	400	900
(b) With the use of the computer	600	—	1,000

You are required to compute the machine hour rate:

- (i) For the firm as a whole for the month when the computer was used and when the computer was not used.
- (ii) For the individual jobs A, B and C. (10 marks)

### Answer to Question No. 2(a)

It is a common feature in any concern that some employees leave the concern and others join it. Workers change the job either for personal betterment or for better working conditions or due to compulsion. This change in work force is known as labour turnover. Labour turnover is the ratio of the number of persons leaving in a period to the average number employed. It can be measured by relating the engagements and losses in the labour force to the total number employed at the beginning of the period. It is therefore, the rate of change in the number of employees of a concern during a definite period. Labour turnover studies are helpful in manpower planning.

Labour turnover reduces the labour productivity and increases costs. Hence, it should be kept at minimum.

The following remedial steps are suggested to minimize the occurrence of labour turnover:

- (i) A sound wage system.
- (ii) A proper recruitment, placement and training policy.

- (iii) A sound promotion and transfer policy.
- (iv) Efficient, impartial and sympathetic personnel management.
- (v) Proper social security schemes like pension, provident fund, etc.
- (vi) Improving working conditions.
- (vii) Job rotation.
- (viii) Providing amenities and welfare schemes.
- (ix) Increasing the recreational facilities.
- (x) Introduction and maintenance of labour participation scheme.
- (xi) Job analysis and evaluation.
- (xii) Use of exit interviews.

**Answer to Question No. 2(b)***Working Notes*

(i) Machine hours per month (1,000 + 1,500 + 1,000)	3,500
(ii) Computer hours per month (600 + 1,000)	1,600
(iii) The machine overheads per month :	<b>Rs.</b>
Rent (Rs.17,500/3)	5,833
Depreciation (Rs.2,00,000/12)	16,667
Indirect charges (Rs.1,50,000/12)	12,500
	<u>35,000</u>
Computer hire charges per month (Rs. 4,20,000/12)	35,000
(iv) Overheads for the machine with computer	
Rs. 35,000/3500 x 1600	16,000
Hire charges for the computer	35,000
Total expenses	<u>51,000</u>

**(A) Computation of Machine Hour Rate for the firm as a whole:**

- (a) When the computer was not used – Rs. 35,000/3,500                      Rs. 10
- (b) Machine hour rate when computer was used Rs. 51,000/1,600      Rs. 31.875

**(B) Machine Hour Rate for Individual Jobs:**

	Rate/hour	Job					
		A		B		C	
		hours	Rs.	hours	Rs.	hours	Rs.
Without computer	10	600	6,000	400	4,000	900	9,000
With computer	31.875	600	19,125	-	-	1000	31,875
<b>Total</b>		<u>1200</u>	<u>25,125</u>	<u>400</u>	<u>4,000</u>	<u>1900</u>	<u>40,875</u>
<b>Machine hour rate</b>			<b>20.94</b>		<b>10</b>		<b>21.51</b>

**Question No. 3**

- (a) Explain the scope and limitations of management accounting. (5 marks)
- (b) What is inventory control? Explain various objectives of inventory control. (5 marks)
- (c) Compute the fixed assets turnover from the following figures along with your comments

	2012 Rs.	2013 Rs.
<i>Fixed assets</i>	40,00,000	60,00,000
<i>Accumulated Depreciation</i>	20,00,000	30,00,000
<i>Sales less Return</i>	1,00,00,000	1,20,00,000

(5 marks)

**Answer to Question No. 3(a)****Scope of Management Accounting**

Management accounting is presentation of accounting information in such a way so as to assist management in the creation of policy and in day to day operation of an understanding. It includes financial accounting and extends to the operation of a system of cost accountancy, budgetary control and statistical data. The scope of management accounting includes:

- Formation, installation and operation of accounting, cost accounting, tax accounting and information systems.
- The compilation and preservation of vital data for management planning.
- Providing means of communicating management plans to the various levels of organisation.
- Providing and installing an effective system of feed-back reports to enable the management in its controlling function.
- Analysing and interpreting accounting and other data to make it understandable and usable to the management.
- Assisting management in decision-making by (a) providing relevant accounting, other data and (b) analysing the effect of alternative proposals on the profits and position of the enterprise.
- Providing methods and techniques for evaluating the performance of the management in the light of the objectives of the enterprises, thus assisting in the implementation of the principle of management by objectives.
- Improving, modifying and sharpening the effectiveness of co-existing techniques of analysis.

**Limitations of Management Accounting**

The management accountant has the responsibility of producing and providing dependable accounting and other relevant data for the use of management. The information and reports presented by management accountant suffers from the following limitations:

- In accounting different terms carry different meanings under different set of circumstances and conditions. Such meanings and figures may superficially resemble one another and a person who is not, familiar with them may easily become confused or frustrated.
- Management accounting data cannot be completely accurate in all respects as approximation is involved in the compilation and preparation of such data.
- Management accountant can provide only the quantitative data as far as available, to the management. Business problems and their decisions often require additional quantitative as well as qualitative data which may be outside the purview of the management accountant.
- A management accountant may provide information and figures in most appropriate form to the management. The same set of figures, if not acted upon by the management, becomes useless or if misunderstood by the management, may lead to unwise actions.

**Answer to Question No. 3(b)****Inventory Control**

Inventory control is the systematic control and regulation of purchase, storage and usage of materials in such a way as to maintain an even flow of production and avoid excessive investment in inventories. Efficient material control reduces losses and wastages of materials. Inventory control is the core of materials management. Inventory control is a planned method of determining when to purchase, so that purchasing and storing cost are minimum without affecting production or sales. Without proper control, inventories have a tendency to grow beyond economic limits. Lack of control over inventory also leads to excessive consumption and wastage as operatives are liable to become careless with irrational supply of materials.

**Objectives of Inventory Control**

Some of the basic objectives of inventory control are as follows:

- To provide continuous flow of required materials, parts and components for efficient and uninterrupted flow of production.
- To minimize investment in inventories keeping in view operating requirements.
- To provide for efficient store of materials so that inventories are protected from loss by fire and theft and handling time and cost are kept at a minimum.
- To keep surplus and obsolete items to minimum.

**Answer to Question No. 3(c)**

$$\text{Fixed Assets Turnover Ratio} = \frac{\text{Net Sales}}{\text{Fixed Assets}}$$

	for year 2012	for year 2013
Fixed Assets Turnover Ratio	$= \frac{1,00,00,000}{20,00,000}$	$= \frac{1,20,00,000}{30,00,000}$
	$= 5 \text{ times}$	$= 4 \text{ times}$

*Note* : Fixed Assets taken after deducting accumulated depreciation.

**Question No. 4**

- (a) *What is Activity Based Costing (ABC)? Describe the evolution of ABC.*  
(5 marks)
- (b) *Prepare a contract account for the year ending 31st March 2013 from the following particulars of the M/s Abacus Constructions. The contract is for erecting a sewer plant for a total value of Rs.24 lakhs. Contract is 100% complete.*

<i>Particulars</i>	<i>Rs.</i>
<i>Wages</i>	<i>6,00,000</i>
<i>Special Plants</i>	<i>2,00,000</i>
<i>Materials</i>	<i>3,00,000</i>
<i>Overheads</i>	<i>1,20,000</i>
<i>Materials lying on site</i>	<i>40,000</i>
<i>Depreciation to be charged on plant</i>	<i>10%</i>
<i>Work certified</i>	<i>16,00,000</i>
<i>Amount received in cash of certified work</i>	<i>80%</i>

*5% of the value of materials issued and 6% of wages may be taken to have incurred for the portion of work completed but not yet certified. Overheads are charged as a percentage of direct wages. Ascertain the amount to be transferred to profit and loss account on the basis of realized profit.* (10 marks)

**Answer to Question No. 4(a)**

The Activity-Based Costing (ABC) is a costing system, which focuses on activities performed to produce products. ABC is that costing in which costs are first traced to activities and then to products. This costing system assumes that activities are responsible for the incurrence of costs and create the demands for activities. E.g. an accounting firm prepares tax returns; a University teaches students. Costs are charged to products based on individual product's use of each activity. In traditional absorption costing system, costs are first traced not to activities but to an organizational unit, such as department or plant and then to products. It means under both, ABC and traditional absorption costing system the second and final stage consists of tracing costs to the product.

### Evolution of Activity Based Costing System (ABC)

The concepts of Activity Based Costing (ABC) were developed in the manufacturing sector of the United States during the 1970's and 1980's. During this time, the consortium for advanced manufacturing – International, now known simply as CAM-I, provided a formative role for studying and formalizing the principles that have become more formally known as Activity Based Costing.

ABC is developed due to many deficiencies of Traditional Cost systems, which lead to the discovery of the ABC System. Which are as under:

- (i) The present costing system has developed convenient overhead recovery basis and blanket overhead recovery are acceptable when valuing stocks for financial reporting, but they are inappropriate when used for decision-making and typical product strategy decisions. Such decisions have implications. Over 3-5 years and over this period many fixed costs become variable.
- (ii) It's easy to determine accurate costs of products or services when a company has only a few products. When companies expand their product offerings and these products use different amount of resources such as supervision, quality control it is more difficult to determine accurate costs of products. This situation is a main reason why companies use ABC.
- (iii) Traditional costing fails to capture cause and effect relationships. If focused on the cost incurred.
- (iv) Traditional accounting was confined merely to furnish information at product level. The new manufacturing technology demands the feedback of performance while production is still in progress rather than history.

Therefore, in order to overcome the inadequacies of traditional methods of overhead absorption, Activity Based Costing has been devised.

#### Answer to Question No. 4(b)

<b>Contract Account for the year ending 31st March, 2013</b>			
<i>Dr.</i>		<i>Cr.</i>	
<i>Particulars</i>	<i>Rs.</i>	<i>Particulars</i>	<i>Rs.</i>
To wages	6,00,000	By cost of contract to date c/d	10,00,000
To Depreciation on special Plants	20,000		
To Materials consumed	2,60,000		
To Overheads	1,20,000		
	<u>10,00,000</u>		<u>10,00,000</u>
To cost of contract to date b/d	10,00,000	By work in progress	
		Work Certified	16,00,000
To Notional profit c/d	6,58,200	Work Uncertified	58,200
	<u>16,58,200</u>		<u>16,58,200</u>
To profit and loss A/c	3,51,040	By Notional Profit b/d	6,58,200
To work in progress A/c	3,07,160		
	<u>6,58,200</u>		<u>6,58,200</u>

**Working Notes:**

(a) Calculation of work uncertified: Rs.

Materials (5% of Rs. 3,00,000)	15,000
Wages (6% of Rs. 6,00,000)	36,000
Overheads (20% of Rs. 36,000)	7,200
Work Uncertified	<u>58,200</u>

(b) Calculation of Amount to be transferred to Profit and Loss Account:

$$\frac{2 \times \text{Notional Profit} \times \text{Cash Received}}{3 \times \text{Work Certified}} = \frac{2 \times 6,58,200 \times 12,80,000}{3 \times 16,00,000}$$

$$= \text{Rs. } 3,51,040$$

**Question No. 5**

- (a) Describe the provisions of Companies Act, 1956 pertaining to cost accounting records. (5 marks)
- (b) Surya Ltd. provides you the following information for the year ended 31st March, 2011:
- Sales for the year amounted to Rs. 1,20,00,000, the company sells goods for cash only.
  - Cost of goods sold was 60% of sales. Closing inventory was higher than opening inventory by Rs. 53,750. Trade creditors on 31st March, 2011 exceeds those on 31st March, 2010 by Rs.28,750.
  - Net profit before tax was Rs. 17,25,000. Tax paid amounted to Rs. 8,75,000. Depreciation on fixed assets for the year was Rs. 3,93,750. Whereas other expenses totaled Rs. 26,81,250. Outstanding expenses on 31st March, 2010 and on 31st March, 2011 totaled to Rs. 1,02,500 and Rs. 1,13,750 respectively.
  - New machinery and furniture costing Rs. 12,84,375 in all were purchased.
  - A rights issue was made of 2,500 equity shares of Rs. 250 each at a premium of Rs. 75. The entire money was received with applications.
  - Dividends and dividend distribution tax totaling Rs. 5,08,750 were paid.
  - Cash in hand and at bank as on 31st March, 2010 totaled Rs. 2,67,250.

Prepare cash flow statement as per Accounting Standard – 3 (Revised).

(10 marks)

**Answer to Question No. 5(a)**

As per Section 209 (1) (d) of the Companies Act 1956 deals with the cost accounting record to be maintained by a body corporate which is as under:

- Every company shall keep at its registered office proper books of account with respect to-
  - All sums of money received and expended by the company and the matters in respect of which the receipt and expenditure take place;

- (b) All sales and purchases of goods by the company;
- (c) The assets and liabilities of the company; and
- (d) In the case of a company pertaining to any class of companies engaged in production, processing, manufacturing or mining activities, such particulars relating to utilization of material or labour or to other items of cost as may be prescribed, if such class of companies is required by the Central Government to include such particular in the books of account.

Provided that cost accounting records and any other statutory books of account may be kept at such other place in India as the Board of Directors may decide and when the Board of Directors so decides, the company shall, within seven days of decision, file with the Registrar a notice in writing giving the full address of that other place.

In exercise of powers conferred by section 642(1) read with section 209(1) (d) of the Companies Act, 1956, the Central Government prescribes Cost Accounting Record Rules for the maintenance of cost records relating to the utilization of materials, labour and other items of cost, in the manner as prescribed, by specified class of companies engaged in production, processing manufacturing or mining operations of the prescribed products/activities.

**Answer to Question No. 5(b)**

**Cash Flow Statement  
For the year ending 31.3.2011**

<b>(A) Cash Flow from Operating Activities</b>		
Net Profit before Tax -	17,25,000	
Add: Depreciation	<u>3,93,750</u>	
Operating Profit before working Capital changes	21,18,750	
Less: Increase in Inventory	53,750	
Add: Increase in Trade Creditors	28,750	
Add: Increase in outstanding expenses	<u>11,250</u>	
Cash generated from operations	21,05,000	
Less: Tax paid	<u>8,75,000</u>	
Net Cash from operating activities		12,30,000
<b>(B) Cash Flow from Investing Activities</b>		
Purchase of Fixed Assets	(12,84,375)	
Net cash flow from Investing Activities		<u>(12,84,375)</u>
<b>(C) Cash flow from Financing Activities</b>		
Proceeds from issue of share capital	8,12,500	
Less: Dividend and Corporate Dividend Tax Paid	<u>(5,08,750)</u>	
Net Cash flow from Financing Activities		<u>3,03,750</u>
Net Increases in Cash & Cash equivalent (A + B + C)		2,49,375
Add: Cash & Cash equivalents as on 31.3.2010 (opening balance)		<u>2,67,250</u>
<b>Cash &amp; Cash equivalents as on 31.3.3011 (closing balance)</b>		<b><u>5,16,625</u></b>

**Question No. 6**

- (a) What are the methods of distribution of service department overheads to production departments ? (5 marks)
- (b) A Chinese soft drink company is planning to establish a subsidiary company in India to produce mineral water. Based on the estimated annual sales of 40,000 bottles of the mineral water, cost studies produced the following estimates for the Indian subsidiary:

	Total Annual Costs	Percent of Total Annual Cost which is variable
Material	2,10,000	100%
Labour	1,50,000	80%
Factory Overheads	92,000	60%
Administration Expenses	40,000	35%

The Indian production will be sold by manufacturer's representatives who will receive a commission of 8% of the selling price. No portion of the Japanese office expenses is to be allocated to the Indian subsidiary.

You are required to:

- Compute the selling price per bottle to enable the management to realize an estimated 10% profit on sale proceeds in India.
- Calculate the break-even point in Rupee sales as also in number of bottles for the Indian subsidiary on the assumption that the selling price is Rs. 14 per bottle. (10 marks)

**Answer to Question No. 6(a)**

Following are the methods of re-distribution of service department costs to production departments:

- (i) *Direct distribution method* : Under this method, the cost of service department are directly apportioned to production departments, without taking into consideration any service from one service departments to another service department.
- (ii) *Step method* : In this method the cost of most serviceable department is first, apportioned to other service departments and production departments. The next service department is taken up and its cost is apportioned and this process goes on till the cost of last service department is apportioned. The cost of last service department is apportioned among production departments only.
- (iii) *Reciprocal service method* : This method gives cognizance to the fact that where there are two or more service departments, they may render service to each other and therefore these inter-departmental services are to be given due weight in distributing the expenses of service departments. There are three methods available for dealing with inter service department transfer:
  - (a) *Simultaneous equation method* : Under this method, the true cost of service departments are ascertained first with the help of simultaneous equations.

These are then distributed among the production departments on the basis of given percentages.

- (b) *Repeated distribution method*: According to this method service department costs are apportioned over other departments, production as well as service according to the agreed percentages and this process is repeated until the total costs of the service departments are exhausted or the figures become too small to be considered for further apportionment.
- (c) *Trial and error method*: In this method the cost of one service department is apportioned to another service department. The cost of another service department plus the share received from the first service department is again apportioned to first service department and this process is continued until the balancing figure becomes nil.

### Answer to Question No. 6(b)

#### Computation of Selling Price per unit

Let the selling price per unit be x.

Total Sales	40,000x
Total Commission (8% on Sales)	3,200x
Total Profit (10% on sales)	4,000x

Total Sales = Total Cost + Total Profit

$$\text{Or, } 40,000x = 2,10,000 + 1,50,000 + 92,000 + 40,000 + 3,200x + 4,000x$$

$$\text{Or, } 40,000x = 4,92,000 + 7,200x$$

$$\text{Or, } 32,800x = 4,92,000$$

$$\text{Or, } x = \text{Rs. } 15$$

#### Computation of Break Even Point

	Rs.	Rs.
Sales (40,000 x 14)		5,60,000
Less : Marginal Cost		
Material	2,10,000	
Labour (1,50,000 x 80/100)	1,20,000	
Overhead (92,000 x 60/100)	55,200	
Administration (40,000 x 35/100)	14,000	
Sales Commission (5,60,000 x 8/100)	44,800	(4,44,000)
Total Contribution		1,16,000

$$\begin{aligned} \text{Breakeven Sales} &= \frac{\text{Fixed Costs} \times \text{Total Sales}}{\text{Total Contribution}} \\ &= \frac{(30,000 + 36,800 + 26,000) \times 5,60,000}{1,16,000} \\ &= \text{Rs. } 4,48,000 \end{aligned}$$

**Question No. 7**

- (a) Distinguish between absorption costing and marginal costing. (5 marks)
- (b) Chemical-X is produced by using two basic raw materials. Standard requirements for raw materials are as follows:

Material	Opening Stock (kgs.)	Closing Stock (kgs.)	Purchase During the Period		
			Qty. (kgs.)	Rate per kg. (Rs.)	Cost (Rs.)
A	100	200	1,000	6.50	6,500
B	150	200	1,150	6.00	6,900

The standard loss is 10% of input. 1,890 kgs. of Chemical-X was produced during a particular period. Details pertaining to the material for the relevant period are as under:

Material	Standard Mix	Standard Price Per Kg. (Rs.)
A	40%	6
B	60%	5

The opening stock is valued at standard price.

Compute the following:

- (i) Material cost variance and material price variance, when:
- (a) Variance is calculated at the point of issue on 'first-in-first-out' basis; and
- (b) Variance is calculated at the point of issue on 'last-in-first out' basis.
- (ii) Material usage variance.
- (iii) Material mix variance. (10 marks)

**Answer to Question No. 7(a)**

Absorption costing	Marginal costing
(i) Fixed production overheads are charged to the product to be subsequently released as a part of goods sold i.e., it is included in cost per unit.	Fixed production costs are regarded as period cost and are charged to revenue along with the selling and administration expenses, i.e., they are not included while computing cost per unit.
(ii) Profit is the difference between sales and cost of goods sold.	Profit in marginal costing is ascertained by establishing the total contribution and then deducting therefrom the total fixed expenses. Contribution is the excess of sales over variable cost.
(iii) Costs are seldom classified into variable and fixed. Although such a classification is possible, it fails to establish a cost-volume profit relationship.	Cost - volume profit relationship is an integral part of marginal costing studies. Costs have to be classified into fixed costs and variable costs.

<i>Absorption costing</i>	<i>Marginal costing</i>
(iv) If inventories increase during a period, this method will reveal more profit than marginal costing. When inventories decrease, less profits are reported because under this method closing stock is valued at higher figures. Since inventories are valued at total cost, a portion of fixed overheads are also included in inventories.	If inventories increase during a period, this method generally reports less income than absorption costing; but when inventories decrease this method reports more net income. The difference in the net income is due to difference in accounting for fixed manufacturing costs as compared to inventory valuation.
(v) Arbitrary apportionment of fixed costs may result in under or over recovery of overheads.	Since fixed costs are excluded, there is no question of arbitrary apportionment of fixed overheads and thus under or over absorption of overheads.

**Answer to Question No. 7(b)**

(i) Material Cost Variance = Standard Cost - Actual Cost

(a) When FIFO is used

$$\text{Material Cost Variance} = \text{Rs. } 11,340 - \text{Rs. } 12,250 = \text{Rs. } 910 \text{ (A)}$$

(b) When LIFO is used

$$\text{Material Cost Variance} = \text{Rs. } 11,340 - \text{Rs. } 12,450 = \text{Rs. } 1,110 \text{ (A)}$$

Material Price Variance = Actual Qty. (Std. price - Actual price)

(a) When FIFO is used

$$A = 100 (\text{Rs. } 6 - \text{Rs. } 6) + 800 (\text{Rs. } 6 - \text{Rs. } 6.5) = \text{Rs. } 400 \text{ (A)}$$

$$B = 150 (\text{Rs. } 5 - \text{Rs. } 5) + 950 (\text{Rs. } 5 - \text{Rs. } 6) = \text{Rs. } 950 \text{ (A)}$$

$$\underline{\text{Rs. } 1,350 \text{ (A)}}$$

$$\text{Or Rs. } 10,900 - \text{Rs. } 12,250 = \text{Rs. } 1,350 \text{ (A)}$$

(b) When LIFO is used

$$A = 900 (\text{Rs. } 6 - \text{Rs. } 6.5) = \text{Rs. } 450 \text{ (A)}$$

$$B = 1,100 (\text{Rs. } 5 - \text{Rs. } 6) = \text{Rs. } 1,100 \text{ (A)}$$

$$\underline{\text{Rs. } 1,550 \text{ (A)}}$$

$$\text{Or Rs. } 10,900 - \text{Rs. } 12,450 = \text{Rs. } 1,550 \text{ (A)}$$

(ii) Material Usage Variance = (St. Qty. for Actual Output - Actual Qty.) x Std. price

$$A = (840 - 900) \times \text{Rs. } 6 = \text{Rs. } 360 \text{ (A)}$$

$$B = (1,260 - 1,100) \times \text{Rs. } 5 = \text{Rs. } 800 \text{ (F)}$$

$$\underline{\text{Rs. } 440 \text{ (F)}}$$

$$\text{Or Rs. } 11,340 - \text{Rs. } 10,900 = \text{Rs. } 440 \text{ (F)}$$

(iii) Material Mix Variance = (Std. Qty. for Actual Input - Actual Qty.) x Std. price

$$A = (800 - 900) \times \text{Rs. } 6 = \text{Rs. } 600 \text{ (A)}$$

$$B = (1,200 - 1,100) \times \text{Rs. } 5 = \text{Rs. } 500 \text{ (F)}$$

$$\underline{\text{Rs. } 100 \text{ (A)}}$$

$$\text{or } 2,000 \left[ \frac{11,340}{2,100} - \frac{10,900}{2,000} \right] = \text{Rs. } 100 \text{ (A)}$$

(iv) Material yield Variance = Std. Cost per unit (Standard loss on actual input – Actual loss)

$$= \text{Rs. } 10,800/1,800 (200 - 110) = \text{Rs. } 540 \text{ (F)}$$

$$\text{or } \text{Rs. } 11,340/1,890 (1,890 - 1,800) = \text{Rs. } 540 \text{ (F)}$$

#### Working Notes

(i) Statement showing standard cost and actual cost (on FIFO and LIFO basis) for 1890 Kgs. of actual output and standard cost of actual input quantity.

Material	%	Standard Cost			Actual Cost (FIFO Basis)				Actual Cost (LIFO Basis)			Standard Cost of Actual Quantity		
		Qty Kgs.	Price Rs.	Amt. Rs.	Qty Kgs.	Price Rs.	Amt. Rs.	Amt. Rs.	Qty Kgs.	Price Rs.	Amt. Rs.	Qty Kgs.	Price Rs.	Amt. Rs.
A	40%	840	6	5,040	100	6.00	600		900	6.50	5,850	900	6	5,400
					800	6.50	<u>5,200</u>	5,800						
B	60%	1,260	5	6,300	150	5.00	750		1,100	6.00	6,600	1,100	5	5,500
					950	6.00	<u>5,700</u>	6,450						
		<u>2,100</u>		<u>11,340</u>	<u>2,000</u>			<u>12,250</u>	<u>2,000</u>		<u>12,450</u>	<u>2,000</u>		<u>10,900</u>
Loss	10%	210		–	110			–	110					
Output		<u>1,890</u>		<u>11,340</u>	<u>1,890</u>			<u>12,250</u>	<u>1,890</u>		<u>12,450</u>			

(ii) Standard yield =  $\frac{1,890}{2,100} \times 2,000 = 1,800$  Kgs.

(iii) Actual consumption = Opening Stock + Purchases - Closing Stock

$$A = 100 + 1,000 - 200 = 900 \text{ Kgs.}$$

$$B = 150 + 1,150 - 200 = 1,100 \text{ Kgs.}$$

#### Question No. 8

Write Short Note on:

(a) Budget Manual

(b) *Escalation Clause*

(c) *Variance Reporting to Management*

(d) *Debtor Turnover Ratio*

(e) *Cost Auditor*

(3 marks each)

**Answer to Question No. 8(a)**

A budget manual is a document which sets outstanding instructions governing the responsibilities of persons and the procedures, forms and records relating to the preparation and use of budgets and it is a booklet containing standing instructions regarding the procedures to be followed and the time schedules to be observed. The following are some important matters dealt with in the budget manual:

- (i) the dates by which preliminary forecasts and plans are to be submitted;
- (ii) the form in which these are to be submitted and the persons to whom these are to be forwarded;
- (iii) the important factors that must be considered for each forecast or plan;
- (iv) the categorisation of expenses, e.g., variable and fixed, and the manner in which each category is to be estimated and dealt with;
- (v) the manner of scrutiny and the personnel to carry it out;
- (vi) the matters which must be settled only with the consent of the managing director, departmental manager, etc.;
- (vii) the finalisation of the functional budgets and their compilation into the master budget;
- (viii) the form in which the various reports are to be made out, their periodicity and dates, the persons to whom these and their copies are to be sent;
- (ix) the reporting of the remedial action;
- (x) the manner in which budgets, after acceptance and issuance, are to be revised or amended; and
- (xi) the matters, included in budgets, on which action may be taken only with the approval of top management.

The main idea behind the budget manual is to inform line executives beforehand about procedures to be followed rather than issuing frequent instructions from the controller's office regarding procedures and forms to be used. Such frequent instructions can be a source of friction between the line and staff management.

**Answer to Question No. 8(b)**

Escalation clause is usually provided in the contract as a safeguard against any likely changes in the price or utilisation of material and/labour. This clause provides that in case prices of items of raw materials, labour etc. specified in the contract change during the execution of the contract, beyond a specified limit over the prices prevailing

at the time of signing the agreement, the contract price will be suitably adjusted. The terms of the contract specify the procedure for calculating such adjustment in order to avoid all future disputes. Thus this clause safeguards the interest of both the contractor and the contractee in case of fluctuations in the prices of material, labour etc

**Answer to Question No. 8(c)**

The primary purpose of reporting variances to management is to enable them to take corrective action and arrest unfavourable variances to the extent possible. The profit and loss account should be prepared in a special manner - starting with the standard or budgeted profit, the various variances would be put in two columns, favourable and unfavourable, and the net results added to or deducted from the standard profit, thus arriving at the actual profit. Management can easily see the factors that have contributed to the change in the profit picture.

In order that variance reporting should be effective, it is essential that the following conditions are fulfilled:

- (i) The variances arising out of each factor should be correctly segregated. If part of a variance due to one factor is wrongly attributed to or merged with that of another, the analysis report submitted to the management would be misleading and wrong inferences may be drawn from it;
- (ii) Variances, particularly the controllable variances should be reported with promptness as soon as they occur. This would enable corrective action being taken in time;
- (iii) Analysis of uncontrollable variances should be made with the same care as for controllable variances since the analysis of the off standard situation may reveal far reaching effects on the economy of the concern; and
- (iv) The forms of reports for the different types of variances should be designed keeping in view the needs of the management and the size of the concern, and no standard forms can, therefore, be suggested.

**Answer to Question No. 8(d)**

Debtor turnover ratio indicates the number of times on the average the receivables are turn over each year. The higher the value of ratio, more is the efficient management of debtors. It measures the accounts receivables (trade debtors and bills receivable) in terms of number of days of credit sales during a particular period. It is calculated as follows:

$$\text{Debtor Turnover Ratio} = \frac{\text{Net Credit Sales}}{\text{Average Debtors}}$$

This ratio is a measure of the collectability of accounts receivable and tells about how the credit policy of the company is being enforced.

**Answer to Question No. 8(e)**

A Cost Accountant as defined in clause (b) of sub-section (1) of section 2 of the Cost and Works Accountants Act, 1959 (23 of 1959) and who holds a valid certificate of practice under sub-section (1) of section 6 of that Act and including Firm of Cost

Accountants can be appointed by a Company as cost auditor. However, the cost accountant or partners of a firm of cost accountant should be in whole-time practice and not holding any other employment

The Rights of Cost Auditor is to access at all times the books of account and vouchers of the company, whether kept at the head office of the company or elsewhere. Further he is entitled to require from the officers of the company such information and explanations as he may think necessary for the performance of his duties as an auditor.

The duties of the cost auditor are also similar to those of the (financial) auditor of the company has under sub-Section (1) of Section 227 [Section 223B (4)]. The main duties of the cost auditor inter-alia include:

- (i) To file the intimation to Central government about his/her/its appointment within 30 days of the receipt of formal letter in Form 23D along with the copy of formal letter;
  - (ii) To ensure that the proper books of accounts as required by Cost Accounting Records Rules have been kept by the company so far as it appears from the examination of those books and proper returns for the purpose of his audit have been received from branches not visited by him;
  - (iii) If the auditor is not satisfied in any of the aforesaid matters, he may give a qualified report along with the reasons for the same;
  - (iv) Sending the Report to the Cost Audit Branch within 180 days from the end of the financial year with one copy to the company;
  - (v) Sending his replies to any clarification, that may be sought by the Cost Audit Branch on his report. Sending such replies within 30 days from the date of receipt of communication calling for such clarification.
-

## TEST PAPER 2/2013

Time allowed : 3 hours

Max. Marks : 100

[Answer Question No.1 which is COMPULSORY  
and ANY FIVE of the rest from this part.]

### Question No. 1

- (a) Management accounting is nothing but presentation and analysis of accounting information which is useful to management. Discuss. (5 marks)
- (b) There is generally a divergence between financial profits and cost profits. Explain this statement and give reasons for such divergence. (5 marks)
- (c) What are the components of total cost shown in the cost sheet ? Give the uses of the cost sheet. (5 marks)
- (d) The following data is available for a company:

	Rs.
Selling price	20 per unit
Variable manufacturing costs	11 per unit
Variable selling costs	3 per unit
Fixed factory overheads	5,40,000 per year
Fixed selling costs	2,52,000 per year

You are required to compute:

- (i) Break-even point expressed in amount of sales in rupees;
  - (ii) Number of units that must be sold to earn a profit of Rs. 60,000 per year;
  - (iii) How many units must be sold to earn a net income of 10% of sales? (5 marks)
- (e) What is cost audit ? State the purpose and scope of cost audit. (5 marks)

### Answer to Question No. 1(a)

Management accounting is the adoption and analysis of accounting information and its diagnosis and explanation in such a way as to assist management. It is a fact that management accounting is the presentation of accounting information in such a way as to assist management in the creation of policy and day-to-day operation of an undertaking. The term management accounting refers to accounting for management, i.e., it provides necessary information to the management for discharging the functions. Management accounting is used by the management to plan the activity, evaluate the performance, ensure integrity of financial information and to implement the system of reporting that is linked to organisational responsibilities and contributes to effective performance measurement.

Modern management needs the accounting and other data to be presented to serve as a guide for the future. Management accounting collects and provides financial accounting, cost accounting, economic and statistical information to the men at various managerial levels to assist them in the performance of managerial functions and their evaluation. It is development and application of various techniques of recording, analysis, interpretation and presentation, making the financial, costing and other data active and effective in the performance of managerial functions, i.e., planning, decision-making and control. It should be noted that management accounting makes use of not only accounting techniques but also of statistical and mathematical techniques. Management accounting is forward looking and should therefore, be able to treat accounting and economic information and data to make it suitable for use by the management.

Management may not be able to use the accounting information in its raw form due to lack of knowledge of accounting techniques or procedures. Management accountant presents the information in an intelligible and non-technical manner. This will help the management in interpreting the financial data, evaluating alternative course of action available and guiding the management in taking decisions and having the most desired financial results.

#### **Answer to Question No. 1(b)**

Financial accounts are concerned with the ascertainment of profit or loss for the whole operation of the organization or a relatively long period usually a year, without being too much concerned with cost computation, whereas cost accounts are provided for ascertaining the profit or loss made by manufacturing or product division/products for cost comparison and preparation and use of variety of cost statements. As these two sets of accounts are maintained in different forms or follow different approach, it is quite natural that their results may also differ. Invariably, the profit and loss revealed by the financial accounts may not agree with the profit or loss as per cost accounts.

#### **Reasons for Disagreement**

Disagreements between financial profits and cost profits may arise due to the following reasons:

1. *Items shown only in financial accounts* : There are certain items which are included in financial accounts but find no place in cost accounts. These may be—
  - (a) Purely financial charges : e.g., loss on sale of fixed assets, discount on issue of shares, damages payable, etc.
  - (b) Purely financial income: e.g. profit on sale of fixed assets, interest received, transfer fees, etc.
  - (c) Appropriation of profits: e.g. dividends, income-tax, transfer to reserves, etc.
2. *Items included in cost accounts only*: There are certain items which are included in cost accounts but not in financial accounts, e.g. notional interest on capital, notional rent on premises owned, etc.
3. *Over or under absorption of overheads* : In cost accounts overheads are charged to production on pre-determined rates while financial accounts show the actual

amount of overheads. If the overheads charged are not equal to the amount of overheads incurred, the difference gives rise to over or under absorption causing difference in profits.

4. *Different bases of stock valuation* : In financial books, stocks are valued at cost or market price whichever is less. However, in cost accounts stock of materials may be valued on FIFO, LIFO, average method, etc. and work-in-progress may be valued at prime cost or works cost, thus, there is difference in profits.
5. *Different methods of charging depreciation* : The amount of depreciation charged may be different in two sets of books either because of the different methods of calculating depreciation or the rates adopted, hence the profits may be different.
6. *Abnormal gains and losses* : Abnormal gains and losses may completely be excluded from cost accounts or may be taken to costing profit and loss account. If it is excluded, costing profit/loss will differ from financial profit/loss and adjustment will be required.

#### Answer to Question No. 1(c)

#### Components of the total cost shown in the cost sheet are as follows:

Prime Cost = Direct Materials + Direct Labour + Direct (or Chargeable) Expenses  
 Factory/Works Cost = Prime Cost + Factory Overheads  
 Cost of Production = Factory/Works Cost + Administrative Overheads  
 Total Cost or Cost of Sales = Cost of Production + Selling and Distribution Overheads

#### Uses of Cost Sheet

- It gives total cost and cost per unit for a particular period.
- It gives information to management for cost control.
- It provides comparative study of actual current costs with the cost of corresponding periods, thus causes of inefficiencies and wastage can be known and suitably corrected by management.
- It acts as a guide to manufacture in formulation of suitable and definite policies and in fixing up the selling price.

#### Answer to Question No. 1(d)

	Rs.
Selling prices per unit	20
Less : Variable manufacturing costs	<u>11</u>
	9
Less : Variable Selling costs	<u>3</u>
Contribution per unit	<u>6</u>

$$\begin{aligned}
 \text{P/V ratio} &= \frac{\text{Contribution}}{\text{Selling Price}} \times 100 \\
 &= \frac{6 \times 100}{20} \\
 &= 30\%
 \end{aligned}$$

$$\begin{aligned}
 \text{(a) BEP in Rs.} &= \frac{\text{Total Fixed Costs}}{\text{P/V Ratio}} \\
 &= \frac{5,40,000 + 2,52,000}{30\%} \\
 &= \text{Rs. } 26,40,000
 \end{aligned}$$

$$\begin{aligned}
 \text{(b) Required Sales in Units} &= \frac{\text{Total Fixed Costs} + \text{Desired Profit}}{\text{Contribution per Unit}} \\
 &= \frac{\text{Rs.}(7,92,000 + 60,000)}{6} \\
 &= 1,42,000 \text{ units}
 \end{aligned}$$

(c) Let Required Sales be Rs. x

$$\text{Required Sales in Rs.} = \frac{\text{Fixed Costs} + \text{Desired Profit}}{\text{P/V Ratio}}$$

$$\text{Or, } x = \frac{7,92,000 + 0.10x}{30\%}$$

$$\text{Or, } 0.20x = 7,92,000$$

$$\text{Or, } x = \text{Rs. } 39,60,000$$

$$\begin{aligned}
 \text{Number of units to be sold} &= \frac{\text{Required Sales in Rs.}}{\text{Selling Price per Unit}} \\
 &= \frac{39,60,000}{20} \\
 &= 1,98,000 \text{ units}
 \end{aligned}$$

### Answer to Question No. 1(e)

Cost audit is an independent examination of cost records and other related information of an entity including a non-profit entity, when such an examination is conducted with a view to expressing an opinion thereon. Cost audit comprises of the verification of the cost accounting records for the accuracy of the cost accounts, cost reports, cost statements and cost data and examination of these records to ensure that they adhere to the cost accounting principles, plans, procedures and objectives.

### Purpose of Cost Audit

The primary purpose of Cost audit is to express an opinion on the cost accounts of the company whether these have been properly maintained and compiled according to the cost accounting system followed by the enterprise or not. However the purposes of

cost audit may be segregated into general and social objectives. The general objectives are verification of cost accounts, complying with cost accounting records rules, detection of errors and fraud, determination of inventory valuation, fixation of prices of goods and services, periodical reconciliation between cost accounts and financial accounts, ensuring optimum utilization of available resources of the enterprise, detection and correction of abnormal loss. The social objectives of cost audit are to facilitate in fixation of reasonable prices of goods and services produced by the enterprise, improvement in productivity of various resources of the enterprise, Channelization enterprise resources to most optimum, productive and profitable areas, Availability of audited cost data as regards contracts containing escalation clauses, facilitation in settlement of bills in the case of cost-plus contracts entered into by the Government.

### **Scope of Cost Audit**

Section 209(1)(d) of the Companies Act, 1956 makes it obligatory for a company pertaining to any class of companies engaged in production, processing, manufacturing or mining activity to maintain such particulars relating to utilization of material or labour or other items of cost as may be prescribed, if such class of companies is required by the Central Government to include such particulars in the books of account. The rules provide that only those companies, which are covered under Section 209(1)(d) of the Companies Act and in respect of which a specific Cost Audit Order has been issued by the Cost Audit Branch of Ministry of Corporate Affairs are required to get their cost accounts audited with respect to that specific product.

The Central Government prescribes the separate cost accounting records for each class of companies and these are called the Cost Accounting Records Rules for that specific industry or class of companies. When cost accounting records/formats are prescribed, they apply to those companies engaged in the manufacture of a particular product or activity.

The legal provisions relating to statutory cost audit are applicable only to companies registered under the provisions of Companies Act, 1956. Therefore, cost audit is not applicable to other enterprises like partnership, cooperative societies, etc. The Cost Audit is conducted by a Cost Accountant in practice within the meaning of the Cost and Works Accountants Act, 1959. The cost auditor is appointed by the Board of Directors of the company with the previous approval of the Central Government. The report of cost auditor is rendered to the Central Government with a copy to the Company.

### **Question No. 2**

(a) *The following information is obtained from the books of Erox Fibre Limited.:*

<i>Standard hours per unit (hours)</i>	<i>3</i>
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<i>Variable overhead per hour (Rs.)</i>	<i>10</i>
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*The actual data for the month of March, 2013 are as follows:*

<i>Actual variable overhead incurred</i>	<i>Rs. 5,40,000</i>
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<i>Actual output</i>	<i>20,000 units</i>
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<i>Actual hours worked</i>	<i>56,000</i>
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You are required to calculate—

- (i) total variable overhead variance;
- (ii) variable overhead budget variance; and
- (iii) variable overhead efficiency variance. (5 marks)

- (b) Working Capital of GAMA Ltd., is Rs. 1,35,000 and Current Ratio is 2.5, Liquid ratio is 1.5 and the proprietary ratio 0.75. Bank Overdraft is Rs. 30,000. There are no long-term loans and fictitious assets. Reserve and surplus amount to Rs. 90,000 and the gearing ratio (Equity Capital/ Preference Capital) is 2.

You are required to:

From the above ascertain current assets, current liabilities, net block, proprietary fund, quick liabilities, quick assets, stock, preference and equity capital.

Also draw the statement of proprietary fund. (10 marks)

**Answer to Question No. 2(a)**

- (i) Total variable overhead variance
    - = Standard variable overhead – Actual variable overhead
    - = (20,000 x 3 x Rs.10) – Rs.5,40,000 = Rs.60,000 (Favourable)
  - (ii) Variable overhead budget variance\*
    - = Budgeted variable overhead for actual hrs. – Actual variable overhead
    - = (56,000 x Rs.10) – Rs.5,40,000 = Rs.20,000 (Favourable)
  - (iii) Variable overhead efficiency variance
    - = Variable overhead rate per hour (Standard hours – Actual hours)
    - = Rs.10 [(20,000 x 3) – 56,000] = Rs.40,000 (Favourable)
- \* Same as Variable Overhead Expenditure.

**Answer to Question No. 2(b)**

- (i) Current Liabilities(CL) and Current Assets(CA)

$$\text{Current Ratio (CR)} = \frac{\text{CA}}{\text{CL}} = 2.5$$

$$\text{Or, CA} = 2.5 \text{ CL}$$

$$\text{CA} - \text{CL} = \text{Rs. } 1,35,000$$

$$\text{Or, } 2.5 \text{ CL} - \text{CL} = \text{Rs. } 1,35,000$$

$$\text{Or, } 1.5 \text{ CL} = \text{Rs. } 1,35,000$$

$$\text{CL} = \text{Rs. } 1,35,000 / 1.5 = \text{Rs. } 90,000$$

$$\text{CA} = \text{Rs. } 90,000 \times 2.5 = \text{Rs. } 2,25,000$$

(ii) *Quick Liabilities, Quick Assets and Stock*

$$\begin{aligned} \text{Quick Liabilities} &= \text{Current Liabilities} - \text{Bank Overdraft} \\ &= \text{Rs. } 90,000 - \text{Rs. } 30,000 = \text{Rs. } 60,000 \end{aligned}$$

$$\text{Liquid Ratio} = \frac{\text{Quick Assets}}{\text{Quick Liabilities}} = 1.5$$

$$\text{Or} = \frac{\text{Quick Assets}}{60,000} = 1.5$$

$$\text{Or, Quick Assets} = \text{Rs. } 90,000$$

$$\begin{aligned} \text{Stock} &= \text{Current Assets} - \text{Quick Assets} \\ &= \text{Rs. } 2,25,000 - \text{Rs. } 90,000 \\ &= \text{Rs. } 1,35,000 \end{aligned}$$

(iii) *Net Fixed Assets and Proprietary Fund*

$$\begin{aligned} \text{Proprietary Ratio} &= \frac{\text{Proprietary Fund}}{\text{Total Assets}} \\ &= \frac{\text{Proprietary Fund}}{\text{Net Fixed Assets}} \\ &= 0.75 \end{aligned}$$

$$\text{i.e. Proprietary Fund} = 0.75 \text{ Net Fixed Assets} + 1,68,750$$

Since there is no long-term loan:

$$\begin{aligned} \text{Proprietary Fund} &= \text{Net Fixed Assets} + \text{Working Capital} \\ &= \text{Net Fixed Assets} + 1,35,000 \end{aligned}$$

$$\text{So, Net Fixed Assets} + 1,35,000 = 0.75 \text{ Net Fixed Assets} + 1,68,750$$

$$\text{Or, } 0.25 \text{ Net Fixed Assets} = 33,750$$

$$\text{Net Fixed assets} = 1,35,000$$

$$\begin{aligned} \text{Proprietary Fund} &= \text{Rs. } 1,35,000 \times 0.75 + \text{Rs. } 1,68,750 \\ &= \text{Rs. } 2,70,000 \end{aligned}$$

(iv) *Preference and Equity Capital*

$$\begin{aligned} \text{Preference and Equity Capital} &= \text{Proprietary Funds} - \text{Reserve and Surplus} \\ &= \text{Rs. } 2,70,000 - \text{Rs. } 90,000 \\ &= \text{Rs. } 1,80,000 \end{aligned}$$

$$\text{Equity Capital} = 2 \text{ Preference Capital (given)}$$

$$\text{or, Equity Capital} - 2 \text{ Pref. Capital} = 0$$

$$\text{Equity Capital} + \text{Pref. Capital} = \text{Rs. } 1,80,000$$

$$\text{Or, } 2 \text{ Pref. Capital} + \text{Pref. Capital} = \text{Rs. } 1,80,000$$

$$\text{Or, } 3 \text{ Pref. Capital} = \text{Rs. } 1,80,000$$

$$\text{Pref. Capital} = \text{Rs. } 1,80,000 / 3 = \text{Rs. } 60,000$$

$$\text{Equity Capital} = \text{Rs. } 60,000 \times 2 = \text{Rs. } 1,20,000$$

**Proprietary Fund Statement**

<i>Particulars</i>	<i>Rs.</i>	<i>Rs.</i>
<b>Sources :</b>		
Equity Capital		1,20,000
Preference Capital		60,000
Reserves and Surplus		<u>90,000</u>
		<u>2,70,000</u>
<b>Applications :</b>		
Net Working Capital		1,35,000
<b>Current Assets :</b>		
Stock	1,35,000	
Other Current Assets	<u>90,000</u>	<u>2,25,000</u>
		3,60,000
<b>Less : Current Liabilities</b>		
Bank Overdraft	30,000	
Other Current Liabilities	<u>60,000</u>	<u>(90,000)</u>
		<u>2,70,000</u>

**Question No. 3**

*Differentiate between the following:*

(a) *Traditional Costing V/s Activity Based Costing*

(b) *Job and Contract Costing*

(c) *Cash Flow and Fund Flow Statement*

*(5 marks each)*

**Answer to Question No. 3(a)**

<i>Traditional Absorption Costing</i>	<i>Activity Based Costing</i>
(i) Overheads are first related to departments cost centres (Production and Service Cost Centres)	Overheads are first related to activities or grouped into Cost Pools.
(ii) Only two types of activities viz. Unit Level Activities and Facility Level Activities are identified.	All levels of activities in the manufacturing cost hierarchy viz. Unit Level, Batch Level, Product Level and Facility Level are identified.
(iii) This method relates overheads to cost centres i.e. locations. It is not realistic of the behaviour of costs.	This method relates overheads to the causal factor i.e. driver. Thus, it is more realistic of cost behaviour.

<i>Traditional Absorption Costing</i>	<i>Activity Based Costing</i>
(iv) Overhead Rates can be used to ascertain cost of products only.	Activity Cost Driver Rates can be used to ascertain cost of products and also cost of other cost objects such as customer segments, distribution channels. etc.

### **Answer to Question No. 3(b)**

#### **Distinction between Job and Contract Costing**

Contract jobs, while they resemble jobs, have a few distinctive features:

- (i) Under job costing, the cost is first allocated to cost centres and then to individual jobs. In contract costing, most of the expenses are of direct nature, overhead forms only a small percentage of total expenditure and it represents expenses like share of head office expenses, share of central storage cost etc.
- (ii) Under job costing pricing is influenced by individual conditions and general policy of the organisation. Under contract costing, pricing is influenced by specific clauses of the contract.
- (iii) Unlike job costing, each contract is a cost unit in contract costing.
- (iv) Under contract costing, the work is usually carried out at a site other than contractee's own premises. Job costing is often applied where jobs are carried out at the contractee's own premises.

### **Answer to Question No. 3(c)**

<i>Cash Flow</i>	<i>Fund Flow</i>
(i) Cash flow statement based on narrow concept of funds, which considers changes in cash.	Funds flow statement is based on the concept of working capital
(ii) It does not contain any opening and closing balance.	It contains opening as well as closing balances of cash and cash equivalents.
(iii) Cash flow statement is prepared on cash basis.	Funds flow statement is prepared on accrual basis.
(iv) Cash flow statement is more useful in short term analysis and cash planning.	Funds flow statement is more useful in long - term analysis of financial planning.
(v) In cash flow statement cash from the operations are calculated after adjusting the increases and decreases in current assets and liabilities.	In funds flow statement such changes in current items are adjusted in the changes of working capital.
(vi) Classification of current and non-current is not relevant.	Such classification is required in this case.

**Question No. 4**

(a) The following figures have been extracted from the Books of Alpha Ltd., for the year ended 31st March, 2013. You are required to prepare a cash flow statement.

(i) Net profit before taking into account Income Tax and Income from law suits but after taking into account the following items was Rs 20 lakhs;

(a) Depreciation on Fixed Assets Rs. 5 lakhs

(b) Discount on issue of Debentures written off Rs. 30,000.

(c) Interest on Debentures paid Rs. 3,50,000.

(d) Book value of investments Rs. 3 lakhs (Sale of Investments for Rs. 3,20,000).

(e) Interest received on investments Rs. 60,000.

(f) Compensation received Rs. 90,000 by the company in a suit filed.

(ii) Income tax paid during the year Rs. 10,50,000.

(iii) 15,000, 10% preference shares of Rs. 100 each were redeemed on 31st March, 2013 at a premium of 5%. Further the company issued 50,000 equity shares of Rs. 10 each at a premium of 20% on 2.4.2013. Dividend on preference shares were paid at the time of redemption.

(iv) Dividends paid for the year 2011-12, Rs. 5 lakhs and Interim dividend paid Rs. 3 lakhs for the year 2012-13.

(v) Land was purchased on 2.4.2013 for Rs. 2,40,000 for which the company issued 20,000 equity shares of Rs. 10 each at a premium of 20% to the land owner as consideration.

(vi) Current assets and Current Liabilities in the beginning and at the end of the years were as detailed below:

	31.3.2012	31.3.2013
	Rs.	Rs.
Stock	12,00,000	13,18,000
Sundry Debtors	2,08,000	2,13,100
Cash in hand	1,96,000	35,300
Bills receivable	50,000	40,000
Bills payable	45,000	40,000
Sundry Creditors	1,66,000	1,71,300
Outstanding expenses	75,000	81,800
		(10 marks)

(b) "High wages do not necessarily mean high labour cost". Explain. (5 marks)

**Answer to Question No. 4(a)****Cash Flow Statement for the year ended 31st March, 2013**

<b>Cash Flows from Operating Activities</b>		
<b>(A) Net Profit before tax and extraordinary items</b>		20,00,000
Adjustments for:		
Depreciation on Fixed Assets	5,00,000	
Discount on issue of Debentures	30,000	
Interest on Debentures paid	3,50,000	
Interest on Investments received	(60,000)	
Profit on Sale of Investments	<u>(20,000)</u>	8,00,000
Operating profit before working capital changes		28,00,000
Adjustments for :		
Increase in Stock	(1,18,000)	
Increase in Sundry Debtors	(5,100)	
Decrease in bills receivable	10,000	
Decrease in bills payable	(5,000)	
Increase in Sundry Creditors	5,300	
Increase in outstanding expenses	<u>6,800</u>	(1,06,000)
Cash flow from operation		26,94,000
Income Tax paid		(10,50,000)
		<u>16,44,000</u>
<i>Cash flow from extraordinary items</i>		
Compensation received in a suit filed		90,000
<b>Net Cash flow from Operating Activities (A)</b>		<u>17,34,000</u>
<b>(B) Cash flows from Investment Activities</b>		
Sale proceeds of Investments	3,20,000	
Interest received on investment	<u>60,000</u>	3,80,000
<b>Net Cash Flow from Investing Activities (B)</b>		<u>3,80,000</u>
<b>(C) Cash flows from Financing activities</b>		
Proceeds by issue of equity shares at a premium	6,00,000	
Redemption of preference shares at a premium	(15,75,000)	
Preference Dividend paid	(1,50,000)	
Interest on debenture paid	(3,50,000)	
Dividend paid (5,00,000 + 3,00,000)	(8,00,000)	
		<u>(22,75,000)</u>
<b>Net Cash used in Financing activities (C)</b>		<u>(22,75,000)</u>
Net Decreases in Cash and Cash Equivalents (A+B+C)		(1,61,000)
Cash Balance on 31.3.2010 (opening)		1,96,300
Closing cash balance on 31.3.2013		<u>35,300</u>

**Answer to Question No. 4(b)**

The method of wage payment should facilitate to reduce labour cost per unit and at the same time workers are paid reasonable amount for their work. Low wages do not necessarily mean low cost of production and high wages mean high cost of production. High wages may lead to low cost of production due to the following :

- (i) High wages may have the effect of increasing labour cost but it may result in increased production and productivity. Increased production will result in lower labour cost per unit. High wages will help in recruiting the most suitable workers. There will be less loss of production due to less labour turnover. The labour force will remain satisfied with high wages and will not like to leave the organization.
- (ii) Increased production will result in lower fixed cost per unit. Thus, cost of production per unit will come down. Thus, when a worker gets more wages on the basis of the individual productivity, it is a reward for efficiency to such worker. But at the same time, management also is benefited in the form of low labour cost per unit.

This can be illustrated as under :

Worker	A	B
Standard Output(units)	100	100
Actual Output (units)	100	150
Wages	Rs.	Rs.
Normal	1,000	1,000
Bonus	—	200
Total Wages	<u>1,000</u>	<u>1,200</u>
Labour Cost Per unit	1000/100	1,200/150
	Rs. 10	Rs. 8

Thus, it is proved that high wages do not mean high labour cost.

**Question No. 5**

- (a) *Delight Chemicals Ltd., electrolyses common salt to obtain three joint products—caustic soda, chlorine and hydrogen. During a costing period, the expenditure relating to the inputs for the common process amounted to Rs. 3,50,000. After separation, expenses amounting to Rs. 1,60,000; Rs. 75,000 and Rs. 10,000 were incurred for caustic soda, chlorine and hydrogen respectively. Entire production was sold and Rs. 3,75,000; Rs. 2,50,000; and 60,000 were realized for caustic soda, chlorine and hydrogen respectively. The selling expenses were estimated @ 5% of sales. Profits @ 15%, 10% and 5% are expected from sale of caustic soda, chlorine and hydrogen respectively.*

*Draw a columnar statement showing the apportionment of joint costs and the profitability of each product.* (10 marks)

- (b) *Describe in brief different methods of analyzing financial statements?*

(5 marks)

**Answer to Question No. 5(a)****Statement Showing the Apportionment of Joint Costs and Profitability**

<i>Particulars</i>	<i>Caustic Soda Rs.</i>	<i>Chlorine Rs.</i>	<i>Hydrogen Rs.</i>	<i>Total Rs.</i>
Realisations from sale	3,75,000	2,50,000	60,000	6,85,000
Less : Expected profits (15%, 10% and 5%)	56,250	25,000	3,000	84,250
Estimated total cost	3,18,750	2,25,000	57,000	6,00,750
Less : Selling expenses (5% on sale)	18,750	12,500	3,000	34,250
Estimated cost of production	3,00,000	2,12,500	54,000	5,66,500
Less : Separation costs	1,60,000	75,000	10,000	2,45,000
Estimated shares of joint costs	1,40,000	1,37,500	44,000	3,21,500
Estimated percentage of share of same cost to total costs	43.50%	42.80%	13.7%	100%
Actual share of Joint costs (43.5 : 42.8 :13.7)	1,52,250	1,49,800	47,950	3,50,000
Add : Post Separation Costs	1,60,000	75,000	10,000	2,45,000
Actual Costs of Production	3,12,250	2,24,800	57,950	5,95,000
Add : Selling expenses (5% on sale)	18,750	12,500	3,000	34,250
Total Cost	3,31,000	2,37,300	60,950	6,29,250
Profits (Loss)	44,000	12,700	-950	55,750
Sales	3,75,000	2,50,000	60,000	6,85,000

**Answer to Question No. 5(b)**

The analysis of financial statements consists of a study of relationship and trends, to determine whether or not the financial position and results of operations as well as the financial progress of the company are satisfactory or unsatisfactory. The analytical methods or devices, listed below, are used to ascertain or measure the relationships among the financial statements items of a single set of statements and the changes that have taken place in these items as reflected in successive financial statements. The fundamental objective of any analytical method is to simplify or reduce the data under review to more understandable terms.

Analytical methods and devices used in analysing financial statements are as follows:

1. *Comparative Statements* :- These financial statements (Comparative Income Statement/ Comparative Balance Sheet) are so designed as to provide time perspective to the various elements of financial position contained therein. These statements give the data for all the periods stated so as to show absolute data of two or more years, Increase and decrease in absolute data in terms of money

values and in terms of percentages. Such comparative statements are necessary for the study of trends and direction of movement in the financial position and operating results.

2. *Common Size Statements* : Common size financial statements (Common-size Income Statement/ Common-size Balance Sheet) are those in which figures reported are converted into percentages to some common base. For this, items in the financial statements are presented as percentages or ratios to total of the items and a common base for comparison is provided. Each percentage shows the relation of the individual item to its respective total.
3. *Trend Ratios* : Trend ratios are index numbers of the movements of the various financial items in the financial statements for a number of periods. It is a statistical device applied in the analysis of financial statements to reveal the trend of the items with the passage of time. They provide a horizontal analysis of comparative statements and reflect the behaviour of various items with the passage of time.
4. *Ratio Analysis* : Ratio analysis is used to evaluate relationships among financial statement items. The ratios are used to identify trends over time for one organisation or to compare two or more organisations at one point in time. It focuses on three key aspects of a business: liquidity, profitability, and solvency. The computation of ratios facilitates the comparison of firms which differ in size. Ratios can be used to compare a firm's financial performance with industry averages.
5. *Cash Flow Statements* : Cash flow statement is prepared to know the sources of cash and its uses during a particular period of time. A statement of cash flows reports the inflows (receipts) and outflows (payments) of cash and its equivalents of an organisation during a particular period. It reports cash receipts and payments classified according to the entities' major activities - operating, investing and financing during the period. This statement reports a net cash inflow or net cash outflow for each activity and for the overall business.
6. *Fund Flow Statement* : Funds flow statement is a method by which we study changes in the financial position of a business enterprise between beginning and ending financial statement dates. It is a statement showing sources and uses of funds for a period of time.

### Question No. 6

- (a) Discuss the influence of fixed cost, variable cost and selling price on profit volume (P/V) ratio, break even point and profit. (3 marks)
- (b) The following is the Trading and Profit and Loss Account of Bright Limited for the year ended 31st March, 2011.

Particulars	Rs.	Particulars	Rs.
To Materials consumed	7,08,000	By Sales – 30,000 units	15,00,000
To Direct wages	3,71,000	By Finished Stock–1,000 units	40,000
To Works overheads	2,13,000	By Work-in-progress:	
To Administration overheads	95,500	Materials	17,000

To Selling and distribution overheads	1,13,500	Wages	8,000	
		Works overheads	5,000	30,000
To Net profit	69,000			
	<u>15,70,000</u>			<u>15,70,000</u>

Manufacturing a standard unit, the company's cost records show that:

- Works overheads have been charged to work-in-progress at 20% on prime cost.
- Administration overheads have been recovered at Rs. 3 per finished unit.
- Selling and distribution overheads have been recovered at Rs.4 per unit sold.
- The under-absorbed or over-absorbed overheads have not been adjusted into costing profit and loss account.

You are required to prepare (i) Costing profit and loss account indicating net profit, (ii) A statement reconciling the profit as disclosed by cost accounts and that shown in financial accounts. (7 marks)

- (c) A Kitchen Care Ltd. manufactures pressure cookers the selling price of which is Rs.600 per unit. Currently the capacity utilization is 60% with a sales turnover of Rs.36 lakhs. The company proposes to reduce the selling price by 20% but desires to maintain the same profit position by increasing the output. Assuming that the increased output could be made and sold, determine the level at which the company should operate to achieve the desired objective.

The following data are also available:

- Variable cost per unit Rs.120.
- Semi-variable cost (including a variable element of Rs.20 per unit) Rs.3,60,000.
- Fixed cost Rs.6,00,000 will remain constant upto 80% level. Beyond this an additional amount of Rs. 1, 20,000 will be incurred. (5 marks)

### Answer to Question No. 6(a)

In marginal costing concept fixed cost, variable cost and selling price are interrelated to profit volume ratio, break-even point and profit. Hence,

$$\text{Sales} = \text{Variable cost} + \text{Fixed cost} + \text{Profit}$$

$$\text{or Sales} - \text{Variable cost} = \text{Contribution} = \text{Fixed cost} + \text{Profit}$$

Profit Volume Ratio (P/V Ratio) establishes the relation between contribution and sales value i.e.

$$\text{P/V Ratio} = \frac{S - V}{S} \times 100$$

$$\text{Or,} \quad = \frac{C}{S} \times 100$$

$$\text{Or, } \frac{(F + P)}{S} \times 100$$

P/V ratio has direct impact on selling price and variable cost. An increase in selling price or reduction in variable cost would show an improvement in P/V ratio and vice versa. P/V ratio being a function of contribution to sales, reduction/increase in fixed cost does not affect the P/V ratio, although the total profit is increased/decreased.

At break-even point the total sales value will be equal to total cost i.e., it is a point of no profit no loss. At this point contribution is equal to fixed cost. Thus,

$$\begin{aligned} \text{Break - even point (units)} &= \frac{\text{Fixed Cost}}{\text{Selling price per unit - Variable cost per unit}} \\ &= \frac{\text{Fixed Cost}}{\text{Contribution per unit}} \\ \text{Break - even point (value)} &= \frac{\text{Fixed Cost} \times \text{Sales price}}{\text{Contribution per unit}} \\ \text{Or} &= \frac{\text{Fixed Cost}}{\text{P/V Ratio}} \end{aligned}$$

It may be noted that below the break-even point the firm will make losses, while above this point it will be making profits. This is because the variable costs vary according to the variations in the volume or level of activity; the fixed costs do not change. When a reduction or increase in selling price is effected it will affect the break-even point also. Thus, a reduction in selling price will lead to an increase in break-even point and viceversa; because when selling price is reduced the sales value will also get reduced, keeping the total cost constant. To match the total costs equal to sales, the sales volume has to be increased.

Fixed cost, variable cost and selling price have direct impact on profit. If a change in any of these variables means a change in profit. Thus,

$$\text{Profit} = \text{Selling price} - \text{Variable costs} - \text{Fixed cost.}$$

#### Answer to Question No. 6(b)

#### Costing Profit and Loss Account for the Year ended March 31, 2011

	Rs.
Materials consumed	7,08,000
Direct wages	3,71,000
Prime Cost	10,79,000
Works overheads @ 20% on prime cost	2,15,800
	<u>12,94,800</u>

Less : Work in progress:		
Materials	17,000	
Wages	8,000	
Works overheads	<u>5,000</u>	<u>30,000</u>
Works cost		12,64,800
Administrative overheads @ Rs.3 per unit (31,000 units)		<u>93,000</u>
Cost of production		13,57,800
Less : Finished stocks @ Rs.43.8 per unit		<u>43,800</u>
Cost of goods sold		13,14,000
Selling and distribution Overheads @ Rs.4 per unit sold		<u>1,20,000</u>
Cost of sales		14,34,000
Net Profit		<u>66,000</u>
Sales (30,000 units)		<u>15,00,000</u>

Note : Cost per unit = Rs. 13,57,800 ÷ 31,000 units produced = Rs. 43.80 per unit.

#### Reconciliation Statement

Profit as per cost accounts		66,000
Add : Over-absorption of works overheads	2,800	
Over-absorption of selling and distribution overheads	<u>6,500</u>	<u>9,300</u>
		75,300
Less : Under-absorption of administrative overheads	2,500	
Over-valuation of closing stock in cost books	<u>3,800</u>	<u>6,300</u>
Profit as per financial accounts		<u>69,000</u>

#### Answer to Question No. 6(c)

Sales volume at 60% capacity = Rs. 36,00,000

Selling price = Rs. 600

Variable cost = Rs. 120 + Rs. 20

= Rs. 140 (including variable portion of semi – variable Overhead)

Fixed cost = Rs. 6,00,000 + (Rs. 3,60,000 – Rs. 1,20,000)

= Rs. 8,40,000 (including fixed portion of semi variable overhead)

Contribution per unit = Rs. 600 – Rs. 140 = Rs. 460

Sales x P/V Ratio = Fixed cost + Profit

Profit at 60% capacity

Rs. 36,00,000 x (Rs. 460/Rs.600) = Rs. 8,40,000 + Profit

or Profit = Rs.19,20,000

Revised selling price = Rs. 600 – (20% of Rs. 600)	=	Rs. 480
Total variable cost (as calculated above)	=	<u>Rs. 140</u>
Revised contribution		<u>Rs. 340</u>

Sales x P/V Ratio = Fixed Cost + Profit

or Sales x 340/480 = Rs. 8,40,000 + Rs.19,20,000

Sales (in rupees) = Rs. 38,96,470

Sales in units = Rs. 38,96,470 ÷ Rs. 480 = 8,118 units i.e., 81.8% capacity

It is given that beyond 80% capacity an additional amount of Rs.1,20,000 will be incurred.

New contribution desired = Rs. 8,40,000 + Rs. 19,20,000 + Rs.1,20,000  
= Rs. 28,80,000

Sales x P/V Ratio = Rs.28,80,000

Required Sales in Rupees = Rs. 28,80,000 x 480/340 = Rs. 40,65,882

Required Sales in units = Rs. 40,65,882 ÷ 480 = 8,471 units

8,471 units should be sold to maintain the same profit or company should operate at 84.71% capacity.

#### Question No. 7

- (a) Discuss the nature of financial statements. (5 marks)
- (b) The monthly budgets for manufacturing overheads of a concern for two levels of activity were as under :

Capacity	60%	100%
Budgeted production (units)	300	500
Insurance (Rs.)	3,000	3,000
Wages (Rs.)	3,600	6,000
Consumable stores (Rs.)	4,500	7,500
Depreciation (Rs.)	12,000	12,000
Maintenance (Rs.)	3,300	4,500
Power and fuel (Rs.)	4,000	5,000

- (i) Prepare a budget for 75% capacity; and
- (ii) Find the total cost segregated into fixed and variable; per unit of output at 60%, 75% and 100% capacity. (10 marks)

#### Answer to Question No. 7(a)

Financial statements are prepared for the purpose of presenting a periodical review or report on the progress by the management and deal with the (a) status of the investments in the business and (b) results achieved during the period under review.

The data exhibited in these financial statements are the result of the combined effect of following factors are explained below:

- (i) *Recorded Facts* : It is recorded in the accounting books such as cash in hand/ at bank, B/P, B/R, sales, purchases, wages, capital and so forth. These items are listed on the basis of historical records of the transactions and valued at the price at which such transactions took place.
- (ii) *Accounting Conventions* : It has reference to certain fundamental accounting principles, the applications of which has been sanctified by long usage. For example, on account of the convention of conservation, provision is made for expected losses but expected profits are ignored. These conventions are applied for the valuation of inventory, allocation of expenditure between capital and revenue for the purpose of assets valuations etc.
- (iii) *Postulates (Assumptions)* : Postulate mean the assumptions on the basis of which financial statements of a business entity are prepared. One of these assumptions or postulates is to the effect that the enterprise will continue in business beyond the period which is covered by the financial statements, i.e., business is a going concern and the assets of the business are valued at cost less depreciation. In absence of this assumption, the assets may have to be valued at realisable value which may be negligible if the business is not a going concern.
- (iv) *Personal Judgements* : It may be noted that the application of conventions, assumptions or postulates depends on the personal judgements of the accountant. For example, the choice of selecting methods of depreciation, the mode of amortisation of fictitious assets, the method of valuation of stock, calculation of provision for doubtful debts etc. depend on the personal judgements of the accountant. However, the existence of consistency principle serves as a check on the power of the accountant to use his personal judgement.
- (v) *Accounting Standards and Guidance Notes* : Accountants are guided by various accounting standards and guidance notes in preparing the financial statement.

#### Answer to Question No. 7(b)

#### Flexible Budget

<i>Capacity level</i>	<i>60%</i>		<i>75%</i>		<i>100%</i>	
<i>Budgeted Production</i>	<i>300</i>		<i>375</i>		<i>500</i>	
<i>Items of Cost</i>	<i>Total Cost</i>	<i>Per unit</i>	<i>Total Cost</i>	<i>Per unit</i>	<i>Total Cost</i>	<i>Per unit</i>
	<i>Rs.</i>	<i>Rs.</i>	<i>Rs.</i>	<i>Rs.</i>	<i>Rs.</i>	<i>Rs.</i>
<b>Variable Cost:</b>						
Wages	3600	12	4500	12	6000	12
Consumable Stores	4500	15	5625	15	7500	15
Maintenance	1800	6	2250	6	3000	6
Power & Fuel	1500	5	1875	5	2500	5

<i>Capacity level</i>		60%	75%	100%		
<i>Budgeted Production</i>		300	375	500		
<i>Items of Cost</i>	<i>Total Cost</i>	<i>Per unit</i>	<i>Total Cost</i>	<i>Per unit</i>	<i>Total Cost</i>	<i>Per unit</i>
	<i>Rs.</i>	<i>Rs.</i>	<i>Rs.</i>	<i>Rs.</i>	<i>Rs.</i>	<i>Rs.</i>
Total Variable cost per unit(A)	<u>11400</u>	<u>38</u>	<u>14250</u>	<u>38</u>	<u>19000</u>	<u>38</u>
Fixed Costs :						
Maintenance	1500	5	1500	4	1500	3
Power & Fuel	2500	8.33	2500	6.67	2500	5
Insurance	3000	10	3000	8	3000	6
Depreciation	<u>12000</u>	<u>40</u>	<u>12000</u>	<u>32</u>	<u>12000</u>	<u>24</u>
Total fixed cost per unit (B)	<u>19000</u>	<u>63.33</u>	<u>19000</u>	<u>50.67</u>	<u>19000</u>	<u>38</u>
Total cost/per unit (A+B)	30,400	101.33	33250	88.67	38,000	76

*Working Notes :*

The fixed and variable elements included in each item of factory overhead have been ascertained as follows:

$$\begin{aligned}
 \text{Wages : Variable cost per unit} &= \frac{\text{Changes in Expense}}{\text{Change in Output}} \\
 &= \frac{6,000 - 3,600}{500 - 300} \\
 &= \text{Rs.12 per unit}
 \end{aligned}$$

$$\begin{aligned}
 \text{Consumable stores : Variable cost per unit} &= \frac{\text{Changes in Expense}}{\text{Change in Output}} \\
 &= \frac{7,500 - 4,500}{500 - 300} \\
 &= \text{Rs.15 per unit}
 \end{aligned}$$

$$\begin{aligned}
 \text{Maintenance : Variable cost per unit} &= \frac{\text{Changes in Expense}}{\text{Change in Output}} \\
 &= \frac{4,500 - 3,300}{500 - 300} \\
 &= \text{Rs. 6 per unit}
 \end{aligned}$$

Variable maintenance cost for 300 units (60%) units =  $300 \times 6 = \text{Rs. } 1,800$

Fixed maintenance cost for 300 units =  $\text{Rs. } 3,300 - \text{Rs. } 1,800 = \text{Rs. } 1,500$

$$\begin{aligned} \text{Power and fuel : Variable cost per unit} &= \frac{\text{Changes in Expense}}{\text{Change in Output}} \\ &= \frac{5,000 - 4,000}{500 - 300} \\ &= \text{Rs. } 5 \text{ per unit} \end{aligned}$$

Variable power and fuel cost for 300 units =  $300 \times \text{Rs. } 5 = \text{Rs. } 1,500$

Fixed power and fuel for 300 (60%) units =  $\text{Rs. } 4,000 - \text{Rs. } 1,500 = \text{Rs. } 2,500$ .

### Question No. 8

- (a) Calculate the machine hour rate for a machine for the year from the following information related to five machines of similar type in a shop.

Rent and rates for the shop	Rs. 2400
Depreciation each machine	Rs. 250
Repairs & maintenance for 5 machines	Rs. 500
Electric charges for light in the shop	Rs. 270
Power Consumed @5paise per unit	Rs. 1500
Two attendants for 5 machines	Rs. 30 per month
One supervisor for 5 machines	Rs. 125 per month
Sundry supplies for the shop	Rs. 225

Each machine uses 10 units of power per hour. (7 marks)

- (b) What do you mean by under/over absorption of overheads? How is it treated in cost accounts? (5 marks)

- (c) Following information is given:

Cost of placing a purchase order	Rs. 20
No. of units to be purchased during the year	5,000 Nos.
Purchase price per unit inclusive of transport cost	Rs. 50
Annual storage cost per unit	Rs. 5

Details of lead time :

– Average	10 days
– Maximum	15 days
– Minimum	6 days
– For emergency purchase	4 days

Rate of consumption per day :

– Average	15 units
– Maximum	20 units

Calculate — (i) re-ordering level; (ii) re-order quantity; (iii) maximum level; (iv) minimum level; and (v) danger level. (3 marks)

**Answer to Question No. 8(a)****Computation of Machine Hour Rate**

<i>Particulars</i>	<i>Per Machine (Rs.)</i>	<i>Per hour (Rs.)</i>
<b>Standing Charges :</b>		
Rent and Rates per machine (Rs. 2,400/5)	480	
Lighting in Shop per machine (Rs. 270/5)	54	
Attendant's Salary per machine (Rs. 30 x 2 x 12)/5	144	
Supervision per machine (Rs. 125 x 12)/5	300	
Sundry Supplies per machine (Rs. 225/5)	45	
Total Standing Charges	<u>1,023</u>	
Standing Charges per hour (1,023/600 hrs.)		1.70
<b>Machine Expenses :</b>		
Depreciation (250/600)		0.42
Repairs and Maintenance (100/600)		0.17
Power (10 units per hour @ 5 paise per unit)		0.50
<b>Machine-hour Rate</b>		<u>2.79</u>

*Working Notes :*

$$(i) \text{ Total Machine hours for 5 machines} = \frac{\text{Total Cost of Power}}{\text{Cost of Power per hour}} = \frac{1,500}{0.50}$$

$$= 3,000 \text{ hours}$$

$$\text{Total Machine hours per machine} = 3,000/5 = 600 \text{ hrs.}$$

**Answer to Question No. 8(b)**

It is the normal practice to apply factory and administration overhead expenses to production. But, the actual factory and administration overhead expenses incurred and the amount of overhead applied to production on the basis of pre-determined rates will rarely be the same. If the actual expenses fall short of the amount applied, there is said to be over-absorption of overheads and conversely, if the actual expenses exceed the amount applied to production, there is a case of under-absorption. The following are the main methods of disposal of under or over absorption of overheads:

(i) *Use of supplementary rates:*

In case, the amount of under or over absorption is considerable, the cost of jobs or products is adjusted by means of a supplementary rate. This rate is determined by dividing the amount of under or over absorption by the case that was adopted for absorption. Under absorption of overheads is set right by increasing the rate of overhead absorption to the extent of supplementary rate whereas in the case

of over absorption of overheads, the rate of overhead absorption is reduced to the extent of supplementary rate.

(ii) *Write off to Costing Profit and Loss Account*

In case, the difference between the actual and absorbed overheads is not large or it is due to abnormal reasons, the method is to write it off to Costing Profit and Loss Account.

(iii) *Carry over of overheads*

This method is generally used in seasonal industries where under or over absorbed overheads of one season are carried forward to the next season where there are reasonable prospects of their being counter-balanced till the end of the accounting period. The balance of under or over absorbed overheads at the end of the year is transferred to an Overhead Reserve or Suspense Account and is carried forward to the next years for absorption. This method is preferably applied when the normal business cycle is more than one year and in the case of new projects and schemes when the output is low in the initial stages of production and cannot bear the entire share of overhead.

**Answer to Question No. 8(c)**

(i) Reordering level = Maximum usage × Maximum delivery time

$$= 20 \text{ units} \times 15 \text{ days} = 300 \text{ units}$$

(ii) Re-order Quantity =  $\sqrt{\frac{2U \times P}{S}}$

$$= \sqrt{\frac{2 \times 5000 \times 20}{5}}$$

$$= 200 \text{ units}$$

(iii) Minimum level = Reorder level – (Normal usage × Average delivery time in days)

$$= 300 \text{ units} - (15 \text{ units} \times 10 \text{ days}) = 150 \text{ units}$$

(iv) Maximum level = Reorder level – (Minimum usage × Minimum delivery time) + Reorder quantity

$$= 300 \text{ units} - (15 \times 6 \text{ days}) + 200 \text{ units} = 410 \text{ units.}$$

\*Minimum usage is not available, so Average usage is taken.

(v) Danger level = Average Consumption X Maximum re-order period for emergency purchase

$$= 15 \text{ units per day} \times \text{Emergency purchase for 4 days}$$

$$= 60 \text{ units}$$


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### TEST PAPER 3/2013

Time allowed : 3 hours

Max. Marks : 100

[Answer Question No.1 which is **COMPULSORY**  
and **ANY FIVE** of the rest from this part.]

#### Question No. 1

- (i) State with reasons in brief, whether the following statements are true or false.
- (a) Bin card shows the value of material at any moment of time.
  - (b) If a labour saves half of time of the standard time, the incentive amount under Halsey Plan and Rowan Plan will be equal.
  - (c) Loss of material due to fire is treated as overhead and included for calculating cost of production.
  - (d) Cost reduction is cost control.
  - (e) A firm is said to be financially sound if it is not able to meet its long term commitments. (2 marks each)
- (ii) Re-write the following sentences after filling-up the blank space with appropriate word(s) so as to convey the correct meaning :
- (a) Profit volume ratio is logical extension of \_\_\_\_\_
  - (b) Debt equity ratio is the relation between \_\_\_\_\_ and \_\_\_\_\_ in a firm.
  - (c) Break even is the point where total \_\_\_\_\_ equals the \_\_\_\_\_.
  - (d) \_\_\_\_\_ is a summary of all functional budgets in a capsule form.
  - (e) All indirect costs are collectively called \_\_\_\_\_. (1 mark each)
- (iii) Comment on any two of the following:
- (a) "Management accounting is an extension of managerial aspects of financial accounting and cost accounting".
  - (b) "Costing system has become an essential tool in the hands of management".
  - (c) "Preparation of break -even chart depends on various assumptions". (5 marks each)

#### Answer to Question No. 1(i)(a)

##### True

The bin card is posted as and when a transaction takes place. Only after the transaction is recorded, the items are received/issued. On receipt of materials, the quantity is entered in the bin card from the goods received note in the receipt column and the issues to various departments in the issue column. The balance quantity is calculated and recorded.

**Answer to Question No. 1(i)(b)****True**

If the time saved by a labourer is less than 50% of the standard time the incentives under Rowan Plan is better. If the time saved is more than 50% of the standard time, the incentive under Halsey Plan is better. Hence a labourer saves half of time of the standard time, the incentive amount under Halsey Plan and Rowan Plan will be equal.

**Answer to Question No. 1(i)(c)****False**

Loss of material due to fire is treated as abnormal loss and is charged to costing profit and loss account.

**Answer to Question No. 1(i)(d)****False**

Cost control is different from cost reduction. The word "control" indicates an exercise in restraint. When expenses are controlled, they are restrained from growing larger than they should grow. The process of cost reduction, on the other hand, concerns reducing expenses that are too high. Controlling is a very different concept than reducing.

**Answer to Question No. 1(i)(e)****False**

A firm is said to be financially sound if it is able to meet its both long and short term commitments.

**Answer to Question No. 1(ii)**

- (a) Profit volume ratio is logical extension of **cost volume profit analysis**.
- (b) Debt equity ratio is the relation between **borrowed funds** and **owner's capital** in a firm.
- (c) Break even is the point where total **revenue** equals the **total costs**.
- (d) **Master Budget** is a summary of all functional budgets in a capsule form.
- (e) All indirect costs are collectively called **overhead**.

**Answer to Question No. 1(iii)(a)**

Management accounting links management with financial accounting and cost accounting. All such information that is useful to the management is the subject matter of management accounting. Any information required for decision making is the concern of management accounting. Management accounting, provides information for internal users, though the basic data come from the same accounting system i.e., financial accounting and cost accounting systems.

Management accounting collects and provides accounting, cost accounting, economic and statistical information to the men at various managerial levels to assist them in the performance of managerial functions and their evaluations. It is the development and application of various techniques of recording, analysis, interpretation and presentation, making the financial, costing, and other data active and effective in the performance of managerial functions, viz., planning, decision-making and control. It

should be noted that management accounting makes use of not only accounting techniques but also of statistical and mathematical techniques. Management accounting is forward looking and able to treat economic information and data to make it suitable for use by the management.

**Answer to Question No. 1(iii)(b)**

Costing as an Aid to Management: Cost accounting provides invaluable aid to management in following ways.

- Cost accounting helps in periods of trade depression and trade competition.
- Cost accounting aids price fixation.
- Cost accounting helps in making estimates.
- Cost accounting helps in channelizing production on right lines.
- Cost accounting eliminates wastages.
- Cost accounting makes comparisons possible.
- Cost accounting provides data for periodical profit and loss account.
- Cost accounting helps in determining and enhancing efficiency.
- Cost accounting helps in inventory control.

**Answer to Question No. 1(iii)(c)**

A number of assumptions are made in computing break-even point or drawing breakeven chart. Preparation of break-even charts depends on the following assumptions:

- (i) That the costs are either fixed or variable and all costs are clearly segregated into their fixed and variable elements. This cannot possibly be done accurately and the difficulties and complications involved in such segregation make the break-even point inaccurate.
- (ii) That selling price remains unchanged at all levels of output. In practice this is not always so. Further, a change in price may result in an increase or decrease in volume and vice-versa.
- (iii) That the behaviour of both costs and revenue is linear. Costs and revenue depend upon several other factors besides volume and the cost and revenue line drawn in relation to volume are not always straight lines.
- (iv) That fixed prices remain constant and variable costs vary in proportion to the volume. Fixed costs are constant only within a limited range and are liable to change at varying levels of activity and also over a long period, particularly when additional plants and equipments are introduced.
- (v) That sales mix is constant or only one product is manufactured. A combined analysis taking all the products of the sales mix does not reflect the correct position regarding individual products.
- (vi) That production and sales figures are identical or the change in opening and closing stocks of the finished product is not significant.
- (vii) That the units of production on the various product lines are identical. Otherwise, it is difficult to find a homogeneous factor to represent volume.

- (viii) That the activities of the concern and productivity remain unchanged during the period of study.

**Question No. 2**

- (a) *BizBag* has just entered the luggage market and has decided to produce two different briefcases: nylon and leather. They are deciding whether to use job-order costing or activity based costing. Based on next year's budget, two cost pools have been developed with the following information:

	Nylon	Leather	Overhead Assigned
Direct labour hours	50,000	100,000	Rs.0
Sewing machine hours	1,000	1,000	Rs.200,000
Machine setup hours	100	400	Rs.100,000

Required:

- (i) Compute the plant-wide overhead rate if overhead is applied on the basis of direct labour hours.
- (ii) Compute the overhead rates using activity based costing.
- (iii) Determine the difference in the amount of overhead allocated to each product between the two methods. (8 marks)
- (b) *Lookahead Ltd.* produces and sells a single product. Sales budget for the calendar year 2013 for each quarter is as under :

Quarter	No. of Units to be Sold
I	12,000
II	15,000
III	16,500
IV	18,000

The year 2013 is expected to open with an inventory of 4,000 units of finished product and close with an inventory of 6,500 units.

Production is customarily scheduled to provide for two-thirds of the current quarter's demand plus one-third of the following quarter's demand. Thus production anticipates sales volume by about one month. The standard cost details for one unit of the product is as follows :

- Direct materials 10 Kgs. @ 50 paise per kg.
- Direct labour 1 hour 30 minutes @ Rs.4 per hour.
- Variable overheads 1 hour 30 minutes @ Rs.1 per hour.
- Fixed overheads 1 hour 30 minutes @ Rs.2 per hour based on a budgeted production volume of 90,000 direct labour hours for the year.

Answer the following —

- (i) Prepare a production budget for the year 2013 by quarters, showing the number of units to be produced. (3 marks)
- (ii) If the budgeted selling price per unit is Rs.17, what would be the budgeted profit for the year as a whole? (2 marks)

- (iii) In which quarter of the year the company is expected to break-even? Which one is more beneficial to workers? (2 marks)

**Answer to Question No. 2(a)**

- (i) Plant-wide overhead rate on the basis of Direct Labour Hours (DLH)

$$= \frac{\text{Total Overhead}}{\text{Total Direct Labour Hours}}$$

$$= \frac{100,000 + 200,000}{50,000 + 100,000}$$

$$= \text{Rs. 2 Per hour}$$

- (ii) Overhead rate using Activity Based Costing

Activities (1)	Overhead Cost (2)	Total Expected Activity (3)	Activity Rate (4)= (2)/(3)
Direct Labour Hours (DLH)	Rs. 0	50,000 + 100,000 = 1,50,000 DLH	Rs. 0 per DLH
Sewing Machine Hours (SMH)	Rs. 2,00,000	1,000 + 1,000 = 2,000 SMH	Rs. 100 per SMH
Machine Setup Hours (MSH)	Rs. 1,00,000	100 + 400 = 500 MSH	Rs. 200 per MSH

- (iii) Difference between the Overhead Allocation (Job Costing and Activity Based Costing)

**Overhead Allocation under Job Costing**

Particulars	Nylon	Leather
Direct Labour Hours (A)	50,000	1,00,000
Overhead Rate (B) (As determined above in para (i))	Rs. 2 per DLH	Rs. 2 per DLH
Overhead Assigned (A x B)	Rs. 1,00,000	Rs. 2,00,000

**Overhead Allocation under Activity Based Costing**

Particulars	Activity Rate	Nylon		Leather	
		Hours	Amount in Rs.	Hours	Amount in Rs.
Direct Labour Hours	Rs. 0 per DLH	50,000	0	1,00,000	0
Sewing Machine Hours (SMH)	Rs. 100 per SMH	1,000	1,00,000	1,000	1,00,000
Machine Setup Hours (MSH)	Rs. 200 per MSH	100	20,000	400	80,000
<b>Overhead Assigned</b>			<b>1,20,000</b>		<b>1,80,000</b>

Shift in overhead allocated (If firm switches from Job Costing to Activity Based Costing)

in case of Nylon is + Rs. 20,000 (Rs. 1,20,000 - Rs.1,00,000)

in case of leather is -Rs.20,000 (Rs. 1,80,000 - Rs. 2,00,000)

Shift in overhead allocated (If firm switches from Activity Based Costing to Job Costing)

in case of Nylon is - Rs. 20,000 (Rs. 1,00,000 - Rs. 1,20,000)

in case of leather is + Rs.20,000 (Rs. 2,00,000 - Rs. 1,80,000)

**Answer to Question No. 2(b)**

Number of units to be sold during the year 2013

Quarter I 12,000 units

Quarter II 15,000 units

Quarter III 16,500 units

Quarter IV 18,000 units

Sales during the year 61,500 units

**(i) Production Budget  
(for the year 2013 by quarters)**

	Quarter I Units	Quarter II Units	Quarter III Units	Quarter IV Units	Total Units
Units to be produced in each quarter: 2/3rd of the current quarter's sales demand	8,000 (2/3 x 12,000)	10,000 (2/3 x 15,000)	11,000 (2/3 x 16,500)	12,000 (2/3 x 18,000)	41,000
Add: 1/3 of the following quarter's sales demand in first 3 quarters and closing inventory in the 4th quarter	5,000 (1/3 x 15,000)	5,500 (1/3 x 16,500)	6,000 (1/3 x 18,000)	6,500	23,000
<b>Total</b>	<b>13,000</b>	<b>15,500</b>	<b>17,000</b>	<b>18,500</b>	<b>64,000</b>

(1) Variable Cost per unit

		Rs.	Rs.
Direct Material :	10 kgs. @ 50 paise per kg.	5.00	
Direct labour :	1-½ hours @ Rs.4 per hour	6.00	
Variable overheads :	1-½ hours @ Re.1 per hour	<u>1.50</u>	12.50

(2) Fixed overhead per annum : 90,000 hrs. @ Rs. 2 = Rs.1,80,000

(ii) *Statement of Budgeted Profit for the year (as a whole)*

	Rs.
Total Sales : 61,500 units @ Rs.17 per unit	10,45,500
Less : Total Variable Cost : 61,500 units @ 12.50 per unit	7,68,750
Contribution	2,76,750
Less : Fixed cost for the year	1,80,000
Profit for the year 2013 as a whole	96,750

(iii) *Calculation of Break-even point/sales*

$$\begin{aligned} \text{Break Even Point} &= \frac{\text{Fixed Overheads}}{\text{Selling Price per unit} - \text{Variable Cost per unit}} \\ &= \frac{\text{Rs. 1,80,000}}{(\text{Rs. 17} - \text{Rs. 12.50})} \\ &= 40,000 \text{ units.} \end{aligned}$$

Total sales (in units) by the end of 3rd quarter will be 43,500 (i.e. 12,000 + 15,000 + 16,500).

Therefore, the company will break-even in the later part of the 3rd quarter.

**Question No. 3**

- (a) *Differentiate between 'Halsey wage plan' and 'Rowan wage plan'. (5 marks)*
- (b) *On 1st July, 2012, Delux Ltd. undertook a contract for Rs.5,00,000. On 30th June, 2013 when the accounts were closed, the following details about the contract were gathered :*

	Rs.
<i>Material purchased</i>	1,00,000
<i>Wages paid</i>	45,000
<i>General expenses</i>	10,000
<i>Plant purchased</i>	50,000
<i>Materials on hand (30.6.2012)</i>	25,000
<i>Wages accrued (30.6.2013)</i>	5,000
<i>Work certified</i>	2,00,000
<i>Cash received</i>	1,50,000
<i>Work uncertified</i>	15,000
<i>Depreciation of plant</i>	5,000

*The above contract has an escalation clause which reads as follows:*

*"In the event of prices of materials and rates of wages increase by more than 5%, the contract price would be increased accordingly by 25% of the rise in the cost of materials and wages beyond 5% in each case."*

*It was found that since the date of signing the agreement, the prices of materials and wage rates increased by 25%. The value of the work certified does not take into account the effect of the above clause.*

*Prepare the contract account.*

*(10 marks)*

**Answer to Question No. 3(a)**

Total wages under Halsey Wage Plan and Rowan Wage Plan is calculated as under:

*Halsey Plan :*

$$\text{Total Wages} = \text{Time taken} \times \text{Hourly rate} + \frac{1}{2} (\text{Time saved}) \times \text{Hourly rate}$$

*Rowan Plan*

$$\text{Total Wages} = \text{Time taken} \times \text{Hourly rate} + \left[ \frac{\text{time saved}}{\text{standard time}} \right] \times \text{time taken} \times \text{hourly rate}$$

The following are the points of distinction between Halsey wage plan and Rowan wage plan:

- (i) In Halsey wage plan bonus is usually set at 50% of the time saved and it does not serve as strong incentive, whereas under Rowan wage plan bonus is that portion of the wages of the time taken which time saved bears to the standard time, and serves as a strong incentive for increasing efficiency.
- (ii) In Rowan wage plan the quality of work does not suffer much as the worker is not induced to rush through the work since bonus increases at a decreasing rate at higher levels of efficiency. In Halsey wage plan, the worker is induced to rush through the work since he gets extra wages for every 50% of the time saved.
- (iii) The effective labour rate per hour in Rowan wage plan is higher up to 50% of the time saved and falls thereafter whereas in the Halsey wage plan the effective labour rate per hour is lower up to 50% of the time saved.
- (iv) If the time taken is more than the time saved, then worker is benefitted under Rowan Plan, while in case time saved is more, workers are benefitted under Halsey Plan.

**Answer to Question No. 3(b)****CONTRACT ACCOUNT**

**For the year ending 30th June, 2013**

	<i>Rs.</i>		<i>Rs.</i>
To Materials	1,00,000	By Work-in-Progress :	
To Wages (45,000+5,000)	50,000	Work certified	2,00,000
To General Expenses	10,000	Work uncertified	15,000
To Depreciation of Plant	5,000	By Materials on hand	25,000
To Notional Profit c/d	80,000	By Contract Escalation(1)	5,000
	<u>2,45,000</u>		<u>2,45,000</u>
To Profit and Loss A/c		By Notional Profit b/d	80,000
$\left( 80000 \times \frac{1}{3} \times \frac{1,50,000}{2,00,000} \right)$	20,000		
To Work-in-Progress A/c (Reserve)	60,000		
	<u>80,000</u>		<u>80,000</u>

## Working Note (1)

Materials	Total increase	Upto 5%	Beyond 5%
1,00,000 – 25,000 x $\frac{25}{125}$ [in the ratio of 5:20 ]	15,000	3,000	12,000
Wages 50,000 x $\frac{25}{125}$	10,000	2,000	8,000
<b>Total Increase</b>	<b>25,000</b>	<b>5,000</b>	<b>20,000</b>

Increase in contract price = 25% of increase in material and wages beyond 5% :

$$= \frac{25}{100} \times 20,000 = \text{Rs. } 5,000$$

**Question No. 4**

(a) X Limited has the following balances as on 1st April, 2012 :

	Rs.
Fixed Assets	11,40,000
Less: Depreciation	<u>(3,99,000)</u>
	7,41,000
Stocks and Debtors	4,75,000
Bank Balance	66,500
Creditors	1,14,000
Bills Payable	76,000
Capital (Shares of Rs. 100 each)	5,70,000

The company made the following estimates for Financial Year 2012-13:

- (i) The company will pay a free of tax dividend of 10%. The rate of tax being 25%.
- (ii) The company will acquire fixed assets costing Rs. 1,90,000 after selling one machine for Rs.38,000 costing Rs. 95,000 and on which depreciation provide amounted to Rs. 66,500.
- (iii) Stocks and Debtors, Creditors and Bills payables at the end of financial year are expected to be Rs. 5,60,500, Rs. 1,48,200 and Rs. 98,800 respectively.
- (iv) The profit would be Rs. 1,04,500 after depreciation of Rs. 1,14,000.

You are required to:

Prepare the Projected Cash Flow Statement and ascertain the bank balance of X Ltd. at the end of Financial Year 2012-13. (10 marks)

- (b) Distinguish between fixed and flexible budget. (5 marks)

**Answer to Question No. 4(a)****Projected Cash Flow Statement for the Year ending 31st March, 2011**

<i>Particulars</i>	<i>Rs.</i>
<b>I Cash Flows from Operating Activities</b>	
Profit for the year	1,04,500
Add : Depreciation (non-cash item)	1,14,000
Less : Profit on sale of machine	(9,500)
Operating Profit before Working Capital Changes	<u>2,09,000</u>
Add : Increase in :	
Creditors (Rs. 1,48,200 – Rs. 1,14,000) = Rs. 34,200	
Bills Payables (Rs. 98,800 – Rs. 78,000) = <u>Rs. 22,800</u>	<u>57,000</u>
	2,66,000
Less : Increase in Stocks & Debtors (Rs. 5,60,500 – Rs. 4,75,000)	(85,500)
<b>Cash Flows from Operating Activities</b>	<b><u>1,80,500</u></b>
<b>II Cash Flows from Investing Activities</b>	
Sale of Machine	38,000
Purchase of Fixed Assets	(1,90,000)
<b>Cash used in Investing Activities</b>	<b><u>(1,52,000)</u></b>
<b>III Cash Flows from Financing Activities</b>	
Payment of Dividend (Rs. 57,000 + 19,000)	(76,000)
<b>Cash Used in Financing Activities</b>	<b><u>(76,000)</u></b>
<b>IV Net Decrease in Cash &amp; Cash Equivalent (I+ II + III)</b>	<b><u>(47,500)</u></b>
V <i>Opening Cash &amp; Cash Equivalents (Bank Balance)</i>	66,500
<b>VI Closing Cash &amp; Equivalents (Bank Balance)</b>	<b><u>19,000</u></b>

*Working Notes:*

- (i) Payment of Dividend and Tax thereon

Tax Free Dividend = 10% of Rs. 5,70,000 = Rs. 57,000

Gross up Amount = (Rs. 57,000 x 100/75) = Rs. 76,000

Total Dividend                      Rs. 76,000

Less : Tax @ 25%                      Rs. 19,000Payment of Dividend                      Rs. 57,000*Note : Income Tax on Company's Profit has been ignored.*

**Answer to Question No. 4(b)**

A fixed budget is a budget designed to remain unchanged irrespective of the level of activity attained. It is designed for a specific planned output level and is not adjusted to the level of activity attained at the time of comparisons between the budgeted and actual costs. A fixed budget has only a limited application and is ineffective as a tool for cost control.

A flexible budget is a budget designed to change in accordance with the level of activity actually attained. It is prepared in a manner so as to give the budgeted cost for any level of activity attained. The distinction between fixed budget and flexible budgets can be summarized as under:

<i>Fixed budget</i>	<i>Flexible budget</i>
(i) It is inflexible and remains the same irrespective of the volume of business activity.	It can be suitably recasted quickly to suit changed conditions.
(ii) It assumes that conditions would remain static.	It is designed to change according to a change in the level of activity.
(iii) Costs are not classified according to their variability, i.e., fixed, variable and semi-variable.	Costs are classified according to the nature of their variability.
(iv) Actual and budgeted performances cannot be correctly compared if the volume of output differs.	Comparisons are realistic since the changed plan figures are placed against actual ones.
(v) Accurate forecasting of results is difficult.	Flexible budget clearly shows the impact of various expenses on the operational aspects of the business.
(vi) All conditions will remain un-altered is an unrealistic expectation on the part of the management	Under flexible budgeting, series of budgets are prepared for different levels of activity.
(vii) Costs cannot be ascertained if there is a change in the circumstances.	Cost can be easily ascertained at different levels of activity. The task of fixing prices becomes easy.
(viii) This budget has a limited application and is ineffective as a tool for cost control.	This budget has more applications and can be used as a tool for effective cost control.

**Question No. 5**

- (a) Standard output in 10 hrs. is 240 units; actual output in 10 hours is 264 units. Wage rate is Rs.10 per hour. Calculate the amount of bonus and total wages under Emerson Plan. (5 marks)
- (b) Following particulars are available for the year 2013 in respect of a product manufactured by GAMMA Ltd.
- monthly demand : 2000 units

- ordering cost : Rs. 200
- Annual carrying cost per unit : 6½% of unit price
- Purchase price of one input unit : Rs. 200
- Usage : Minimum : 50 units per week  
Maximum : 150 units per week
- Re-order period : 8 to 12 weeks

Compute following from the above details:

- (a) Re-order quantity
- (b) Re-order level
- (c) Minimum level
- (d) Average stock level
- (e) Total cost p.a. if order size is of EOQ. (10 marks)

**Answer to Question No. 5(a)**

$$\text{Efficiency Percentage} = \frac{264}{240} \times 100 = 110\%$$

As per Emerson plan, in case of efficiency above 100%, bonus of 20% of basic wages plus 1% for each 1% increase in efficiency is admissible.

$$\text{So, new bonus percentage} = 20\% + 1\% \times (110 - 100) = 30\%$$

$$\begin{aligned} \text{Total Earnings} &= (\text{AH} \times \text{R}) + 30\% (\text{AH} \times \text{R}) \\ &= (10 \times \text{Rs. } 10) + 30\% (10 \times \text{Rs. } 10) \\ &= \text{Rs. } 100 + \text{Rs. } 30 = \text{Rs. } 130 \end{aligned}$$

**Answer to Question No. 5(b)**

$$(a) \text{ Re-order quantity} = \sqrt{\frac{2AO}{C}} = \sqrt{\frac{2 \times 5200 \times 200}{13}} = 400 \text{ units}$$

$$\begin{aligned} A &= \text{Annual demand of input units} = 52 \text{ weeks} \times \text{Normal Usage per week} \\ &= 52 \text{ weeks} \times (50 + 150)/2 = 5200 \text{ units} \end{aligned}$$

$$O = \text{Ordering cost per order} = \text{Rs. } 200$$

$$C = \text{Annual carrying cost per unit} = 6\frac{1}{2}\% \text{ of Rs. } 200 = \text{Rs. } 13$$

(b) Re-order Level (ROL)

$$\begin{aligned} &= \text{Maximum Usage} \times \text{Maximum Re-order Period} \\ &= 150 \text{ units} \times 12 \text{ weeks} = 1800 \text{ units.} \end{aligned}$$

(c) Minimum Level

$$\begin{aligned} &= \text{Re-order level} - (\text{Normal Usage} \times \text{Average re-order period}) \\ &= 1800 \text{ units} - (100 \text{ units} \times 10 \text{ weeks}) \\ &= 1800 \text{ units} - 1000 \text{ units} \\ &= 800 \text{ units} \end{aligned}$$

## (d) Maximum Level

$$\begin{aligned}
 &= \text{Re-order level} + \text{Re-order quantity} - (\text{Minimum Usage} \times \text{Minimum Re-order Period}) \\
 &= 1800 \text{ units} + 400 \text{ units} - (50 \text{ units} \times 8 \text{ weeks}) \\
 &= 2200 - 400 \text{ units.} \\
 &= 1800 \text{ units}
 \end{aligned}$$

$$\begin{aligned}
 \text{(e) Average Stock Level} &= \frac{1}{2} (\text{Minimum Stock Level} + \text{Maximum Stock Level}) \\
 &= \frac{1}{2} (800 \text{ units} + 1800 \text{ units}) = 1300 \text{ units} \\
 \text{Alternatively,} &= \text{Minimum Level} + \frac{1}{2} \text{ Re-order quantity} \\
 &= 800 \text{ units} + 400 \times \frac{1}{2} = 1000 \text{ units}
 \end{aligned}$$

## (g) Statement showing Total Cost at EOQ

A. Annual Usage	5,200 units
B. Order size	400 units
C. No. of orders (A/B)	13
D. Ordering cost per order	Rs. 200
E. Total order cost (C x D)	Rs. 2,600
F. Average Inventory (Order size/2)	200 units
G. Carrying cost per unit (6.5% of Rs. 200)	Rs. 13
H. Total Carrying Cost (F x G)	Rs. 2,600
I. Total Ordering & carrying cost (E + H)	Rs. 5,200
J. Purchase price (5,200 x Rs. 200)	Rs. 10,40,000
K. Total cost (I + J)	Rs. 10,45,200

**Question No. 6**

- (a) Discuss the usefulness of preparing cash flow statement. (5 marks)
- (b) A product passes through three processes — A, B and C. The details of expenses incurred on the three processes during the year 2012-13 were as under:

Particulars	Process A	Process B	Process C
Units issued (units)	1,000	—	—
Cost per unit (Rs.)	500	—	—
Sundry materials (Rs.)	10,000	15,000	5,000
Labour (Rs.)	26,000	80,000	63,920
Direct expenses (Rs.)	6,000	18,150	27,200
Sale price of output per unit (Rs.)	700	1,000	2,000

Actual output of the three processes was — Process A 930 units; Process B 540 units and Process C 210 units. Two-third of output of Process-A and one-

*half of output of Process-B was passed on to the next process and the balance was sold.*

*The entire output of Process-C was sold.*

*The normal loss of the three processes, calculated on the input of every process was: Process – A: 5%; Process – B 15% and Process – C 20%. The loss of Process–A was sold at Rs. 10 per unit, that of Process-B at Rs.30 per unit, and that of Process-C at Rs.60 per unit. Selling and distribution expenses during the year were Rs.90, 000. These are not allocable to the processes but to be considered while drawing the income statement.*

*Prepare the three processes accounts and a statement of income. (10 marks)*

**Answer to Question No. 6(a)**

The usefulness of cash flow statement can be summarised as follows:

- (i) *Predict future cash flows* : The cash flow statement makes it possible to predict the amounts, timing and uncertainty of future cash flows on the basis of what has happened in the past. This approach is better than accrual basis data presented by profit and loss account and the balance sheet.
- (ii) *Determine the ability to pay dividends and other commitments* : A cash flow statement indicates the sources and uses of cash under suitable headings such as operating, investing and financing activities. Shareholders are interested in receiving dividends on their investments in the shares. Creditors want to receive their interest and principal amount on time. The statement of cash flows helps investors and creditors to predict whether the business can make these payments.
- (iii) *Show the relationship of net income to changes in the business cash* : Usually cash and net income move together. High levels of income tend to lead to increase in cash and vice-versa. However, a company's cash balance can decrease when its net income is high, and cash can increase when income is low. The users want to know the difference between the net profit and net cash provided by operations. The net profit shows the progress of the business during the year while cash flow relates more to the liquidity of the business. The users can assess the reliability of net profit with the help of cash flow statement.
- (iv) *Efficiency in cash management* : Cash flow analysis helps in evaluating financial policies and cash position. It facilitates the management to plan and co-ordinate the financial operations properly. The management can estimate how much funds are needed, from which source they will be derived, how much can be generated internally and how much should be arranged from outside.
- (v) *Discloses the movement of cash* : A comparison of cash flow statement for the previous year with the budget for that year would indicate to what extent the resources of the enterprise were raised and applied. A comparison of the original forecast with actual result may highlight trend of movement that might otherwise remain undetected.
- (vi) *Discloses success or failure of cash planning* : A success or failure of cash planning can be known by comparing the projected cash flow statement with the

actual cash flow statement and necessary remedial measures can be taken. Moreover it provides a better measure for inter-period and inter-firm comparison.

- (vii) *Evaluate management decisions* : The statement of cash flows reports the companies' investing and financing activities and thus gives the investors and creditors about cash flow information for evaluating managers' decisions.

**Answer to Question No. 6(b)**

<b>Process A Account</b>					
Dr.					Cr.
<i>Particulars</i>	<i>Units</i>	<i>Rs.</i>	<i>Particulars</i>	<i>Units</i>	<i>Rs.</i>
To Material introduced	1,000	5,00,000	By Normal Loss A/c	50	500
To Sundry Material		10,000	By Abnormal Loss A/c (@ Rs.570)	20	11,400
To Labour		26,000	By Process B A/c (Transfer -2/3)	620	3,53,400
To Direct Expenses		6,000	By Income Statement (Sales – 1/3)	310	1,76,700
	<u>1,000</u>	<u>5,42,000</u>		<u>1,000</u>	<u>5,42,000</u>

*Abnormal Loss (Units)*

$$= \text{Material introduced} - (\text{Normal Loss} + \text{Output})$$

$$= 1,000 \text{ units} - (50 \text{ units} + 930 \text{ units}) = 20 \text{ units}$$

$$\text{Calculation of abnormal loss and transfer price per unit} = \frac{\text{Rs. } 5,42,000 - \text{Rs. } 500}{1,000 \text{ units} - 50 \text{ units}}$$

$$= \text{Rs. } 570$$

<b>Process B Account</b>					
Dr.					Cr.
<i>Particulars</i>	<i>Units</i>	<i>Rs.</i>	<i>Particulars</i>	<i>Units</i>	<i>Rs.</i>
To Process A A/c (Transfer)	620	3,53,400	By Normal Loss A/c	93	2,790
To Sundry Material		15,000	By Process C A/c (Transfer -1/2 @Rs. 880)	270	2,37,600
To Labour		80,000	By Income Statement (Sales – ½ @ Rs.880)	270	2,37,600
To Direct Expenses		18,150			
To Abnormal Gain A/c (@ Rs.880)	13	11,440			
	<u>633</u>	<u>4,77,990</u>		<u>633</u>	<u>4,77,990</u>

Abnormal Gain (Units)

$$= 620 \text{ units} - (93 \text{ units} + 540 \text{ units}) = 13 \text{ units}$$

$$\text{Calculation of abnormal gain and transfer price per unit} = \frac{\text{Rs. } 4,66,550 - \text{Rs. } 2,790}{620 \text{ units} - 93 \text{ units}}$$

$$= \text{Rs. } 880$$

<b>Process C Account</b>					
<i>Dr.</i>					<i>Cr.</i>
<i>Particulars</i>	<i>Units</i>	<i>Rs.</i>	<i>Particulars</i>	<i>Units</i>	<i>Rs.</i>
To Process B A/c (Transfer)	270	2,37,600	By Normal Loss A/c	54	3,240
To Sundry Material		5,000	By Abnormal Loss A/c (@ Rs.1,530)	6	9,180
To Labour		63,920	By Income Statement (@ Rs.1,530)	210	3,21,300
To Direct Expenses		27,200			
	270	3,33,720		270	3,33,720

$$\text{Calculation of abnormal loss and transfer price per unit} = \frac{\text{Rs. } 3,33,720 - \text{Rs. } 3,240}{270 \text{ units} - 54 \text{ units}}$$

$$= \text{Rs. } 1530$$

#### Income Statement

<i>Particulars</i>	<i>Rs.</i>	<i>Particulars</i>	<i>Rs.</i>
To Cost of Sales		By Sales :	
Process A A/c (310 units @ Rs.570)	1,76,700	Process A (310 units @ Rs.700)	2,17,000
Process B A/c (270 units @ Rs.880)	2,37,600	Process B (270 units @ Rs.1000)	2,70,000
Process C A/c (210 units @ Rs.1530)	3,21,300	Process C (210 units @ 2000)	4,20,000
To Abnormal Loss		By Abnormal Gain	
Process A 20 units (11,400 – 200) =	11,200		
Process C 6 units (9,180 – 360) =	<u>8,820</u>	Process B 13 units (11,440 – 390)	11,050
To Selling and Distribution Overhead	90,000		
To Net Profit	72,430		
	<u>9,18,050</u>		<u>9,18,050</u>

**Question No. 7**

- (a) What do you mean by trend ratios? Explain the technique of computing trend ratios. (5 marks)
- (b) Ashok Ltd. manufactures a single product with a capacity of 1,50,000 units per annum. The summarized income statement for the year ended 31st March, 2011 is as under :

	Rs.	Rs.
Sales : 1,00,000 units @ Rs.15 per unit		15,00,000
Cost of sales :		
Direct materials	3,00,000	
Direct labour	2,00,000	
Production overhead:		
Variable	60,000	
Fixed	3,00,000	
Administration overheads (fixed)	1,50,000	
Selling and distribution overheads:		
Variable	90,000	
Fixed	1,50,000	12,50,000
Profit		<u>2,50,000</u>

You are required to evaluate the following options :

- (i) What will be the amount of sales required to earn a target profit of 25% on sales, if the packing is improved at a cost of Rs.1 per unit?
- (ii) There is an offer from a retailer for purchasing 30,000 units per annum, subject to providing a packing with a different brand name at a cost of Rs. 2 per unit. However, in this case there will be no selling and distribution expenses. Also, this will not, in any way, affect the company's existing business. What will be the break-even price from this additional offer?
- (iii) If an expenditure of Rs. 3,00,000 is made on advertising, the sales would increase from the present level of 1,00,000 units to 1,20,000 units at a price of Rs.18 per unit. Will that expenditure be justified ?
- (iv) If the selling price is reduced by Rs. 2 per unit, there will be 100% capacity utilization. Will the reduction in selling price be justified? (10 marks)

**Answer to Question No. 7(a)**

Trend ratios can be defined as index numbers of the movements of the various financial items in the financial statements for a number of periods. It is a statistical device applied in the analysis of financial statements to reveal the trend of the items with the passage of time. They provide a horizontal analysis of comparative statements and reflect the behaviour of various items with the passage of time. Trend ratios can be graphically presented for a better understanding by the management. The trend ratios are very useful in predicting the behaviour of the various financial factors in future. However the trend percentages are not calculated for all items in the financial statements. They are only calculated for major items since the purpose is to highlight important

changes. Conclusions however could not be drawn on the basis of single trend. Trends of related items should be carefully studied, before any meaningful conclusion is arrived at. Sometimes trends are significantly affected by external causes over which the organization has no control. These factors are government policies, economic conditions, changes in income and its distribution, etc.

Computation of trend ratios can be done on the following lines:

- (i) The accounting principles and practices followed should be constant throughout the period for which analysis is made.
- (ii) The trend ratios should be calculated only for items having logical relationship with one another.
- (iii) There should be financial statement for a number of years.
- (iv) Take one of the statements as the base with reference to which all other statements are to be studied but the selected base statement should belong to a normal year.
- (v) Every item in the base statement is stated as 100.
- (vi) Trend percentage of each item in other statement is calculated with reference to same item in the base statement by using the following formula:

$$\frac{\text{Absolute Value of item (say cash) in other statements}}{\text{Absolute Value of same item (cash) in base statement}} \times 100$$

### Answer to Question No. 7(b)

*Working Notes:*

$$\text{Total fixed cost} = \text{Rs. } (3,00,000 + 1,50,000 + 1,50,000) = \text{Rs. } 6,00,000$$

$$\text{Total variable cost} = \text{Rs. } (3,00,000 + 2,00,000 + 60,000 + 90,000) = \text{Rs. } 6,50,000$$

$$\text{Variable cost per unit} = \text{Rs. } 6,50,000 \div 1,00,000 \text{ unit} = \text{Rs. } 6.50$$

$$\text{Revised variable cost per unit} = \text{Rs. } 6.50 + \text{Re. } 1 = \text{Rs. } 7.50$$

$$\text{Selling price per unit} = \text{Rs. } 15,00,000 \div 1,00,000 \text{ unit} = \text{Rs. } 15$$

$$\text{P/V Ratio} = \frac{\text{Sales} - \text{Variable Cost}}{\text{Sales}} = \frac{\text{Rs. } (15 - 7.50)}{15} = 50\%$$

- (i) *Calculation of sales required to earn a target profit of 25% on sales*

Let required sales = x, target profit is 25% of sales

Required contribution = Total fixed cost + 25% of x

$$\text{P/V Ratio} = \frac{\text{Contribution}}{\text{Sales}} = \frac{\text{Fixed Cost} + \text{Profit}}{\text{Sales}} = \frac{\text{Rs. } 6,00,000 + 25\% \text{ of } x}{x}$$

$$x = \frac{6,00,000 + 25\% \text{ of } x}{50\%}$$

$$0.50x = \text{Rs. } 6,00,000 + 0.25x$$

$$0.25x = \text{Rs. } 6,00,000$$

$$x = \text{Rs. } 24,00,000$$

Thus required sales = Rs. 24,00,000.

(ii) *Calculation of break-even price for additional 30,000 units*

Fixed costs are being absorbed by existing activity and thus only revised variable cost will be its break-even price. Fixed cost has no relevance in this regard :

Present Variable Cost = Rs.6.50

Less : Variable selling and distribution overhead per unit (–) 0.90

Add : Special packing cost (+) 2.00

Revised Variable Cost = Rs. 7.60

Thus break-even price for additional 30,000 units = Rs. 7.60

(iii) *Justification of Advertising Cost*

New contribution = Sales – Variable cost = Rs.(18 – 6.50) = Rs.11.50

Total contribution = 1,20,000 units x Rs. 11.50 = Rs. 13,80,000

Less : Fixed cost 6,00,000

Advertisement cost 3,00,000 9,00,000

Profit 4,80,000

Additional expenditure on advertisement is justified as it results in additional profit of Rs. 2,30,000, (Rs. 4,80,000 – Rs. 2,50,000).

(iv) *Justification of selling price reduction by Rs. 2 per unit*

Contribution = Sales – Variable Cost = Rs. (13 – 6.50) = Rs. 6.50

Total contribution at 100% capacity

(1,50,000 units x Rs. 6.50) = Rs. 9,75,000

Less : Fixed Cost 6,00,000

Profit 3,75,000

Since profit has increased by Rs.1,25,000 from the existing Rs. 2,50,000 to Rs. 3,75,000, the proposal for sale price reduction of Rs. 2 is justified.

**Question No. 8**

*Write short note on:*

- Applications of Marginal Costing*
- Various Types of Standards*
- Cost Audit Report*
- Reconciliation of Cost and Financial Accounts*
- Cost Accounting Standards*

(3 marks each)

**Answer to Question No. 8(a)**

The technique of marginal costing is an effective aid to management in taking correct decisions. It is a useful managerial technique for profit planning, cost control and decision making. There are occasions in which it may be profitable to carry on an activity or produce a product although, on actual cost basis, it is not itself yielding a profit. Decision making involves a choice between alternatives. The following are the managerial problems where marginal costing can be applied-

1. Profit planning
2. Evaluation of Performance
3. Make or Buy Decisions
4. Closure of a Department or Discontinuance of a Product
5. Maintaining a Desired Level of Profit
6. Offering Quotations
7. Accepting an Offer or Exporting below Normal Price
8. Alternative Use of Production Facilities
9. Problem of Key Factor
10. Selection of a Suitable Product Mix

**Answer to Question No. 8(b)**

Various types of Standards are:

*Basic Standard*: This is a "standard" which is established for use, unaltered over a long period of time. Standards are fixed scientifically and hence it is more of a technical job. These standards are supposed to remain unchanged so long as quality requirements are constant. Moreover, if forward contracts are entered into regarding materials and labour pact signed for a certain period, the costs can be planned accordingly. Such costs, i.e., basic standards may, however, have to be adjusted for changes in circumstances in a period.

*Current Standard*: In practice, standards are fixed on the basis of scientific studies but adjusted for current subjective factors. A standard, therefore, is made realistic to reflect the anticipated conditions affecting operations; it is not too idealistic. Such a standard would bring to sharp focus the avoidable causes for variances, leading to control action. A current standard is a standard for a certain period, for certain condition and for certain circumstances. Basic standards are more idealistic whereas current standards are more realistic. Most companies use current and not basic standards.

*Expected or Attainable Standard*: A standard though idealistic should also be realistic. If targets are fixed for a certain budgeted period, taking into account the expected conditions, it can be known as "expected standard" or "attainable standard". It is defined by CIMA, London as "a standard which can be attained if a standard unit of work is carried out efficiently, a machine properly operated or a material properly used. Allowances are made for normal losses, waste and machine downtime."

*Normal Standard*: Yet another target is one which is intended to cover a longer

period of time - a period long enough to cover one trade cycle, i.e., roughly 7 to 10 years. This is defined as "the average standard which it is anticipated can be attained over a future period of time, preferably, long enough to cover one trade cycle".

*Ideal Standard*: This standard refers to the target which can be attained under most ideal conditions. Hence, it is more idealistic and less realistic. It is defined by the Terminology as: "The standard which can be attained under the most favourable conditions, with no allowance for normal losses waste and machine down time".

#### **Answer to Question No. 8(c)**

A Cost Auditor is required to submit his/her report in the format as provided by the Cost Audit Report Rules. The Ministry of Corporate affairs has revised the Cost Audit report Rules in year 2011 vide G.S.R. 430(E) dated the 3rd June, 2011. Form-II of Cost audit report rules contains the Form of the cost auditor's report and includes auditor's observations and suggestions, and Annexure to the cost audit report and Form-III of the rules contains the Form of the performance appraisal report. The cost audit report rules apply to every company in respect of which an audit of the cost records has been ordered by the Central Government under sub-section (1) of section 233B of the Act.

Cost audit report of a company contains 11 Annexure. The details of which is as given

1. General Information
2. Cost Accounting Policy
3. Product Group Details (for the company as a whole)
4. Quantitative Information (for each product group separately)
5. Abridged Cost Statement (for each product group separately)
6. Operating Ratio Analysis (for each product group separately)
7. Profit Reconciliation (for the company as a whole)
8. Value Addition and Distribution of Earnings (for the company as a whole)
9. Financial Position and Ratio Analysis (for the company as a whole)
10. Related Party Transactions (for the company as a whole)
11. Reconciliation of Indirect Taxes (for the company as a whole)

#### **Answer to Question No. 8(d)**

When cost accounts and financial accounts are maintained in two different sets of books, there will be prepared two profit and loss accounts - one for costing books and the other for financial books. The profit or loss shown by costing books may not agree with that shown by financial books. Although both deal with the same basic transactions like purchases consumption of materials, wages and other expenses, the difference of purpose leads to a difference in approach in a collection, analysis and presentation of data to meet the objective of the individual system. Financial accounts are concerned with the ascertainment of profit or loss for the whole operation of the organisation for a

relatively long period, usually a year, without being too much concerned with cost computation, whereas cost accounts are concerned with the ascertainment of profit or loss made by manufacturing divisions or products for cost comparison and preparation and use of a variety of cost statements. The difference in purpose and approach generally results in a different profit figure from what is disclosed by the financial accounts and thus arises the need for the reconciliation of profit figures given by the cost accounts and financial accounts. Reconciliation of cost and financial accounts mean tallying the profit or loss revealed by both set of accounts.

**Answer to Question No. 8(e)**

Cost Accounting Standards (CAS) had been issued by the Institute of Cost Accountants of India (ICAI). The Preface to Cost Accounting Standards issued by the ICAI has set out the following objectives to be achieved through CAS:

- (a) To provide better guidelines on standard cost accounting practices;
  - (b) To assist cost accountants in preparation of uniform cost statements;
  - (c) To provide guidelines to bring standard approach towards maintenance of cost accounting records under various statutes;
  - (d) To assist the management to follow the standard cost accounting practices in the matter of compliance with statutory obligations; and
  - (e) To help Indian industry and the government towards better cost management.
-