

Biyani's Think Tank

Concept based notes

Cost Accounting

[B.Com. Part-II]

B.N. Gaur

MBA, PGDBM,

Lecturer

Deptt. of Commerce & Management

Biyani Girls College, Jaipur



Biyani's
Group of **Girls' Colleges**

Published by :

Think Tanks
Biyani Group of Colleges

Concept & Copyright :

©**Biyani Shikshan Samiti**

Sector-3, Vidhyadhar Nagar,

Jaipur-302 023 (Rajasthan)

Ph : 0141-2338371, 2338591-95 • Fax : 0141-2338007

E-mail : acad@biyanicolleges.org

Website : www.gurukpo.com; www.biyanicolleges.org

Edition : 2011

While every effort is taken to avoid errors or omissions in this Publication, any mistake or omission that may have crept in is not intentional. It may be taken note of that neither the publisher nor the author will be responsible for any damage or loss of any kind arising to anyone in any manner on account of such errors and omissions.

Leaser Type Setted by :

Biyani College Printing Department

Preface

I am glad to present this book, especially designed to serve the needs of the students. The book has been written keeping in mind the general weakness in understanding the fundamental concept of the topic. The book is self-explanatory and adopts the “Teach Yourself” style. It is based on question-answer pattern. The language of book is quite easy and understandable based on scientific approach.

Any further improvement in the contents of the book by making corrections, omission and inclusion is keen to be achieved based on suggestions from the reader for which the author shall be obliged.

I acknowledge special thanks to Mr. Rajeev Biyani, *Chairman* & Dr. Sanjay Biyani, *Director (Acad.)* Biyani Group of Colleges, who is the backbone and main concept provider and also have been constant source of motivation throughout this endeavour, who played an active role in co-ordinating the various stages of this endeavour and spearheaded the publishing work.

I look forward to receiving valuable suggestions from professors of various educational institutions, other faculty members and the students for improvement of the quality of the book. The reader may feel free to send in their comments and suggestions to the under mentioned address.

Syllabus

Section-A

1. Introduction : Meaning and definition of Cost Accountancy, cost accounting and costing. Distinction between financial and cost accounting. Elements of Cost.
2. Material : Purchasing, storage and pricing of stores issued material control.
3. Labour : Recording of time and wages, Methods of remuneration, incentive plans, allocation of wages, labour turnover and treatment of idle-time, overtime.
4. Overhead : meaning, Collection, Classifications, Apportionment allocation and absorption of overheads, treatment of interest on capital research and development expenses, Losses on account of depreciation, waste, obsolescence and defectives.

Section-B

5. costing Methods : Single output or unit costing; operating costing, job and contract costing; process costing (excluding equivalent production).
6. Non-integral accounting systems and Reconciliation between cost and financial statements.

Section-C

7. Cost volume Analysis : Meaning, Significance and Limitations, Break-even analysis, profit graph, profit-volume ratio, Assumptions of cost volume profit analysis.
8. Standard Costing : Meaning, Significance and Limitation. Types of standards and variances pertaining to material and Labour.

Theoretical Question

Q.1 What do you mean by Cost?

Ans. Cost means account of expenditure incurred upon manufacturing of an article or providing any service.

Q.2 What do you understand by costing.

Ans. Costing is the technique and process of determining cost.

Q.3 What is meant by cost accounting.

Ans. Cost accounting is the provision of such analysis and classification of expenditure as will enable to ascertain the total cost of any particular unit of production.

Q.4 Mention name of four product for which order for cost audit is issued.

Ans. (1) Cement Industry (2) Electric Industry
(3) Sugar Industry (4) Bactor Industry

Q.5 What is meant by supplementary cost?

Ans. Supplementary cost is the cost of product other than direct cost.

Q.6 What is opportunity cost?

Ans. The value of opportunity for gone is known as opportunity cost.

Q.7 Name four method of costing.

Ans. (1) Unit costing
(2) Operating costing
(3) Contract costing
(4) Process costing

Q.8 Explain Cost Unit?

Ans. Cost unit is a measurement of any goods or service e.g. per ton km. per unit.

Q.9 Explain term cost centre?

Ans. Cost centre is a location or item of any equipment which are connected with an undertaking for which cost are ascertained.

Q.10 Difference between costing & cost accounting.

Ans. (1) Costing is a dynamic technique in which changes may take place from time to time in comparison to cost accounting that enables to determine and control the cost of manufactured goods.

(2) Costing include determination of cost. Cost accounting include recording expenditure and income.

(3) Costing means technique for determination of cost whereas cost accounting means adoption of accounting system of cost.

Q.11 Give two items which are not include in cost.

Ans. Non cost items are profit on sale of fixed asset, goodwill w/o. discount on issue of share etc.

Q.12 What is the difference between cost of goods sold and cost of production.

Ans. Cost of production means prime cost + works overhead + office overheard while cost of goods sold means cost of production + opening stock of F.g. - closing stock of finished goods.

Q.13 Write two objective of material control.

Ans. (1) control cost of inventory.

(2) provide material at right time.

Q.14 What is normal wastage of material?

Ans. Normal wastage of material means any wastage due to normal reason like evaporation.

Q.15 What is abnormal wastage?

Ans. Any wastage arise due to abnormal. Reason like loss by fire, loss by earthquake.

Q.16 What is ABC technique?

Ans. It is a technique to control under these material classified three parts AB & C A include high value material B include. Medium value material and C include low value material.

Q.17 What is JIT purchase.

Ans. Under this technique no stock maintain and material purchase when having its demand.

Q.18 What is economic order quantity ?

Ans. Economic order quantity is that quantity of material where ordering & carrying cost minimum.

Q.19 What is meant by wages abstracts?

Ans. It is a statement and it include detail of wages prepare by cost department with the help of time card, wages sheet.

Q.20 What is idle time?

Ans. Idle time means no production hour but wages paid for that time.

Q.21 Name the method of giving remuneration to workers.

Ans. (1) Time rate method.

- (2) Piece rate method.
- (3) Piece rate with guaranteed pay rate
- (4) Differential piece rate method.

Q.22 How labour separation rate is computed.

Ans. Labor turnover rate = $\frac{\text{no of spepratoin}}{\text{Avg No of workers}} \times 100$

Q.23 What do you understand by time study?

Ans. Time study is useful is determination of time require by an average worker in a Job.

Q.24 Write the formula of Halsey-weir premium plan.

Ans AT X RATE + [30% of ts x rate]

Q.25 What is meant by overhead?

Ans. Indirect material indirect labour & Indirect expenses are known as Indirect overhead.

Q.26 Explain variable overhead.

Ans. The cost which increase according to production known as variable overhead.

Q.27 Explain semi variable overhead.

Ans. Overhead upto certain level fixed and after that variable known as semi variable overhead.

Q.28 In how many classes are the indirect expenses classified under the functional classification name them.

- Ans.
- (1) Factory overhead.
 - (2) Office overheard
 - (3) Selling & Distribution overheard.

Q.29 State the name of four industries where unit costing is applied.

- Ans. (1) Brick Industry
(2) Sugar Industry
(3) Steel industry
(4) Cement Industry

Q.30 What is meant by sub contract ?

Ans. When contractor assign a portion of contract to any other person for completion of that portion.

Q.31 What do you mean by cost plus contract?

Ans. Contract price is determined after adding a certain percentage of profit or certain amount of profit on actual cost.

**Q.32 Explain escalation clause in the context of contract costing/
What is the importance of escalation clause?**

Ans. Under this clause contract price will change in proportion to change in price of material labour & other expenses.

Q.33 What is meant by retention money?

Ans. In case of incomplete contract a part of the certified work is paid by the contractee to contractor. Rest of the amount is known as retention money.

Q.34 Mention the names of industries where process costing method may be used.

- Ans. (1) Chemical industries
(2) Mining industries.
(3) Water & Gas Industries
(4) Electric supply

Q.35 Define joint product

Ans. Joint product is same type of product equal importance & value.

Q.36 What is scrap?

Ans. It is residue material from certain manufacturing operation

Q.37 What do you mean by abnormal effective.

Ans. When actual wastage is less than normal wastage then difference is termed as abnormal effective the balance transferred to P & L .

Q.38 Give basic formula for valuation of abnormal wastage and abnormal effective.

Ans. $\text{Cost P. U.} = \frac{\text{total cost} - \text{value of normal loss}}{\text{total unit} - \text{unit of normal wastage}}$

Value of abnormal wastate = abnormal wastge x cost P. U.

Q.39 Give name of any five industries where operating costing method is used.

- Ans. (1) Bus
(2) Hospital
(3) Water supply industry
(4) Canteen

Q.40 What do you meant by marginal costing?

Ans. Marginal costing is the ascertainment of marginal cost and its effect on profit of changes in value of type of output by differentiating between fixed cost and variable cost.

Q.41 Explain absolute tone kilometer

Ans. Journey from one station to another is treated as independent inurned distance is multiplied by weight total of all journey is absolute tone kilometer.

Q.42 What do you understand by commercial tone kilometer?

Ans. Commercial tone kilometer is compared by multiplying average weight by total distance of journeys.

Q.43 Why cost and financial accounts are reconciled?

Ans. Cost and financial accounts are reconcile. To verify the accuracy of both accounts.

Q.44. Explain two reason for difference in profit as per cost book and financial books

Ans. (1) it may be due to under/over absorption of overhead
(2) it may be due to valuation of stock

Q.45 What do you meant by marginal costing?

Ans. Marginal costing is mean ascertainment of marginal cost and its effect on profit of changes in volume of type of output by differentiating between fixed cost and variable cost.

Q.46 What do you mean by break even point.

Ans. Break even point is that point where no profit/ no loss. At this point contribution is just equal to fixed cost.

Q.47 Explain the meaning of profit volume ratio.

Ans. Also known as $PVR = \frac{C}{S} \times 100$

Q.48 State two factors effecting break even point.

Ans. (1) Increase in FC
(2) Decrease in FC
(3) Increase /Decrease in V.C

Practical Part

Chapter-1

Problem 2.1 : The following information relating to a manufacturing company is given. Calculate Prime Cost.

	Rs.
Stock of Raw Material on 1.1.05	1,12,500
Purchases of Raw Material	2,38,500
Productive Wages	80,000
Chargeable Expenses	4,000
Non-productive Wages	20,400
Carriage on Raw material	5,000
Haulage (ढुलाई)	720
Stock of Raw Material on 31.12.05	1,02,000

Solution:

Statement of Cost

Particulars	Rs.	Rs.
Opening Stock of Raw Material	1,12,500	
Add: Purchases of Raw Material	2,38,500	
Add: Carriage on Raw Material	5,000	
	3,56,000	
Less: Closing Stock of Raw Material	1,02,000	
Raw Material Consumed		2,54,000
Productive Wages (Direct)		80,000
Chargeable Expenses (Direct)		4,000
Prime Cost		3,38,000

Problem 2.2: From the following particulars, prepare a cost statement showing components of Total cost and the Profit for the year ended 31st December, 1995:

	Rs.
Stock of finished goods 1 January, 2005	5,000
Stock of raw materials 1 January, 2005	45,000
Purchase of raw materials	4,50,000
Carriage inwards	5,000
Wages	1,80,000
Works Manager's salary	25,000
Factory employees salary	75,000
Factory rent, Taxes and Insurance	9,000
Power expenses	12,000
Other production expenses	45,000
General expenses	35,000
Sales for the year	9,00,000
Stock of finished goods, 31 st December, 2005	20,000
Stock of raw materials, 31 st December, 2005	40,000

Solution:**Statement of Cost**

Particulars	Rs.	Amount in Rs.
Opening Stock of Raw Material	45,000	
Add: Purchases of Raw Material	4,50,000	
Add: Carriage inwards (on purchases)	5,000	
	5,00,000	
Less: Closing stock of raw material	40,000	
Raw Material Consumed		4,60,000
Direct Wages		1,80,000
Prime Cost		6,40,000
Add: Factory Overheads:		
Works manager's salary	25,000	
Factory employees salary	75,000	
Factory rent, taxes and insurance	9,000	
Power expenses	12,000	
Other production expenses	45,000	1,66,000
Works Cost		8,06,000
Add: Office Overhead: General expenses		35,000
Cost of Production		8,41,000
Add: Opening stock of finished goods		5,000
		8,46,000
Less: Closing stock of finished goods		20,000
Cost of goods sold		8,26,000
Profit (Balance)		74,000
Sales (given)		9,00,000

Problem 2.3: From the following Trading and Profit and Loss Account for the year ending 31st December, 1995 prepare a statement of cost:

Particulars	Rs.	Particulars	Rs.
To Opening Stock:		By Sales	25,00,000
Material	10,000		
Finished goods	15,000		
To Purchases of Material	7,50,000	By Closing Stock:	
		Material	90,000
To Productive Wages	6,00,000	Finished Goods	15,000
To Power	75,000		1,05,000
To Carriage Inward	10,000		
To Royalty	1,20,000		
To Cost of a special design	25,000		
To Gross Profit c/d	10,00,000		
	26,05,000		26,05,000
To Rent and Rates:		By Gross Profit b/d	10,00,000
Factory	35,000	By Interest on Loan	21,250
Office	25,000	By Sales of scrap	3,750
To Telephone Expenses	15,000	(at works cost)	
To Advertisement	37,500	By Dividend Received	10,000
To Electricity:			
Factory	22,500		
Office	15,000		
To Provision for Bad debts	50,000		
To Depreciation On:			
Plant and Machinery	30,000		
Delivery Vans	10,000		
To Income Tax	60,000		
To Salaries	1,25,000		
To Donations	35,000		
To Establishment Expenses	50,000		
To Depreciation on Furniture:			
Office	12,500		
Factory	10,000		
To Rent of warehouse	32,500		
To Net Profit	4,70,000		
	10,35,000		10,35,000

Problem 3.1: Two Materials X and Y are used as follows:

Minimum usage	:	50 units per week each
Maximum usage	:	150 units per week each
Normal usage	:	100 units per week each
Ordering quantity	:	X600 units; Y 1000 units
Delivery Period	:	X 4 to 6 weeks Y 2 to 4 weeks

Calculate for each material:

- (a) Minimum Level
- (b) Maximum Level
- (c) Ordering Level

Solution:

(a) Minimum Stock Level = Re-order level - (Normal usage x Normal Reorder Period)

$$\begin{aligned} \text{Minimum Stock Level (X)} &= 900 - (100 \times 5) \\ &= 900 - 500 = 400 \text{ units} \end{aligned}$$

$$\begin{aligned} \text{Minimum Stock Level (Y)} &= 600 - (100 \times 3) \\ &= 600 - 300 = 300 \text{ units} \end{aligned}$$

(b) Maximum Stock Level = (Re-order Level + Re-order Quantity) - (Minimum Usages x Minimum Re-order Period)

$$= (900 + 600) - (50 \times 4)$$

Maximum Stock Level (X) = 1500 - 200 = 1300 units

Maximum Stock Level (Y) = 600 + 1000) - (50x2)

$$= 1600 - 100 = 1500 \text{ units}$$

(c) Ordering Level = (Maximum Usage x Maximum Re-order Period)

Ordering Level (X) = 150 x 6 = 900 units

Ordering Level (Y) = 150 x 4 = 600 units

Problem 3.2: In manufacturing its products a company was three raw materials A,B and C in respect of which the following apply:

Raw Material	Usage per units of Productions	Re order Quantity	Price Per Lbs.	Delivery Period	Order Level	Minimum Level
A	10	10,000	10	1 to 3	8,000	-
B	4	5,000	30	3 to 5	4,750	-
C	6	10,000	15	2 to 4	-	2,000

Weekly production varies from 175 to 225 units, averaging 200 what would you expect the Quantities of the following to be?

- (a) Minimum Stock of A
- (b) Maximum Stock of B
- (c) Re-order Level of C
- (d) Average Stock Level of A

Solution:

(a) Minimum Stock of A = Re-order Level - Normal Usage x Normal Re-order Period)

$$= 8,000 - 2,000 \times 2$$
$$= 8,000 - 4,000 = 4,000 \text{ Lbs.}$$

(b) Maximum Stock of B = (Re-order Level + Re-order (Quantity) - (Minimum Usage x Minimum Re-order Period)

$$= (4,750 + 5,000) - (700 \times 3)$$
$$= (9,750 - 2,100) = 7,650 \text{ Lbs.}$$

(c) Re-order Level of C = Maximum Usage x Maximum Re-order Period

$$= 1,350 \times 4 = 5,400 \text{ Lbs.}$$

(d) Average Stock Level of A = $\frac{1}{2}$ (Minimum Stock Level + Maximum Stock Level)

$$= \frac{1}{2} (4,000 + 16,250)$$
$$= 10,125 \text{ Lbs.}$$

Problem 3.3: A consignment consisted of two chemicals X and Y. The following details are extracted:

	Rs.
Chemical X 800 Kg. @ Rs. 20 Per Kg. = 16,000	
Y 500 Kg. @ Rs. 16 Per Kg. = 8,000	24,000
Add: Railway Freight	1,820
Add: Sales Tax	1,680

A shortage of 5% is expected on the basis of past experience. What rate would you adopt for pricing issues of these chemicals?

Solution:

Particulars	<u>Chemical X</u>		<u>Chemical Y</u>	
	Qty. Kg.	Value Rs.	Qty. Kg.	Value Rs.
Invoice Price	800	16,000	500	8,000
Add: Railway Freight		1,120		700
Sales Tax		1,120		500
Total	800	18,240	800	9,260
Less: Provision for Shortage @ 5%	40	-	25	-
Total	760	18,240	475	9,260
Rate of Issue per unit	1	24	1	19.50

Problem 4. The Personal department of a company gives you the following information regarding labour. Calculate labour turnover rate using the different methods.

No. of workers at the beginning of the years	2,000
No. of workers at the end of the year	2,400
No. of workers resigned	150
No. of workers discharges	70
No. of workers replaced due to quits and discharges	154
Additional workers employed	466

Solution:

Average number of workers employed in the year:

$$= 2,000 + 2,400/2 = 2,200$$

Calculation of Labour Turnover Rate:

(i) Separation Rate Method:

Labour Turnover Rate =

$$\frac{\text{No. of separation during a period}}{\text{Average number of workers employed during the same period}} \times 100$$

$$\frac{150 + 70}{2200} \times 100 = 10\%$$

(ii) Replacement Rate Method:

Labour Turnover Rate =

$$\frac{\text{No. of separation during a period}}{\text{Average number of workers employed during the same period}} \times 100$$

$$\frac{154}{2200} \times 100 = 7\%$$

(iii) Flux Rate Method

Labour Turnover Rate =

No. of separations + No. of replacements

_____x100

$$\frac{220 + 154}{2200} \times 100 = 17 \%$$

Problem 5. During one week the workman X manufactured 200 units. He received wage for a guaranteed 44 hours week at the rate Rs. 1.50 per hour. The time allowed to produce one unit is 18 minutes. Calculate his gross wages under each of the following methods of remunerating labour:

- (a) Time Rate;
- (b) Piece Rate with Guaranteed Weekly Wages;
- (c) Halsey Premium Plan, 50% Bonus, and
- (d) Rowan Premium Plan

Solution:

Calculation of Gross Wages

(a) Time Rate:

Total Earnings = Hours worked x Rate per hour
 = 44x Rs. 1.50 = Rs. 66

(b) Piece rate with guaranteed weekly wages:

Time allowed per unit	=	18 minutes
Standard production during one hour	=	60 / 10
		----- units
		18 / 3
Rate per hour	= Rs.	$\frac{1.50 \times 3}{10}$
	=	0.45

$$\begin{aligned} \text{Total Earnings} &= \text{Units produced} \times \text{Rate per unit} \\ &= 200 \times \text{Re. } 0.45 = \text{Rs. } 90 \end{aligned}$$

Since piece rate wages is more than time rate wages, the worker will get piece rate wages i.e. Rs. 90.

(c) Halsey Premium Plan, 50% Bonus:

$$\text{Time allowed for actual production} = 200 \times \frac{18}{60} = 60 \text{ hours}$$

$$\text{Time taken for actual production} = 66 - 44 = 16 \text{ hours.}$$

$$\text{Time taken for actual production} = 44 \text{ hours}$$

$$\text{Time saved} = 66 - 44 = 16 \text{ hours.}$$

$$\begin{aligned} \text{Total Earnings} &= (\text{Time taken} \times \text{Rate per hour} + \\ &\quad 50\% (\text{Time saved} \times \text{Rate per hour})) \\ &= (44 \times \text{Rs. } 1.50) + 50\% (16 \times \text{Rs. } 1.50) \\ &= \text{Rs. } 66 + \text{Rs. } 12 = \text{Rs. } 78 \end{aligned}$$

(d) Rowan Premium Plan:

$$\begin{aligned} \text{Total Earnings} &= (\text{Time taken} \times \text{Rate per hour}) + \\ &\quad (\text{Time saved}) / \text{Time allowed} \times \\ &\quad \text{Time taken} \times \text{Rate per hour} \\ &= (44 \times \text{Rs. } 1.50) + (16 \times 60 / 44 \times \text{Rs. } 1.50) \\ &= \text{Rs. } 66 + \text{Rs. } 17.60 = \text{Rs. } 83.60 \end{aligned}$$

Problem 6. From the following annual charges incurred in respect of a machine in a shop where labour is almost nil and where work is done by means of five machines of exactly similar type and specifications, calculate machine hour rate for one machine.

1.	Rent and Rate (Proportionate to the floor space occupied for the shop)	4,800
2.	Depreciation of each machine	500
3.	Repairs and maintenance for five machines	1,000
4.	Power consumed (as per meter) @ 25 paise per unit for the shop	5,000
5.	Electric charges for light in the shop	540

- | | | |
|-----|--|-----------------------------------|
| 6. | There are two attendants for the five machines and they are each paid | Rs. 160
per month |
| 7. | For the five machines in the shop there is one supervisor whose emoluments are | Rs. 500
p.m. |
| 8. | Sundry supplies such as lubricants, cotton waste etc. for the shop | 450 |
| 9. | Hire Purchase Installment payable for the machine (including Rs. 300 interest) | 1,200 |
| 10. | The machine uses | 10 units of
power per
hour. |

Solution :**Computation of Machine Hour Rate**

Items of Expenses	Total for 5 Machines	Amount for one Machine
	Rs.	Rs.
Standing Charges:	4,800	960
Rent and Rates		
Lighting	540	108
Supervision (500x 12)	6,000	1,200
Salary of Attendants (2 x 160 x 12)	3,840	768
Sundry Supplies	450	90
Total Standing Charges	15,630	3,126
Machine Expenses:		
Depreciation	2,500	500
Power	5,000	1,000
Repairs and Maintenance	1,000	200
Total Machine Expenses	8,500	1,700
Hurly Rate for Standing Charges (3,126x400)		7.82
Hurly Rate for Machine Expenses (1,700x400)		4.25
Machine Hour Rate		12.07

Notes:

- (i) Machine operation hours have been calculated on the basis of consumption of power. The machine consumes 10 units of power per hour @ 25 paise per unit. It means the cost of power per hour is 10×25 paise i.e. Rs. 2.50 per hour. Since the total cost of power consumed for the year is Rs. 5,000/5 i.e. Rs. 1,000 for the machine, the machine operation hours are $1,2000/2.50 = 400$ hours.
- (ii) Salary of attendants has been treated as indirect since it has been apportioned amongst five machines.
- (iii) Interest included in hire purchase installment, being a financial item, has not been included in cost.

Problem 7. A Production Department of a manufacturing company has three different machines, for each of which it is desired to establish machine hour rate. The overhead expenses for this department for the year ended 31st March, 1996 are:

	Rs.		Rs.
Consumable Stores:		Power	720
Machine No. 1	300	Heat and Light	400
Machine No. 2	500	Rent and Rates	2,400
Machine No. 3	600	Insurance of Buildings	200
Repairs and Maintenance:			
Machine No. 1	400	Insurance of Machine	480
Machine No. 2	600	Depreciation of Machines	7,200
Machine No. 3	800	Supervision	4,400
		General Charges	1,100

Additional information available are as follows:

	Effective H.P.	Area occupied (Sq.ft.)	Book Value of Machines	Working hours
Machine No. 1	5	100	12,000	1,000
Machine No. 2	10	500	20,000	2,500
Machine No. 3	15	400	16,000	2,000

You are required to calculate Machine Hour Rate for each of the three machines. Show clearly the basis of apportionment that you use.

Solution:

Computation of Machine Hour Rate

Items of Overhead	Total Amount	Basis of Allocation	Machine		
			No. 1	No. 2	No. 3
	Rs.		Rs.	Rs.	Rs.
Consumable Stores	1,400	Actual	300	500	600
Repairs & Maintenance	1,800	Actual	400	600	800
Power	720	Effective H.P.	60	300	300
Heat and Light	400	Area	40	200	160
Rent and Rates	2,400	Area	240	1,200	960
Insurance of Buildings	200	Area	20	100	80
Insurance of Machines	480	Book value	120	200	160
Depreciation of Machines	7,200	Book Value	1,800	3,000	2,400
Supervision	4,400	Area	440	2,200	1,760
General Charges	1,100	Area	110	550	440
Total Overhead			3,530	8,850	7,720
Working Hours			1,000	2,500	2,000
Machine Hour Rate (Rs.)			3.53	3.54	3.86

Notes:

(i) Effective hourse Power, for apportionment of power, has been calculated as follows:

Machine No. 1 : $5 \times 1,000 = 5,000$

Machine No. 2 : $10,2,500 = 25,000$; and

Machine No. 3: $15 \times 2,000 = 30,000$. Thus, the ratio is 1 : 5 : 6

(ii) In the absence of any other information supervision and General Charges have been apportioned on the basis of 'area'

Problem 8.1: The following costing information is related to commodity 'X' for the year ending 31st March, 2006.

	Rs.		Rs.
Purchase of raw materials	2,40,000	Stock (31-3-96):	
Factory rent	16,000	Raw materials	44,480
Carriage inwards	2,880	Work-in-progress	40,000
Other factory overhead	80,000	Finished goods	64,000
		(4000 tons)	
Direct wages	2,00,000	Sales-Finished goods	5,98,000
Stock (1-4-95)		Administration	8,000
		Overhead	
Raw Materials	40,000	Selling Overhead Re. 1	
		per ton Sold	
Work-in-progress	9,600		
Finished goods (2000 tons)	30,000		

32,000 Tons of commodity were produced during the period. You are to ascertain (i) Prime Cost; (ii) Works Cost; (iii) Total Cost of Production; (iv) Gross Profit; and (v) Net Profit per ton.

Solution: Statement of Cost & Profit of Commodity 'x'

Particulars	Rs.	Amount Rs.
Opening stock 1-4-95	40,000	
Add: Purchases of Raw Materials	2,40,000	
Add: Carriage Inward	2,880	
	2,82,880	
Less: Closing stock 31-3-96	44,480	
(i) Raw Material Consumed		2,38,400
Add: Direct wages:		2,00,000
Prime Cost		4,38,400
Add: Factory Overhead:	16,000	
Factory Rent	80,000	96,000
		5,34,400
Add: Work-in-Progress (1-4-95)		9,600
		5,44,000
Less: Work-in-progress (31-3-96)		40,000
(ii) Factory Cost		5,04,000
Add: Administration Overhead		8,000
		5,12,000
Add: Opening stock of finished products (2000 tons)		30,000
		5,42,000
Less: Closing stock of finished products(4000 tons)		64,000
Cost of goods sold (30,000 tons)		4,78,000

Add: Selling Overheads:	30,000
Advertising, Discount and Selling Cost (30,000 tons @ Re. 1 per ton)	
Total Cost	5,08,000
Profit	90,000
	5,98,000
(iv) Gross Profit = Sales - Cost of goods sold = 5,98,000 - 4,78,000 = Rs. 1,20,000	
(v) Net Profit per ton $\frac{90,000}{30,000}$ = Rs. 3.00	

Problem 8.2: A Factory produces a standard product. The following information is given to you from which you are required to prepare a cost sheet for the period ended on 30th June, 1996:

	Rs.
Opening stock of raw materials	20,000
Purchases of raw materials	1,70,000
Closing stock of raw materials	8,000
Direct Wages	40,000
Other direct expenses	20,000
Factory Overhead	100% of Direct wages
Office Overhead	10% of works cost
Selling and distribution expenses	Rs. 2 per unit sold
Units of finished product:	

In hand at the beginning of period 2,000 (Value Rs.
32,000

Produced during the period 20,000

In hand at the end of the period 4,000

Also find out the selling price assuming that profit is 20% of the selling price.

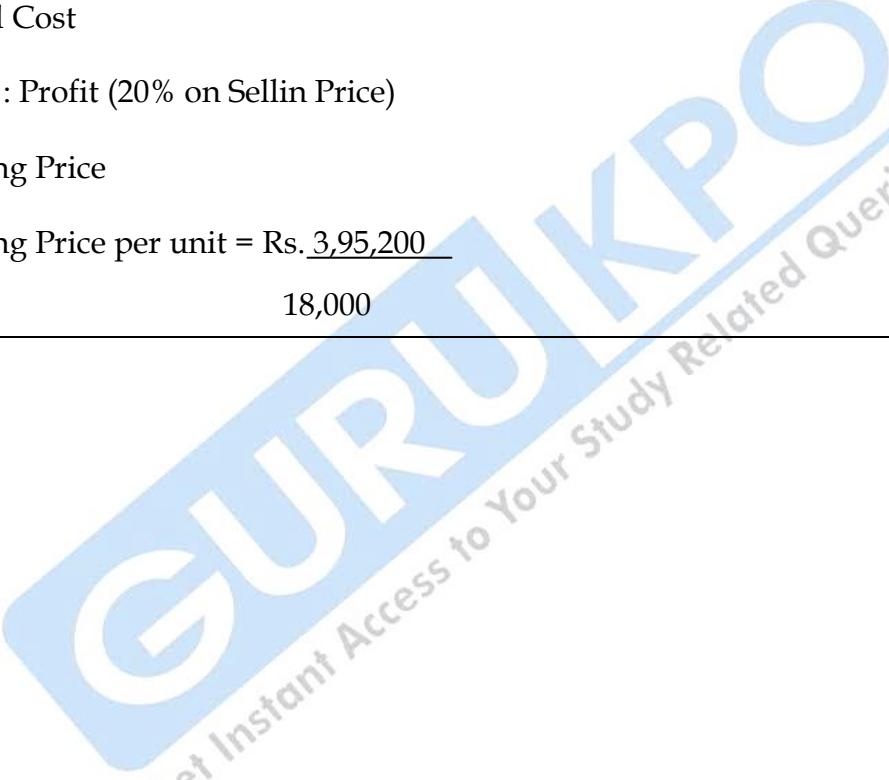
Solution :

Statement of Cost

(for the year ended 30th June, 1996)

	Rs.	Rs.
Opening stock of Raw Material	20,000	
Add: Purchases of Raw Material	1,70,000	
	1,90,000	
Less: Closing stock of Raw Material	8,000	
Raw Material Consumed		1,82,000
Direct wages		40,000
Direct expenses		20,000
Prime Cost		2,42,000
Add: Factory Overhead (100% of Direct wages)		40,000
Factory Cost		2,82,000
Add: Office Overhead (10% of Factory cost)		28,200
Cost of Production (20,000 units)		3,10,200
Add : Cost of Opening stock finished goods (2,000 units)		32,000

	3,42,000
Less : Closing stock of finished goods $\frac{(3,10,200) \times 4,000}{20,000}$	62,040
Cost of Goods Sold	2,80,160
Add: Selling & Distribution Expenses (18,000 unit X Rs.2)	36,000
Total Cost	3,16,160
Add : Profit (20% on Sellin Price)	79,040
Selling Price	3,95,200
Selling Price per unit = Rs. $\frac{3,95,200}{18,000}$	21.96



 Get Instant Access to Your Study Related Queries...

Problem 8.3: A Factory produced a standard product. The following information is given to you from which you are required to prepare the "Cost Sheet" of Product 'X' :

Material Used :	Rs.
In Manufacturing	11,000
In Primary Packing	2,000
In Selling the Product	300
In Factory	150
In Office	250
Labour - required :	
In Producing	2,000
For Supervision of Factory Management	400
Expenses :	
Direct	1,000
Indirect :	
Factory	200
Office	250
Depreciation - Factory	350
Deprecation - Office Building and Equipment	150
Selling Expenses	700
Freight on Sales	1,000
Advertisement	250

Assuming that all the units manufactured have been sold, also find out the selling price which may yield a profit of 25% on the selling price.

Solution :**Statement of Cost**

Material Used in manufacturing	11,000	
Material used in Primary Packing	2,000	
Labour required in Producing (Direct)	2,000	
Direct Expenses	1,000	
	Prime Cost	16,000
Add : Factory Overhead :		
Material used in Factory	150	
Supervision of Factory Management	400	
Factory Expenses (Indirect)	200	
Depreciation (Factory)	350	1,100
	Factory Cost	17,100
Add : Office Overhead :		
Material used in Office	250	
Office expenses (Indirect)	250	
Dep. on Office Building & Equipments	150	650
	Cost of Production	17,750
Add: Selling Overhead		
Material used in Selling	300	
Selling Expenses	700	
Freight on Sales	1,000	
Advertisement	250	2,250
	Total Cost	20,000
Add: Profit (25% on selling price) (20,000 x 25)		6,667
	100-25	
	Selling Price	26,667

Problem 9.1: The following information relate to contract. You are required to prepare the contract account and contractors account assuming that the amount due from contractee was duly received.

	Rs.		Rs.
Direct Materials	20,250	Tractor Expenses :	
Direct Wages	15,500	Running Material	2,300
Stores issued	10,500	Wages of Drivers	3,000
Loose Tools	2,400	Direct Charges	2,650

The contract was for Rs. 90,000 and the contract took 13 weeks in its completion. The value of loose tools and stores returned at the end of the year were Rs. 200 and Rs. 3,000 respectively. The plant was also returned at a value of Rs. 16,000 after charging depreciation is to be charge to contract @ 15% per annum. The administration and office expenses are 10% of works cost.

Solution:

Contract Account

	Rs.		Rs.
To Direct Materials	20,250	By Returned to Stores:	
To Direct Wages	15,500	Loose Tools	200
To Stores issued	10,500	Stores	3,000
To Loose Tools	2,400	By Plant returned (20,00-4,000)	16,000
To Tractor Expenses :		By Works Cost c/d	58,150
Running Material	2,300		
Wages of Drivers	3,000		
To Other Direct Charges	2,650		
To Plant (Cost)	20,000		
To depreciation on Tractor	750		
	77,350		77,350
To Works Cost b/d	58,150	By Contractee's A/c	90,000
To Administration & Office			
Expenses(10% on W.C.)	5,815		
To Profit & Loss A/c	26,035		
	90,000		90,000

Contractor's Account

To Contract A/c	90,000	By Bank A/c	90,000
-----------------	--------	-------------	--------

Working Notes:

- Calculation of original cost of Plant :

Depreciated Value	=	Rs. 16,000
Rate of Depreciation	=	20%
Cost of Plant = Rs. 15,000 x 100/80	=	Rs. 20,000

2. Calculation of Depreciation on Tractor

$$\text{Depreciation} = \text{Rs. } 20,000 \times 75 / 100 \times 13 / 52 = \text{Rs. } 750$$

Problem 9.2 : A building contractor having undertaken construction work at a contract price of Rs. 5,00,000 began the execution of the work on 1st April 1995. The following are the particulars of the contract upto 31st March, 1996:

	Rs.		Rs.
Machinery Installed	30,000	Work certified	3,90,000
Materials set	1,60,698	Cash received	3,60,000
Labour at site	1,48,750	Cost of work uncertified	9,060
Direct expenses	6,334	Materials in hand	3,766
Overhead charges	8,252	Wages accrued	5,380
Materials returned	1,098	Machinery at site	22,000

It was decided that the profit made on the contract in the year should be arrived at by deducting the cost of the work certified from the total value of the architect's certificates that 1/3 of the profit so arrived at should be regarded as a provision against contingencies and that such provision against contingencies should be increased by taking to the credit of the profit and loss account only such portion of the 2/3 profit as the cash received bears to the work certified. After taking into consideration the above, prepare contract account.

Solution :

Contract Account

For the year ended 31st March, 1996

Particulars	Rs.	Particulars	Rs.
To Materials sent	1,60,698	By Materials returned	1,098
To Labour at site	1,48,750	By Materials in hand	3,766
To Machinery installed	30,000	By Machinery at site	22,000
To Direct expenses	6,334	By work in progress :	
To Overhead charges	8,252	value of work certified	3,90,000
To Wages accrued	5,380	Cost work uncertified	9,060
To Total Profit c/d	66,510		
	4,25,924		4,25,924
To Profit & Loss a/c	40,929	By total profit b/d	66,510
To work-in-Progress a/c (Reserve)	25,581		
	66,510		66,510

Problem 10.1 : A product passes through two process viz. A and B prepare process accounts from the following:

	Process A	Process B
	Rs.	Rs.
Input (in units 5,000)	5,000	--
Material consumed	6,000	3,000
Wages	7,000	4,000
Manufacturing expenses	2,000	2,000
Normal wastage	5%	10%
Scrap value of normal wastage (per 100 units)	16	20
Output (unit)	4,700	4,250

Solution :

Process 'A' Account

Output - 4,700units

Particulars	Unit	Amount Rs.	Particulars	Unit	Amount Rs.
To Input	5,000	5,000	By Normal wastage a/c @ Rs. 16 per 100 units (5% of 5,000 units)	250	40
To Material Consumed	--	6,000	By Abnormal wastage a/c @ Rs. 4.20 per unit)	50	210
To Wages	--	7,000	By Transfer to Process 'B' a/c Rs. 4.20 per unit	4,700	19,750
To manufacturing Exp.	--	2,000			
	5,000	20,000		5,000	20,000

$$\begin{aligned}
 \text{टिप्पणी - Normal Production} &= \text{Input - Normal wastage} \\
 &= 5000 - 250 = 4750 \text{ units}
 \end{aligned}$$

Abnormal waster (per unit) = Normal Production - Actual Production

$$= 4750 - 4700 = 50 \text{ units}$$

Cost of good production (per unit) = $\frac{\text{Normal Process cost}}{\text{Normal Production}}$

$$= \frac{20,000 - 40}{5,000 - 250} = \text{Rs. } 4.20$$

Normal Process Cost = Total Cost - Sale Value of Normal Waste

Normal production = Total input - Units of Normal waste

Process 'B' Account

Output - 4,250 units

Particulars	Units	Amount Rs.	Particulars	Units	Amount Rs.
To Transfer from process 'A' a/c	4,700	19,750	By Normal wastage a/c Rs. 20 per 100 units (10% of 4700 units)	470	94
'A' a/c	--	--	By Transfer to finished stock a/c @ Rs. 6.77 per unit	4,250	28,791.40
To Material consumed	--	3,000			
To Wages	--	4,000			
To manufacture expenses	--	2,000			
To Abnormal effectives a/c @ Rs. 6.77 per units	20	135.40			
	4,720	28,885.40			

टिप्पणी - Normal Production = 4,700 - 470 = 4,230 units

Abnormal effectives (in unit) = 4,250 - 4,430 = 20 units

Cost per unit of good production = $\frac{28750-94}{4700} = \text{Rs. } 6.77$

Problem 10.2: A product passes through three process to completion. In January, 1996 the cost of production were as given below:

	Process I	Process II	Process II
Input (1,000 units)	Rs. 5,000	--	--
Direct Material	Rs. 2,000	3,020	3,462
Wages	Rs. 3,500	4,226	5,000
Production overheads	Rs. 1,500	2,000	2,500
Normal wastage	10%	5%	10%
Scrap value of normal wastage (per unit)	Rs. 3	5	6
Actual output (units)	920	870	800

Prepare the necessary accounts.

Solution :

टिप्पणी -

	Process I	Process II	Process II
Input (in units)	1,000	920	870
Normal wastage (10%, 5%, 10% of input)	100	46	87
Normal Production	900	874	783
Actual Production	920	870	800
Abnormal Wastage of effectives	20(effec.)	4(was.)	17 (eff.)

Cost per unit of good production

$$= \frac{12,000 - 300}{1,000-100} ; \frac{21,206-230}{920-46} ; \frac{31,842-522}{870-42}$$

$$= \text{Rs. } 13; \quad \text{Rs. } 24; \quad \text{Rs. } 40$$

Process 'I' Account

Output - 920 units

Particulars	Units	Amount	Particulars	Units	Amount
To Input	1,000	5,000	By Normal wastage @	100	300
To Direct Materials	--	2,000	Rs. 3 per unit		
To Wages	--	3,500	By Transfer to Process II a/c @ Rs. 13 per unit	920	11,960
To Production overheads	--	1,500			
To Abnormal effectives	20	260			
	1,020	12,260		1,020	12,260

Process 'II' Account

Output - 870 units

Particulars	Units	Amount	Particulars	Units	Amount
To Transfer from Process I a/c	920	11,960	By Normal wastage @ Rs. 5 per unit	46	230
To Direct Material	--	3,020	By Abnormal wastage a/c Rs. 24 per unit	4	96
To Wages	--	4,226			
To Production overhead	--	2,000	By Transfer to Process III a/c @ Rs. 24 per unit	870	20,880
	920	21,206		920	21,206

Process 'III' Account

Output - 800 units

Particulars	Units	Amount	Particulars	Units	Amount
To Transfer from Process II a/c	870	20,880	By Normal wastage @ Rs. 3 per unit	87	522
To Direct Materials	--	3,462	By Transfer to Process II a/c @ Rs. 13 per unit	800	32,000
To Wages	--	5,000			
To Production overheads	--	2,500			
To Abnormal effectives @ Rs. 40 per unit	17	680			
	887	32,522		1,020	12,260

Problem 11.1: From the following information, you are required to calculate the cost of running a motor truck per tonne-kms.

Total tonnage carried in week : 30 tons

Total Kilometers run in a week : 1,000 Kms.

Details of the above are as follows:-

Day	Kilometers	Tons
Monday	250	6.0
Tuesday	200	5.0
Wednesday	200	4.5
Thursday	100	5.5
Friday	150	5.0
Saturday	100	4.0
	1,000	30.0

Expenses for the week are as follows :

Driver's Salary	Rs. 1,200 per month
Cleaner's Salary	Rs. 960 per month
Diesel, Oil etc.	60 paise per km.
Repairs & Maintenance	Rs. 1,200 per month
Depreciation	Rs. 19,200 per month
Other Expenses	Rs. 800 per month

You may assume four weeks in a month for your calculations.

Solution :

Operating Cost Sheet for a week

	Rs.
(A) Fixed Expenses :	
Driver's Salary (1200/4)	300
Cleaner's Salary (960/4)	240
Other's Expenses (800/4)	200
	(A) 740
(B) Variable Expenses :	
Petrol, Diesel, Oil etc. (0.60 x 1,000)	600
Repair & Maintenance (1200/4)	300
Depreciation (19,200/12) ÷ 4	400
	(B) 1,300
Total Overhead (A+B)	2,040
Effective ton - kms	5,100
Rate per ton-km. (Rs. 2,040/5,100)	0.40

टिप्पणी - टन किलोमीटर का परिकलन निम्न प्रकार किया गया है -

Monday	250 X 6.0 =	1,500
Tuesday	200 X 5.0 =	1,000
Wednesday	200 X 4.5 =	900
Thursday	100 X 5.5 =	550
Friday	150 X 5.0 =	750
Saturday	100 X 4.0 =	400
Total Ton Kms.		<u>5,100</u>

Problem 11.2: A Transport Company maintains a truck for carrying goods from Jaipur to Bhilwara 270 kms. off. It operates for 26 days on average in a month. Every day it starts from Jaipur with a load of 8 tonnes and returns from Bhilwara with a load of 4 tonnes. The detail of expenses are as follows

Depreciation	Rs. 6,000 per month
Diesel & Oil	Rs. 24,000 per month
Driver's Salary	Rs. 1,600 per month
Cleaner's Salary	Rs. 800 per month
Garage Rent	Rs. 4,800 per month
Repairs & Maintenance	Rs. 48,000 per month
Taxes and Insurance	Rs. 24,000 per month

Solution :

Operating Cost Sheet

		Rs.
(A)	Fixed Expenses :	
	Taxes & Insurance (24,000/12)	2,000
	Driver's Salary	1,600
	Cleaner's Salary	800
	Garage Rent (4,800/12)	400
	Total Fixed Expenses	4,800
(B)	Variable Expenses :	
	Repair & Maintenance (48,000/12)	4,000
	Depreciation	6,000
	Diesel & Oil	24,000
	Total Variable Expenses	34,000
(C)	Total Opening Cost (A+B)	38,800
(D)	Cost per ton - km. (38,800/84,240)	0.46

टिप्पणी - 1. टन, किमी. की गणना निम्न प्रकार की गई है -

जाते समय 270 किमी. X 8 टन X 26 दिन	=	56,160
आते समय 270 किमी. X 4 टन X 26 दिन	=	28,080
कुल टन किमी.	=	84,240

Problem 11.3 : From the following particulars, calculate the rate to be charged per passenger km. to earn 30% profit on net takings. The bus has capacity to 50 persons.

(a) **Delhi to Chandigarh and back** (on the same day)

Distance covered	150 km. each way
No. of days run	10
Occupancy Ratio	90%

(b) **Delhi to Agra and back** (on the same day)

Distance covered	120 km. each way
No. of days run	10
Occupancy Ratio	80%

(c) **Local Trips** (within Delhi)

No. of days run	4
Average distance per day	40 Kms.
Occupancy Ratio	112.5%

Additional Information :

Cost of Bus	Rs. 1,50,000
Depreciation	40% p.a
Salary of driver	Rs.800 p.m.
Salary of Conductor	Rs. 600 p.m.
Salary of Accountant - cum Manager	Rs. 600 p.m.
Shed Rent	Rs. 600 p.m.

Insurance at 5% per annum on insured value of Rs. 1,20,000

Diesel Consumption	3 Kms. per litre at a cost of Rs. 3 per litre
Road Tax	Rs. 600 per annum per seat
Lubricants	50% of Diesel Cost
Repairs and Spares	Rs. 24,000 p.a.
Permit and Licence Fees	Rs. 1,200 p.m
Passenger Tax	at 15% of the total takings

Solution :

Operating Cost Sheet of a Month

	Rs.
(A) Fixed Charges:	
Salary of Driver	800
Salary of Conductor	600
Salary of Accountant - cum Manager	600
Shed Rent	600
Insurance (5% of 1,20,000 = 6,000/12)	500
Road Tax (6600x 50 = 30,000/12)	2,500
Permit & Licence Fees	1,200
Total Fixed Charges	6,800
(B) Variable Charges :	
Depreciation (40% of 1,50,000 = 60,000/12)	5,000

Diesel Cost (5,560 / 3x3)	5,560
Lubricants (50% of 5,560)	2,780
Repairs & Spares (24,000 / 12)	2,000
Total Fixed Charges	15,340
(C) Total Operating Cost (A+B)	22,140
Add : Profit @ 30% on net takings (22,140 x 30/70)	9,488.57
(D) Net Takings	31,628.57
Add : Passenger tax 15% of total takings (31,628.57x15/85)	5,581.51
(E) Gross of Total takings (sale proceeds of tickets)	37,210.08
(F) Passenger kms	2,40,000
(G) Cost per passenger kms. 22,140 / 2,40,000	.092
(H) Fare or Rate to be charged per passenger per km	.155
37,210.08 / 2,40,000	

टिप्पणी : बस द्वारा तय किय कुल किलोमीटर व कुल यात्री किलोमीटर की गणना निम्न प्रकार की गई है :-

Delhi to Chandigarh=	300 x 10	= 3,000 x $\frac{50 \times 90}{100}$	= 1,35,000
Delhi to Agra =	240 x 10	= 2,400 x $\frac{50 \times 80}{100}$	= 96,000
Delhi Local =	40 x 4	= 160 x 50 x 112.5	= 9,000
Total passenger kms.			2,40,000

Problem 12.1: The net profit M. Ltd. shown by Cost accounts for the year ended 31st December, 1994 was Rs. 86,200. A scrutiny of the figures of the financial accounts and the cost accounts revealed the following facts :

(a)	work overhead under recovered in cost	1,560
(b)	Administrative overhead recovered in excess in cost	850
(c)	(i) Depreciation charged in financial account	5,600
	(ii) Depreciation recovered in cost	6,250
(d)	Interest on investment not included in costs	4,000
(e)	Loss due to obsolescence charged in Financial Accounts	2,850
(f)	Income tax provided in Financial Accounts	20,150
(g)	Bank Interest and Transfer fees (in financial books)	375
(h)	Stores adjustment (credited in financial books)	237
(i)	Loss due to depreciation in stock value (Charged in financial accounts)	3,375

Prepare a statement showing reconciliation between the figures of net profit as per cost accounts and the figures of the net profit to be calculated for the Financial Accounts, as per reconciliation.

Solution:

Reconciliation Statement

	Rs.	Rs.
Profit as per Cost Accounts		86,200
Add: Administrative Overhead excess recovered	850	
Depreciation excess charged in cost accounts	650	

(Rs. 6,250 - 5,600)		
Interest on investment not included in cost	4,000	
Bank Interest and Transfer Fees	375	
Stores Adjustments (not included in cost)	237	6,112
Less: Work Overhead under recovered in Cost	1,560	
Loss due to obsolescence charged in F.A.	2,850	
Income Tax provided in financial books	20,150	
Loss due to depreciation in stock value	3,375	27,935
Profit as per financial Books		64,377

Problem 12.2 : Find out the profit as per costing records and financial accounts from the following information and reconcile the results.

	Product A	Product B
No. of units produced and sold	600	400
Total Direct Materials (Rs.)	3,600	2,800
Total Direct Wages (Rs.)	3,000	2,400
Selling Price per unit (Rs.)	25	30

Works overhead is charged at 80% of direct wages and office overhead at 25% of works cost. Actual works expenses amounted to Rs. 4,500 and office expenses to Rs. 3,900. There were no opening or closing stock.

Solution :

Cost Sheet Production A-600; B-400

Particulars	Product A		Product B	
	Total Cost	Cost per unit	Total Cost	Cost per unit
	Rs.	Rs.	Rs.	Rs.
Direct Materials	3,600	6.00	2,800	7.00
Direct Wages	3,000	5.00	2,400	6.00
Prime Cost	6,600	11.00	5,200	13.00
Factory Overhead (80% of wages)	2,400	4.00	1,920	4.80
Works Cost	9,000	15.00	7,120	17.80
Office Overhead (25% of W.C.)	2,250	3.75	1,780	4.45
	11,250	18.75	8,900	22.25
Profit	3,750	6.25	3,100	7.75
Sales	15,000	25.00	12,000	30.00

Total Profit = 3,750 + 3,100 = 6,850

Profit & Loss Account

	Rs.		Rs.
To Material : A - 3,600 <u>B-2,800</u>	6,400	By Sales A : 15,000 <u>B : 12,000</u>	27,000
To Wages : A - 3,000 <u>B - 2,400</u>	5,400		
To Factory expenses	4,500		
To Office expenses	3,900		
To Profit	6,800		
	27,000		27,000

Reconciliation Statement

	Rs.
Profit as per Cost Accounts (3750 + 3100)	6,850
Add : Office Overhead over charged in cost (4030 - 3900)	130
	6,980
Less : Factory Overhead under charged in cost (4500 - 4320)	180
Profit as per Financial Accounts	6,800

Problem 14.1: In manufacturing a commodity the standard quantity of material was fixed at 10 kg. and standard price was fixed at Rs. 2 per kg., the actual quantity consumed came to be 12 kg. and the actual price paid was Rs. 1.90 per kg.

You are required to calculate -

- (a) Material Cost Variance;
- (b) Material Rate Variance;
- (c) Material Usage v

Solution :

$$\begin{aligned}
 \text{(a) Material Cost Variance} &= \text{TSC} - \text{TAC} \\
 &= (\text{SQ} \times \text{SP}) - (\text{AQ} \times \text{AP}) \\
 &= (10 \times 2) - (12 \times 1.90) \\
 &= 20 - 22.8 \text{ or Rs. 2.80 (A)} \\
 \text{(b) Material Price Variance} &= \text{AQ} (\text{SP} - \text{AP}) \\
 &= 12 (2 - 1.90) \text{ or Rs. 1.20 (F)}
 \end{aligned}$$

$$\begin{aligned} \text{(c) Material usage Variance} &= \text{SP (SQ - AQ)} \\ &= 2 (10-12) \text{ or Rs. 4 (A)} \end{aligned}$$

Verification :

$$\begin{aligned} \text{MCV} &= \text{MPV} + \text{MUV} \\ \text{Rs. 2.80 (A)} &= \text{Rs. 1.20 (F)} + \text{Rs. 4 (A)} \end{aligned}$$

Problem 14.2 : The Standard Metal Co. Ltd. : manufactures, a single product. The standard of which is as follows:

Material X 60% at Rs. 20

Material Y 40% at Rs. 10

Normal loss in production is 20% of input. Due to shortage of material X, the standard mix was charged. Actual results for March, 1996 were as follows :-

Material X -	210 kgs.	at Rs. 20	=	4,200
Material Y -	190 kgs.	at Rs. 9	=	1,710
Input	400 kgs.			Rs. 5,910
Loss	70 kgs.			
Output	330 kgs.			

Calculate Material Variances.

Solution :

$$\begin{aligned} \text{(i) Material Cost Variance} &= \text{TSC} - \text{TAC} \\ \text{X} &= (247.5 \times 20) - (210 \times 20) = \text{Rs. 750 (F)} \\ \text{Y} &= (165 \times 10) - (190 \times 9) = \underline{\text{Rs. 60 (A)}} \\ &= \text{Rs. 690 (F)} \end{aligned}$$

Problem 14.3 : Calculate (i) Labour Rate Variance (ii) Labour Efficiency Variance (iii) Labour Mix Variance (iv) Labour Cost Variance

Standard	Actual
Workman A : <u>20 hrs. @ Rs. 3 = Rs. 60</u>	<u>60 hrs. @ Rs. 4 = 120</u>
Workman B : 20 hrs. @ Rs. 7 = Rs. 140	30 hrs. @ Rs. 6 = 180
<u>40 hrs. Rs. 200</u>	<u>60 hrs. 300</u>

Solution :

(i) Labour Rate Variance = AH (SR - AR)

A = 30 (3 - 4) = Rs. 30 (A)

B = 30 (7 - 6) = Rs. 30 (F)

Rs. Nil

(ii) Labour Efficiency Variance = SR (SH- AH)

A = 3 (20 - 30) = Rs. 30 (A)

B = 7 (20 - 30) = Rs. 70 (F)

Rs. 100 (A)

(iii) Labour Mix Variance = SR (RSH- AH)

A = 3 (30 - 30) = Rs. Nil

B = 7 (30 - 30) = Rs. Nil

Rs. Nil

$$\text{Revised Standard Hours (RSH)} = \frac{\text{SH of each grade at Labour} \times \text{TAH}}{\text{Total Std. Hours (TSH)}}$$

$$\begin{aligned} \text{TAH} &= \text{Total Actual Hours} \\ \text{A} &= \frac{20}{40} \times 60 = 30 \text{ hrs.} \\ \text{B} &= \frac{20}{40} \times 60 = 30 \text{ hrs.} \end{aligned}$$

$$\begin{aligned}
 \text{(iv) Labour Cost Variance} &= \text{TSC} - \text{TAC} \\
 \text{A} &= (20 \times 3) - (30 \times 4) = \text{Rs. } 60 \text{ (A)} \\
 \text{B} &= (20 \times 7) - (30 \times 6) = \text{Rs. } 40 \text{ (A)} \\
 &\qquad\qquad\qquad \underline{\text{Rs. } 100 \text{ (A)}}
 \end{aligned}$$

टिप्पणी - प्रमाप मिश्रण व वास्तविक मिश्रण का अनुपात समान होने के कारण श्रम मिश्रण विचरण (खट) शून्य हैं ।

Problem 15.1 : From the following find out :

- (i) P/V Ratio;
- (ii) Break - even point ;
- (iii) Net Profit from the sale of Rs. 3,00,000;
- (iv) Required sale for the net profit of Rs. 70,000.

Position of A Ltd., for the year 1955 :

	Rs.
Sales	2,00,000
Variable overhead	1,50,000
Gross Profit	50,000
Fixed overhead	15,000
Net Profit	35,000

Solution :

$$\begin{aligned}
 \text{(i) P/V Ratio} &= \frac{\text{S} - \text{V}}{\text{S}} \times 100 \\
 &= \frac{2,00,000 - 1,50,000}{2,00,000} \times 100 = 25\% \\
 \text{(ii) Break - even Point (Rs.)} &= \frac{\text{F}}{\text{P/V Ratio}} = \frac{15,000}{25} \times 100
 \end{aligned}$$

(iii) Net Profit from the sale of Rs. 3,00,000

$$\begin{aligned} \text{Profit} &= \text{Sales} \times \text{P/V Ratio} - \text{Fixed Cost} \\ &= 3,00,000 \times \frac{25}{100} - 15,000 \\ &= 75,000 - 15,000 = \text{Rs. } 60,000 \end{aligned}$$

(iv) Required Sales for the profit of Rs. 70,000

$$\begin{aligned} \text{Required Sales (Rs.)} &= \frac{\text{F} + \text{Desired Profit}}{\text{P/V Ratio}} \\ &= \frac{15,000 + 70,000}{25} \times 100 \\ &= \text{Rs. } 3,40,000 \end{aligned}$$

Problem 15.2 : Modern company has maximum capacity of 4,40,000 units per annum. Normal capacity is regarded as 3,60,000 unit in a year. Variable manufacturing cost (including material and labour) is Rs. 2.20 per unit. Fixed factory overhead is Rs. 1,08,000 per annum. Selling and Distribution cost of the fixed nature is Rs. 50,400 per annum where as variable is Rs. 0.60 per unit. Sale price is Rs. 4 per unit. Calculate:

- (i) Break-even point, P/V Ratio and Margin of Safety.
- (ii) Number of units to be sold to earn a profit of Rs. 12,000 in a year.
- (iii) Sales value needed to earn a profit of 10% on sales.
- (iv) Selling price per unit to bring down break - even point to 1,20,000 units of the product.

Solution :

Marginal Cost Statement

Selling Price per unit		4.00
Less : Variable Cost per unit :		
Manufacturing	2.20	
Selling & Distribution Cost	0.60	2.80
Contribution per unit		1.20

(i) Calculation of P/V Ratio, BEP and Margin of Safety.

$$(a) \quad P/V \text{ Ratio} = \frac{C}{S} \times 100 = \frac{1.20}{4.00} \times 100 \text{ or } 30\%$$

$$(b) \quad BEP \text{ (in Rs.)} = \frac{F}{P/V \text{ Ratio}} = \frac{158400}{30\%} \text{ or Rs. } 5,28,000$$

$$(c) \quad \begin{aligned} \text{Margin of Safety (in Rs.)} &= \text{Actual Sales} - \text{BEP Sales} \\ &= 14,40,000 - 5,28,000 \\ &= 9,12,000 \\ \text{Margin of Safety (in\%)} &= \frac{\text{Actual Sales} - \text{BEP Sales}}{\text{Actual Sales}} \times 100 \\ &= \frac{14,40,000 - 5,28,000}{14,40,000} \times 100 \\ &= \frac{9,12,000}{14,40,000} \times 100 \text{ or } 63.3\% \end{aligned}$$

(ii) Number of units to be sold to earn a profit of Rs. 12,000 in a year.

$$\text{Repaired sales (in units)} = \frac{F + \text{Desired Profit}}{\text{Contribution per unit}}$$

$$= \frac{1,58,400 + 12,000}{1.20}$$

$$= \frac{1,70,400}{1.20} = 1,42,000 \text{ units}$$

(iii) Sales value needed to earn a profit 10% on sales:

Let sales at this level be Rs. X

$$\text{Desired Profit} = \frac{X \times 10}{100} = 0.1 X$$

$$\text{Required sales (in Rs.)} = \frac{F + \text{Desired Profit}}{\text{P/V Ratio}}$$

$$X = \frac{1,58,400 + 0.1 X}{30\%}$$

$$\frac{X}{1} = \frac{(1,58,400 + .1X) \times 100}{30}$$

$$\frac{X}{1} = \frac{1,58,400 + 10 X}{30}$$

$$\text{or } 30 X = 1,58,40,000 + 10 X$$

$$\text{or } 30 X - 10 X = 1,58,40,000$$

$$\text{or } 20 X = 1,58,40,000$$

$$\text{or } X = \frac{1,58,40,000}{20}$$

$$X = 7,92,000$$

(iv) Selling price per unit to bring down BEP to 1,20,000 units of the product :

$$\text{S.P. per unit} = \frac{F}{\text{New BEP in units}} + \text{V. Cost per unit}$$

$$= \frac{15,84,000}{1,20,000} + 2.80$$

$$= 1.32 + 2.80 = 4.12$$

Problem 15.3 : Calculate

- (i) The amount of fixed expenses.
- (ii) The number of units to break - even.
- (iii) The number of units to earn a profit of Rs. 40,000.

The selling price per unit is Rs. 100.

The company sold in two period 7,000 units and 9,000 units and has incurred a loss of Rs. 10,000 and earned a profit of Rs. 10,0000 respectively.

Solution :

$$\begin{aligned}
 \text{P/V Ration} &= \frac{\text{Change in Profit}}{\text{Change in Sales}} \times 100 \\
 &= \frac{10,000 - (-10,000)}{9,00,000 - 7,00,000} \times 100 \\
 &= \frac{20,000}{2,00,000} \times 100 = 10\%
 \end{aligned}$$

$$\begin{aligned}
 \text{(i) Fixed Cost} &= \text{Sales} \times \text{P/V Ratio} - \text{Profit} \\
 &= 9,00,000 \times \frac{10}{100} - 10,000 = \text{Rs. } 80,000
 \end{aligned}$$

$$\begin{aligned}
 \text{or} &= 7,00,000 \times \frac{10}{100} - (-10,000) \\
 &= 70,000 + 10,000 = 80,000
 \end{aligned}$$

$$\begin{aligned}
 \text{(ii) BEP (in units)} &= \frac{\text{F}}{\text{Contribution per unit}} = \frac{80,000}{10} \\
 &= 8,000 \text{ units}
 \end{aligned}$$

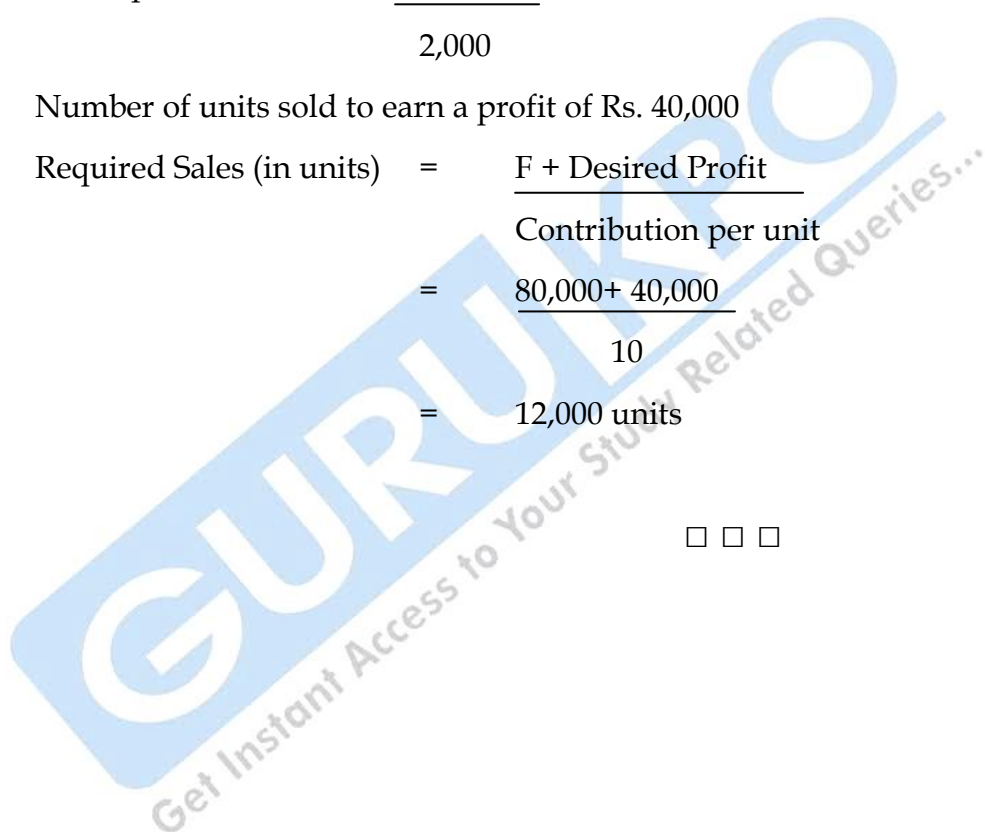
Contribution per unit -

	Sales in Unit	Profit or Loss
	Rs.	Rs.
II Period	9,000	10,000
I Period	7,000	-10,000
On Subtracting	2,000	20,000
Contribution per unit	= $\frac{20,000}{2,000}$	= Rs. 10

(iii) Number of units sold to earn a profit of Rs. 40,000

$$\begin{aligned}
 \text{Required Sales (in units)} &= \frac{F + \text{Desired Profit}}{\text{Contribution per unit}} \\
 &= \frac{80,000 + 40,000}{10} \\
 &= 12,000 \text{ units}
 \end{aligned}$$

□ □ □



B. Com (Part-II) Examination, 2010

(10+2+3 Patterns)

(Faculty of Commerce)

Cost Accounting**Objective Part- I**

Time : One Hour

Max. Marks.: 40

Attempt all questions. Question No. 1 (i) to (x) are of 2 marks each.**Question No. 2 (i) to (v) are of 5 marks each.**

1. (i) State main object of cost accounting.
- (ii) What do you understand by costing?
- (iii) What is the difference between indirect expenses and overheads?
- (iv) What is the difference between production cost of goods sold and cost of production?
- (v) What is meant by Reorder Level? Give formula.
- (vi) Mention the names of the individual bonus scheme for wages payment.
- (vii) Give any main assumptions of unit and output costing methods.
- (viii) Give any two differences between contract costing method and job costing method
- (ix) Calculate on the basis of following information.
- | | | | |
|------|----------------------------|----------------|-------------------------|
| (i) | Absolute Tonne Kilometre | | |
| (ii) | Commercial Tonne Kilometre | | |
| | Route of Journey | Distance (k.m) | Weight of Goods (Tonne) |
| a) | Jaipur to Ajmer | 130 | 20 |
| b) | Ajmer to Bhilwara | 137 | 16 |
| c) | Bhilwara to Udaipur | 200 | 10 |

- d) Udaipur to J 467 –
- (x) A bus runs 90,000 kms. in a year. One litre diesel is required for 12 kms. and cost of diesel per litre is Rs.10 Calculate cost of diesel.
2. (i) The annual demand for an item is 3,200 units. The unit cost is Rs. 6 and inventory carrying cost is 25% per annum. If the cost of one order is Rs. 150 determine.
- (a) E.O.Q.
 (b) No. of orders per year
 (c) Time between two consecutive order.
- (ii) What are the different bonus rates on the basis of efficiency under Emerson Plan? Give the formula of efficiency percentage.
- (iii) Give meaning of marginal costing.
- (iv) What are the different methods of labour turnover? Give formulas.
- (v) Details regarding a contract for the year 2009 is as follow:
- | | |
|-----------------|-----------------------|
| Contract Price | Rs. 40,00,000 |
| Cost up-to-date | Rs.20,80,000 |
| Work completed | 2/3 of contract price |
| Cash received | 1/2 of contract price |
| Cash received | 90% of contract price |

DESCRIPTIVE PART II

Time: Two Hour

Max. Marks: 60

Attempt Three questions in all, selection one question from each Section.

Section-A

3. A manufacturing company uses two identical large and four identical small machines. Each large machine occupies one-quarter space of the workshop and employs fully three workers. Each small machine occupies half the space

of a large machine and employs fully tow workers. the workers are paid by piece work. Each machine is estimated to work 1,440 hours for each small machine. Large cost Rs. 20,000 each and small machines Rs. 4,000 and each small machine Rs. 1,200 during its effective life. Power consumption cost 5 paisa per unit and amounts for a large machine 20 units per hour and for a small machine 2 units per hour. The manager is paid Rs. 4,800 a year and workshop supervision occupies half of his time which is divided equally among the six machines. Detail to other expenses are : Rent and rates of workshop : Rs. 6,400 a year; Lighting (to be apportioned in the ratio of workers employed) Rs. 1,820 a year. Taking a period of three months as a basis, calculate the machine hour rate for a large machine and a small machine respectively.

4. Write short notes on the following :
- (a) ABC analysis
 - (b) Maximum stock level
 - (c) Accounting treatment of wastage for material
 - (d) Idle time

Section- B

5. The Fancy Toys company manufactures two types of toys: X and Y. The manufacturing details for the year ending 31st December, 2009 were as under:

	Rs.
Direct material	2,00,000
Direct wages	1,12,000
Manufacturing overhead	48,000

There was no work in progress the beginning or at the end of the year. It was ascertained that:

- i. Direct material per toy for X, cost twice as much as direct material per toy in type Y.
- ii. Direct wages per toy for type Y were 60% of those for type X.
- iii. Manufacturing overhead was 30 paise, the same per toy of X and Y types.
- iv. Administrative overhead for each type was 200 per cent of direct labour cost.
- v. Selling overhead was 25 paise per toy sold for each type.
- vi. Production during the year : Type X- 40,000 toys of which 36,000 were sold; Type Y-20,000 toys of which 1,00,000 were sold.
- vii. Selling price - Type X Rs. 7 per toy; and Type Y Rs. 5 per toy.

Prepare a statement showing the cost per toy for each type of toy and profit earned on each type of toy.

6. (a) "It has been stated that an efficient costing system will not necessarily agree with the financial accounts." Comment upon this statement.
(b) Explain normal wastage abnormal wastage and abnormal effectives. How would should be dealt within process accounts?

Section-C

7. Given the following particulars, compute the labour variances :

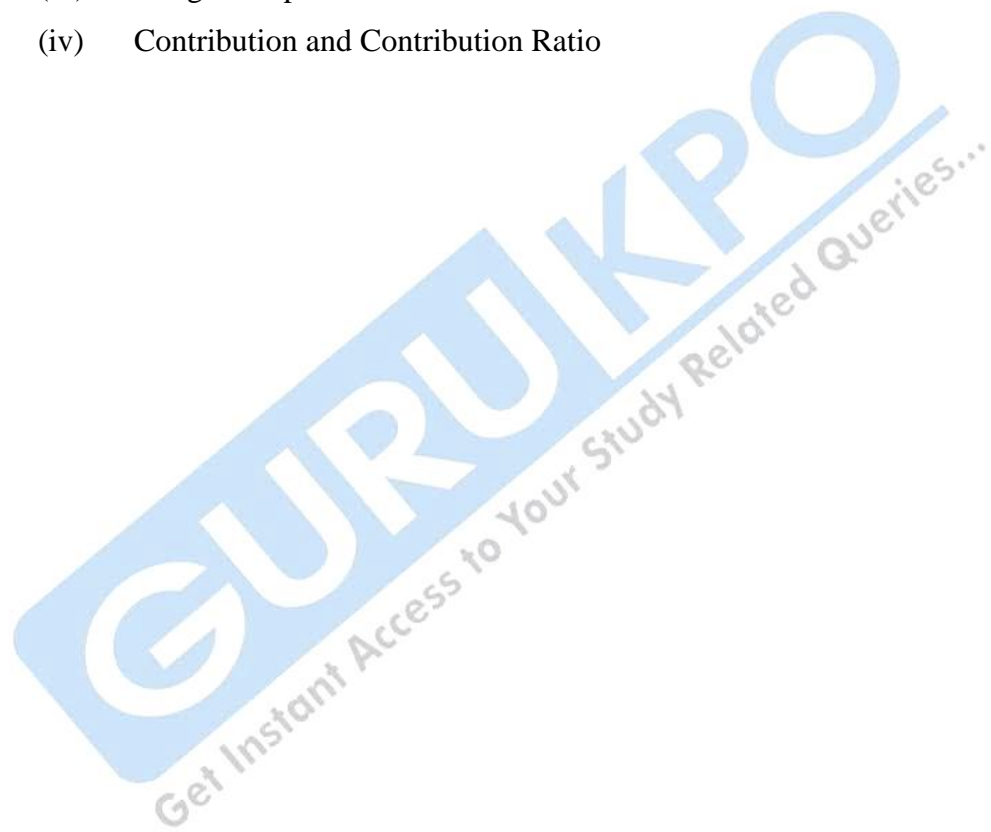
		Standard	
Labour	No. of person	Rate	Hours worked
Grade A	100	Rs. 3	100
Grade B	50	Rs. 5	100
Grade C	40	Rs. 10	100

		Actual	
Labour	No. of person	Rate	Hours worked

Grade A	80	Rs. 2.50	120
Grade B	60	Rs.5.00	120
Grade C	50	Rs. 8.00	120

8. Write short notes on the following:

- (i) Break even point
- (ii) Nagle of Incidence
- (iii) Margin Graph
- (iv) Contribution and Contribution Ratio



B. Com (Part-II) Examination, 2009

(10+2+3 Patterns)

(Faculty of Commerce)

Cost Accounting**Objective Part- I**

Time : One Hour

Max. Marks.: 40

Attempt all questions. Question No. 1 (i) to (x) are of 2 marks each.**Question No. 2 (i) to (v) are of 5 marks each.****1.**

- (i) Differentiate between cost and costing.
- (ii) What is the difference selling overhead and distribution overhead?
- (iii) What is the difference between Apportionment and Absorption of factory overhead?
- (iv) What is cost-sheet? How does it differ from a Production Account?
- (v) If certification of contract price is more than $\frac{1}{4}$ of contract price but less than $\frac{1}{2}$ of it then give the formula for the amount to be credited in profit and Loss A/c
- (vi) A bus runs 90,000 kms. in a year. One litre diesel is required for 12 kms. and the cost of diesel per litre is Rs.10.00. Calculate cost of diesel.
- (vii) What is the difference between Joint-product and By-Product? Explain it with the help of illustration.
- (viii) State any two items which are included in Cost Accounts but not in Financial Accounts.
- (ix) P/V Ratio for the firm is 60%, variable cost of a product is Rs.360, find out its selling price.
- (x) Give the formula to calculate Labour Yield Variance.

2.

- (i) Name the methods of costing for each of the following industries.
Goods transport 2. Coal mines 3. Readymade garments 4. Car-repairing workshop.
- (ii) Overhead at two level of production are as under:
- | Total overhead | Volume of Production |
|----------------|----------------------|
| Rs. | Rs. |
| 12,200 | 900 |
| 15,400 | 1,300 |
- (iii) Distinguish between Job Costing and Contract Costing.
- (iv) A hotel has 100 rooms, of which 80% are normally occupied in summers and 25% in winters. Period of Summers and winters will be taken as 6 month each and normal days in a month to be 30, calculate the total occupied room days.
- (v) Give the formula to calculate Material Price and Material Mis Variance.

DESCRIPTIVE PART- II

Time: Two Hour

Max. Marks. 60

Section-A

3. (a) Record the following transactions in the Stores Ledger of Shah Ltd.

15.1.2008 Receipt 250 units costing Rs.312.50 (GR No. 115)
 21.02.2008 Receipt 100 units costing Rs.130.00 (GR No. 123)
 24.03.2008 Receipt 50 units costing Rs. 67.50 (GR No. 315)
 05.04.2008 Issue 55 units (req. No. 151)
 19.04.2008 Receipts 50 units costing Rs.70.00 (GR No. 418)
 25.4.2008 Issue 300 units (Req. No.25)
 3.5.2008 issue 40 units (Req. No.351)

The issue on 05.04.2008 and 25.04.2008 were priced at LIFO and FIFO basis respectively, and from 01.05.2008 it was decided to price the issue at weighted average price.

- (b) If a workers took 60 hours for which standard time is 75 hours then what will be his income in Halsay 50% Plan and Rowan Plan? His hourly wages rate is Rs. 15 and he gets Rs. 12 per day for dearness allowance on hourly basis. There are 8 working hours in a day.
4. Explain different methods of factory overhead absorption. Which method is most scientific in your opinion and why? 20

Section-B

5. The product of a factory passes through three processes X, Y and Z.

Expenditure on these processes are as follows:

Particulars	Process		
	X Rs.	Y Rs.	Z Rs.
Material Used	10,000	5,000	2,500
Wages	13,000	12696	7,223
Indirect Expenses	2,800	2,500	3,750
Unit issued to process X (50,000 Unit)	20,000		
Normal Wastage	4%	10%	10%
Sale of Scrap per 100 units	10	25	10

The percentage of wastage given above should be calculated on the units entering each process. The finished product of Z is transferred to finished stock account.

The output of process X is 47,520 units, of process Y 43,460 unit and of process Z 38,960 units. Prepare process accounts and abnormal wastage and effective account.

6. What are the different methods of calculating profit on an incomplete contract?
Explain with illustrations. 20

Section-C

7. Define and explain Standard Costing. Describe briefly the variances relating to material and labour costs.
8. Rex Ltd. furnishes the following information for the year 2008 :

	Jan. to June	July to Dec.
Sales (Rs.)	13,50,000	15,00,000
Total Cost (Rs.)	12,00,000	12,90,000

Assuming that fixed expenses are incurred uniformly in both the periods, calculate the following for the year 2008 :

- (i) Fixed expenses:
- (ii) Break-even-sales:
- (iii) Sales to earn a profit of 10% on sales.

GURUKPO
Get Instant Access to Your Study Related Queries...

B. Com (Part-II) Examination, 2008

(10+2+3 Patterns)

(Faculty of Commerce)

Cost Accounting**Objective Part- I**

Time : One Hour

Max. Marks.: 40

Attempt all questions. Question No. 1 (i) to (x) are of 2 marks each.**Question No. 2 (i) to (v) are of 5 marks each.****1.**

- i. What is opportunity cost?
- ii. What is difference between indirect expenses and overheads?
- iii. If the minimum stock level and average stock level of raw material is 4,000 and 9,000 units respectively, find out its reorder quantity.
- iv. What do you understand by time study?
- v. At what rate remuneration will be paid to a worker under Emerson Bonus Plan if a worker works on 110% efficiency?
- vi. Distinguish between overhead and on cost.
- vii. what is the importance of "Escalation Clause" in contract Price?
- viii. What is the difference by-product and scrap?
- ix. What do you mean by Angle of incidence?
- x. Why idle time variance is always adverse?

2.

- i. A consignment consists of two chemicals A and B for which following data are given:
- | | Rs. |
|--|-----------|
| a. Chemical A 1600 kgs @ Rs. 20 per kg | |
| 32,000 | |
| b. Chemical B 1000 kgs @ Rs. 16 per kg | |
| 16,000 | |
| c. Railway freight | |
| 3,640 | |
| d. Sales Tax | |
| 3,360 | |
| | i. 55,000 |
- e. A shortage of 5% is expected on the basis of past experience. What price would you select for pricing the issue of these chemicals?
- ii. Standard time for a job is 12 hours and hourly guaranteed rate of wages is Rs. 6 per hour. due to saving in time under Rowan Bonus scheme effective rate of wages of a worker is Rs. 7.50 per hour. If this worker has taken same actual time in Halsey scheme then find his effective labour rate per hour in Halsey scheme.
- iii. Explain cost treatment of wastage and scrap.
- iv. Explain the valuation of stock in financial and cost accounts
- v. The profit volume ratio of a company deals in toys making is 50% and the margin of safety is 40% . If present sales is Rs. 30,00,000 then calculate Break even point.

DESCRIPTIVE PART- II**Time: Two Hour****Max. Marks: 60**

Attempt three questions in all, selecting one question from each Section.

All questions carry equal marks of 20 each.

Section-A

3. Write notes on the following :

1. ABC analysis
2. VED analysis
3. FSND analysis

4. Details of process cost of a company manufacturing electrical equipment is as follows:

- i. Original cost of machine is Rs. 10,000 with estimated life of 10 years and salvage value is Rs. 1,000 Standard working hours of this machine is 2200 (44 hours per week for 50 weeks) out of which it is estimated that 200 hours will be lost in maintenance which will not be treated as productive hours. No electricity will be consumed during maintenance.
- ii. Machine will consume 16 units of electricity @ 9 paise per unit during productive hours.
- iii. The machine requires a chemical solution which is replaced at the end of each week at a cost of Rs. 20 each time.
- iv. The estimated cost of maintenance per year is Rs. 1,200
- v. Two attendants control the operation of the machine together with five other identical machines. Their combined weekly wages amount of Rs. 120.
- vi. Department and general works overheads allocated to this machine for the year amount to Rs. 2,000

- vii. In addition to above 100 hours will be consumed for setting up of the jobs on machine. Compute machine hour rate if:
- viii. Setting up time is treated as productive time and power is consumed during setting of machine.
- ix. Setting up time is productive time but no power is consumed during setting.
- x. Setting up time is non-productive but power is consumed during setting.
- xi. Setting up time is non-productive and no power is consumed during setting.

Section-B

5. J.K. Mittal and Co. undertook a contract for Rs.5,00,000 on 1st April, 2006, On 31st March, 2007, when the contract account was closed, the following details, were gathered about the contract :

	Rs.
Material purchased	1,95,920
Wages paid	52,000
Plant purchased and issued	50,000
General expens (for 15 months)	12,500
Material at site on 31.03.2007	25,000
Wages outstanding for two weeks on 31.03.2007	
Work certified	2,50,000
Work uncertified	15,000
Cash received from contractee	2,04,000
Depreciation on plant	5,000

The above contract contained clause which read as follows:

"In the event of prices of materials and rates of wages increase by more than 5% then the contract price will be increased by 25% of the rise in the cost of material and wages beyond 5% in each case." It was found that since the date of signign the agreement the prices of materials and wages rates increased by 25%. The value of the

work certified didn't consider the effect of the above clause, although there were provision in the contract that value of work certified should be increased in the same proportion in which contract price is increased. Prepared contract account for the year ended 31.03.2007.

6. The following data are available pertaining to a product after passing through two processes A and B :

— Output transferred from process B to process C : 9120 units at a cost of Rs.49,263.

— Expenses incurred in process C :

Sundry material	Rs. 1,480
Direct labour	Rs. 6,500
Direct expenses	Rs. 1,605

Normal wastage of process C is sold at Rs. 1.00 per unit. The overhead charges were 168% of direct labour. The final product was sold at Rs.10.00 per unit fetching a profit of 25% on total cost. As there was no abnormal loss or abnormal gain in process C, find normal wastage and prepare process C account.

Section-C

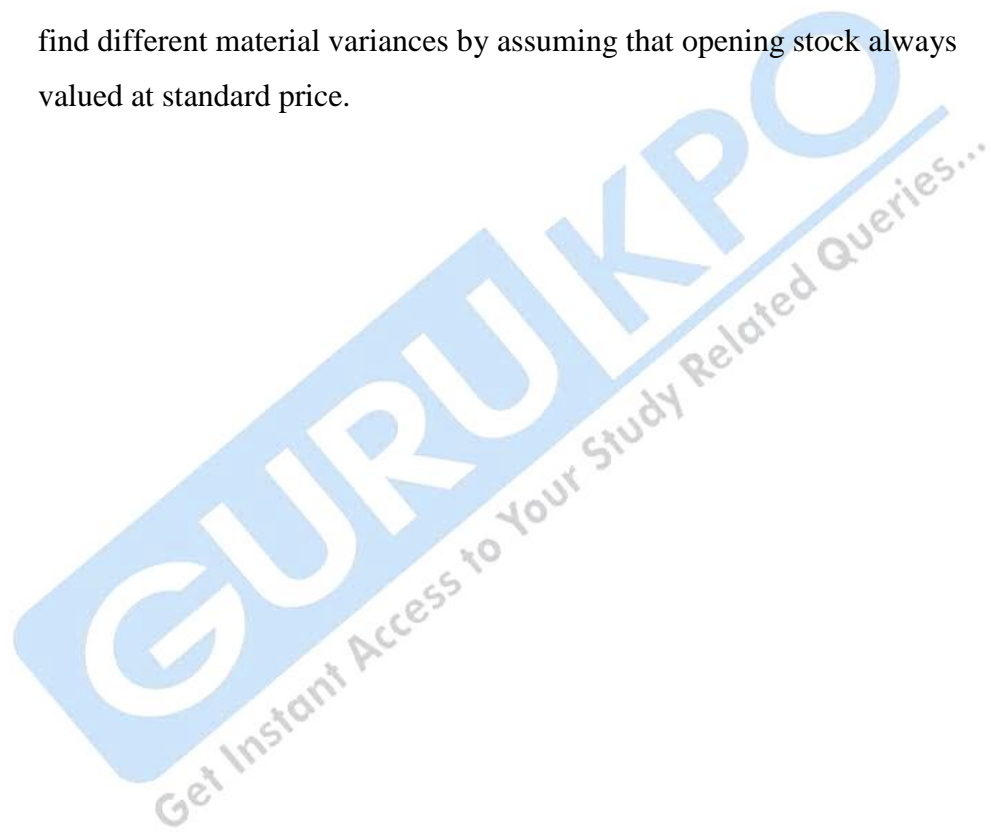
7. "The technique of marginal cost can be valuable aid to management discuss this statement and give year views.
8. Shah Ltd. produces an article by blending two basic raw materials. The following standards have been set up raw materials.

Material	Standard mix	Standard price per k.g.
A	40%	Rs. 4.00
B	60%	Rs. 3.00

The standard loss in processing is 15% of input. During January, 2008 the company produced 1700 kgs of finished output. Information regarding purchases and stock for January, 2008 was as under:

Material	Stock on 01.01.2008	Stock on 31.01.2008	Purchase during Jan., 2008
A	35 kg	10 kg	800 kg at Rs. 3,600
B	40 kg	50 kg	1200 kg at Rs.3,000

find different material variances by assuming that opening stock always valued at standard price.



B. Com (Part-II) Examination, 2007

(10+2+3 Patterns)

(Faculty of Commerce)

Cost Accounting

Attempt all questions. Question No. 1 (i) to (x) are of 2 marks each.

Question No. 2 (i) to (v) are of 5 marks each.

1.

- i. What is the difference between cost unit and cost centre?
- ii. What is the difference between production cost of goods sold and cost of production?
- iii. Write any one formula for finding out reorder stock level.
- iv. What is meant by "Wages Abstract" ?
- v. Mention formula to calculate bonus hours in Rowan Bonus Scheme.
- vi. Explain the difference between Allocation and Apportionment of Overhead.
- vii. State the name of hour industries where unit costing is applied.
- viii. State the name of contract price is more than 1/4th of contract price but less than 1/2 of it then give the formula for the amount to be credited in Profit and Loss A/c.
- ix. What is the meaning of "Cost Unit" is operating costing?
- x. What do you mean by abnormal effectiveness? Where is the balance of this account transferred?

2.

- i. Explain the different steps of material purchasing in brief.
- ii. What is meant by overhead? How can these be classified? Explain with example.

- iii. How will you value the work-in-progress with reference to contract?
- iv. Give the causes of differences between costing profits and financial profits.
- v. A factory manufacturing sewing machines has the capacity to produce 500 machines per annum. The marginal (variable) cost of each machine is Rs. 200 and each annum. Calculate the break even point for production and break-even point for sales.

DESCRIPTIVE PART- II

Time: Two Hour

Max Marks: 60

Attempt three question in all, selecting one question from each Section
All question carry equal marks of 20 each.

Section-A

3. Two types of materials A and B are used as follows:

Normal Usage		50 Units per week each
Minimum usage		25 units per week each
Maximum usage		75 units per week each
Re-order quantity	A:	300 units per week
	B:	500 units per week
Re-order period	A:	4 to 6 weeks
	B:	2 to 4 weeks

Calculate the following levels for each type of material:

1. Reorder Level;
 2. Minimum Level;
 3. Maximum Level;
 4. Average Stock Level;
4. The following information are available regarding total production of a production department:

Direct Materials (Rs.)	1,00,000
Direct Wages (Rs.)	60,000
Labour hours worked (Hours)	20,000
Number of units produced (units)	8,000
Overhead changeable to the department (Rs.)	40,000

The details of job No. 500 carried out during the period were as follows:

Direct materials (Rs.)	4,000
Direct Wages (Rs.)	3,000
Labour hours	820
Number of units produced	300

Prepare a comparative statement of cost by using five differences methods of overhead absorption.

Section-B

5. A cooler manufacturing concern produced and sold 500 coolers during the year 2006 and earned a profit of Rs.48,000. Concern expects that demand of coolers will be much more during the year 2007. the concern's records show the following particulars for the past year.

	Rs.
Materials	1,20,000
Direct wages	60,000
Direct charges	10,000
Works overhead	70,000
Office overhead	28,000
Selling overhead	32,000

You ascertain that 50% of the works overheads fluctuate directly with production and 60% of the selling overhead fluctuate with sales. It is anticipated that the concern would produce 2,500 coolers per annum and that direct wages per unit will be reduced by 28% while fixed works overheads charges will increase by Rs.30,000 Office overhead and fixed selling overhead charges are expected to show an increase of 25%. Except it no change are anticipated. Prepare a cost sheet showing sales price for the year 2007. Assuming that the same % of profit is desires as in the last year.

6. To completion of an item it has to pass in three processes. On 31st March, 2006, end of three month period the cost and productive were as under :

B. Com (Part-II) Examination, 2006

(10+2+3 Patterns)

(Faculty of Commerce)

Cost Accounting**Objective Part- I**

Time : One Hour

Max. Marks.: 40

Attempt all questions. Question No. 1 (i) to (x) are of 2 marks each.**Question No. 2 (i) to (v) are of 5 marks each.****1.**

- i. What do you understand by costing?
- ii. What is meant by supplementary cost?
- iii. Give formula for determination of maximum stock level.
- iv. What is meant by "Ghost Worker"?
- v. what is preventive cost?
- vi. What is meant by semi-variable overhead?
- vii. Give five names of industries for which process cost accounting is suitable.
- viii. Why cost and financial accounts are reconciled?
- ix. What is contribution?
- x. What is the meaning of favorable variance?

2.

- i. Ascertain the amount of bonus and total wages under Emerson plan with the help of following information:

- | | |
|---------------------------------|------------|
| a. Standard output in 10 hours: | 120 units |
| b. Actual output in 10 hours: | 132 units |
| c. Wages rate: | Rs. 15 per |
| hour | |

- ii. Define different components of total cost:
- iii. The following information is available in respect of a particular material:
- | | |
|--|--------------------|
| a. Re-order quantity | 3600 units |
| b. Maximum usage | 900 units per week |
| c. Minimum usage | 300 units per week |
| d. Normal usage | 600 units per week |
| e. Re-order usage | 3 to 5 weeks |
| f. Calculate the following (i) Re-order level (ii) Minimum stock level | |
- iv. What is Inter Process?
- v. Calculate Labour idle Time Variance from the following information of X ltd.
- | | |
|---------------------------------|----------------|
| a. Standard rate of labour hour | Rs. 5 per hour |
| b. Actual rate of Labour hour | Rs. 6 per hour |
| c. Standard rate of Labour | 250 hours |
| d. Actual Time taken | 200 hours |
| e. Idle time | 25 hours |

DESCRIPTIVE PART- II**Time: Two Hour****Max Marks: 60****Attempt three questions in all, selecting one question from each Section.****All question carry equal marks.****Section-A**

3. Details of receipts and issue of an item of material for the month November, 2005 are as under:

1st November	Received 100 units @ Rs. 6.00 per unit
5th November	Received 200 units @ Rs. 7.50 per unit
10th November	Issued 150 units
13th November	Received 100 units @ Rs. 8.00 per unit.
15th November	Wastage (informed by inspector) 10 units.
20th November	Received 200 units @ Rs. 10.04 per units.
25th November	Issued 250 units

Material is issued to production departments by weighted average method. Record these transactions separately in the store ledger on the basis of following two methods: -

- (i) Wastage of material is treated as factor overhead.
 - (ii) Cost of good units is inflated by the cost of wastage.
4. Calculate machine hour rate to recover the overhead expenses indicated below relating to a particular machine:

Expenses per annum	Rs.
Rent of the department	7,800
Lighting	2,880

Insurance	360
Cotton waste, oil etc.	600
Salary of foreman	12,000

Additional information is as follows:

- i. Space occupied by the machine being one fifth of the department.
- ii. Number of bulbs in the department 12, tow bulbs used for his machine.
- iii. One fourth of his time of occupied by this machine and the remainder equally upon the other two machine.
- iv. The cost of machine is Rs. 9,200 and it has an estimated scrap value of Rs.200
- v. Machine will work 1,800 hours per annum.
- vi. Machine will require expenditure of Rs.1,440 for repairs and maintenance during the whole working life of machine.
- vii. Machine consumes 10 units of power per hour per hour at the cost of 30 paise per unit.
- viii. Working life of the machine will be 18,000 hours.

Section-B

5. Vikas & Co. undertook a contract for Rs. 3,00,000, which was completed in six month. The following expenditure was made by contractors to complete the contract :-

	Rs.
Direct Material	1,18,800
Wages	79,200
Plant	52,800
Stores issued	21,120
Loose tools	9,900
Other direct charges	7,900

Running expenses of Tractor	17,160
-----------------------------	--------

On completion of contract the plant was returned after charging depreciation @ 20% of the original cost. The value of loose tools and stores returned were Rs. 6,600 and Rs. 2,670 respectively. The value of tractor was Rs. 60,000 and depreciation was to be charged on this contract @ 20% per annum. The amount of office expenses to be charged to the contract is calculated at the rate 10% on the total works cost.

Show the contract account assuming that the amount due from the contractee would be duly received.

6. A Municipal Corporation arranges for the removal of garbage by means of motor vehicles which is given as follows:

No. of vehicles	Capacity
3	5 tons
4	3 tons
5	2 tons
2	4 tons

On an average each vehicle make 5 trips a day covering an average distance of 6 kms. with a load of 50% of its capacity. 10% of the vehicles remain unused in workshop for repair every day.

following expenditure are incurred on these vehicles :	Rs.
Salary of the superintendent of vehicle deptt.	1,800
Salary for 2 transport foreman	12,00 each
Wages of 20 Drivers	1,000 each
Wages of 20 labour	8,00 each
Consumable stores	20,000
Petrol	80,000
Lubricant and oil	10,000

Repairs of tyres, tubes etc.	6,000
Garage rent and rates	2,500
Gas and electric charges	800
Sundry expenses	15,000

50% of the superintendent's salary is debited to the workshop and these vehicles bear a monthly charges of Rs. 15,000 for services of the workshop prepare operating cost sheet for a month of 30 days.

Section-C

7. The following figures are given to you :

	Sales Rs.	Profit/Loss Rs.
2003-2004	1,00,000	10,000 Loss
2004-2005	2,50,000	20,000 Profit

Calculate :

1. P/V ratio
 2. Break even point
 3. Margin of safety at a profit of Rs. 2,000
 4. Sales to make a profit of Rs. 40,000
8. Explain and illustrate the following variance :
1. Material Price Variance
 2. Material Usages Variance
 3. Material Mix Variance
 4. Material Yield Variance