INTERMEDIATE EXAMINATION
GROUP II
(SYLLABUS 2008)

SUGGESTED ANSWERS TO QUESTIONS
JUNE 2013

PAPER- 8 : COST AND MANAGEMENT ACCOUNTING

Time Allowed : 3 Hours **Full Marks : 100**

The figures in the margin on the right side indicate full marks.
Question No.1 is compulsory. Answer any five from the rest.

1. (a) Match the statement in Column I with the appropriate statement in Column II: 1x5=5

Column I	Column II
(i) Apportionment of Overheads	(A) Job Evaluation
(ii) Equivalent Production	(B) Reciprocal Method
(iii) Point Ranking Method	(C) Cost Ledger Accounts
(iv) Output Costing	(D) Process Costing
(v) Non Integrated Accounts	(E) Coal Industry

(b) State whether the following statements are 'True' or 'False': 1x5=5

(i) Fixed cost per unit remains constant irrespective of the number of units of output.

(ii) An efficient worker always gets more bonus under Rowan Plan than under 50% Halsey Plan.

(iii) A bin card shows the quantity and value of a stores item.

(iv) Cost Ledger Control Account is maintained in the costing books while General Ledger Adjustment Account is maintained in the financial books.

(v) In LIFO method of valuing inventory, the company has to suffer loss due to accumulation of old stocks and consequent spoilage and obsolescence.

(c) Fill in the blanks suitably: 1x5=5

(i) _____centre is defined as a business entity's segment by which both revenues are earned and costs are incurred.

(ii) _____ Level of stores inventory is maximum usage multiplied by maximum lead time.

(iii) The most appropriate cost unit for pricing and costing goods transport is _____.

(iv) Where the production is as per the requirements of the customers, _____is the method of costing used.

(v) Where there are two raw materials A and B, and the total material mix variance is favourable and if A has a favourable mix variance, then B will have a mix variance that is _____.

(d) In the following cases, one of the four given answers is correct. You are required to indicate the correct answer (=1 mark) and give brief workings (=1 mark): 2x5=10

(i) T Ltd. uses pre-determined overhead rate of ₹ 15 per labour hour. The actual

labour hours are 5750 and the actual overhead cost is ₹ 85,000. There is
(a) ₹ 1,250 over absorption **(c) ₹ 1,000 over absorption**
(b) ₹ 1,250 under absorption **(d) ₹ 1,000 under absorption**

(ii) A chemical process has a normal yield of 90%. In a period, 5000 kgs of material were introduced and there was an abnormal loss of 150 kgs. The quantity of good production is
(a) 4850 kgs **(c) 4500 kgs**
(b) 4650 kgs **(d) 4350 kgs**

(iii) If break-even sales is 60% of current sales and profit is ₹ 60,000, then the amount of contribution will be
(a) ₹ 1,00,000 **(c) ₹ 1,50,000**
(b) ₹ 36,000 **(d) ₹ 1,86,000**

(iv) The following information is given for the next year:
Budgeted Sales = 5,00,000 units
Finished Goods: Closing Stock = 1,50,000 units; Opening Stock = 80,000 units.
Equivalent units of WIP: Closing Stock= 60,000 units; Opening Stock = 50,000units.
The number of equivalent units produced would be
(a) 5,80,000 units **(c) 5,00,000 units**
(b) 5,50,000 units **(d) 5,75,000 units**

(v) A production process has the capacity to produce either 4,000 units of A or 3,500 units of B or 5,000 units of C. Only one product can be made in a production period. The contributions per unit of A, B and C are Rs. 10, Rs. 11 and Rs. 8 respectively. The opportunity cost of A would be
(a) ₹ 44,000 **(c) ₹ 50,000**
(b) ₹ 38,500 **(d) ₹ 40,000**

Answer1.
(a)

Column I	Column II
i)	(B)
ii)	(D)
iii)	(A)
iv)	(E)
v)	(C)

(b)

i)	False	Fixed costs per unit varies with the change in the volume of production i.e., fixed cost per unit decreases as the production increases and vice versa. **Example:** Say Fixed Cost Rs. 1,00,000, units produced = 10,000 ∴ Fixed Cost / Units Produced = 10.00 Now, If production is increased to 12,000 ∴ Fixed Cost / Units Produced = $\frac{1,00,000}{12,000}$ = 8.33 If Production is decreased = 8,000 ∴ Fixed Cost / Units Produced = $\frac{1,00,000}{8,000}$ = 12.50
ii)	False	If we have time taken = 140, time allowed = 200, time saved = 60 & Rate = Re. 1 Bonus in,

		Halsey Plan = 50% x 60 x 1 = ₹ 30 Rowan Plan = (60/200) x 140 x 1 = ₹ 42 Here, Bonus is more in case of Rowan Plan Again, if we have time taken = 80, time allowed = 200, time saved = 120, which is more than 50% of time allowed. Bonus in, Halsey Plan = 50% x 120 = 60 x Re 1 = ₹ 60 Rowan Plan = 80/200 x 120 = 48x Re 1 = ₹ 48 So, Here, Bonus is more in case of Halsey Plan than Rowan Plan. Hence, an efficient worker **always** does not gets more bonus under Rowan Plan than under 50% Halsey Plan.
iii)	False	A bin card is a quantitative record of receipts issues and closing balances of each item of stores.
iv)	False	General ledger Adjustment Account is also known as cost ledger control account. All transaction of income and expenditure, which originate in financial accounts, are entered in this account for eventual transfer to some control account. In Financial A/c under Self-balancing Ledger we also maintain General Ledger Adjustment A/c.
v)	False	LIFO is the method that is applied to value the inventory, it does not segregate the physical stock with reference to their time of procurement i.e., the old stock and the new stock. So the given statement is not true.

(c)

i)	Profit
ii)	Reorder
iii)	Tonne-Kilometer
iv)	Job Costing
v)	Adverse

Note: For (iii), any measure that represents weight x distance may be considered right, e.g. pound-mile/ton-km, ton-mile, etc.

(d)

Sl. No.	Answer	Workings:
i)	(a)	Absorbed OH = 15 x 5750 = 86250 Actual OH = 85000 Over Absorption = ₹1250
ii)	(d)	Normal Loss = 10% of input = 500 kgs. Abnormal Loss = 150 kgs. Total Loss = 650 kgs. Good Production = 5000 – 650 = 4350 kgs.
iii)	(c)	BEP = 60% Hence, Margin of Safety = 100 – 60 = 40% Profit = 60,000 = Contribution on MOS. Hence, Total Contribution = 60,000 ÷ 40% = ₹ 1,50,000
iv)	(a)	Sales + Cl. Stk – Op. Stk = Production FG: 500000 + 150000 – 80000 = 5,70,000 Units WIP: + 60,000 – 50,000 = 10,000 Units Number of equivalent units produced = 5,80,000 Units
v)	(d)	Opportunity Cost = Cost of next best alternative. Contribution B: 3500 x 11 = ₹ 38,500 Contribution C: 5000 x 8 = ₹ 40,000 Opportunity Cost: ₹ 40,000

2. (a) The following are figures relating to a factory for two successive years:

Particulars	Year I (₹)	Year II (₹)
Sales	10,00,000	16,80,000
Marginal Cost of Sales	6,00,000	8,00,000
Contribution	4,00,000	8,80,000

During Year II, the selling price increased by 20% and the company implemented a cost reduction programme very aggressively. You are required to analyse the increase in contribution due to
(i) Increase in selling price
(ii) Increase in sales volume
(iii) Reduction in cost **3+4+3=10**

(b) How would you deal with the following in Cost Accounts?
(i) Fringe Benefits;
(ii) Bad Debts. **3+2=5**

Answer 2.
(a)

	Year I ₹	Year II SP increased by 20% ₹	Year II Actual ₹	Workings	Year II Before SP Increase
Sales	10,00,000	12,00,000	16,80,000	Increase in Sales = ₹ 4,80,000 (16,80,000–12,00,000) ∴ Increase in Volume = $\frac{₹4,80,000}{₹12,00,000} \times 100$ = 40%	14,00,000 (10,00,000+40%)
Loss: Marginal Cost of Sales	6,00,000	6,00,000	8,00,000		8,40,000 (at year I cost) (6,00,000 + 40%)
Contribution	4,00,000	6,00,000	8,80,000		5,60,000

(i) Increase in contribution due to increase in Selling Price=16,80,000–14,00,000=2,80,000
Increase in Volume = 40%
If only volume increased,
Sales value should have been = 14,00,000
Variable cost should have been = 8,40,000
Contribution should have been = 5,60,000

(ii) Increase in Contribution due to volume increase = 5,60,000 – 4,00,000 = ₹ 1,60,000
Variable cost for the increased volume should have been = 8,40,000
It is actually = 8,00,000

(iii) Increase in Contribution due to Cost Reduction = ₹ 40,000

Reconciliation	₹
Contribution in Yr. 1	4,00,000
Increase due to selling price increase	2,80,000
Increase due to increase in volume	1,60,000
Increase due to cost reduction	40,000
Contribution in Yr. II	8,80,000

(b) (i) **Fringe Benefits:** These benefits are given in the form of overtime, extra-shift duty allowance, holiday pay, pension facilities etc. there are some non-cash fringe benefits also like canteen facility etc.

Expenditure incurred on fringe benefits in respect of factory workers should be treated as factory overheads and apportioned among all the production and service departments on the basis of number of workers in each department. Fringe benefits of office and selling & distributing staff should be treated as administration overheads and selling and distribution overheads respectively and recovered accordingly.

(ii) **Bad Debts:** One view is that 'Bad Debts' should be excluded from cost accounts as they are financial losses. Another view is that they should be treated as part of selling and distribution overheads, especially when they arise in the normal course of trading. Therefore, bad debts should be treated in cost accounting as any other selling and distribution expenses.

3. (a) The following information is available in respect of fixed overheads for a production period:

Overheads Cost Variance	**₹ 1,400 (Adverse)**
Overheads Volume Variance	**₹ 1,000 (Adverse)**
Budgeted Hours	**1200 hours**
Budgeted Overheads	**₹ 6,000**
Actual rate of recovery of Overhead	**₹ 8 per hour**

You are required to compute the following for the given production period:

(i) Actual Overheads Incurred

(ii) Overhead Expenditure Variance

(iii) Overheads Capacity Variance

(iv) Actual Hours for Actual Production **2+2+3+3=10**

(b) What do you mean by a joint product and a by-product? How are they different? 5

Answer 3.

(a)

Overheads Cost Variance	= ₹ 1400 (A) (given)
Overheads Volume Variance	= ₹ 1000 (A) (given)
Overheads Expenditure Variance	= ₹ 400 (A) [1400 – 1000]
Budgeted OH	= ₹ 6000 (given)
Actual OH	= ₹ 6400 [400 + 6000]

Actual Hours = Actual OH/Actual Recovery Rate = 6400/8 = 800 Hours
Budgeted OH recovery rate = 6000/1200 = ₹ 5 Per Hours
Actual Hours – Budgeted Hours = 800 – 1200 = 400 Hours
Overheads Capacity Variance = 400 x 5 = ₹ 2000(A)

(b)

Joint Products are the result of utilization of the same raw materials and same processing operations. The processing of a particular raw material may result in the output of two or more products, e.g. in oil refining, fuel oil, petrol, diesel, kerosene, lubricating oil are joint products.

A **by-product** also arises from the same process, but it is a secondary product or a minor product. Its production is an incidental outcome of the main operation, e.g. in oil refining, camphor, grease, etc are by-products.

When the degree of economic importance is changed, what was earlier a joint product can become a by-product and vice versa. When a by-product gains economic significance, its costs and revenue are treated on par with those of the joint products, e.g. gas produced in the oil refining process.

Difference Between Joint Products and by-products

Joint Products	By-Products
They have almost equal economic importance.	They are not so important as the joint products.
There is an intention to produce each of the joint products.	There is no intention. The output is incidental to main production.
Joint Costs are apportioned to each of the joint products on a suitable basis. inventory is maintained	By-product inventory is not maintained. Costs/Revenues are either written off to P&L A/c or accounted for like scrap. If they are significant to be consumed captively, opportunity cost method is used or they are valued as standard cost.

4. (a) The following information is given to you from the records of P Ltd. for the year 2013:

Budgeted Sales Value in 2013:

April	**₹ 4,00,000**
May	**₹ 4,50,000**
June	**₹ 5,20,000**
July	**₹ 4,20,000**
August	**₹ 4,80,000**
Contribution to Sales ratio	**40%**
Fixed Costs	**₹ 12,00,000 for the whole year 2013, includes depreciation ₹ 3,00,000 per annum**

Other Information:

40% of each month's sales is produced in the month prior to the sale and 60% in the month of sale. 50% of the direct materials required for production is purchased in the month prior to their use in production. The remaining 50% is purchased in the month of production. Labour costs are paid in the month in which they are incurred and constitute 30% of the variable costs. 60% of the variable costs are direct material costs. Suppliers of direct materials are paid in the month after purchase. The remaining variable costs are variable overhead costs, of which 40% are paid in the month they are incurred and the balance paid in the next month. Fixed costs are incurred at a constant rate per month and paid in the month they are incurred. The expected capital expenditure in June 2013 is ₹ 1,90,000. The sales receipts budgeted are as follows:

May 2013	**₹ 4,01,700**
June 2013	**₹ 4,50,280**
July 2013	**₹ 4,25,880**

The bank balance on 1.5.2013 is expected to be ₹ 40,000.

Prepare a month-wise cash budget for P Ltd. for the period May to July 2013. 10

(b) Explain the treatment of profits on incomplete work in contract accounts. 5

Answer4.
(a)

Cash Budget

(Amount in ₹)

Description	May 2013	June 2013	July 2013
Opening Balance	40,000	92,428	(9,860)
Receipts	4,01,700	4,50,280	4,25,880
Total Inflows	4,41,700	5,42,708	4,16,020
Payments of Suppliers	1,61,640	1,72,440	1,66,320
Labour Payments	86,040	86,400	79,920
Variable OH paid	26,592	28,728	27,936
Fixed OH Paid	75,000	75,000	75,000
Capital Expenditure		1,90,000	
Total Outflows	3,49,272	5,52,568	3,49,176
Closing Balance	92,428	(9,860)	66,844

Particulars	April	May	June	July	August
Budgeted Sales	4,00,000	4,50,000	5,20,000	4,20,000	4,80,000
60% of Sales – Current	2,40,000	2,70,000	3,12,000	2,52,000	2,88,000
40% Sales prior month	1,80,000	2,08,000	1,68,000	1,92,000	
Sales value of Production	4,20,000	4,78,000	4,80,000	4,44,000	
Variable cost of pdn = 60%	2,52,000	2,86,800	2,88,000	2,66,400	
Materials required for pdn 60%	1,51,200	1,72,080	1,72,800	1,59,840	
50% materials purchased prior month	86,040	86,400	79,920		
50% materials purchased this month	75,600	86,040	86,400	79,920	
Material Purchases	1,61,640	1,72,440	1,66,320	79,920	
Payment to suppliers		1,61,640	1,72,440	1,66,320	
Labour paid = 30% of V.C.	75,600	86,040	86,400	79,920	
Var. OH = 10% of variable cost	25,200	28,680	28,800	26,640	
40% of var OH paid this month	10,080	11,472	11,520	10,656	
60% var OH paid next month		15,120	17,208	17,280	15,984
Total Variable OH paid		26,592	28,728	27,936	
Cash Fixed OH = 9 lacs/12	75,000	75,000	75,000	75,000	75,000

(b) Treatment of profits on incomplete work in contract accounts

(i) In case of contracts which are less than 25% complete, on profits should be taken into consideration and consequently no credit should be taken to Profit and Loss Account.

(ii) In case of contracts which are more than 25% complete, but less than 50% complete, the following method should be used for computing the profit to be credited to the Profit and Loss Account:-

$\frac{1}{3}$ x Notional Profit x Cash Received / Work Certified.

Notional Profit is the difference between the value of work certified and cost of work certified. It is computed in the following manner.

Notional Profit = Value of work certified – [cost of work to date – cost of work completed but not certified]

(iii) In case of contracts complete between 50% and 90% [more than 50% but less

than 90%] the following method is used for computing the profit to be credited to the Profit and Loss Account:-

2/3 x Notional Profit x Cash Received / Work Certified

(iv) In case of contracts completed 90% or more than that, it is considered to be almost complete. In such cases, the estimated total profit is first determined by deducting the total costs to date and additional expenditure necessary to complete the contract from the contract price. The portion of profit so arrived is credited to the Profit and Loss Account by suing any of the following formula:-

Method I – Estimated Profit x Work Certified / Contract Price
Method II – Estimated Profit x Work Certified / Contract Price x Cash Received / Work Certified or Estimated profit x Cash Received / Contract Price.

5. (a) A company manufactures a product currently utilizing 80% capacity with a turnover of 32,000 units at a selling price of ₹ 25 per unit. The variable cost of the product is ₹ 17.5 per unit. Fixed cost amounts to ₹ 1,50,000 up to 80% of level of output and there will be an additional cost of a supervisor amounting to ₹ 20,000 beyond that level. Calculate:
(i) Activity level (%) at break-even point
(ii) Number of units to be sold to earn a net income of IO% of sales
(iii) Activity level (%) to earn a profit of ₹1,00,000 **10**

(b) The product of a manufacturing concern passes through two processes, A and B and then to finished stock. It is ascertained that in each process, normally 5% of the total weight is lost and I0% is scrap from which processes A and B realize ₹ 80 per tonne and ₹ 200 per tonne respectively. The following are the figures relating to the processes:

Particulars	Process A	Process B
Materials (tones)	1,000	70
Cost of Materials ₹/tone	125	200
Wages (₹)	28,000	10,000
Manufacturing Expenses (₹)	8,000	5,250
Output (tones)	830	780

There was no stock or WIP in any process.

Prepare the Process Cost A/c of Process B assuming no inter-process profit mark-up on transfers to Process B. **5**

Answer5.
(a) Selling Price = 25
Variable Cost = 17.5
Contribution = 7.5

(i) BEP (units) = Fixed Cost / Contribution per unit = 1,50,000/7.5 = 20,000 units
80% activity = 32000 units. Hence, 100% level = 32,000/.8 = 40,000 units
Activity Level at BEP = 20,000/40,000 = 50%

(ii) Let x be the number of units to get 10% of sales as profit.
10% * 25 * x = 7.5x – 1,50,000
2.5x = 7.5x – 1,50,000.
5x = 1,50,000
X = 30,000, which is <32,000. Hence no additional supervision.

In the next range,

2.5x = 7.5x – 1,70,000
5x = 1,70,000
X = 1,70,000/5 = 34,000.

At 30,000 units and 34,000 units, there will be 10% of sales as profit.
At 30,000 units, sales = 7,50,000. Profits = 75,000.
At 34,000 units, sales = 8,50,000. Profits = 85,000.

(iii) No. of units to earn a profit of ₹ 1,00,000
7.5x – 1,50,000 = 1,00,000
X = 2,50,000/7.5 = 33,333 which exceeds 32,000 units.
Hence fixed costs = 1,70,000.
X = 2,70,000/7.5 = 36,000 units.
Activity Level = 36,000/40,000 = 90%

(b) **Process B A/c.**

Description	Quantity (Tonnes)	Value (₹)	Description	Quantity (Tonnes)	Value (₹)
To Process A A/c	830	1,49,400			
To Material	70	14,000	By Normal Loss	45	
To Wages		10,000	By Sale of Scrap	90	18,000
To Expenses		5,250	By Finished Stock	780	1,63,800
To Abnormal Gain	15	3,150			
	915	1,81,800		915	1,81,800

Working Notes:

Cost transferred from Process A= $\frac{(1,25,000+28,000+8,000-8,000)}{850}$ X 830 = ₹ 1,49,400.

Input = 830 from Process A and input of 70 = 900 (Tonnes)
Normal loss = 5% of input = 45 (Tonnes)
Scrap = 10% of input = 90 (Tonnes)
Output (given) = 780 (Tonnes)
Hence, Abnormal gain (915 – 900) = 15 (Tonnes)

6. (a) From the following figures, do the reconciliation process to arrive at the net profit or loss as per financial accounts: 10

Particulars	Figures (₹)
Net loss as per Costing Records	**1,72,400**
Works overhead under recovered in Costing	**3,120**
Administrative overhead recovered in excess in Costing	**1,700**
Depreciation charged in Financial Records	**11,200**
Depreciation recovered in Costing	**12,500**
Interest received not included in Costing	**8,000**
Obsolescence charged (loss) in Financial Records	**5,700**
Income Tax provided in Financial Books	**40,300**
Bank Interest credited in Financial Books	**750**
Stores Adjustment (credit) in Financial Books	**475**
Value of Opening Stock in Cost A/cs	**52,600**
Value of Opening Stock in Financial A/cs	**54,000**
Value of Closing Stock in Cost A/cs	**52,000**

Value of Closing Stock in Financial A/cs	**49,600**
Interest charged in Cost A/cs but not in Financial A/cs	**6,000**
Preliminary expenses written off in Financial A/cs	**800**
Provision for Doubtful Debts in Financial A/cs	**150**

(b) The Production Department of a factory furnishes the following data for the month of May 2013:

Materials used	**₹ 54,000**
Direct Wages	**₹ 45,000**
Overheads	**₹ 36,000**
Labour hours worked	**36000**
Machine hours	**30000**

For a certain job executed by the Department during the period, the following data is given:

Materials used	**₹ 6,000**
Direct Wages	**₹ 5,000**
Labour hours worked	**4000**
Machine hours used	**2400**

Calculate the cost of the job when the overheads are charged using

(i) Direct Material Cost Rate

(ii) Labour Hour Rate

(iii) Machine Hour Rate **5**

Answer 6.

(a) Reconciliation Statement

(Figures in ₹)

Net loss as per Costing records	1,72,400	
	Add: (+)	Subtract (-)
Works overhead under recovered in costing	3,120	
Administrative overhead recovered in excess		1,700
Depreciation charged in Financial Records	11,200	
Depreciation recovered in Costing		12,500
Interest received not included in costing		8,000
Obsolescence charged (loss) in financial records	5,700	
Income tax provided in financial books	40,300	
Bank Interest credited in Financial books		750
Stores Adjustment (credit) in Financial books		475
Value of opening stock in Cost A/cs		52,600*
Value of opening stock in Financial A/cs	54,000*	
Value of closing stock in Cost A/cs	52,000	
Value of closing stock in Financial A/cs		49,600*
Interest charged in Cost A/cs but not in Financial A/cs		6,000
Preliminary expenses written off in Financial A/cs	800	
Provision for doubtful debts in Financial A/cs	150	
Loss as per Financial Accounts	2,08,045	

* These figures may ideally be shown as Undervalued Opening Stock 1,400#
Undervalued Closing Stock 2,400#

Alternative Answer

Reconciliation Statement

(Figures in ₹)

Net loss as per costing records		(-) 1,72,400
Add:		
Administrative overhead recovered in excess	1,700	
Depreciation over-recovered in costing (12500-11200)	1,300	
Interest received not included in costing	8,000	
Bank interest credited in financial books	750	
Stores adjustment (credit) in financial books	475	
Interest charged in cost A/cs but not in financial A/cs	6,000	(+) 18,225
Less:		(-) 1,54,175
Works overhead under-recovered in costing	3,120	
Obsolescence charged (loss) in financial records	5,700	
Income tax provided in financial books	40,300	
Opening stock under-valued in cost A/cs (54,000 - 52,600)	1,400	
Closing stock over-valued in cost A/cs (52,000 – 49,600)	2,400	
Preliminary expenses written off in financial A/cs	800	
Provision for doubtful debts in financial A/cs	150	(-) 53,870
Net Loss as per Financial Accounts		(-) 2,08,045

Alternative Answer 2

Memorandum Reconciliation Account

(Figures in ₹)

Particulars	Amount	Particulars	Amount
To Net loss as per costing records	1,72,400	By Administrative overhead recovered in excess	1,700
To worked overhead under recovered in costing	3,120	By Depreciation over recovered in costing (12500 – 11200)	1,300
To obsolescence charged (loss) in financial records	5,700	By Interest received not included in costing	8,000
To income tax provided in financial books	40,300	By Bank interest credited in financial books	750
To opening stock under valued in cost accounts (54,000 – 52,600)	1,400	By stores adjustment (credit) in financial books	475
To closing stock over valued in cost accounts (52,000 – 49,600)	2,400	By Interest charged in cost A/cs but not in financial A/cs	6,000
To Preliminary expenses written off in financial A/cs	800		
To Provision for doubtful debts in financial A/cs	150	By Net loss as per Financial Accounts	2,08,045
	2,26,270		2,26,270

(b)

Cost Elements	Workings	(i) DMC Rate	(ii) LH Rate	(iii) MH Rate
Material Cost		6000	6000	6000
Labour		5000	5000	5000
Overheads	36000/54000x6000	4000		
Overheads	36000/36000x4000		4000	

Overheads	36000/30000x2400			2880
Cost of the Job		15000	15000	
Cost of the Job				13880

7. (a) The following is the summary of receipts and issues of material in a factory for May 2013. Prepare the Stores Ledger (only the quantity and rate columns of the Receipts and Issues are required) according to

(i) First In First Out Method;

(ii) Last In First Out Method;

(iii) Compute the Inventory Turnover Ratio under both (i) and (ii). Which method shows a more favourable situation? (For the purpose of this ratio, do not include shortage value in production cost.) 10

Date: May 2013	Transaction
1	Opening Balance 500 units @ ₹ 25 per unit
3	Issue 70 units
4	Issue I 00 units
8	Issue 80 units
13	Received from supplier 200 units @ ₹ 24.5 per unit
14	Returned to Stores 15 units @ ₹ 24 per unit
16	Issue 180 units
20	Received from supplier 240 units @ ₹ 24.75 per unit
24	Issue 304 units
25	Received from supplier 320 units @ ₹ 24 ·5 per unit
26	Issue 112 units
27	Returned to Stores 12 units @ ₹ 24.5 per unit
28	Received from supplier 100 units @ ₹ 25 per unit

There was a shortage of 5 units on the 15th and 8 units on the 27th.

(b) What are the methods of fixing 'Transfer Price' for transfer of a product from one profit centre to another? 5
Mention one demerit of each method.

Answer7.
(a)

Date	Receipts	Qty (units)	Rate (₹)	FIFO Method			LIFO Method		
				Issue	Qty (Units)	Rate (₹)	Issue	Qty (units)	Rate (₹)
May 2013									
1	Opening Balance	500	25	-	-	-		-	-
3	-	-	-	To Production	70	25	To Production	70	25
4	-	-	-	To Production	100	25	To Production	100	25
8	-	-	-	To Production	80	25	To Production	80	25
13	From Supplier	200	24.5	-	-	-	-	-	-
14	Returned to stores	15	24	-	-	-	-	-	-
15	-	-	-	(Shortage)	5	25	(Shortage)	5	24
16	-	-	-	To Production	180	25	To Production (180)	10 170	24 24.5
20	From Supplier	240	24.75	-	-	-	-	-	-
24	-	-	-	To Production (304)	65 200 15 24	25 24.5 24 24.75	To Production (304)	240 30 34	24.75 24.5 25
25	From supplier	320	24.5						

26	-	-	-	To Production	112	24.75	To Production	112	24.5
27	-	-	-	(Shortage)	8	24.75	(Shortage)	8	24.5
27	Returned Stores	12	24.5	-	-	-	-	-	-
28	From Supplier	100	25	-	-	-	-	-	-

	FIFO Method		LIFO Method	
	Units	**₹**	**Units**	**₹**
Total Issued to production	846	21,001	846	20,924
Less: Returns	27	654	27	654
Net Cost of Consumption	**819**	**20,347**	**819**	**20,270**
Closing inventory value		13,010		13,094
Opening inventory value		12,500		12,500
Total		**25,510**		**25,594**
Average inventory at cost	= ₹ 25,510/2	= 12,755	= ₹ 25,594/2	= 12,797
Inventory Turnover Ratio =	$\frac{\text{Material Cost of Sales}}{\text{Average Inventory}}$ = $\frac{₹\ 20,347}{₹\ 12,755}$ = 1.595 or 1.6		= $\frac{₹\ 20,270}{₹\ 12,797}$ = 1.584 or 1.6	

Working Notes:

(i) Calculation of closing inventory value

96 @ 24.75 =	₹ 2,376	316 @ 25 = ₹ 7,900	
320 @ 24.5 =	7,840	212 @ 24.5 = 5,194	
12 @ 24.5 =	294		
100 @ 25 =	2,500		
528	₹ 13,010	528	₹ 13,094

(ii) Calculation of value issued to production

495 @ 25 =	₹ 12,375	,284 @ 25 = ₹	7,100
200 @ 24.5 =	4,900	10 @ 24 =	240
15 @ 24 =	360	312 @ 24.5 =	7,644
136 @ 24.75 =	3,366	240 @ 24.75 =	5,940
846	₹ 21,001	846	₹ 20,924

Conclusion: Inventory turnover ratio (1.595) under FIFO method shows a more favourable situation.

(b)

	Transfer Pricing Method	Demerit
A.	Cost Based Pricing	
(i)	Actual Cost (Full Cost or Variable cost) of Production Or Actual Cost Plus Profit	Inefficiency of transferor borne by receiving centre
(ii)	Standard Cost	Standards may be unrealistic or out dated creating an unfair price for any of the divisions.
(iii)	Marginal Cost	While fixed costs have to be incurred by transferring division, the receiving division does not pay for it.
B.(iv)	Market Based Pricing	Market price may not be available if product is made to the specification of the receiving division. Market prices may be fluctuating.
(v)	Negotiated pricing	If the negotiating range is not mutually beneficial

		to both the divisions, there is clash of interest and management intervention may become necessary. The more powerful division may have its way. Goal congruence may be sacrificed, adversely affecting the overall Company profits.
(vi)	Opportunity Cost Pricing	Since this method sets the minimum price for the selling division and the minimum price for the buying division, clash of interest may arise. The more powerful division may exercise heavier bargaining power. Company's overall interest may be sacrificed or the divisional managers may be demotivated.

8. Answer any three of the following: 5 X 3=15

(a) What is a principal budget factor? How is it important? List four such factors.

(b) Write a short note on the Activity based Costing System.

(c) Write a short note on 'flexible budget'.

(d) How are normal and abnormal idle time dealt with in Standard Costing in computing idle time variance?

(e) State the appropriate costing method and cost units for each of the following industries:

(i) Textiles; (ii) Canteen; (iii) Medicines; (iv) Paper; (v) Oil Refinery.

Answer 8.

(a) A principal budget factor or key factor is also called a constraint, which restricts the other functions of the business. This factor has to be carefully assessed before any functional budget is prepared. The factor may vary from business to business or even from year to year for the same business. For example, if a company can sell 8000 units, but can produce 4000 units, then production becomes the constraint. If this key factor is given more resources to lessen the extent of constraint, there will be a relaxation in the other budgets as well.

Examples of some such factors are:

(i) **Sales:** Consumer demand, shortage of sales staff, inadequate advertising.
(ii) **Material:** Availability of supply, restrictions on import.
(iii) **Labour:** Shortage of labour.
(iv) **Plant:** Availability of capacity, bottlenecks in key resources.
(v) **Management:** Lack of capital, pricing policy, shortage of efficient executives, lack of know-how, faulty design of product, etc.

(b) Activity Based Costing (ABC) System: Activities in a process are identified and analysed. It may be a production or a service. The process of making the product or rendering the service is broken down into smaller activities for analysis and elimination of wasteful and non-value added activities. The point of focus for the costs relating to an activity is called an activity pool. It may consist of different cost elements. All cost elements assigned to an activity is called an activity pool. Factors that determine the cost of an activity or the resources consumed, varying which the level of activity itself varies are called activity cost drivers. The cost pool is analysed according to the cost drivers and the cost of the activity is done as per the resources consumed. The more detailed the break-up, the greater the accuracy of the cost of the activity. But depending on the cost and benefit arising out of such detailed analysis, the level of detail required is determined.

(c) Flexible Budget: If the actual level of activity (e.g. production is 12000 units) varies from the budgeted level of activity (e.g., 15,000 units), then it would be meaningless to compare various

elements of cost and report the differences. Hence, we redo the figures in the budget, assuming that the actual level of output was indeed budgeted. Then, the comparison becomes more meaningful. In other words, we are eliminating the variance arising out of the difference in the levels of activity. This recomputed meaningful budget is called the flexible budget. It may also be considered as a series of static budget (fixed budgets) for different levels of activity. The most important pre-requisite for a flexible budget is the study of the behaviour of costs and accurate classification into fixed and variable. Sometimes, there is a semi-fixed cost which has to be broken down into fixed and variable components. The relevant range over which fixed costs remain fixed is also to be reckoned carefully. Sometimes, there is a jump in the fixed costs beyond a certain volume or level of activity. A flexible budget, drawn up after considering these factors to match the actual level of activity will give a meaningful analysis of the variances which would be realistic and therefore lead to correct decisions.

(d) In standard costing, standard labour time is fixed after taking into account the normal idle time. However, if the actual idle time is more than this normal level, it is considered as abnormal idle time and is therefore shown as variance which is always adverse. It indicates the loss caused due to abnormal idle time. Since we need to exclude the influence of the actual rate, we have idle time variance = Abnormal idle time x standard rate.

(e)

	Industry	**Costing Method**	**Cost Unit**
(i)	Textile	Process Costing	Per metre (or any unit of length)
(ii)	Canteen	Operating Costing	Per meal/per item
(iii)	Medicines	Batch Costing	Per batch
(iv)	Paper	Unit Costing/Process Costing	Per ream (or any unit of numbers)
(v)	Oil Refinery	Process Costing	Per tonne/per litre (or any unit of volume or weight)