Advanced Cost Accounting

2011 April

Commerce Accountancy MCom

Part 1

University of Mumbai

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M. Com (Part I) 28th April 201.
Accountancy: Paper II
Advanced Cost Accounting

Con. 2354 & (a)-11. (OLD COURSE) HP-1013-1014

(3 Hours) (Old & Rev) [Total Marks : 100

N.B. :- (1) Question No. 1 is **compulsory**. Attempt any **four** questions from the remaining.
(2) **All** questions carry **20** marks each.
(3) **All** sub-questions carry **equal** marks unless specified to the contrary.
(4) Workings to form **part** of the soulutions and **necessary** assumptions to be made and stated **clearly**

1. M/s. Alok Industries has given the following details, find the most profitable product mix and prepare a statement of profitability of that product mix :

Particulars	Product "X"	Product "Y"	Product "Z"
Units budgeted to be produced and sold	1,800	3,000	1,200
Selling price per unit (Rs.)	60	55	50
Requirements per unit :			
Direct Materials	5 kg.	3 kg.	4 kg.
Direct Labour	4 hrs.	3 hrs.	2 hrs.
Variable Overheads	Rs. 7	Rs. 13	Rs. 8
Fixed Overheads	Rs. 10	Rs. 10	Rs. 10
Cost of Direct Material per kg.	Rs. 4	Rs. 4	Rs. 4
Direct Labour Hour Rate	Rs. 2	Rs. 2	Rs. 2
Maximum possible Units of Sales	4,000	5,000	1,500

All the three products are produced from the same direct material using the same type of machines and labour.
Direct labour, which is the key factor, is limited to 18,600 hours.

2. The following is the Trial Balance of Superfast Construction Company, engaged in the execution of Contract No. 51, for the year ended on 31st December, 2010.

Particulars	Debit (Rs.)	Credit (Rs.)
Share Capital		4,00,000
Contractee's Account (75% of Work Certified)		3,60,000
Provision for Depreciation on Plant Account		50,000
Creditors		10,000
Buildings	1,25,000	
Bank Balance	18,000	
Materials	2,00,000	
Wages	1,80,000	
Expenses	47,000	
Plant	2,50,000	
	8,20,000	**8,20,000**

The work on Contract No. 51 was commenced on 1st January, 2010.
Materials costing Rs. 1,70,000 were sent to the site of the contract but those costing Rs. 6,000 were destroyed in an accident. Plant costing Rs. 50,000 was used in the contract all through the year. Plant with a cost of Rs. 2,00,000 was used on the contract from 1st January, 2010 to 30th September, 2010 and then returned to the stores.
The Contract was for Rs. 6,00,000 and the Contractee pays 75% of the Work Certified.
The cost of work uncertified was estimated to be Rs. 15,000 on 31st December, 2010, on which date materials costing Rs. 4,000 were at the site of the contract.
Expenses are charged to the contract at 25% of the wages. Plant is to be depreciated at 10% on straight line method for the entire year.
You are required to prepare :
(a) Contract No. 51 Account for the year ended on 31st December, 2010
(b) Balance Sheet as on 31st December, 2010.

3. On 30th September, 2009 following was the Balance Sheet of MD Pvt. Ltd. :

Liabilites	Rs.	Assets		Rs.
Equity shares (Rs. 10) fully paid	20,000	Equipment (cost)	20,000	
Reserves & Surplus	10,000	Less : Depreciation	5,000	15,000
Creditors	40,000	Stock		20,000
Proposed dividend	15,000	Debtors		15,000
		Bank		35,000
	85,000			**85,000**

[TURN OVER

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The company is developing a system of forward planning and on 1st October, 2009 it submits the following information :

		Credit Sales (Rs.)	Cash Sales (Rs.)	Credit Pruchases (Rs.)
September, 2009	(Actual)	15,000	14,000	40,000
October, 2009	(Budgeted)	18,000	5,000	23,000
November, 2009	(Budgeted)	20,000	6,000	27,000
December, 2009	(Budgeted)	25,000	8,000	26,000

On 1st October, 2009, the equipment will be replaced at a cost of Rs. 30,000, Rs. 14,000 will be allowed in exchange for the old equipment and a net payment of Rs. 16,000 will be made. Depreciation is to be provided at the rate of 10% per annum.

The proposed dividend will be paid in December, 2009.

The following expenses will be paid.

Wages Rs. 3,000 per month.

Administration Rs. 1,500 per month.

Rent Rs. 3,600 (for the year to 30th September, 2010) to be paid in October, 2009.

You are required to prepare a Cash budget for the months of October, November and December, 2009.

4. Pramod Automobiles has been distributing goods to its prominent customer situated at a place 40 kms. away from its own place using a single truck. The truck has been purchased at a cost of Rs. 7,50,000 (excluding tyres), and has a capacity of carrying 10 tonnes of load of goods. It makes the journey twice a day carrying its full load on the outward journey whereas it returns empty. The truck operates five days in a week.

The following is the relevant data for a month equated to a 4-weekly period :

	Rs.	
Insurance	9,000	per annum
License, Road-tax	4,000	per annum
Garage rent	1,500	per week
Repairs and maintenance	500	per week
Tyres and tubes	20,000	(Life : 25, 000 kms.)
Other Overheads allocated	60,000	per annum
Drivers' remuneration	800	per week
Oil	300	per week
Petrol	25	per litre (consumed @ 8 kms. per litre)

The effective life of the vehicle is worth running 80,000 kms. at the end of which the vehicle will have scrap value of Rs. 25,000.

You are required to submit a statement showing the total cost for a month and decide the fare to be charged per tonne km. that allows 20% profit on fares.

5. The following is the data available of AB Ltd. in respect of Process III for the month of January, 2011 :

			Rs.
1. Direct materials			776
2. Direct labour			386
3. Production overheads			768
4. Transfer from Process II : 4,200 units			1,560
5. Transfer to Process IV : 3,650 units			
6. Stock on 1-1-2011 : 600 units (Degree of completion :			
	Materials added in the process	60%	
	Labour	50%	
	Overheads	40%)	390
7. Stock on 31-1-2011 : 800 units (Degree of completion :			
	Materials added in the process	80%	
	Labour	70%	
	Overheads	60%)	

8. 350 Units scrapped are fully complete in all respects i.e. materials, labour and overheads.
9. Normal loss was 10% of the production and units scrapped have a scrap value of Re. 0·10 per unit.

Prepare Process account alongwith Statements of Equivalent production, Cost allocated per equivalent unit and Evaluation for the month of January, 2011 assuming F.I.F.O. basis.

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6. The following were the balances appearing in the Cost books of Cost Conscious Ltd. at the start of a month :

	Rs. (in lakhs)
Stores Ledger Control Account	80
Work-in-Progress Control Account	20
Finished Goods Control Account	430
Building Construction Account	10
General Ledger Adjustment Account	540
During the month, the following transactions took place :	
Materials Purchased	40
Materials issued to production	50
Materials issued to general maintenance	6
Materials issued to building construction	4
Wages - Direct wages paid	150
- Indirect wages pad	40
- Paid for building construction	10
Works Overheads - Actual amount incurred (excluding items shown above)	160
Absorbed in building construction	20
Under absorbed	8
Royalty paid	5
Selling distribution and administration overheads	25
Sales	450

At the end of the month, the stock of raw materials and work-in-progress was Rs. 55 lakhs and Rs. 25 lakhs respectively. The loss arising in the raw material accounts is treated as factory overheads. The building under construction was completed during the month. Company's gross profit margin is 20% on sales.
Prepare the relevant control accounts to record the above transactions in the cost ledger of the company for the month.

7. (a) The standard cost of a certain chemical mixture is as follows :

Material	Cost per tonne (Rs.)	
I (40%)	20	A standard loss of 10% is expected in
II (60%)	30	production.

For a period, the actual consumption data was as follows :

Material	Cost per tonne (Rs.)	
I (180 tonnes)	18	The actual weight produced was 364 tonnes
II (220 tonnes)	34	

Calculate the Material Cost variance, Material Price variance and Material Quantity variance.

(b) Explain the Overhead variances in detail.

8. (a) From the following particulars, you are required to calculate :
   (i) P/V ratio
   (ii) B.E.P. for sales
   (iii) Margin of safety
   (iv) Profit when sales are Rs. 2,00,000/-
   (v) Sales required to earn net profit of Rs. 40,000/-

Year	Sales (Rs.)	Profit (Rs.)	Units
I	2,40,000	18,000	24,000
II	2,80,000	26,000	28,000

(b) Explain the Production budget and its linkage to Purchase budget.

9. Write short notes on (any **four**) :–
   (a) Statutory Cost Audit;
   (b) Cross-checks in Overheads variances;
   (c) Purchase Budget;
   (d) Difference between Cost Accounting and Cost Audit;
   (e) Cost Audit (Reporting) Rules;
   (f) Sales Variances.

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(REVISED COURSE)

(3 Hours) [**Total Marks : 100**

N.B. : (1) Q. No. **I** and **II** are **compulsory**. Attempt any **four** questions from the **remaining**.
(2) Question No. **I** carries **20** marks and **all** remaining questions carry **16** marks each.
(3) **All** sub-questions carry **equal** marks unless specified to the contrary.
(4) Workings to form part of the solutions and necessary assumptions to be made and stated **clearly**.

1. M/s Alok Industries has given the following details, find the most profitable product mix and prepare a statement of profitability of that product mix.

Particulars	Product "X"	Product "Y"	Product "Z"
Units budgeted to be produced and sold	1,800	3,000	1,200
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Requirements per unit :			
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Direct Labour Hour Rate	Rs. 2	Rs. 2	Rs. 2
Maximum possible Units of Sales	4,000	5,000	1,500

All the three products are produced from the same direct material using the same type of machines and labour. Direct labour, which is the key factor, is limited to 18,600 hours.

2. Choose the correct option and rewrite in full.
(a) In case of operation of a motor vehicle, the following cost would be classified as fixed cost :—
(i) Insurance
(ii) Change of engine oil after every 5,000 kilometers
(iii) Tyre Replacement
(iv) Petrol
(b) Under Process Costing, the concept of process cost is based on :—
(i) Marginal cost
(ii) Standard cost
(iii) Average cost
(iv) Differential cost
(c) P/v ratio is indicated in a Break even chart by :
(i) Intersection of Fixed cost and Total cost lines
(ii) Intersection of Total Cost and Sales line
(iii) Angle of Incidence between Total Cost and Sales line
(iv) Angle between Total Cost and Fixed Cost lines.
(d) Fixed Overhead Cost Variance is the difference between :—
(i) Actual fixed cost and budgeted fixed cost
(ii) Actual fixed cost and standard fixed cost
(iii) Actual Fixed cost and Applied fixed cost
(iv) Budgeted fixed cost and Applied fixed cost.
(e) Cost Audit Report is to be submitted by the cost auditor :—
(i) to the managing director
(ii) to the Chief Financial Officer
(iii) to the shareholders
(iv) to the Central Government with a copy to the company
(f) A budget that gives indication of Purchases to be made as derived from Production figures is known as :-
(i) Fixed budget
(ii) Flexible budget
(iii) Production budget
(iv) Purchase budget

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(g) When the variance is due to the difference between actual overhead and applied overhead, it is called as :--
   (i) Efficency variance
   (ii) Total overhead variance
   (iii) Spending variance
   (iv) Volume variance.

(h) Under integrated system of accounting issue of indirect raw material for production is debited to :—
   (i) Purchase Account
   (ii) Work-in-Progress Control Account
   (iii) Stores Ledger Control Account
   (iv) Works overhead control account.

(b) Answer the following in brief (in one sentence) :—
   (1) State any two variable costs of a Hotel.
   (2) Name any two industries where process costing in applicable.
   (3) Name the account which makes the cost ledger self balancing.
   (4) If contribution per unit is known, how will you calculate Margin of Safety (in units) ?
   (5) When is the Sales Volume Variance said to be adverse ?
   (6) Mention any one budget classified on the basis of coverage.
   (7) Give the formula for "Equivalent Units" under Process Costing.
   (8) Write the formula for calculating Labour Cost Variance.

3. On 30th September, 2009, following was the Balance Sheet of MD Pvt. Ltd.

Liabilities	Rs.	Assets		Rs.
Equity shares (Rs. 10) fully paid	20,000	Equipment (cost)	20,000	
Reserves and Surplus	10,000	Less : Depreciation	5,000	15,00'
Creditors	40,000	Stock		20,000
Proposed dividend	15,000	Debtors		15,000
		Bank		35,000
	85,000			**85,000**

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   (i) P/V ratio
   (ii) B.E.P. for sales
   (iii) Margin of safety
   (iv) Profit when sales are Rs. 2,00,000/-
   (v) Sales required to earn net profit of Rs. 40,000/-

Year	Sales (Rs.)	Profit (Rs.)	Units
I	2,40,000	18,000	24,000
II	2,80,000	26,000	28,000

(b) ABC Ltd. have prepared the following budget for the production of one lakh units of the commodity manufactured by it for a period :

Particulars	Rs. (per unit)
Raw material	2·52
Direct labour	0·75
Direct expenses	0·10
Works overheads (60% Fixed)	2·50
Administration overheads (80% Fixed)	0·40
Selling overheads (50% Fixed)	0·20

The actual production during the period was later reviewed and re-estimated at 60,000 units. Prepare the budgeted cost (both totally and per unit) at this revised level on the basis of the aforesaid data showing a profit of 22·5% of the sale-price which you would arrive at therein.

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9. (a) Write short notes on (any **two**) :–
   - (i) Statutory Cost Audit;
   - (ii) Cross-checks in Overheads variances;
   - (iii) Purchase Budget;
   - (iv) Cost Audit (Reporting) Rules.

   (b) A company submits the following data of its product manufactured for the first quarter of 2009 and 2010 :

Particulars	Amounts/Values
Sales : January, 2009	30,000 units
: February, 2009	25,000 units
: March, 2009	35,000 units
Selling price (2009)	Rs. 20
Targets for first quarter 2010 :	
Increase in Sales quantity	10%
Increase in Sales price	10%
Stock : 1-1-2010 (% of January, 2010 Sales)	50%
Stock : 31-3-2010	25,000 units
Stock : 31-1-2010 and 28-2-2010 (as percentage of subsequent month's Sales)	50%

Prepare the Sales and Production budget for the first quarter of 2010.

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