# Advanced Cost Accounting

2010 October

Commerce Accountancy MCom

Part 1

University of Mumbai

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Con. 5070–10. Paper - II DM–4335

Advanced Cost Accounting (3 Hours) [Total Marks : 100

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

1. The following information is available in respect of a firm.

Balance Sheet as on 1st August, 2009 :—

| Liabilities | Rs. | Assets | | Rs. |
|---|---|---|---|---|
| Accrued wages | 600 | Cash | | 5,100 |
| Capital | 59,200 | Account Receivable | | 14,700 |
| Other Liabilities | 2,000 | Inventory | | 26,000 |
| | | Fixed Assets | 20,000 | |
| | | *Less* Depreciation | 4,000 | 16,000 |
| | 61,800 | | | 61,800 |

*Further :*

(a) (i) Sales are 40 percent against cash, 60 percent on credit.
(ii) Of the credit sales, 75 percent are collected in the first month following sales and 25 percent in the second month following sales.
(iii) All inventory purchases are paid for during the month in which they are made.
(iv) A basic inventory of Rs. 10,000 (cost) is constantly maintained and the firm follows a policy of purchasing enough additional inventory each month to cover 1·25 times the following month's sales. Its gross profit margin is 20 percent on sales.
(v) A minimum cash balance of Rs. 2,000 is to be maintained by the firm.
(vi) "Accrued wages" and "other current liabilities" have remained unchanged.

(b) *Past Sales :*

| | Rs. | | Rs. |
|---|---|---|---|
| June, 2009 | | | 18,000 |
| July, 2009 | | | 20,000 |

(c) *Sales Budget :*

| | Rs. | | Rs. |
|---|---|---|---|
| August, 2009 | 20,000 | November, 2009 | 40,000 |
| September, 2009 | 26,000 | December, 2009 | 50,000 |
| October, 2009 | 24,000 | January, 2010 | 18,000 |
| | | February, 2010 | 16,000 |

(d) *Monthly Expenses :*

(i) Wages and Salaries :

| 2009 | Rs. | | Rs. |
|---|---|---|---|
| August | 1,400 | November 2009 | 2,000 |
| September | 1,600 | Desember 2009 | 3,000 |
| October | 1,600 | January 2010 | 1,400 |

(ii) Rent : Rs. 400 per month
(iii) Depreciation : Rs. 150 per month
(iv) Other expenses : 1 percent of sales.

You are required to work out the Cash Budget for the months August, 2009 to January, 2010 also indicating the necessary borrowings.

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2. Mr. X, a contractor, is to procure vehicles for transport of materials from his godown to the work site. He has to make a choice between trucks on the one hand and tractors with trailers on the other. The following details are furnished by him :—
   (a) The distance between godown and work site is 4 km. and a bridge is lying on the route on which vehicles carrying over 6 tonnes are prohibited.
   (b) In order to complete the work in time 60 tonnes of materials shall have to be moved to the work site per day of 8 hours.
   (c) The costs of the truck, tractor and trailer are respectively Rs. 70,000, Rs. 48,000 and Rs. 18,000.
   (d) Salary for a driver is estimated at Rs. 300 per month.
   (e) Maintenance charges are estimated as under :

| | |
|---|---|
| Truck | Rs. 240 per month |
| Tractor | 200 per month |
| Trailer | 60 per month |

   (f) Depreciation allowable is 20% p.a. in each case.
   (g) On an average the truck will run 20 km. per gallon of diesel and the tractor 12 km.
   (h) One gallon of diesel will cost Rs. 6.

   You are required to work out the cost per tonne under both 'Truck' and 'Tractor with trailers' alternatives respectively.

3. A company manufactures a particular product the standard direct materials cost of which is Rs. 10 per unit. The following information is obtained from the costing records :—
   (a) Standard Mix :

| Material | Quantity (units) | Rate (Rs.) | Amount (Rs.) |
|---|---|---|---|
| A | 70 | 10 | 700 |
| B | 30 | 5 | 150 |
| | 100 | | 850 |
| *Loss* : (15%) | 15 | | – |
| | 85 | | 850 |

   (b) Actual results for June, 2008 :

| Material | Quantity (units) | Rate (Rs.) | Amount (Rs.) |
|---|---|---|---|
| A | 400 | 11 | 4,400 |
| B | 200 | 6 | 1,200 |
| | 600 | | 5,600 |
| *Loss* : (10%) | 60 | | – |
| | **540** | | **5,600** |

   Compute :
   (i) Total Material Cost Variance;
   (ii) Material Price Variance;
   (iii) Material Mix Variance;
   (iv) Material Yield Variance;
   (v) Material Usage Variance.

4. Mill and Co. undertook a contract for Rs. 12,50,000 on 1st April, 2009. On 31st March, 2010, when the accounts were closed, the following details of the contract were available :—

| Particulars | Rs. |
|---|---|
| Materials purchased | 2,50,000 |
| Plant purchased (1st April, 2009) | 1,25,000 |
| Wages paid | 1,25,000 |
| Work certified (retention : 20%) | 5,00,000 |
| Work uncertified | 37,500 |
| Materials on hand on 31st march, 2010 | 52,500 |
| General expenses | 25,000 |

   Depreciation on machinery is to be charged @ 10% per annum.

The contract contained an escalation clause as follows :—

"In the event of price of materials and rate of wages increase by more than 5%, the contract price will be increased by 25% of the rise in the cost of materials and wages beyond 5% in each case".

It was found that after signing the agreement, the price of materials and wage rates had increased by 25% each. The value of the work certified does not take into account the effect of the above clause.

Of the Plant and materials charged to the contract, Materials costing Rs. 10,000 were lost and on 31st March, 2010, Plant 'costing' Rs. 20,000 was returned to stores.

Prepare the contract account giving the effect of the above escalation.

The following data pertains to Process I of XYZ Ltd. for March, 2009 :—

| | | |
|---|---|---|
| Opening Work-in-progress | 1,500 units | at Rs. 15,000 |
| (Degree of completion : material 100%; Labour and Overheads 33·33%) | | |
| Input of materials | 18,500 units | at Rs. 52,000 |
| Direct Labour | | Rs. 14,000 |
| Overheads | | Rs. 28,000 |
| Closing Work-in-progress | 5,000 units | |
| (Degree of completion : Material 90%; Labour and Overheads 30%) | | |

Normal process loss is 10% of total input. Scrap value Rs. 2 per unit.

Transferred to next process : 15,000 units.

Assuming F. I. F. O. method. You are required to prepare :

(a) Statement showing equivalent units of production.

(b) Statement showing cost per equivalent unit for each cost element.

(c) Statement of cost apportionment.

(d) Process I Account

(e) Abnormal Loss / Abnormal Gain Account (if any).

The following is the data of M Ltd. relating to two types of machines :—

| | Existing Machine | New Machine |
|---|---|---|
| Output per annum (units) | 2,000 | 4,000 |
| | Rs. | Rs. |
| Capital cost | 25,000 | 1,00,000 |
| Marginal cost | 15·00 | 13·00 |
| Selling price | 30·00 | 30·00 |
| Fixed expenses per annum | 12,000 | 32,000 |
| Life | 10 years | 10 years |

The existing machine has completed five years of services and the present resale value is Rs. 10,000.

Advise, on the basis of 'annual' comparative data analysis taking into account all aspects and assuming 15% p.a. as the rate of interest, whether the company should go for the new machine or not and also highlight subjective / qualitative factors for consideration of the management in regard thereto.

7. (a) From the following data of a concern, find out the Fixed Costs, P/V Ratio and Break-even Sales :—

| | Sales (Rs.) | Profit (Rs.) |
|---|---|---|
| First half-year | 14,433 | 385 |
| Second half-year | 18,203 | 1,139 |

Also calculate :

(i) Profit or Loss at Sales of Rs. 12,000;

(ii) Sales required to earn a profit of Rs. 2,000;

(iii) Margin of safety at sales of Rs. 24,000.

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(b) State the different factors to be ... while devising a production budget and the link between a production budget and its relevant purchase budget.

8. As on 31st March, 2007, the following balances existed in a firm's Cost Ledger :—

(a)

| | Dr. Rs. | Cr. Rs. |
|---|---|---|
| Stores Ledger Control A/c | 3,01,435 | |
| Work-in-Progress Control A/c | 1,22,365 | |
| Finished Stock Ledger Control A/c | 2,51,945 | |
| Manufacturing Overhead Control A/c | | 10,525 |
| Gen. Ledger Control A/c | | 6,65,220 |
| | 6,75,745 | 6,75,745 |

Following data relates to the next three months :—

| | Rs. |
|---|---|
| Finished product (at cost) | 2,10,835 |
| Manufacturing overhead incurred | 91,510 |
| Raw materials purchased | 1,23,000 |
| Factory Wages | 50,530 |
| Indirect Labour | 21,665 |
| Cost of Sales | 1,85,890 |
| Material issued to production | 1,27,315 |
| Sales returned at Cost | 5,380 |
| Material returned to suppliers | 2,900 |
| Manufacturing overhead charged to production | 77,200 |

You are required to write up the Ledger Accounts for quarter ended 30-6-2007.

(b) 'Master budget' is the overall comprehensive budget and encompasses the various other budgets. — Explain.

9. Write short notes on (any **four**) of the following :—

(a) Cost Audit Programme

(b) Difference between variance analysis of 'Costs' and 'Incomes' and their importance

(c) Master budget

(d) Difference between 'Fixed' and 'Flexible' budget

(e) Structural difference between 'Financial' and 'Cost' Profit and Loss Accounts.