# INTERMEDIATE EXAMINATION
## GROUP II
## (SYLLABUS 2008)

## SUGGESTED ANSWERS TO QUESTIONS
## JUNE 2015

## 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 and Answer any five from the rest.**
**Working notes should form part of your answer.**

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

| Column I | | Column II | |
|---|---|---|---|
| (i) | VED Analysis | (A) | Contract Costing |
| (ii) | Reverse cost Method | (B) | Inventory Control |
| (iii) | Key Factor | (C) | Group Bonus Plan |
| (iv) | Escalation clause | (D) | Cost Method for by- product Accounting |
| (v) | Pristman system | (E) | By – Product Cost Accounting |
| | | (F) | Absorption Costing |
| | | (G) | Process Costing |
| | | (H) | Budgeting |

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

**(i) The allocation of joint cost on by-products affects the total profit or loss.**

**(ii) For decision making, absorption costing is more suitable than marginal costing.**

**(iii) Overhead and conversion cost are inter-changeable terms.**

**(iv) Only one set of accounting records is kept in integrated accounting system of financial and Cost Accounts.**

**(v) Profit Planning and control is not a part of budgetary control mechanism.**

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

**(i) _____ Cost is the difference in total cost that results from two alternative courses of action.**

**(ii) _____ is must for meaningful inter-firm comparison.**

**(iii) Idle time variance is always _____.**

**(iv) Generally an item of expense, when identified with a specific cost unit is treated as _____.**

**(v) In 'make or buy' decisions, it is profitable to buy from outside only when the suppliers price is below the firm's own _____.**

**(d) In the following cases, one out of the four answers is correct. You are required to indicate the correct answer (= 1 mark) and give brief workings (= 1 mark): 2×5=10**

**(i) A JBC machine was used on a contract site for the period of 7 months and depreciation on it was charged to the contract ₹78,750. If the working life of the machine is 5(five) years and salvage value is ₹25,000, then the cost of JBC machine will be:**
**(a) ₹7,00,000**
**(b) ₹4,18,750**
**(c) ₹6,75,000**
**(d) ₹3,93,750**

**(ii) In a factory the monthly requirement for a material is 20,000 units, ordering cost ₹225 per order, purchase price ₹20 per unit and annual carrying cost is 15%, then economic order quantity will be:**
**(a) 3,000 units**
**(b) 2,683 units**
**(c) 6,000 units**
**(d) 1,732 units**

**(iii) In a company, opening stock of material was 14,000 units, closing stock required to be maintained. 14,000 units and sale is expected to be maintained at 28,000 units, what would be the production units during the period?**
**(a) 56,000**
**(b) 14,000**
**(c) 28,000**
**(d) 30,000**

**(iv) When in a company, sale price per unit is ₹69.50, Variable cost ₹35.50 and Fixed cost is 18,02,000, the break-even volume would be:**
**(a) 58,500 units**
**(b) 53,000 units**
**(c) 63,250 units**
**(d) 28,750 units**

**(v) The actual machine hours worked in June' 2014, is for 35,000 units and the predetermined overhead recovery is @ ₹3 per unit, when actual overhead is ₹1,57,500, the outcome will be:**
**(a) ₹ 52,500 under absorbed**
**(b) ₹ 53,500 over absorbed**
**(c) ₹1,57,500 over absorbed**
**(d) ₹1,05,000 under absorbed**

**Answer:**

**1. (a) Matching:**

| Column I | | Column II | |
|---|---|---|---|
| (i) | VED Analysis | (B) | Inventory Control |
| (ii) | Reverse cost Method | (E) | By – Product Cost Accounting |
| (iii) | Key Factor | (H) | Budgeting |
| (iv) | Escalation clause | (A) | Contract Costing |
| (v) | Pristman system | (C) | Group Bonus Plan |

**(b)** (i) False
(ii) False
(iii) False
(iv) True
(v) False

**(c)** (i) Differential
(ii) Uniform Costing
(iii) Adverse
(iv) Direct expenses
(v) Variable cost

**(d)** (i) (a) ₹ 7,00,000;

Depreciation for one year 78,750 × 12/7 = ₹1,35,000

Depreciation for 5 years 1,35,000 × 5 = ₹6,75,000

Cost of Machine = Total Depreciation plus salvage value

₹6,75,000 + 25,000 = ₹7,00,000

(ii) (c) 6000 units;

$$EOQ = \sqrt{\frac{2uc}{IC}} = \sqrt{(2 \times 20,000 \times 12 \times 225) / 15\% \text{ of } 20}$$

$$= \sqrt{\frac{10,80,00,000}{3}} = \sqrt{3,60,00,000} = 6000 \text{ Units}$$

(iii) (c) 28,000

| | |
|---|---|
| Expected sale during the period = | 28,000 Units |
| Closing stock to be maintained | 14,000 Units |
| Less: Opening Stock | 14,000 Units |
| Production to be carried out | 28,000 Units |

(iv) (b) 53,000 units

Contribution = SP − VC

₹69.50 − ₹35.50 = ₹34

So, Breakable volume $= \frac{FC}{C} = \frac{₹18,02,000}{₹34}$

= 53,000 units.

(v) (a) ₹52,500

35,000 × 3 = ₹1,05,000

Actual Overhead – Pre-determined overhead

= under absorbed overhead

So, ₹1,57,500 – ₹1,05,000 = ₹52,500

**2. (a) M/s. Sun & Moon Company Ltd. is experiencing high labour turnover in recent years. Management of the company would like you to submit a statement on the loss suffered by the company due to such labour turnover. Following facts are available from the records:**

**Sales ₹800 lakhs, Direct Materials ₹200 lakhs, Direct Labour ₹48 lakhs on 4,80,000 labour hours,. other variable expenses ₹ 80 lakhs, Fixed Cost ₹90 lakhs.**

**Direct Labour hours include 10,000 Labour hours spent on trainees and replacement, only 50% of which were productive.**

**Further during the year 15,000 Labour hours of potential work could not be availed of, because of delayed replacement. Cost incurred due to separation and replacement amounted to ₹2 lakhs.**

**With these information, you are required to prepare a statement showing actual profit against profit which would have been realised had there been no labour turnover. 2+3+1+1+3 =10**

**(b) Write a note on 'Just-in-Time' Inventory 5**

**Answer:**

**2. (a)** (I) **Calculation of direct labour cost if there was no labour turnover:**

Actual direct labour cost per hour: = 48,00,000 ÷ 4,80,000
= ₹10 per direct labour hour.

Cost of man hours of potential work Lost due to delayed replacement
= 15,000 × 10 = -1,50,000.

Direct labour cost of there was no labour turnover = 48,00,000 + 1,50,000
= ₹49,50,000

(II) **Calculation of potential total sales if there was no labour turnover**

| Particulars | Hours |
|---|---|
| Hours lost for delayed replacement | 15,000 |
| Unproductive hours (50% of 10,000) | 5,000 |
| Total hours lost | 20,000 |
| Actual Labour hours spent: | 4,80,000 |
| Less: Unproductive hours | 5,000 |
| Productive hours worked | 4,75,000 |

Sales related to 4,75,000 productive hours = 800 Lakhs.

(III) **Potential Sales lost due to loss of 20,000**

Direct labour hours: 8,00,00,000/4,75,000 (DLH) × 20,000 DLH. = ₹33,68,421

Total sales if there was no labour turnover.

₹8,00,00,000 + ₹33,68,421 = ₹8,33,68,421.

(IV) **Variable expenses if there was no labour turnover**:₹2,80,000/8,00,000 × 8,33,68,421
= ₹2,91,78,947.

Comparative statements showing actual profit vis – a- vis profit, which would have been realised if there was no labour turnover:

| Particulars | Actual (₹) | If no labour turnover (₹) |
|---|---|---|
| Sales | 8,00,00,000 | 8,33,68,421 |
| Cost:<br>Variable Cost | 2,80,00,000 | 2,91,78,947 |
| Direct Labour cost | 48,00,000 | 49,50,000 |
| Fixed Cost | 90,00,000 | 90,00,000 |
| Separation cost | 2,00,000 | - |
| | 4,20,00,000 | 4,31,28,947 |
| Profit (Sales – Cost) | 3,80,00,000 | 4,02,39,474 |

Thus loss of profit due to labour turnover:
₹4,02,39,474 – ₹3,80,00,000 = ₹22,39,474

**(b) Just in Time Inventory:** This is the latest trend in inventory management. This principle envisages that there should not be any intermediate stage like storekeeping. Material purchased from supplier should directly go to the assembly line, i.e. to the production department. There should not be any need of storing the material. The storing cost can be saved to a great extent by using this technique. However, the practicality of this technique in Indian conditions should be verified before practicing the same.
The benefits of just in time system are as follows,

- ❖ Right quantities are purchased or porduced at right time.
- ❖ Cost effective production or operation of correct services is possible.
- ❖ Inventory carrying costs are eliminated totally.
- ❖ The stores function is eliminated and hence there is a considerable saving in the stores cost.
- ❖ Losses due to breakage, wastage, pilferage etc. are avoided.

**3. (a) M/s Starlight Co. Ltd. specialises in the manufacturing of small components. Cost structure is given below:**

| | |
|---|---|
| **Material** | **₹60 (per unit)** |
| **Labour** | **₹100 (per unit)** |
| **Variable cost** | **75% of Labour Cost** |

**Fixed over head of the Co, ₹3 lakhs per annum. Unit price of small component is ₹ 260.**

**(i) Determine the number of components that have to be manufactured and sold in a year in order to break-even.**

**(ii) How many components have to be manufactured and sold to make a profit of ₹1 lakh (one lakh) per year?**

**(iii) If the sale price is reduced by ₹20 per unit, how many components have to be sold to break even? 3+3+4=10**

**(b) What are the limitations of a zero-based budgeting? 5**

**Answer:**

**3. (a)** (i)

| | | |
|---|---|---|
| Sales Price per unit | | ₹260 |
| Less variable cost per unit: - | | |
| Material | ₹60 | |
| Labour | ₹100 | |
| V. of Head (75% labour) | 75 | ₹235 |
| Contribution per unit | | ₹25 |
| Fixed cost ₹3,00,000 | | |
| Break even (unit) $\frac{FC}{C}$ = | $\frac{3,00,000}{25}$ | 12,000 Unit |

(ii) Fixed overhead = ₹3,00,000

Required Profit = ₹1,00,000

Revised total contribution required = ₹4,00,000

Breakeven(units) $\frac{4,00,000}{25}$ = 16,000 units

(iii) If sale price is reduced by ₹20 per unit:

Revised contribution –

S. P. = ₹240

Less V. C. = ₹235

Contribution = ₹5 (per unit)

BE (Volume) = $\frac{FC}{C} = \frac{3,00,000}{5}$ = 60,000 Units

**(b)** The following are the limitation of Zero Based Budgeting:

(i) It is a very detailed procedure and naturally it is time consuming and lot of paper work is involved.

(ii) Cost involved in preparation and implementation of this system is very high.

(iii) Morale of staff may be very low as they might feel threatened if a particular activity is discontinued.

(iv) Ranking of activities and decision - making may become subjective at times.

(v) It may not be advisable to apply this method when there are non financial considerations, such as ethical and social responsibility because this will dictate rejecting a budget claim on low ranking projects.

**4. (a) The net profit of Dhura Ltd. shown by cost accounts for the year ended 31st March 2015 was ₹ 10,35,000 and by financial accounts for the same period was ₹ 5,00,200.**

**A scrutiny of the figures of the financial accounts and the cost accounts revealed the following facts:**

| | Particulars | (₹) |
|---|---|---|
| (i) | Administrative overhead under recovered in cost accounts | 14,800 |
| (ii) | Factory overhead-over-recovered in cost accounts | 20,000 |
| (iii) | Depreciation-over charged in financial accounts | 40,000 |
| (iv) | Interest on Investment | 20,000 |
| (v) | Loss due to obsolescence charged in financial accounts | 24,000 |
| (vi) | Abnormal Labour wastage charged in financial accounts | 2,00,000 |
| (vii) | Income Tax provided in financial accounts | 2,80,000 |
| (viii) | Bank Interest credited in financial accounts | 4,000 |
| (ix) | Stocks adjustment credited in financial accounts | 28,000 |
| (x) | Loss due to depreciation in stock values charged in financial accounts | 48,000 |

**10**

**(b) State the essentials of a good costing system? 5**

**Answer:**

**4. (a) Memorandum Reconciliation Account**
**As on 31st March, 2015**

| | ₹ | | ₹ |
|---|---|---|---|
| To Administrative overhead under recovered in cost accounts | 14,800 | By Profit as per cost accounts | 10,35,000 |
| To Depreciation over-charge in financial accounts | 40,000 | By Factory overhead over-recovered in cost accounts | 20,000 |
| To Loss due to obsolescence | 24,000 | By Interest on Investment | 20,000 |
| To Abnormal labour wastage charged in fin. accounts | 2,00,000 | By Bank interest credited in fin. account | 4,000 |
| To Income tax provided in financial accounts | 2,80,000 | By Stores adjust credit in fin account | 28,000 |
| To Loss due to depreciation in stock values in fin accounts | 48,000 | | |
| To Profit as per financial accounts | 5,00,200 | | |
| | 11,07,000 | | 11,07,000 |

**Alternative**

**Reconciliation Statement as on 31.03.2015**

| | Particulars | ₹ | ₹ |
|---|---|---|---|
| | Profit as per financial accounts | | 5,00,200 |
| **Add:** | | | |
| (i) | Administration overhead under recovered | 14,800 | |
| (ii) | Over recovery of depreciation | 40,000 | |
| (iii) | Loss due to obsolescence considered | 24,000 | |
| (iv) | Abnormal labour wastage | 2,00,000 | |
| (v) | Income Tax | 2,80,000 | |
| (vi) | Loss due to depreciation in stock | 48,000 | 6,06,800 |
| | | | 11,07,000 |

| | | | |
|---|---|---|---|
| **Less:** | | | |
| (i) | Factory overhead over recovery | 20,000 | |
| (ii) | Interest on investment | 20,000 | |
| (iii) | Bank Interest | 4,000 | |
| (iv) | Stock adjustment | 28,000 | 72,000 |
| | **Profit as per Cost Accounts** | | 10,35,000 |

**(b) Essentials of a good costing system: -** For availing of maximum benefits, a good costing system should possess the following characteristics:-

(a) Costing system adopted in any organization should be suitable to its nature and size of the business and its information needs.

(b) A costing system should be such that it is economical and the benefits derived from the same should be more than the cost of operating of the same.

(c) Costing system should be simple to operate and understand. Unnecessary complications should be avoided.

(d) Costing system should ensure proper system of accounting for material, labour and overheads and there should be proper classification made at the time of recording of the transaction itself.

(e) Before designing a costing system, need and objectives of the system should be identified.

(f) The costing system should ensure that the final aim of ascertaining of cost as accurately as possible should be achieved.

**5. (a) Prince Hotel has three types of rooms viz. super deluxe, deluxe and semi-deluxe. Detail information are given below:**

**(i) There are 20 super deluxe rooms, 80 deluxe rooms and 180 semi-deluxe rooms.**

**(ii) The rent/tariff of super deluxe rooms is to be fixed as twice the deluxe rooms and that of semi-deluxe rooms as 2/3rd of the deluxe rooms.**

**(iii) Normally 80% of super deluxe; 75% of deluxe and 70% of semi-deluxe rooms are occupied in summer of 7(seven) months. In winter of 5(five) months 40% of super deluxe, 50% of deluxe and 60% of semi-deluxe rooms are occupied.**

**Normal days in a month may be taken as 30 days.**

**(iv) Total actual expenses for the year ended 31st March 2015 are ₹ 4,73,85,000.**

**Your are required to suggest what rent should be charged for each type of room if profit is 25% on gross receipts/room rent. 6+4=10**

**(b) What is inter- process profit? Explain it clearly. 5**

**Answer:**

**5. (a)**

(i) **Calculation of room days -**

| | Equivalent to Deluxe | |
|---|---|---|
| Supper Deluxe Summer 20 ×30 × 7×80/100 | = 3360 | |
| Winter 20×30×5×40/100 | $= \frac{1,200}{4,560 \times 2}$ | = 9,120 |
| Deluxe Summer 80×30×7×75/100 | = 12,600 | |

| | | |
|---|---|---|
| Deluxe Winter 80×30×5×50/100 | $= \frac{6,000}{18,600 \times 1}$ | = 18,600 |
| Semi- Deluxe Summer 180 ×30 ×7 ×70/100 | = 26,460 | |
| Semi- Deluxe Winter 180 ×30 × 5 × 60/100 | $= \frac{16,200}{42,660 \times \frac{2}{3}}$ | = 28,440 |
| Total room days equivalent to deluxe rooms | ..... | 56,160 |

(ii) Total amount to be recovered as rent ₹4,73,85,000 + Profit 25% on rent or 33/1/3% in cost = 4,73,85,000 + 1,57,95,000 = 6,31,80,000

Room rent per Deluxe Room – 6,31,80,000/56,160 = ₹1,125

Room rent per Super Deluxe Room – 1,125 × 2 = ₹2,250

Room rent per semi Deluxe room = (1,125 × 2/3) = ₹750

**(b) Inter Process Profits:**

The output of one process is transferred to next process at cost price. However, sometimes, the transfer is made at cost + certain percentage of profit. This is done when each process is treated as a profit center. In such cases, the difference between the debit and credit side of the process account represents profit or loss and is transferred to the Profit and Loss Account. The stocks at the end and at the beginning contain an element of unrealized profits, which have to be written back in this method. If the profit element contained in the closing inventory is more than the profit element in the opening inventory, profit will be overstated and vice versa. Profit is realized only on the goods sold, thus to obtain the actual profit the main task would be to calculate the profit element contained in the inventories.

**6. (a) M/s Zenith Co. Ltd. operating at normal capacity produces 1,00,000 units of a product which supplies the following particulars:**

| Particulars | (₹) Per unit |
|---|---|
| **Direct Materials** | **32** |
| **Direct labour** | **12** |
| **Variable overhead** | **16** |
| **Fixed overhead** | **15** |
| | **75** |

**Sale Price per unit ₹100.**

**In addition, selling and distribution cost of ₹ 5 per unit is incurred for selling each unit of product.**

**As the company faces recession in the market, the Marketing Department desires to produce only 5000 units.**

**But, management is of the opinion to shut down the plant.**

**If the plant is shutdown the loss due to fixed cost could be avoided for ₹ 4,00,000, but the committed unavoidable cost would be estimated at ₹ 2,95,000.**

**Required: Advise whether the plant should be shut down or not. 4+4+2=10**

**(b) What is Integrated Accounting System? What are its advantages? 2+3=5**

**Answer:**

**6. (a) Marginal cost statement during recession**

| | | |
|---|---|---|
| Sales 5,000 units @ ₹100 | | ₹5,00,000 |
| Less: Marginal cost (per unit) | | |
| Direct materials | ₹32 | |
| Direct labour | ₹12 | |
| Variable overhead | ₹16 | |
| Addl. Variable OH | ₹5 | |
| | ₹65 | ₹3,25,000 |
| Contribution | | ₹1,75,000 |
| Less: Fixed Cost | | ₹15,00,000 |
| Operating Loss | | ₹13,25,000 |

**Computation of Shutdown cost**

| | ₹ |
|---|---|
| Fixed cost | 15,00,000 |
| Less: avoidable fixed cost | 4,00,000 |
| | 11,00,000 |
| Add: Addl. Fixed cost | 2,95,000 |
| Shutdown cost | 13,95,000 |

**Advice:** It is apparent that the shutdown costs is higher (₹13,95,000 – ₹13,25,000) = 70,000. So, it is not justified to Shutdown.

**(b) Advantages of Integrated Accounting:**

Integrated Accounting is the name given to a system of accounting whereby cost and financial accounts are kept in the same set of books. Such a system will have to afford full information required for costing as well as for Financial Accounts. In other words, information and data should be recorded in such a way so as to enable the firm to ascertain the cost (together with the necessary analysis) of each product, job, process, operation or any other identifiable activity. For instance, purchases are analysed by nature of material and its end-use. Purchases account is eliminated and direct postings are made to stores control account, work-in-progress accounts, or overhead account. Payroll is straightway analysed into direct labour and overheads. It also ensures the ascertainment of marginal cost, variances, abnormal losses and gains. In fact all information that management requires from a system of costing for doing its work properly is made available. The integrated accounts give full information in such a manner so that the profit and loss account and the balance sheet can be prepared according to the requirements of law and the management maintains full control over the liabilities and assets of its business.

The main advantages of integrated accounting are as follows:-

(i) Since there is one set of accounts, thus there is one figure of profit. Hence the question of reconciliation of costing profit and financial profit does not arise.
(ii) There is no duplication of recording of entries and efforts to maintain separate set of books.
(iii) Costing data are available from books of original entry and hence no delay is caused in obtaining information.
(iv) The operation of the system is facilitated with the use of mechanized accounting.
(v) Centralization of accounting function results in economy.

**7. (a) Draw-up a Flexible Budget for over head expenses of M/s Black & White Co. Ltd, on the basis of the following data and determine the over head rate at 70%, 80% and 90% of plant capacity level (based on direct labour hours).**

| Variable overhead | At 80% capacity (₹) |
|---|---|
| **Indirect labour** | **12,000** |
| **Indirect Material** | **4,000** |
| **Semi- variable overheads**<br>**Power (30% fixed, 70% variable)** | **20,000** |
| **Repairs & Maintenance**<br>**(60% Fixed, 40% variable)** | **2,000** |
| **Fixed Overhead** | |
| **Depreciation** | **11,000** |
| **Insurance** | **3,000** |
| **Others** | **10,000** |
| **Total overheads expenses** | **62,000** |

**Estimated direct labour hours 1,24,000 hrs.** **3+3+4=10**

**(b) State the accounting treatment of abnormal process loss and abnormal process gain.** **3+2=5**

**Answer:**

**7. (a)**

**FLEXIBLE BUDGET FOR OVERHEAD**

| | CAPACITY LEVEL | | |
|---|---|---|---|
| | 70% | 80% | 90% |
| | ₹ | ₹ | ₹ |
| Variable overhead | | | |
| 1. Indirect Labour | 10,500 | 12,000 | 13,500 |
| 2. Indirect Martial | 3,500 | 4,000 | 4,500 |
| Variable portion of semi variable overhead | | | |
| 1. Power | 12,250 | 14,000 | 15,750 |
| 2. Repair & Maintenance | 700 | 800 | 900 |
| (A) Total variable O/H | 26,950 | 30,800 | 34,650 |
| Fixed portion of semi variable overhead - | | | |
| 1. Power | 6,000 | 6,000 | 6,000 |
| 2. Repair & Maintenance | 1,200 | 1,200 | 1,200 |
| Fixed overhead - | | | |
| 1. Depreciation | 11,000 | 11,000 | 11,000 |
| 2. Insurance | 3,000 | 3,000 | 3,000 |
| 3. Others | 10,000 | 10,000 | 10,000 |
| (B) Total Fixed Overhead | 31,200 | 31,200 | 31,200 |
| Total Overhead | 58,150 | 62,000 | 65,850 |
| Estimated direct labour hours | 1,08,500 | 1,24,000 | 1,39,500 |
| Overhead recovery rate per direct labour charges | 0.5359 | 0.5000 | 0.4720 |

**Working** **Variable Overhead** ₹

1. Indirect Labour $\frac{12,000 \times 70}{80}$ = ₹10,500

$\frac{12,000 \times 90}{80}$ = ₹13,500

2. Indirect materials $\frac{4,000 \times 70}{70}$ = ₹3,500

$\frac{4,000 \times 90}{80}$ = ₹4,500

Semi-variable overhead
Power (70% variable 30% fixed)
Variable overhead $\frac{20,000 \times 70}{100}$ = ₹14,000

$\frac{14,000 \times 90}{80}$ = ₹12,250

$\frac{14,000 \times 90}{80}$ = ₹ 15,750

Repair & maintenance (40% variable 60% fixed)
Variable overhead $\frac{20,000 \times 40}{100}$ = ₹800

$\frac{800 \times 70}{80}$ = ₹700

$\frac{800 \times 90}{80}$ = ₹900

Estimated direct labour from at 80% capacity = 1,24,000

For 70% = $\frac{1,24,000 \times 70}{80}$ = ₹1,08,500

For 90% $\frac{1,24,000 \times 90}{80}$ = ₹1,39,500

**(b) Treatment of abnormal loss & abnormal gain:**

**Abnormal Loss:** If the units lost in the production process are more than the normal loss, the difference between the two is the abnormal loss. The relevant process account is credited and abnormal loss account is debited with the abnormal loss valued at full cost of finished output. The amount realized from sale of scrap of abnormal loss units is credited to the abnormal loss account and the balance in the abnormal loss account is transferred to costing profit and loss account.

**Abnormal Gain:** If the actual production units are more than the anticipated units after deducting the normal, loss, the difference between the two is known as abnormal gain. The valuation of abnormal gain is done in the same manner like that of the abnormal loss. The units and the amount is debited to the relevant process account and credited to the Abnormal Gain Account.

**8. Write short notes on any three of the following: 5×3=15**

**(a) VED Analysis.**
**(b) Material handling cost.**
**(c) Cost Reduction.**
**(d) Opportunity Cost.**
**(e) Cost-volume-Profit Analysis.**

**Answer:**

**8. (a) VED Analysis:** This analysis divides items into three categories in the descending order of their criticality as follows: -

- 'V' stands for vital items and their stock analysis requires more attention. The reason is that if these items are not available, the resulting stock outs will cause heavy losses due to stoppage of production. Thus these items are required to be stored adequately to ensure smooth operation of the plant.
- 'E' means essential items. Such items are considered essential for efficient running but without these items, the system will not fail. Care must be taken to see that they are always in stock.
- 'D' stands for desirable items, which do not affect production immediately but availability of these items will lead to more efficiency and less fatigue.
- Thus VED analysis can be very useful to capital intensive process industries. As it analysis items based on their importance and it can be used for those special raw materials which are difficult to procure.

**(b) Material handling cost** refers to the expenses involved in receiving, storing, issuing and handling materials to deal with this cost in cost accounts. There are two prevalent approaches to deal with this cost as under:

First one suggests the inclusion of these costs as part of the cost of materials by establishing a separate material handling rate, e.g., at the rate of percentage of the cost of material issued or by using a separate material handling rate which may be established on the basis of weight of material issued.

Under another approach, these costs may be included along with those of manufacturing overhead and be charged over the products on the basis of direct labour or machine hours.

**(c) Cost reduction: -**

Cost reduction: The goal of cost reduction can be achieved in two ways, first is reducing the cost per unit and the second one is increasing productivity. Reducing wastages, improving efficiency, searching for alternative materials, and a constant drive to reduce costs, can effect cost reduction. The following tools and techniques are normal used for cost reduction.

(A) Value analysis or value engineering.

(B) Setting standards for all elements of costs and constant comparison of actual with standard and analysis of variances.

(C) Work study.

(D) Job evaluation and merit rating.

(E) Quality control.

(F) Use of techniques like Economic Order Quantity.

(G) Classification and codification

(H) Standardization and simplification.

(I) Inventory Management.

(J) Benchmarking

(K) Standardization

(L) Business Process Re-engineering.

**(d) Opportunity cost** is the value of a benefit sacrificed in favour of an alternative course of action. It is the maximum amount that could be obtained at any given point of time if a resource was sold or put to the most valuable alternative use that would be practicable. Opportunity cost of good or service is measured in terms of revenue which could have been earned by employing that good or service in some other alternative uses. Opportunity cost can be defined as the revenue foregone by not making the best alternative use.

Opportunity costs represent income foregone by rejecting alternatives. They are, therefore not incorporated into formal accounting systems because they do not incorporate cash receipts or outflows. Opportunity costs are, however, very relevant when examining alternative proposals or projects. When deciding whether or not to allocate capital to a project it is highly desirable to consider if the money could produce a better or worse return if invested elsewhere.

**(e) Cost-volume-profit analysis.** Profit of an undertaking depends upon a large number of factors, the most importance of which are cost of manufacture, volume, of sales and selling prices of product sold. The three factors of cost, volume and profit are inter-connected and dependent on one another. For example, profit depends upon sales, selling price to a large extent depends upon cost, and volume of sales depends upon volume of production which in turn is related to cost. In cost-volume profit analysis an attempt is made to measure variations in cost with variations in volume. Of all these factors, which influence cost, often, outside factors, over which management usually has no control, necessitate changes in volume and costs do not always vary in proportion to the volume of output. This type of situations poses special problems for management.

The cost-volume-profit relationship may be shown in statement form as shown below:

- **Statement of Marginal cost and Profit**

| | **Product X (₹)** | |
|---|---|---|
| Sales | | X |
| Less: Marginal cost: | | |
| Direct Materials | X | |
| Direct Labour | X | |
| Variable Overhead | X | |
| Contribution: | | X |
| Less: Fixed cost | | X |
| Profit | | X |

Sales les marginal cost = Contribution

Contribution less Fixed Cost = Profit.