**Unit Costing & Job and Batch costing**

1. M/s Shaw & Co. manufactures two types of shoes A and B. Production costs for the year ended 31st March 2011 were:

Rs.

Direct Material 15,00,000

Direct Wages 8,40,000

Production overhead 3,60,000

27,00,000

There was no Work in Progress at the beginning or at the end of the year. It is ascertained that the cost per unit ratios are

1. Direct Material in type A shoes consists twice as much as that in type B shoes.
2. The direct wages for type B shoes were 60% of those for type A shoes.
3. Production overhead was the same per pair of A and B type.
4. Administrative overhead for each type was 150% of direct wages.
5. Selling cost was Rs. 1.50 per pair.
6. Production during the year were:

Type A 40,000 pairs of which 36,000 were sold.

Type B 120,000 pairs of which 100,000 were sold.

1. Selling price was Rs. 44 for type A and Rs. 28 per pair for type B.

Prepare a Statement showing Cost and Profit. M.N.Arora Problem No.6.8

1. Distinguish between :
2. Why product cost is inventoirable?
3. Distinguish between cost apportionment and overhead absorption.
4. Barbie Company creates, produces, and markets video games. Most of the games involve some sort of brainteaser. Rajiv Mehta, the owner of Barbie, is convinced that his employees must have strong analytical and problem-solving skills. Before an employee is hired, he or she must successfully solve a puzzle of some sort. The puzzle always relates to the employee’s area of expertise. You are applying for a job as an entry-level accountant. The controller of the firm wishes to test your knowledge of basic cost terms and concepts and at the same time, evaluate your analytical skills. The controller has gathered information for one of Barbie’s plans for the previous year.
5. Conversion cost was Rs.3,60,000 and was three times the prime cost.
6. Direct materials used in production equaled Rs.1,00,000.
7. Cost of goods manufactured was Rs.4,15,000.
8. Beginning WIP is one-half the cost of ending WIP.
9. There are no beginnings or ending inventories for direct materials.
10. Cost of goods sold was 90% of the cost of goods manufactured.
11. Beginning finished goods inventory was Rs.10,000.

**Required:**

1. Prepare a statement of cost of goods manufactured for the previous year.
2. Prepare a statement of cost of goods sold for the previous year.

PS Page Np.243

1. A Co. makes two distinct types of vehicles A and B. The total expense during a period is shown by the books for assembly of 600 of A and 800 of B are as under :-

**Rs.**  Material 1,98,000 Wages 1,12,000

Stores overhead 19,800 Running Expenses of Machine 44,400 Depreciation 32,200 Labour amenities 31,500 Works General Expenses 30,000

Adm. and Selling Expenses 26,800

**Other information**

**A :B**  Material cost ratio per unit 1 : 2 Wages cost ratio per unit 2 : 3 Machine utilization unit 1 : 2

Calculate the cost of each vehicle giving reasons for the basis of apportionment adopted by you.

MN Arora Page No.6.18 Problem 6.7

1. What are the essential principles of a good costing system? What are the objections to the introduction of a costing system?

**Overheads:**

1. In a factory, there are two service departments, P and Q and three production departments, AB, and C. In April 2009, the departmental expenses were as follows: PS Page No.185

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Particulars | Production Departments | | | Total | Service Departments | | Total |
| A | B | C | P | Q |
| Departmental expenses | 23,000 | 6,000 | 6,500 | 35,500 | 4,500 | 2,000 | 6,500 |

The service departmental expenses are allotted on % basis as follows:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Production Departments | | | | | Service Departments | |
|  |  | A | B | C |  |  |
| Service Department | P | 40% | 30% | 20% | Nil | 10% |
| Service Department | Q | 30% | 30% | 20% | 20% | Nil |

You are requested to apportion the cost of service department to the production department using repeated distribution method

1. Civil Medical Clinic offers a number of specialized medical services, one of which is cancer care. Because of the reputation the clinic’s oncologists have developed over the years, the demand for these services is strong. As a result, civil medical Clinic recently added a 10-bed cancer wing to the clinic. The cost of the cancer facility is depreciated on SLM basis. All the equipment within the facility is leased.

Since the clinic had no experience with-in-patient cancer services, it decided to operate the cancer care center for two months before determining how much to charge per patient-day on an ongoing basis. As a temporary measure, the clinic adopted a patient-day charge of Rs.100, an amount equal to the fees charged by hospital specializing in cancer care in a nearby city.

This initial per-day charge was quoted to patients entering the cancer care center during the first two months with assurances that if the actual operating cost of the new center was justified it, the charge could be less. In no case would the charges be more.

A temporary policy of billing after 60 days was adopted so that any adjustments could be made.

The cancer care center opened January 1. During January, the center had 2,100 patient-days of activity. During February, the activity was 2,250 patient-days. Costs for these two levels of activity output are as follows:

|  |  |  |
| --- | --- | --- |
|  | 2,100 patient-days  Rs. | 2,250 patient days  Rs. |
| Salaries  Aides  Laboratory  Pharmacy  Depreciation  Laundry  Administration  Lease (equipment) | 6,000  1,200  1,10,000  31,000  11,800  16,800  12,000  30,0000 | 6,000  1,200  1,17,500  32,500  11,800  18,000  12,000  30,000 |

1. Use the high-low method to separate the mixed costs into fixed And variable.
2. Nirav Shah, the administrator of the cancer center has estimated that the center will average 2,000 patient-days per month. If the center is to be operated as a non-profit organization, how much will it need to charge per patient-day? How much of this charge is variable? How much is fixed? PS Page No. 189
3. Describe the methods of distribution of service department overheads to production departments.
4. Define the following terms
5. Imputed costs
6. Blanket rates
7. Conversion cost
8. Cost centre
9. Cost driver
10. Differentiate the followings:
11. Job and Batch costing
12. Financial accounting and cost accounting
13. ABC Company produces two types of stereo units. Activity data follows:



Activity Cost Data (overhead activities)

Activity Activity Cost Rs.

Setting up equipment 60000

Material Handling 30000

Using Power 50000

Testing 40000

Total 180000

Required:

1. Calculate the consumption ratios for each activity.
2. Group activities based on the consumption ratios and activity level.
3. Calculate a rate for each pooled group of activities.
4. Using the pool rate, calculate unit product costs.
5. Alpha Ltd. has decided to analyze the profitability of its five new customers. It buys bottled water at Rs.90 per case and sells to retail customers at a list price of Rs.108 per case. The data pertaining to five customers are:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Particulars | Customers | | | | |
| A | B | C | D | E |
| Cases Sold | 4680 | 19688 | 136800 | 71550 | 8775 |
| List Selling Price | Rs.108 | Rs.108 | Rs.108 | Rs.108 | 108 |
| Actual Selling Price | Rs.108 | Rs.106.20 | Rs.99 | Rs.104.40 | Rs.97.20 |
| No. of purchase orders | 15 | 25 | 30 | 25 | 30 |
| No. of Customers visits | 2 | 3 | 6 | 2 | 3 |
| No. of deliveries | 10 | 30 | 60 | 40 | 20 |
| Km. travelled per delivery | 20 | 6 | 5 | 10 | 30 |
| No. of expected deliveries | 0 | 0 | 0 | 0 | 1 |

Its five activities and their drivers are:

Activities Cost Driver Rate

Order taking Rs.750 per purchase order

Customer visits Rs.600 per customer visit

Deliveries Rs.5.75 per delivery Km. travelled

Product handling Rs.3.75 per case sold

Expedited deliveries Rs.2,250 per expected delivery

Required:

1. Compute the customer level operating income of each of five retail customers now being examined (A, B, C, D and E.) Comment on the results.
2. What insights are gained by reporting both the list selling price and the actual selling price for each customer?
3. (a) A hotel has a capacity of 100 single rooms and 20 double rooms. The average occupancy of both single and double room is expected to be 80% throughout the year of 365 days. The rent for the double room has been fixed at 125% of the rent of the single room. The costs are as under:

Variable costs: Single room Rs.220 each per day, double room Rs.350 each per day

Fixed costs: Single room Rs.120 each per day, double room Rs.250 each per day

Calculate the rent chargeable for single and double rooms per day in such a way that the hotel earns a margin of safety of 20% on hire of room.

(b) Explain the followings in brief:

1. Relevant range
2. Out-of pocket cost
3. XYZ Ltd. Has two production departments and three service departments. Expenses incurred for these departments and other information available is given below:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Particulars | Production Departments | | Service Departments | | |
| A | B | Maintenance | Power | Personnel |
| Overheads before allocating service department’s cost Rs. | 1,20,000 | 1,50,000 | 20,000 | 48,000 | 40,000 |
| Allocating Basis:  Maintenance  KWH consumed  No. of employees | 80  4  60 | 20  16  30 | Nil  2  30 | 40  Nil  18 | 20  2  Nil |

Allocate the cost of service departments to the production departments under Step-down method.

**Tax man Page 211 Illustration 1**

1. ABC Transport Company has given a route 40 kilometers long to run bus. The bus costs the company a sum of Rs.1, 00,000. It has been insured at 3% p.a. and the annual tax will amount to Rs.2, 000. Garage rent is Rs.200 per month. Annual repairs will be Rs.2, 000 and the bus is likely to last for 5 years. The driver’s salary will be Rs.300 per month and the conductor’s salary will be Rs.200 per month in addition to 10% of takings as commission [To be shared by the driver and conductor equally]. Cost of stationery will be Rs.100 per month. Manager-cum-accountant’s salary is Rs.700 per month. Petrol and oil will be Rs.50 per 100 kilometers. The bus will make 3 up and down trips carrying on

an average 40 passengers on each trip. Assuming 15% profit on takings, calculate the bus fare to be charged from each passenger. The bus will run on an average 25 days in a month.