



Delhi School of Business

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PGDM Program

MID-TERM EXAMINATION, DECEMBER 2023

TERM – II (Batch: 2023-25)

Course Name	Cost and Management Accounting	Course Code	CMA
Duration	One and Half hours	Max. Marks	40

Instructions:

1. Mode of Exam is Closed Book.
2. Use of mobile phones is strictly prohibited.
4. Only the use of calculators (preferably manual) is allowed.
5. Any attempt of misconduct will amount to the cancellation of the paper.

Answer any four from the following:

4 X 10 = 40

1. (a) A company has 3 production departments, A, B and C and a service department S. the overhead costs incurred during a particular four-week period were:

	₹
Indirect wages and salaries:	
Department A	40,000
Department B	30,000
Department C	35,000
Department S	25,000
Workmen's Compensation Insurance	7800
Rent and rates	6000
Repairs to plant and machinery	6000
Depreciation to plant and machinery	4500
Electricity	3000
Power	5600
Insurance	3500
Medical costs	240

The following further information are also available:

	A	B	C	S
Area in sq. meters	10000	8000	7000	5000
Number of employees	20	12	15	13
Book value of plant and machinery (₹)	100000	120000	60,000	20,000



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Average stock value (₹)	20,000	15,000	15,000	—
Horsepower of machines (HP)	120	95	55	10

Carry out the allocation and apportionment of overhead to the production departments assuming that service department S is a canteen.

You are r
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(b) Classify each of the costs listed as:

- (1) a product or period cost and
- (2) a variable or fixed cost

- a) Tomatoes used in the manufacture of Kisaan ketchup
- b) Administrative salaries of executives employed by Jet Blue Airlines
- c) Wages of assembly-line workers at a Ford plant
- d) Marketing expenditures of the Sunrisers' Hyderabad IPL team
- e) Commissions paid to Coca-Cola's salespeople
- f) Straight-line depreciation on manufacturing equipment owned by Dell Computer
- g) Shipping charges incurred by Office Depot on out-going orders
- h) Speakers used in Sony home-theater systems
- i) Insurance costs related to Mary Kay Cosmetics' manufacturing plant

7+3 (CO1,2)

2. (a) From the following information compute the machine hour rate:

A manufacturing unit has added a new machine to its fleet of five existing machines. The total cost of purchase and installation of the machine is ₹7,50,000. The machine has an estimated life span of 5 years and is expected to realize ₹30,000 as scrap at the end of its working life. Other relevant data are as follows:

- a. Budgeted working hours is 2000 based on 8 hours per day for 250 working days. This includes 400 hours for plant maintenance.
- b. Power used by the machine is 5 units per hour at a cost of ₹6 per unit. No current is drawn during maintenance.
- c. The machine requires special oil for heating that is replaced once in every month at a cost of ₹2500 on each occasion
- d. Estimated cost of maintenance of the machine is ₹1000/week of 5 working days.
- e. 3 operators control the operations of the entire battery of 6 machines and the average wages per person is ₹4500/week plus 40% fringe benefits.
- f. Departmental and general works overheads allocated to the operation during the last year was ₹6,00,000. During the current year, it is estimated that there will be an increase of 12.5% of this amount. No incremental overhead is envisaged for the installation of the new machine.



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You are required to compute the machine hour rate for the recovery and running of the machine.

(b) The budgeted working conditions for a cost center are as follows:

Normal working hours	42 hrs
Number of machines	14
Normal weekly loss of hours on maintenance etc.	5 hours per machine
Estimated annual overhead	₹62160
Estimated direct wages rate	₹0.75 per hour
Number of weeks worked per year	48
Actual results in respect of a 4-week period are:	
Overhead incurred	₹5100
Wages incurred	₹1850
Machine hours produced	2100

You are required to: a) Calculate the overhead rate per machine hour; and (b) Calculate the amount of under-or over-absorption of both wages and overhead.

7+3 (CO2,3)

3. A company has two production departments and two service departments. The data relating to a period are as follows:

	Production Departments		Service Departments	
	PD1	PD2	SD1	SD2
Direct Materials (₹)	8,00,000	4,00,000	1,00,000	2,00,000
Direct Wages (₹)	9,50,000	5,00,000	2,00,000	1,00,000
Overheads (₹)	8,00,000	5,00,000	3,00,000	2,00,000
Power required at normal capacity of operations(kWh)	20,000	35,000	12,500	17,500
Actual Power consumption during the year (kWh)	13,000	23,000	10,250	10,000

The power requirements of these departments are met by a power generation plant. The said plant incurred an expenditure, which is not included above., of ₹12,18,750 out of which ₹8,43,750 was variable and the rest fixed.

After the apportionment of the power generation plant costs to the four departments, the service department overheads are to be redistributed on the following basis:

	PD1	PD2	SD1	SD2
SD1	50%	40%	—	10%
SD2	60%	20%	20%	—

You are required to:

- i) Apportion power generation plant costs to the four departments.
- ii) Re-apportion service department cost to production departments (using the shortest method possible) and compute the overhead rates per direct labour hour.

85000

56250



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7+3+1 (CO 2,3)

4. (a) A company makes ₹5,000 profit from ₹60,000 sales. Fixed costs are ₹15,000. What is the break-even point of the company?
- (b) A company's sales are ₹1,00,000 fixed costs ₹20,000 and the break-even point is ₹80,000. What is the profit it has made?
- (c) A company has a sales of ₹40,000, variable expenses ₹30,000 and break-even point ₹30,000. What profit it has earned?
- (d) A company has earned a profit of ₹5000, fixed costs ₹10,000 and a break-even point of ₹20,000. What are its sales?
- (e) A company has earned a profit of ₹30,000 during the year 2008-09. The marginal cost and selling price of the product are ₹8 and ₹10 per unit respectively. Find out the amount of margin of safety. (2 X 5) (CO 3)

5. ADC Electronics makes audio players of 3 models 1, 2 and 3. Monthly manufacturing costs are as follows (Best suitable absorption rate applied by ADC):

	₹ in lakhs
Direct Material Cost	1000
Direct Labour Cost	800
Testing Cost	400
Machining Cost	200
Rework Cost	150
Ordering Cost	350
Engineering Cost	300

ADC Electronics provides the additional information for the current year:

PARTICULARS	Model1	Model2	Model3	
Machining hours	400	500	300	1200
Units Reworked	1250	5750	2000	9000
Direct Material.	1000	800	600	2400
No. of orders	50	30	60	140
Labour hours	700	500	800	2000
Testing hours	150	250	100	500
Engineering hours	900	500	700	2100
Calculate the total cost of product using ABC system and traditional method				

7+3 (CO 2,3)