STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI – 600 086.
(For candidates admitted during the academic year 2020–2021 and thereafter)

B.COM. DEGREE EXAMINATION NOVEMBER 2023
HONOURS
THIRD SEMESTER

COURSE : MAJOR – CORE
PAPER : COST ACCOUNTING TECHNIQUES
SUBJECT CODE : 20BH/MC/CT34
TIME : 3 HOURS **MAX. MARKS: 100**

SECTION – A

ANSWER ALL QUESTIONS: **(10 x 2 = 20)**

1. What is Margin of safety?
2. What is relevant cost?
3. What do you mean by absorption costing?
4. What are the four perspectives in a balance scorecard?
5. Give any two advantages of beyond the budgeting module.
6. Calculate profit from the following figures:
   Sales Rs. 2,00,000
   Fixed Cost Rs. 40,000
   C/S Ratio 30%

7. Calculate the sales volume profit variance from the following information:
   Budgeted selling price – Rs 15 per unit
   Budgeted sales units – 10000 units
   Budgeted profit per unit – Rs 5 per unit
   Actual sales revenue – Rs 151500
   Actual units sold – 9800 units.

8. The fixed expenses of an industrial concern amount to Rs. 1,80,000. Its variable cost per unit is Rs. 29 and selling price is Rs. 44 per unit. Calculate the break even point.

9. From the following details, compute the material consumption during November 2021:
   Estimated sales – 5,000 units
   Expected closing stock – 2,000 units
   Opening stock – 1,000 units

10. A manufacturer spent $45,600 on 12,000 kgs of materials. This resulted in an adverse material price variance of $3,000. Budgeted production was 6,000 units but actual production was 7,000 units. Calculate the standard cost per kg of the materials.

SECTION – B

ANSWER ANY FIVE QUESTIONS: **(5 x 8 = 40)**

11. Required:
    a. Calculate the break-even point from the following details of A Ltd:
       Sales 1000 Units @ Rs. 10 each Rs.10,000
       Fixed cost Rs. 7,500, Variable Cost Rs. 6 per unit.
    b. If the selling price is reduced to Rs.9, what is the new breakeven point?

…2

12. Rabort Ltd. is considering whether to administer its own purchase ledger or to use an external accounting service. The following are the cost estimates for each option

Particulars	Costs	Volume
Internal service department:		
Purchase of Hardware	Rs 400 per annum	
Maintenance of hardware	Rs 680 per annum	
Accounting stationary	Rs 450 per annum	
Part time accounting clerk	Rs 5000 per annum	
External service:		
Invoice processing	Rs 0.50 per document	5000 per annum
Cheque payment processing	Rs 0.50 per cheque	4500 per annum
Supplier account reconciliation	Rs 2 per supplier per month	125 Suppliers

Advise whether the work should be done in house or to be outsourced. Show all your working clearly.

13. XYZ Ltd. has furnished you the following details for April – June 2021 Quarter

Output (Units)	Total Cost
200	7000
300	8000
400	9000

Calculate the following:

a. Total fixed cost
b. Variable cost per unit
c. Calculate the total cost if output 340 units
d. Calculate the total cost if output is 600 units

14. S Co makes widgets. Two types of labour are involved in the production of a widget, skilled and unskilled. Skilled labour is paid Rs 15.00 per hour and unskilled Rs 3.00 per hour. Twice as many unskilled labour hours as skilled labour hours are needed to produce a widget, six unskilled labour hours being needed.

A widget is made up of two different direct materials. Five kg of Material X and two metres of Material Z are needed. Material X costs Rs 2.00 per kg and Material Z Rs 5.00 per metre. Variable production overheads are incurred at Swindle at the rate of Rs 3.00 per direct skilled labour hour.

The basis of fixed cost absorption is direct skilled labour hours. For the coming year, budgeted fixed production overheads are Rs 100,000 and budgeted production of widgets is 10,000 units.

Administration, selling, and distribution overheads are added to products at the rate of Rs 20.00 per widget, and a mark-up of 15% is made on each.

Required:

Complete the standard cost card for a widget:

a. Direct materials – X
b. Direct materials – Y
c. Direct labour – skilled
d. Direct labour – unskilled
e. Variable production overhead

f. Fixed production overhead
g. Administration, selling and distribution overhead
h. Standard cost of sale
i. Standard profit
j. Standard sales price

15. TW manufactures two products, the D and the E using the same material for each. Annual demand for the D is 9,000 units, while the demand for E is 12,000 units. The variable production cost per unit of the D is $10, that of the E $15. The D requires 3.5kg of raw material per unit, the E requires 8kg of raw materials per unit. Supply of raw materials will be limited to 87,500 kg during the year.
A subcontractor has quoted prices of $17 per unit for the D and $25 per unit for the E to supply the product. How many of each product should TW manufacture in order to maximize profits?

16. The monthly Budget for manufacturing overheads of a concern for a level of activity were as follows:

Capacity	100%
Budgeted production(Units)	2,000
	Rs.
Indirect wages	4,000
Consumable stores	3,000
Maintenance	3,000
Power and Fuel	4,000
Depreciation	8,000
Insurance	2,000
Total	24,000

You are required to:
i) Indicate which of the items are fixed, variable and semi-variable;
ii) Prepare a budget for 70% capacity and
iii) Find the total cost, both fixed and variable, per unit of output at 70% and 100% capacity.

17. From the following information calculate (a) Current Ratio (b) Acid test ratio (c) Debt-equity ratio (d) Fixed Assets ratio

Usha Ltd. as on 31.12.2020

Liabilities	**2020 (Rs)**	**Assets**	**2020 (Rs)**
Equity share capital	25000	Fixed Assets	30000
Preference share capital	5000	**Current Assets**	
Reserves and surplus	4000	Stores	2000
Debentures	8000	Sundry Debtors	1000
Bank Loan	4000	Cash	500
Sundry Creditors	1000	Bank	2500
Proposed Dividend	1000	Preliminary expenses	8000
Provision for taxation	2000	Brokerage on shares	2000
		Stock	4000
	50000		50000

SECTION – C

ANSWER ANY ONE QUESTIONS: (1 x 20 = 20)

18. ABC produces and sells two types of sports equipment items for kids, balls(In Batches) and racquets:
A Batch of balls sales for the Rs 7 and has variable cost of Rs 4.50. Racquets are sold for Rs 4.50 per unit and have a variable cost of Rs 2.50
For every two batches of balls sold, 1 racquets is sold. ABC budged fixed cost are Rs 4,00,000 per period. Budged sales revenue for next period Rs 12,50,000 in the standard mix.
Calculate (show your workings clearly) the following:
    a. Contribution per unit
    b. Contribution per mix
    c. Breakeven point in terms of mixes
    d. Breakeven point in units of the products
    e. Breakeven point in terms of revenue
    f. Margin of safety

19. The Perseus Co a medium sized company, produces a single product in its one overseas factory. For control purposes, a standard costing system was recently introduced. The standards set for the month of May were as follows:

Particulars	
Production and sales	16,000 units
Selling price (per unit)	Rs 140
Materials:	
Material A	6 kilos per unit at Rs 12.25 per kilo
Material B	3 kilos per unit at Rs 3.20 per kilo
Labour	4.5 hours per unit at Rs 8.40 per hour
Overheads (all fixed)	Rs 86,400 per month

(They are not absorbed into the product costs)
The actual data for the month of May is as follows:
Produced 15,400 units which were sold at Rs 138.25 each.
Materials: Used 98,560 kilos of material A at a total cost of Rs 1,256,640 and used 42,350 kilos of material B at a total cost of Rs 132,979.
Labour: Paid an actual rate of Rs 8.65 per hour to the labour force. The total amount paid out, amounted to Rs 612,766.
Overheads (all fixed): Rs 96,840.
Required:
    a. Prepare a standard costing profit statement, and a profit statement based on actual figures for the month of May. (6 marks)
    b. Prepare a statement of the variances which reconciles the actual with the standard profit or loss figure. (Mix and yield variances are not required) (9 marks)
    c. Briefly explain the possible reasons for inter-relationships between material variances and labour variances. (3 marks)
    d. State TWO possible causes of an adverse labour rate variance. (2 marks)

20. X Ltd. wishes to prepare cash budget from January to June.

Months	Total Sales Rs.	Materials Rs.	Wages Rs.	Production Overhead Rs.	Selling distribution overhead Rs.
January	20,000	20,000	4,000	3,200	800
February	22,000	14,000	4,400	3,300	900
March	24,000	14,000	4,600	3,300	800
April	26,000	12,000	4,600	3,400	900
May	28,000	12,000	4,800	3,500	900
June	30,000	18,000	4,800	3,600	1,000

Cash balance on 1st January was Rs. 10,000.
A new machine is to be installed at Rs. 30,000 on credit to be repaid by two equal instalments in March and April. Sales commission at 5% on total sales is to be paid within the month following actual sales. Rs. 10,000 being the amount by second call may be received in March. Share premium amounting to Rs. 2,000 is also obtained with second call. Income from investments Rs. 5,000 to be received in January and May.
Period of credit allowed by suppliers – 2 months
Period of credit allowed to customers – 2 months
Delay in payment of overheads – ½ month
Assume cash sales to be 50% of the total sales

21. **Case Study (Compulsory)** **(1 x 20 = 20)**

The Mobile Co (M Co) is a company specialising in the provision of telephone systems for commercial clients.
M Co has been approached by a potential customer, Swing Co, which wants to install a telephone system in new offices it is opening. While the job is not a particularly large one, M Co is hopeful of future business in the form of replacement systems and support contracts for Swing Co. M Co is therefore keen to quote a competitive price for the job.
The following information should be considered:

i. One of the company's salesmen has already been to visit Swing Co, to give them a demonstration of the new system, together with a complimentary lunch, the costs of which totalled Rs 400.

ii. The installation is expected to take one week to complete and would require three engineers, each of whom is paid a monthly salary of Rs 4,000. The engineers have just had their annually renewable contract renewed with M Co. One of the three engineers has spare capacity to complete the work, but the other two would have to be moved from Contract X in order to complete this one. Contract X generates a contribution of Rs 200 per engineer per week. There are no other engineers available to continue with Contract X if these two engineers are taken off the job. It would mean that M Co would miss its contractual completion deadline on Contract X by one week. As a result, M Co would have to pay a one-off penalty of Rs 500. Since there is no other work scheduled for their engineers in one week's time, it will not be a problem for them to complete Contract X at this point.

…6

iii. 120 telephone handsets would need to be supplied to Swing Co. The current Cost of these is Rs 18.20 each, although M Co already has 80 handsets in inventory. These were bought at a price of Rs 16.80 each. The handsets are the most popular model on the market and are frequently requested by M Co's customers.

iv. Swing Co would also need a computerised control system called 'Swipe 2'. The current market price of Swipe 2 is Rs 10,800, although M Co has an older version of the system, 'Swipe 1', in inventory, which could be modified at a cost of Rs 4,600. M Co paid Rs 5,400 for Swipe 1 when it ordered it in error two months ago and has no other use for it. The current market price of Swipe 1 is Rs 5,450, although if M Co tried to sell the one it has, it would be deemed to be 'used' and therefore only worth Rs 3,000.

Required:

a. What figure should be included in the relevant Cost statement for engineers' costs?
b. What figure should be included in the relevant Cost statement for telephone handsets?
c. What figure should be included in the relevant Cost statement for the computerised control system?
d. State whether the following statements about M Co's decision to quote for the contract are true or false and give reasons supporting the same
    (i) The opportunity cost is defined as the relevant Cost of taking a business opportunity to install the telephone system for Swing Co.
    (ii) The decision to install the telephone system should be taken purely on the basis of whether it improves profit or reduces costs for M Co.
e. Explain the steps of calculation in a make or buy decision with a limiting factor.
f. What are the factors to be considered by the company in a make or buy decision making?

****