



LOYOLA COLLEGE (AUTONOMOUS) CHENNAI – 600 034

B.Com. DEGREE EXAMINATION – HONOURS

SECOND SEMESTER – APRIL 2025



UBH2MC01 / UBH 2501– MANAGEMENT ACCOUNTING

Date: 23-04-2025

Dept. No.

Max. : 100 Marks

Time: 01:00 PM - 04:00 PM

SECTION- A

ANSWER ALL THE QUESTIONS

(30X2=60Marks)

1. The following information is available for a company:

	Budgeted	Actual
Expenditure	\$176,400	\$250,400
Machine hours	4,000	5,000
Labour hours	3,600	5,400

The company absorbs overheads using labour hours.

What was the under or over absorption of the overheads?

- A Under-absorbed by \$29,900
- B Under-absorbed by \$14,200
- C Over-absorbed by \$14,200
- D Over-absorbed by \$64,990

2. The following information is available for a company in Period 2.

Actual overheads	\$225,900
Actual machine hours	7,530
Budgeted overheads	\$216,000

The budgeted overhead absorption rate was \$32 per hour.

How many machine hours (rounded to the nearest hour) were budgeted?

3. A Company has three departments – Assembly, Finishing and Maintenance. Budgeted data for each department is shown below:

	Assembly	Finishing	Maintenance
Allocated overheads	\$90,000	\$100,000	\$10,000
Direct labour hours	5,000	6,000	Nil
Machine hours	10,000	3,000	2,000
Percentage of time spent maintaining machinery	60	40	Nil
Number of staff	60	120	10

What is the most suitable production overhead absorption rate for the Assembly department?

- A \$9.60 per machine hour
- B \$9.90 per machine hour
- C \$17.33 per labour hour
- D \$18.33 per labour hour

4. A business is using time series analysis to prepare its budget for the coming year.

What is the seasonal variation for October based on the given data and a 3-month moving average?

Month	Sales value
	(000s)
June	770
July	750
August	928
September	854
October	834
November	1012
December	938

- A **–66**
- B **–38**
- C **+66**
- D **+38**

5. Zee Ltd operates a total absorption costing system. Budgeted fixed overheads for 2007 were \$175,000 and budgeted production was 5,000 units.

During 2007, the actual fixed overheads amounted to \$186,000 and actual production was 6,000 units.

What is the over or under absorption of overheads?

A under-absorbed by \$24,000

B under-absorbed by \$11,000

C over-absorbed by \$11,000

D over-absorbed by \$24,000

6. The following is the standard cost card for one unit of product M.

	\$/unit
Selling price	35
Direct materials	20
Direct labour	4
Variable overhead	1
Fixed overhead	6

Production was 50,000 units and sales 60,000 units. Opening inventory was 25,000 units. The profit calculated using marginal costing was \$180,000.

What is the profit from absorption costing?

A \$30,000

B \$120,000

C \$210,000

D \$240,000

7. Using a 15% annual interest rate, the project's net present value (NPV) is \$850 as calculated correctly. If the interest rate is increased by 5%, the project's NPV decreases by \$900. What is the project's internal rate of return (IRR).

A 14.7%

B 17.4%

C 19.7%

D 20.3%

8. Which ONE of the following is an advantage of Activity Based Costing?

A It provides more accurate product costs

B It is simple to apply

C It is a form of marginal costing and so is relevant to decision making

D It is particularly useful when fixed overheads are very low

9. An item's production level corresponds exactly to its sales level during a given period.

How the profit change if marginal or absorption costing would were used?

A There would not be any difference.

B The absorption cost would be higher.

C It would be lower under absorption costing.

D It is impossible to determine given the information.

10. A company manufactures and sells a single product with a variable cost of \$6 per unit. Fixed costs were calculated at \$2 per unit based on 200,000 units of normal activity.

The current selling price is \$10 per unit. How much profit is made under marginal costing if the company sells 250,000 units?

A \$500,000

B \$600,000

C \$900,000

D \$1,000,000

11. A company absorbs labor-hour-related costs. In one period, 11,500 hours were worked, resulting in \$138,000 in overheads and a \$23,000 over-absorption. What was the overhead absorption rate per hour?

12. A law firm recovers its overheads through chargeable consulting hours. The budgeted overheads were \$615,000, while the actual consulting hours were 32,150. Overheads were under-recovered by \$35,000. Actual overheads totaled \$694,075. What is the budgeted overhead absorption rate per hour (to 2 decimal places)?

A \$20.21

B \$20.50

C \$21.59

D \$22.68

13. What exactly is an overhead absorption rate used for?

- A distribution of common costs among benefiting cost centers.
B calculate the total overheads for a cost centre.
C charge overheads to products
D control overheads

14. A company analyzed a customer's last 7 orders to determine how many items they purchased. The seven days orders are as given: 10, 22, 3, 6, 17, 14, 19

Which TWO of the following statements are correct?

- A The arithmetic mean is 13
B The median is 6
C The arithmetic mean is 15
D The median is 14
E The arithmetic mean value is higher than the median value

15. Regression analysis is being used to determine the line of best fit ($y = a + bx$) from five data sets. The calculations yielded the following information:

$\Sigma x = 129$ $\Sigma y = 890$ $\Sigma xy = 23,091$; $\Sigma x^2 = 3,433$ $\Sigma y^2 = 29,929$.

What is the value of 'a' in the equation for the line of best fit (rounded to the nearest whole number).

- A 146
B 152
C 210
D 245

16. Which one of the following organisations is most likely to use batch costing as the method for establishing the cost of products?

- A Car repairs
B Clothing
C Oil refining
D Antique Curio shop

17. The following data relates to a process for the month of May:

Input materials -500 liters, Labour - \$ 3,000 and overhead- \$ 2,670.

Normal output is expected to be 9 liters for every 10 liters input. Actual output was 460 liters.

Identify how many liters of abnormal loss/gain in the process?

18. Two products W and X are created from a joint process. Both products can be sold immediately after splitoff. The following information is available for the last period:

Total joint production costs \$776,200

Product	Production units	Sales units	Selling price per unit
W	12,000	10,000	\$10
X	10,000	8,000	\$12

Using the sales value method of apportioning joint production costs, what was the **value of the closing inventory of product X for the last period?**

19. A consumer electronics retailer with multiple stores sells a popular smartphone model known as the TechPro X1, for which the following information is available:

- Average sales: 60 units per day
- Maximum sales: 80 units per day
- Minimum sales: 45 units per day
- Lead time: 10–15 days
- Reorder quantity: 1,500 units

At what inventory level should a replenishment order be issued?

20. **Swift Motors Ltd.** manufactures a **gear assembly** used in one of the **vehicle engines** it produces.

On average, the company **requires 2,400 units** of this component, **steadily throughout the year**. Each unit **costs \$18 to produce**, and there is an additional **\$400 setup cost** every time a batch is manufactured. The **holding cost per unit** is **10% of the production cost**. Calculate the EBQ.

21. A sample of 10% of B.Com (Honours) students is required. Which ONE of the following methods will provide the best simple random sample?

- A) Select every tenth B.Com (Honours) student to arrive at their college on a specific day.
- B) Use random number tables to randomly select one in ten students from each B.Com (Honours) class.
- C) Select 10% of colleges offering B.Com (Honours) programs, then choose all students enrolled in those colleges.
- D) Select 10% of all students enrolled in B.Com (Honours), ensuring each has a 0.1 probability of being chosen.

22. Orion Tech Ltd. operates in three different sales regions, with the following revenue figures for the last year:

Market	Sales (\$)
Region A	120,000
Region B	180,000
Region C	60,000
Total Sales	360,000

In a pie chart representing the proportion of sales from each region, what would be the angle of the section representing Region C (to the nearest whole degree)?

23. Omega Chemicals Ltd. processes two chemicals, X and Y, with the following data:

Process	Normal Loss (% of Input)	Input (litres)	Output (litres)
X	8%	65,000	58,900
Y	5%	37,500	35,700

For each process, was there an abnormal loss or an abnormal gain?

Process X	Process Y
A) Abnormal gain	Abnormal gain
B) Abnormal gain	Abnormal loss
C) Abnormal loss	Abnormal gain
D) Abnormal loss	Abnormal loss

24. A company operates a job costing system. **Job Alpha** requires **110 hours** of labour at **\$16 per hour**. Materials and other expenses amount to **\$1,700**. There are **3 employees**, each with a basic workweek of **30 hours**. The job must be completed within **one week** as per the customer's request. Overtime is compensated at **time and a quarter**. What is the total direct labour cost of **Job Alpha**?

25. The following information is available for Trident Residency for thirty day period.

Number of rooms available per night - 40

Percentage occupancy achieved - 65%

Room servicing cost incurred - \$3,900

What was the room servicing cost per occupied room-night for the 30 day period, to the nearest cent?

A \$3.25

B \$5.00

C \$97.50

D \$150.00

26. A company operates a job costing system. Job Omega 2024 requires \$90 of direct materials and \$60 of direct labour. Direct labour is paid at the rate of \$15 per hour. Production overheads are absorbed at a rate of \$25 per direct labour hour, and non-production overheads are absorbed at a rate of 60% of prime cost. Calculate the total job cost.

27. XYZ Manufacturing Ltd. uses standard marginal costing. Last month, when all sales were made at the standard selling price, the standard contribution from actual sales was \$100,000. The following variances arose: Calculate the actual contribution for last month?
- Total variable cost variance: \$7,000 Adverse
 - Total fixed costs variance: \$2,000 Favourable
 - Sales volume contribution variance: \$4,000 Favourable
28. ABC Enterprises had an opening inventory of 30 units on July 1 at \$3.00 each. The following inventory movements occurred during the month:
- July 3, 20X4: 10 units sold at \$3.30 each
 - July 8, 20X4: 20 units purchased at \$3.50 each
 - July 12, 20X4: 16 units sold at \$4.00 each
- What would be the closing inventory valuation on July 31 using the FIFO method?
29. XYZ Manufacturing Ltd. pays its employees on a piecework basis under the following scheme:
- 1 – 250 units per day → \$0.18 per unit
 - 251 – 600 units per day → \$0.22 per unit
 - 600 units per day → \$0.28 per unit
- Only the additional units qualify for the higher rates, and rejected units are not paid. An employee produced 524 units in a day, but 19 were rejected as faulty. Calculate the total wages paid to this employee?
30. XYZ Industries Ltd. pays its direct production workers on a time basis at a rate of \$7.20 per hour. To encourage productivity, the company has introduced a bonus scheme, where the bonus is based on the ratio of time taken to time allowed.
- For a specific operation in the Manufacturing Department, the standard time allowed per operation is 40 minutes. During the first week of the scheme, an employee worked 48 hours and completed 105 operations. What are the gross wages for this employee based on a time rate of \$7.20 per hour

SECTION -B

ANSWER ALL THE QUESTIONS

(4X10=40 Marks)

31. Yez Ltd manufactures one product and can produce 5,000 units per period when operating at full capacity, but has recently been operating below capacity. The following is the flexible budget prepared at the start of the previous period for three levels of activity at below capacity:

Level of activity (units)	3,500	4,000	4,500
	\$	\$	\$
Direct materials	7,000	8,000	9,000
Direct labour	28,000	32,000	36,000
Production overheads	34,000	36,000	38,000
Administration, selling and distribution overheads	15,000	15,000	15,000
Total cost	84,000	91,000	98,000

In the event, the last period turned out to be even worse than expected, with production of only 2,500 units. The following costs were incurred:

	\$
Direct materials	4,500
Direct labour	22,000
Production overheads	28,000
Administration, selling and distribution overheads	16,500

Total cost	71,000
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Required:

Use the information given above to prepare the following.

- | | |
|--------------------------------------|-----------|
| (a) A flexed budget for 2,500 units. | (5 marks) |
| (b) A budgetary control statement. | (5 marks) |

32. A company is considering investment in several projects. The following information relates to three of the projects:

Project 1: Investment of \$119,000 at the start of the project.

Net cash inflow of \$13,500 per annum in perpetuity.

Project 2: Investment of \$241,000 at the start of the project.

Net present value (NPV) at 20% of (\$23,000) i.e. negative, based on net cash inflows of:

1st year	\$60,000
2nd year	\$65,000
3rd year	\$70,000
4th year	\$100,000
5th year	\$85,000

Project 3: Investment of \$186,000 at the start of the project.

Constant annual net cash inflows for five years. Internal rate of return (IRR) of 14%.

Assume that net cash inflows occur at the end of each year.

The company's cost of capital is 10%.

Required:

- | | |
|--|--------------------------|
| (a) Calculate the net present value (NPV) of Project 1 at the company's cost of capital (to the nearest \$). | (2 marks) |
| (b) Calculate the estimated internal rate of return (IRR) % of Project 2 (to 1 decimal place). | (3 marks) |
| (c) Calculate the annual net cash inflow of Project 3 (to the nearest \$). | (3 marks) |
| (d) If the company's cost of capital increased to 15%, which project would be invested in? | (2 marks) |
| | (Total: 10 marks) |

33. Everest Manufacturing Ltd. produces a single product. The budgeted fixed overheads are \$12,000, with a budgeted output of 1,000 units.

Actual Results:

- Actual Output: 1,100 units
- Actual Overheads Incurred: \$13,000

Required: Calculate the following:

- | | |
|--|-----------|
| (a) Fixed overhead expenditure variance | (2 marks) |
| (b) Fixed overhead volume variance | (2 marks) |
| (c) Fixed overhead total variance | (2 marks) |
| (d) Under/over absorption of fixed overheads | (2 marks) |
| (e) Explain the meaning of variance analysis | (2 marks) |

34(A). GreenTech Ltd. is a retailer of solar panels. The company has an annual demand of 36,750 panels. Each panel costs \$12. Fresh supplies can be obtained immediately, but ordering costs and carriage inwards amount to \$200 per order. The annual holding cost per panel is estimated to be \$1.20. The economic order quantity (EOQ) has been calculated as 3,500 panels.

The suppliers have introduced a quantity discount as follows:

- 2% discount on orders of at least 5,000 panels
- 2.5% discount on orders of at least 7,500 panels

Requirement: Determine whether the least-cost order quantity remains at the EOQ of 3,500 panels or if ordering in larger quantities with the discounts is more cost-effective. (5 marks)

(B) The table below shows the number of units produced and the total costs incurred.

Units produced	Total costs
\$	
100	40,000
200	45,000
300	50,000
400	65,000
500	70,000
600	70,000
700	80,000

The table above produces the following data:

$$\Sigma x = 28; \Sigma y = 420; \Sigma xy = 1,870; \Sigma x^2 = 140; \Sigma y^2 = 26,550; n = 7$$

Required:

Calculate the correlation coefficient for the data given and comment on the result obtained.

(5 marks)
