

Total No. of printed pages = 11

IV SEM COMC 1

2023

COMMERCE (Core)

Paper : COMC-401

(Cost Accounting)

Full Marks – 80

Pass Marks – 32

Time – Three hours

The figures in the margin indicate full marks
for the questions.

1. Answer the following questions as directed :

1×4=4

- (a) In a transport company, salaries to truck drivers is a fixed charge. (Write True or False)
- (b) In Taylor's Differential piece rate system, _____ piece rates are set for each job. (Fill in the blank)

[Turn over

(c) Output – 2,000 units in process 1 account at a total cost of ₹ 12,250. Normal loss in process 2 is 5% of input. Output of process 2 is 1,800 units. Additional cost incurred in process 2 amounted to ₹ 7,750. Units scrapped realized ₹ 10 each. Calculate value of abnormal loss.

(d) If the minimum stock level and average stock level of raw material A are 20,000 and 40,000 units respectively, find out its Re-order Quantity.

2. Answer the following questions as directed :

1×4=4

(a) A bus carries 25 passengers daily for 25 days and its mileage per month is 1,000 kms. Compute its passenger miles.

(b) Opening stock (Work-in-progress) – 10,000 units – 40% complete. Units brought in the Process – 50,000. Transferred to Process B-40,000 complete units (entire complete production). Closing stock (Work-in-progress) – 20,000 units, 75% complete. Calculate completed equivalent production.

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(c) First in first out method of valuing material issues is suitable in times of

(i) falling prices

(ii) rising prices

(iii) prices fluctuate considerably

(Choose the correct option)

(d) Cost of the machine is ₹ 9,200. Working life of the machine is estimated to be 18,000 hours after which its scrap value is estimated at ₹ 200. Calculate hourly rate of depreciation.

3. Answer the following questions : 4×4=16

(a) Write a short note on Perpetual Inventory System.

(b) The following information is extracted from the Stores Ledger :

<u>Material X</u>	
Opening stock	Nil
Purchases : Jan. 1	100 @ ₹ 2 per unit
Jan. 20	200 @ ₹ 3 per unit
Jan. 22	200 @ ₹ 3.50 per unit
Jan. 30	300 @ ₹ 4 per unit

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Issues : Jan. 5	60 for job No. 15
Jan. 21	150 for job No. 16
Jan. 25	200 for job No. 17

Compute the value of Closing stock under Simple Average method.

(c) A transport company maintains fleet of vehicles for carrying goods between two places. The capacity of the vehicles is :

No. of vehicles	Capacity (in tonnes each)
10	2
5	6
20	5

Each vehicle makes 5 trips a day covering distance of 10 kms in each trip. On average 10% of the vehicles are laid up for repairs daily and 80% of capacity of each vehicle is actually used. If the company operates for 25 days a month, calculate total tonne kms. carried by the company per month.

(d) Calculate the amount of profit earned from the following data :

	1-4-2000	31-3-2021
	₹	₹
Raw materials	8,000	8,600
Work-in-progress	8,000	12,000
Finished goods	14,000	18,000

Other expenses :

Selling expenses ₹ 3,400, General and Administration expenses ₹ 2,600, Direct labour cost ₹ 16,000 (160% of Factory overhead).

Sales for the year ₹ 75,000 and Cost of goods sold ₹ 56,000.

4. (a) What is Cost Accounting ? What are the distinctions between Cost Accounting and Management Accounting ? 2+8=10

Or

- (b) How does Cost Accounting contribute to the effective and efficient management of an industrial establishment ? 10

5. (a) During first week of April 2019, the workman Mr. Kalyan manufactured 300 articles. He receives wages for guaranteed 48 hours week at the rate of ₹ 4 per hour. The estimated time to produce one article is 10 minutes and under incentive scheme the time allowed is increased by 20%. Calculate his Gross wages according to:

- (i) Piece work with a guaranteed weekly wage,
(ii) Rowan premium bonus and
(iii) Halsey premium bonus, 50% to workman.
4+4+4=12

Or

- (b) A workman's wage for a guaranteed 44 hours week is ₹ 0.19 per hour. The estimated time to produce one article is 30 minutes and under incentive scheme the time allowed is increased by 20%. During one week the workman

manufactured 100 articles. Calculate his Gross wages under each of the following methods of remuneration :

- (i) Time-rate.
(ii) Piece work with a guaranteed weekly wages.
(iii) Rowan premium bonus.
(iv) Halsey premium bonus, 50% to workman.
3×4=12

6. (a) What do you mean by Allocation and Apportionment of overhead expenses ? What are the main bases of overhead apportionment ?
4+6=10

Or

- (b) What is Machine hour rate ? What are the bases adopted for apportioning the different expenses for the purpose of calculation of machine hour rate ?
2+8=10

7. (a) What is Integrated Accounting system ? State its advantages and pre-requisites or principles.
2+4+4=10

Or

- (b) A company maintains separate cost accounts and financial accounts, and the Costing profit for 2021 differed to that revealed in the financial accounts, which was shown as ₹ 50,000.

The following information is available :

(i)	Cost Accounts ₹	Financial Accounts ₹
Opening stock of raw materials	5,000	5,500
Closing stock of raw materials	4,000	5,300
Opening stock of finished goods	12,000	15,000
Closing stock of finished goods	14,000	16,000

- (ii) Dividend of ₹ 1,000 was received by the company.
- (iii) A machine with net book value of ₹ 10,000 was sold during the year for ₹ 8,000.

- (iv) The company charged 10% interest on its opening capital employed of ₹ 80,000 to its process cost.

You are required to determine the profit figure which was shown in the Cost accounts.

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8. (a) In manufacturing the main product A, a company processes the resulting waste materials into two by-products, B₁ and B₂. Using Reverse Cost method of by-products, prepare a Comparative Profit and Loss Statement of the three products from the following data :

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- (i) Total cost upto separation point was ₹ 68,000.

	A (₹)	B ₁ (₹)	B ₂ (₹)
(ii) Sales (all production)	1,64,000	16,000	24,000
(iii) Cost after Separation		4,800	7,200
(iv) Estimated Net Profit Percentage to Sale value		20%	30%

	A (₹)	B ₁ (₹)	B ₂ (₹)
(v) Estimated selling expenses as Percentage of Sales value	20%	20%	20%

Or

- (b) Surya Construction Ltd. with a paid up capital of ₹ 50 lakhs undertook a contract for ₹ 60 lakhs. Cash received upto 31.3.2021 was ₹ 18 lakhs (being 90% of work certified). Work completed but not certified was estimated at ₹ 1 lakh. At the end of 31.3.2021 material at site was estimated at ₹ 30,000. Machinery at site costing ₹ 2 lakhs was returned to stores and wages outstanding were ₹ 5,000. Plant and Machinery at site is to be depreciated at 5%.

The following were the balances (Dr.) as per Trial balance as on 31.3.2021 :

	₹
Land & building	23,00,000
Plant & Machinery (60% at site)	25,00,000
Furniture	60,000

	₹
Materials	14,00,000
Fuel & Power	1,25,000
Site expenses	5,000
Office expenses	12,000
Rates & Taxes	15,000
Cash at Bank	1,33,000
Wages	2,50,000

Prepare the Contract Account and Balance Sheet of Surya Construction Ltd. 8+6=14

Total No. of printed pages = 7

IV SEM COMC 2

2023

COMMERCE (Core)

Paper : COMC-402

(Business Mathematics)

Full Marks - 80

Pass Marks - 32

Time - Three hours

The figures in the margin indicate full marks for the questions.

1. Answer the following questions : 1×8=8

(a) Find the value of

$$\begin{vmatrix} 1 & 2 & 6 \\ 4 & 8 & -2 \\ 2 & 4 & 3 \end{vmatrix}$$

(b) Define Linear function.

(c) What is the degree of the homogeneous function $f(x, y) = x^2 + y^2 + 3xy$.

[Turn over

(d) What do you mean by an effective rate of interest.

(e) Define a Basic Feasible solution in a LPP.

(f) If the total cost function for a product is $6x^2+2x$, find the marginal cost.

(g) Evaluate : $\int \frac{1}{x-1} dx$.

(h) The value of the minor of an element lying in 3rd row and 2nd column of a determinant is 4. Find the cofactor of the element.

2. (a) Find the minor and cofactor of 5 in Δ

2

$$\Delta = \begin{vmatrix} 1 & -2 & 2 \\ 3 & 2 & 5 \\ 1 & -3 & 7 \end{vmatrix}$$

(b) Show that

3

$$\begin{vmatrix} 1 & 1 & 1 \\ a & b & c \\ a^2 & b^2 & c^2 \end{vmatrix} = (a-b)(b-c)(c-a).$$

(c) Solve the equations by matrix method : 3

$$2x+3y = 5$$

$$3x-2y = 1$$

(d) (i) If $A = \begin{bmatrix} 3 & 1 \\ -1 & 2 \end{bmatrix}$ show that

$A^2-5A+7I = 0$ where I is the unit matrix of order 2×2 and 0 is the null matrix of same order. 5

Or

(ii) Find the inverse of A

$$A = \begin{vmatrix} 2 & 2 & 3 \\ 1 & -2 & 3 \\ 0 & 1 & -1 \end{vmatrix} \quad 5$$

3. (a) Find $\frac{d^2y}{dx^2}$ where $y = x^2 \log x$. 2

(b) Find $\frac{dy}{dx}$ of the implicit function 3

$$x^3 + y^3 - 3axy = 0.$$

(c) Evaluate any two : $2 \times 2 = 4$

(i) $\lim_{x \rightarrow 0} \frac{\sqrt{1+x} - \sqrt{1-x}}{x}$

(ii) $\lim_{x \rightarrow \infty} \frac{5-2x^2}{3x+5x^2}$

(iii) $\lim_{x \rightarrow 2} \frac{x^2 - 3x + 2}{x^2 + x - 6}$

- (d) (i) Find the maximum and minimum value of the function $f(x) = 2x^3 - 15x^2 + 36x + 10$ 5

Or

- (ii) Show that maximum value of $x + \frac{1}{x}$ is less than its minimum value. 5

4. (a) If $z = 3x^3 - 5x^2y + 2y^3$ show that

$$x \frac{\partial z}{\partial x} + y \frac{\partial z}{\partial y} = 3z. \quad 3$$

- (b) Evaluate (any two) : $3 \times 2 = 6$

(i) $\int \left(\sqrt{x} + \frac{1}{\sqrt{x}} \right) dx.$

(ii) $\int \frac{3x \, dx}{x^2 + 1}.$

(iii) $\int_0^1 x e^{-x} dx.$

- (c) Find the total differential of

$$u = 2x^2 - xy + 5y^2 \quad 3$$

- (d) (i) If the marginal revenue and marginal cost for an output x of a commodity are given as $MR = 5 - 4x + 3x^2$ and $MC = 3 + 2x$ and if the fixed cost is zero. Find the profit function and profit when output $x = 4$ 5

Or

- (ii) A monopolist firm has the following marginal revenue and total cost function

$$MR = 20 - 2x \text{ and } C(x) = x^2 + 8x + 2$$

where x is the number of units produced. Find x so that the profit is maximum. 5

5. (a) Find the effective rate corresponding to 12% p.a. convertible quarterly. 4

- (b) (i) Find the discounted value of Rs. 10,000 due after 5 years if the rate of interest is 10% compounded semi-annually. 4

Or

- (ii) A person invests money in a bank paying 6% interest compounded semi-annually. If the person expects to receive Rs. 8,000 in 6%, what is the discounted value of investment. 4

- (c) Find the compound interest of Rs. 2,600 in 3 years, the rate of interest being 4% for the 1st year, 5% for the 2nd year and 6% for the third year. 3

6. (a) In what purpose Linear Programming Problem (LPP) is used ? Give a general mathematical formulation for LPP. 2+3=5

- (b) Solve the following LPP using graphical method : 5

Maximise $z = 3x_1 + 4x_2$

subject to $x_1 + x_2 \leq 450$

$2x_1 + x_2 \leq 600$

$x_1, x_2 \geq 0.$

- (c) (i) Define Slack and Surplus variables. When Simplex method is used to solve LPP ? Construct initial simplex table for the following LPP : 2+2+3=7

Minimize $Z = 2x_1 + 4x_2$

subject to $2x_1 + 3x_2 \leq 48$

$x_1 + 3x_2 \leq 42$

$x_1 + x_2 \leq 21$

and $x_1, x_2 \geq 0.$

Or

- (ii) Solve the Linear Programming Problem by Simplex method 7

Maximize $Z = 2x_1 + 4x_2 + x_3 + x_4$

subject to $x_1 + 3x_2 + x_4 \leq 4$

$2x_1 + x_2 \leq 3$

$x_2 + 4x_3 + x_4 \leq 3$

and $x_1, x_2, x_3, x_4 \geq 0.$

Total No. of printed pages = 4

IV SEM COMC 3

2023

COMMERCE (Core)

Paper : COMC-403

(Computer Applications in Business)

Full Marks – 50

Pass Marks – 20

Time – Two hours

The figures in the margin indicate full marks
for the questions.

1. Fill in the blanks : 1×5=5
- (a) The Latest version of MS-Word is _____.
 - (b) The short-cut key for pasting a selected text is _____.
 - (c) The value of the primary key in a database table can't be _____.
 - (d) In MS-Excel, the last column of a Spread sheet is _____.

[Turn over

(e) The full form of DML is _____.

2. Answer any *five* from the following : $3 \times 5 = 15$

(a) Write about any two features available in MS-Word in brief.

(b) What are the three different types of SQL? Give an example of each of them.

(c) What is E-R diagram ? What are the various cardinality ratio ?

(d) Differentiate between functions and formula in MS-Excel.

(e) Define atomic and composite attributes in terms of DBMS.

(f) Differentiate between header and footer available in MS-Word.

(g) What is a Weak entity ? How can a weak entity be identified ?

3. (a) Define the following in terms of DBMS :

$1 \times 4 = 4$

(i) Entity

(ii) Primary-key Attribute

(iii) Derived Attribute

(iv) Foreign Key.

(b) Write SQL statements to perform the following : $2+2+1+1=6$

(i) To create a database table "STUDENT" with fields STD_ID, STD_NAME, DEPT and DATE_OF_BIRTH. Assume data types and other parameters yourself.

(ii) To insert a record into the database.

(iii) To display the entered record.

(iv) To delete the database table.

4. (a) What is Watermark in MS-Word ? Write the steps in inserting a watermark in a word document. $1+2=3$

(b) Mention two arithmetic functions of MS-Excel with proper syntax. 4

(c) How are slides inserted and deleted in MS-Power Point ? 3

5. (a) Write short notes on any *two* : $2\frac{1}{2}\times 2=5$

(i) DBMS

(ii) Any two features of MS-Excel.

(iii) Data Dictionary.

(b) What is Mail merge in MS-Word ? Write the steps to perform mail merge. $1+4=5$

Total No. of printed pages = 4

IV SEM ECOG 1 (Com.)

2023

ECONOMICS (GE)

(Commerce)

Paper : ECOG-401

Indian Economy

Full Marks – 80

Pass Marks – 32

Time – Three hours

The figures in the margin indicate full marks for the questions.

1. Answer the following questions/Choose the correct answer : $1\times 8=8$

(a) What is demographic dividend ?

(b) Write one demerit of Head Count ratio.

(c) Write the formula for calculating Poverty gap index.

(d) What is meant by density of population ?

(e) Give the meaning of minimum support price.

[Turn over

(f) "Food increases in a slow arithmetical ratio, while men grow in geometrical ratio". Who told it ?

(g) When was Niti Ayog started ?

(h) Literacy rate as per 2021 Census in India is

- (i) 94.02% (ii) 77%
(iii) 74.04% (iv) 81.05%.

2. Answer the following questions : 2×6=12

(a) Write two differences between secondary sector and tertiary sector.

(b) What is Population pyramid ?

(c) Give the meaning of structural transformation of an economy.

(d) Write two defects of Agricultural marketing in India.

(e) Define vicious circle of poverty.

(f) Write the full form of L.P.G. When was it introduced in India ?

3. Write short notes on any *three* of the following within 150 words each : 4×3=12

(a) Population growth and Development.

(b) Public Distribution System (PDS)

(c) Land Reform

(d) Make in India.

4. (a) Discuss the linkages between Agriculture and Non-Agriculture sectors. 12

Or

(b) State and explain the main features of Indian agriculture. 12

Or

5. (a) Discuss the trend and composition of national income in India in post reform period. 12

Or

(b) What is meant by population explosion ? Explain the various causes of high rate of growth of population in India. 2+10=12

6. (a) What is inequality ? Discuss the different dimensions of inequality found in India. 2+10=12

Or

(b) Write notes on : 6+6=12

(i) Green Revolution in India.

(ii) MGNREGA.

7. (a) What are the causes of slow growth of Industrial sector in India ? Give suggestions for its speedy growth. 7+5=12

Or

- (b) What are the economic reforms measures introduced in India ? Examine the performance of service sector in recent years. 4+8=12

Total No. of printed pages = 3

IV SEM COMS 1

2023

COMMERCE (SEC)

Paper : COMS-401

(Office Management)

Full Marks – 40

Pass Marks – 16

Time – Two hours

The figures in the margin indicate full marks for the questions.

1. Answer the following questions as directed :

1×4=4

- (a) To protect and safeguard the assets against destruction, damage, loss etc. is which function of an office ?

(i) Primary

(ii) Secondary

(iii) Management

(iv) None of these

(Write the appropriate option)

[Turn over

- (b) The duties and responsibilities of an Office manager is/are
- (i) to coordinate the work of different subunits of the office
 - (ii) to maintain discipline in the office
 - (iii) Both (i) and (ii)
 - (iv) None of the above
- (Write the appropriate option)
- (c) Filing and Indexing is an important tool used to perform the function of "Processing of Information." (Write True or False)
- (d) _____ may be defined as a guide to locate the required file. (Fill in the blank)
2. Write short notes on the following : $3 \times 4 = 12$
- (a) Importance of Modern office
 - (b) Benefits of Office layout
 - (c) Essentials of a good filing system
 - (d) Advantages of an Open office.

3. (a) State and explain the functions of an Office Manager. 8

Or

- (b) Discuss briefly, the principles of Office organisation. 8

4. (a) State the features that you will take into consideration while selecting the location of an office. 8

Or

- (b) Briefly indicate the objectives of an office layout and principles on which it should be based. 8

5. (a) Why Indexing is necessary in an office? Describe five kinds of indexes of files. 8

Or

- (b) What is e-filing in Office Management? Discuss the merits and demerits of e-filing in Office Management. $2+6=8$