

BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2022 COURSE)
B.C.A. Sem-II : SUMMER : 2026
SUBJECT: DBMS-I

Day : Tuesday
Date : 26/05/2026

S-26279-2026

Time : 10:00 AM-01:00 PM
Max. Marks : 10

NB :

1. Answers to Section I, II and III should be written in same answer book.
2. Section -I (MCQ) all sub-questions of Q. No. 1 are COMPULSORY, write the sub-question no. and the chosen alternative (eg. 1b, 2c) in the answer book.
3. Section-I (MCQ) is of 10 marks and Section-II and onwards are of 50 marks.

SECTION - I

- Q. 1 MCQs
- 1) Which of the following is a key characteristic of a DBMS? (1)
a) Manual data processing b) Data Redundancy
c) Data Abstraction d) File-based storage
 - 2) The network model represents data using: (1)
a) Tables b) Hierarchies c) Graphs with records and sets d) Arrays
 - 3) A weak entity is one that: (1)
a) Has a primary key of its own b) Depends on a strong entity for its existence
c) Can exist independently d) Has no attributes
 - 4) What is the main purpose of a primary key in a database table? (1)
a) To store duplicate values b) To uniquely identify each record
c) To sort data alphabetically d) To create indexes
 - 5) How many level of abstraction in DBMS are there? (1)
a) 2 b) 3 c) 4 d) 5
 - 6) Which command removes both the data and the structure of a table? (1)
a) DELETE b) TRUNCATE c) DROP d) REMOVE
 - 7) Which type of lock allows multiple transactions to read but not write a data item? (1)
a) Exclusive lock b) Shared lock c) Binary Lock d) Read write Lock
 - 8) Which SQL command is used to undo a transaction? (1)
a) COMMIT b) ROLLBACK c) SAVEPOINT d) DELETE
 - 9) A transaction that violates database integrity constraints fails the property of: (1)
a) Atomicity b) Isolation c) Consistency d) Durability
 - 10) DA Stands for (1)
a) Data Administrator b) Define Application c) Database Active d) Data Advisor

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Time : 10:00 AM-01:00 PM

Max. Marks : **50**

NB :

1. Figures to the right indicate FULL marks.
2. Section – III - Attempt any ONE question. Each questions carries 10 marks.
3. Section – II - Attempt any FIVE questions. Each questions carries 08 marks.

SECTION - II

- Q. 2 Define DBMS. Write the difference between Data and Information? (8)
- Q. 3 Explain Network Data Model with suitable example. (8)
- Q. 4 Write the advantages and disadvantages of Normalization? (8)
- Q. 5 Discuss All Select command of SQL with example. (8)
- Q. 6 Explain the four necessary conditions for a deadlock to occur in a system. (8)
- Q. 7 Attempt ANY TWO of the following: (Short Notes) (4x2)
 a) Level of Abstraction.
 b) Strong and Weak Entity Set.
 c) Decomposition in DBMS.

SECTION - III

- Q. 8 Amazon maintains a large database to manage customer orders. Initially, all order-related information is stored in a single table as shown below: (10)
(Orderid , Customername , CustomerEmail , Productid , ProductName, Quantity , Price)
Write the Step-by-step transformation through 1NF, 2NF, and 3NF.
- Q. 9 Create a table Department (Empid , Ename , Address, Department , Contactno , Salary) (10)
Write the SQL query
a) Display Employee name with Address.
b) Display Employee name whose salary are greater than 25000/Rs.
c) Display the list of employee living in city "Mumbai".

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BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2022 COURSE)
B.C.A. Sem-II : SUMMER : 2026
SUBJECT: FINANCIAL ACCOUNTING

Day : Monday

Date : 01/06/2026

S-26281-2026

Time : 10:00 AM-01:00 PM

Max. Marks : 50

Date:

NB :

1. Figures to the right indicate FULL marks.
2. Section – III - Attempt any ONE question. Each questions carries 10 marks.
3. Section – II - Attempt any FIVE questions. Each questions carries 08 marks.
4. Use of simple non-programmable calculator is allowed.

SECTION - II

- Q. 2 Explain the need for accounting. Distinguish between Financial Accounting and Bookkeeping with suitable examples. (8)
- Q. 3 Explain the classification of accounts and the rules of debit and credit. Illustrate your answer with appropriate journal entries. (8)
- Q. 4 A company purchases a machine for ₹1,20,000 on 1st April 2023. The estimated useful life of the machine is 5 years, and its expected salvage value at the end of 5 years is ₹20,000. Company uses the straight line method of depreciation. Financial Year of the company ends on 31st March every year. (8)
a) Calculate the annual depreciation expense.
b) Prepare Machinery and Depreciation Account for the 5 years.
- Q. 5 From the following transactions of M/s Verma & Sons during the month of May, record the entries in the appropriate subsidiary books. (8)
1. Purchased goods on credit from Gupta Traders ₹40,000.
2. Sold goods on credit to Mehta Enterprises ₹55,000.
3. Purchased office supplies on credit from Stationery House ₹3,500.
4. Sold goods on credit to Raju & Co. ₹20,000.
5. Returned goods worth ₹4,000 to Gupta Traders.
6. Received goods returned from Mehta Enterprises ₹2,500.
- Q. 6 Define subsidiary books. Explain the types and format of subsidiary books with examples. (8)
- Q. 7 Attempt ANY TWO of the following: (Short Answer) (4x2)
a) Accounting Concepts
b) Depreciation: Meaning and Objectives
c) Trial Balance

SECTION - III

Q. 8

Journalise the following transactions of M/s. Radha & Sons

(10)

Date	Particulars
1.1.2024	Business Started with ₹ 2,50,000
3.1.2024	cash deposited with Bank ₹1,50,000
6.1.2024	Purchased machinery on credit from Rangan – ₹ 50,000
12.1.2024	Bought furniture from Ramesh for cash – ₹ 25,000
13.1.2024	Goods sold to Yesodha – ₹ 22,500
15.1.2024	Goods sold for cash – ₹ 50,000
17.1.2024	Bought goods for cash – ₹ 25,000
20.1.2024	Cash withdrawn from bank – ₹ 50,000 for personal-use
22.1.2024	Paid Salaries ₹ 15,000
25.1.2024	Received interest ₹ 7,000

Q. 9

The following trial balance was extracted from the books of M/s XYZ Traders as on 31st March 2025. Prepare the Trading and Profit & Loss Account for the year ended 31st March 2025 and the Balance Sheet as on that date.

(10)

Particulars	Debit (₹)	Credit (₹)
Opening Stock	50,000	
Purchases	3,00,000	
Sales		2,96,000
Returns Inwards	10,000	
Returns Outwards		5,000
Carriage Inwards	2,000	
Carriage Outwards	4,000	
Salaries	30,000	
Rent	15,000	
Debtors	60,000	
Creditors		40,000
Cash	20,000	
Capital		1,50,000
Total	4,91,000	4,91,000

Additional information:

1. Closing stock as on 31st March 2025 is ₹60,000.
2. Outstanding salaries ₹5,000
3. Prepaid rent ₹3,000

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BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2022 COURSE)
B.C.A. Sem-II : SUMMER : 2026
SUBJECT: DATA STRUCTURES USING C

Day : Wednesday

Time : 10:00 AM-01:00 PM

Date : 03/06/2026

S-26280-2026

Max. Marks : 10

NB :

1. Answers to Section I, II and III should be written in same answer book.
2. Section-I (MCQ) all sub-questions of Q. No. 1 are COMPULSORY, write the sub-question no. and the chosen alternative (eg. 1b, 2c) in the answer book.
3. Section-I (MCQ) is of 10 marks and Section-II and onwards are of 50 marks.

SECTION - I

- Q. 1 MCQs (1)
- 1) Binary search requires the array to be (1)
a) Unsorted, b) Sorted, c) Circular, d) Sparse
 - 2) Which searching technique checks each element sequentially? (1)
a) Binary search, b) Linear search, c) Hash search, d) Tree traversal
 - 3) Which operation is easiest in linked lists compared to arrays? (1)
a) Searching, b) Random access, c) Insertion and Deletion
 - 4) Which type of linked list allows traversal in both directions? (1)
a) Singly linked, b) Doubly linked, c) Circular singly linked, d) None
 - 5) Which structure is used in breadth-first search (BFS)? (1)
a) Stack, b) Queue, c) Linked list, d) Tree
 - 6) Which operation removes an element from the stack? (1)
a) Push, b) Pop, c) Peek, d) Insert
 - 7) Which traversal method uses a queue? (1)
a) Inorder, b) Preorder, c) Postorder, d) Level order
 - 8) A leaf node is a node with (1)
a) Two children, b) One child, c) No child, d) Parent node only
 - 9) Which function in C is used to write formatted output into a file? (1)
a) printf(), b) fprintf(), c) fwrite(), d) puts()
 - 10) Which data structure is used in depth-first search (DFS) of graphs? (1)
a) Queue, b) Stack, c) Array, d) Hashing

BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2022 COURSE)
B.C.A. Sem-II : SUMMER : 2026
SUBJECT: DATA STRUCTURES USING C

Day : Wednesday

Date : 03/06/2026

S-26280-2026

Time : 10:00 AM-01:00 PM

Max. Marks : 50

NB :

1. Figures to the right indicate FULL marks.
2. Section – III - Attempt any ONE question. Each questions carries 10 marks.
3. Section – II - Attempt any FIVE questions. Each questions carries 08 marks.

SECTION - II

- | | | |
|------|--|-------|
| Q. 2 | Discuss applications of arrays in real life with justification. | (8) |
| Q. 3 | Discuss applications of linked lists in real life | (8) |
| Q. 4 | Discuss applications of Stack and Queue in system software | (8) |
| Q. 5 | Discuss real life applications of trees in computer science | (8) |
| Q. 6 | Discuss applications of graphs in real life scenarios | (8) |
| Q. 7 | Attempt ANY TWO of the following: (Short Answer) | (4x2) |
| | a) Compare Linear Search and Binary Search | |
| | b) Explain deletion operation in a doubly linked list with diagram | |
| | c) Differentiate between Stack and Queue | |

SECTION - III

- | | | |
|------|---|------|
| Q. 8 | Write a C program to delete a node from a Binary Search Tree | (10) |
| Q. 9 | Write a C program to implement adjacency matrix representation of a graph | (10) |

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BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2022 COURSE)
B.C.A. Sem-II : SUMMER : 2026
SUBJECT: ENVIRONMENTAL STUDIES

Day : Friday
Date : 05/06/2026

S-32506-2026

Time : 10:00 AM-01:00 PM
Max. Marks : 40

N. B. ;

1) All questions are **COMPULSORY**.

Seat No: _____

- Q 1. "Silent Spring," which sparked modern environmentalism, was written by:
A. E.O. Wilson B. Rachel Carson
C. A.G. Tansley D. Malthus
- Q 2. The 1992 UN Conference on Environment and Development is also known as:
A. Stockholm Conference B. Earth Summit
C. Montreal Protocol D. Kyoto Protocol
- Q 3. Which discipline contributes to the study of the fate of pollutants in soil?
A. Chemical sciences B. Anthropology
C. Literature D. Management
- Q 4. Sustainable development aims to meet current needs without:
A. Increasing population B. Using technology
C. Compromising future generations D. Economic growth
- Q 5. The main objective of environmental education is to:
A. Increase industrial production B. Create awareness and sensitivity
C. Promote fossil fuel use D. Ignore social issues
- Q 6. Ecology is the study of:
A. Rock formations B. Interactions between organisms and environment
C. Ocean currents D. Human history
- Q 7. The 'Standing Crop' refers to:
A. Total area of a forest B. Living matter at each trophic level
C. Only producers D. Decaying matter
- Q 8. Chemosynthetic bacteria are examples of:
A. Producers B. Consumers
C. Decomposers D. Parasites
- Q 9. Omnivores are organisms that eat:
A. Only plants B. Only animals
C. Both plants and animals D. Only dead matter
- Q 10. The rate at which solar energy is captured by producers is:
A. Net productivity B. Secondary productivity
C. Gross primary productivity D. Respiration rate
- Q 11. Which organism is at the top of a food chain in a forest?
A. Deer B. Rabbit
C. Tiger D. Grasshopper
- Q 12. The Pyramid of Numbers for a single large tree supporting many insects is:
A. Upright B. Inverted
C. Spindle-shaped D. Horizontal
- Q 13. Energy lost at each trophic level is primarily in the form of:
A. Water B. Heat
C. Biomass D. Carbon

P.T.O.

- Q 14. Primary production depends on:
- Solar radiation
 - Availability of nutrients
 - Chlorophyll
 - All of the above
- Q 15. The rate of storage of energy at the consumer level is:
- Primary production
 - Secondary production
 - Net production
 - Decomposition
- Q 16. Which nutrient cycle is primarily sedimentary?
- Nitrogen
 - Oxygen
 - Sulphur
 - Water
- Q 17. The 'Oxygen Cycle' is maintained by which two processes?
- Respiration and Combustion
 - Photosynthesis and Respiration
 - Evaporation and Rainfall
 - Fixation and Leaching
- Q 18. Acid rain is primarily caused by oxides of:
- Carbon and Hydrogen
 - Nitrogen and Sulphur
 - Phosphorus and Oxygen
 - Argon and Helium
- Q 19. The major source of energy driving the water cycle is:
- Wind
 - The Moon
 - The Sun
 - Geothermal heat
- Q 20. Excessive nitrogen and phosphorus in water bodies causes:
- Biomagnification
 - Desertification
 - Eutrophication
 - Salinization
- Q 21. What percentage of Earth's surface is land?
- 71%
 - 29%
 - 50%
 - 10%
- Q 22. Which of the following is a physical type of land degradation?
- Nutrient depletion
 - Salinization
 - Waterlogging
 - Loss of biodiversity
- Q 23. The Chipko Movement was focused on:
- Water conservation
 - Forest protection
 - Mining
 - Air pollution
- Q 24. Major cause of soil erosion on hill slopes is:
- Wind
 - Heavy rainfall
 - Snow
 - Volcanic ash
- Q 25. Terracing is a method used for:
- Mining
 - Soil conservation on slopes
 - Irrigation in plains
 - Fishing
- Q 26. Blue Baby Syndrome is caused by water polluted with:
- Mercury
 - Arsenic
 - Nitrates
 - Lead
- Q 27. Rainwater harvesting primarily aims to:
- Increase surface runoff
 - Recharge groundwater
 - Stop rainfall
 - Increase sea levels
- Q 28. Which state in India is highly utilizing its groundwater resources?
- Punjab
 - Kerala
 - Assam
 - Mizoram
- Q 29. Strategic minerals are required for a country's:
- Food security
 - Defence
 - Agriculture
 - Education
- Q 30. Waterlogging is often associated with:
- Drought
 - Salinity
 - Deforestation
 - Wind erosion

- Q 31. Wind energy is harnessed using a:
- A. Solar panel
B. Turbine
C. Boiler
D. Mirror
- Q 32. CNG stands for:
- A. Carbon Neutral Gas
B. Compressed Natural Gas
C. Common Natural Gas
D. Certified New Gas
- Q 33. Nuclear fission involves splitting of a _____ nucleus.
- A. Light
B. Heavy
C. Hydrogen
D. Carbon
- Q 34. Which is a major advantage of wind energy?
- A. Reliable
B. No air pollution
C. Low installation cost
D. Small land area
- Q 35. The fuel used in nuclear reactors is commonly:
- A. Thorium
B. Uranium-235
C. Plutonium
D. Radium
- Q 36. Environmental Impact Assessment (EIA) is used to:
- A. Calculate profit
B. Predict environmental effects of proposed projects
C. Count species
D. Measure rainfall
- Q 37. The 'Silent Valley Movement' was against:
- A. Mining
B. Dam construction
C. Air pollution
D. Population growth
- Q 38. Which Act in India is called the 'Umbrella Act'?
- A. Water Act
B. Air Act
C. Environment (Protection) Act
D. Wildlife Act
- Q 39. 'Agenda 21' was a major outcome of:
- A. Stockholm Conference
B. Rio Earth Summit
C. Paris Agreement
D. Vienna Convention
- Q 40. The primary cause of the 'Enhanced Greenhouse Effect' is:
- A. Natural cycles
B. Anthropogenic (human) activities
C. Solar flares
D. Volcanic eruptions

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BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2022 COURSE)

B.C.A. Sem-II : SUMMER : 2026

SUBJECT: WEB DEVELOPMENT TECHNOLOGY

Day : Friday
Date : 29/05/2026

S-26278-2026

Time : 10:00 AM-01:00 PM
Max. Marks : 60

N.B.:

- 1) Q.1 is **COMPULSORY**.
- 2) Section – I (MCQ type) should be attempted in **SEPARATE** OMR sheet and will be collected within first 20 minutes.
- 3) Attempt any **FIVE** questions from Section. II. Each questions carries 08 marks.
- 4) Attempt any **ONE** question from Section. III. Each questions carries 10 marks.
- 5) Figures to the right indicate **FULL** marks.
- 6) Answers to Section II and Section III should be written in **SAME** answer book.

SECTION – I

Q.1 MCQ's Questions:

- 1) Which of the following not a web development component?
 - a) ☐ <shadow>
 - b) ☐ <menu>
 - c) ☐ <content>
 - d) ☐ <element>
- 2) A software application that enables user to display and interact with text, images, and other information typically located on a web page at a website in the World Wide Web or a Local area network.
 - a) ☐ Web browser
 - b) ☐ Web page
 - c) ☐ Web Site
 - d) ☐ Web space
- 3) What is the primary purpose of a header in a website layout?
 - a) ☐ To display navigation links and the site logo
 - b) ☐ To show the footer content
 - c) ☐ To display advertisements
 - d) ☐ To load background images
- 4) Which of the following settings is typically used to change the default font for a website?
 - a) ☐ Site configuration
 - b) ☐ General configuration – font
 - c) ☐ Button type
 - d) ☐ Back colour

P.T.O.

- 5) What is the primary function of an admin panel in a website?
- a) ☐ To allow users to interact with the website
 - b) ☐ To manages the content, users, and setting of the website
 - c) ☐ To design website's front-end interface
 - d) ☐ To host and store website files
- 6) Which of the following is NOT typically available in an admin panel?
- a) ☐ User management
 - b) ☐ Content editing
 - c) ☐ Data analytics and repotting
 - d) ☐ Browsing and interacting with the website's public pages
- 7) What is WordPress theme?
- a) ☐ A plugin that adds extra functionality to a site
 - b) ☐ A set of templates that define the visual appearance of a website
 - c) ☐ A database that stores all website content
 - d) ☐ A user role that manages website content
- 8) What does the "Customizer" features in word press allow you to do?
- a) ☐ Edit the website's content in real time
 - b) ☐ Modify theme settings such as colours, fonts and logs
 - c) ☐ Install plugins to add new features
 - d) ☐ Write and publish blog posts
- 9) What is ten primary purpose of a WordPress plugin?
- a) ☐ To change the website's theme
 - b) ☐ To add new features or functionality to a WordPress
 - c) ☐ To manage the website's database
 - d) ☐ To design the website's layout
- 10) What is element or in WordPress
- a) ☐ A plugin used to enhance website security
 - b) ☐ A drag and drop page builder that helps design pages without coding
 - c) ☐ A plugin for managing users and role
 - d) ☐ A plugin for creating a custom WordPress theme.

SECTION – II

- Q.2 Differentiate between theme and templates. [08]
- Q.3 Define SSL and its role in securing online communication. [08]
- Q.4 Discuss the importance of consistency in logo usage across various platform and devices. [08]
- Q.5 Compare and construct the process of adding and modifying themes in different content management system (CMS). [08]
- Q.6 Discuss the importance of activating the installed theme and how it affects the appearance and functionality of the website. [08]
- Q.7 Write short note on **ANY TWO** of the following [08]
- a) Elementor plugin
 - b) Dashboard plugin method
 - c) DNS

SECTION – III

- Q.8 How to disable comments? State different option available with it. [10]
- Q.9 Explain the purpose of a site icon and significance in web browsing [10]

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