

BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2022 COURSE)
B.C.A. Sem-I : WINTER: 2025
SUBJECT: ORGANIZATION OF IT BUSINESS

Day : Thursday
Date : 04/12/2025

W-25954-2025

Time : 02:00 PM-05:00 PM
Max. Marks : 60

N. B. :

- 1) Q. No. 1 is **COMPULSORY**.
- 2) Section – I (MCQ Type), should be attempted in **SEPARATE** OMR sheet and will be collected within the first **20 Minutes**.
- 3) Attempt **ANY FIVE** questions from Section **II**. Each question carried **08** marks.
- 3) Attempt **ANY ONE** questions from Section **III**. Each question carried **10** marks.
- 4) Figures to the right indicate **FULL** marks.
- 5) Answers to Section – **II** and Section – **III** should be written in **SAME** answer book.

SECTION – I

Q. 1 MCQ's

(10)

- i) Which of the following best defines business?
 - a) A social activity
 - b) An economic activity
 - c) A political activity
 - d) A leisure activity
- ii) Which revolution is known to have triggered the beginning of modern industry?
 - a) Technological Revolution
 - b) Green Revolution
 - c) Industrial Revolution
 - d) French Revolution
- iii) Which of the following is **NOT** a feature of sole proprietorship?
 - a) Unlimited liability
 - b) Shared decision-making
 - c) Full control by owner
 - d) Easy formation
- iv) A company legally comes into existence on which of the following stages?
 - a) Promotion
 - b) Incorporation
 - c) Capital subscription
 - d) Commencement of Business

- v) Which document defines the objectives and powers of a company?
- a) Memorandum of Association
 - b) Articles of Association
 - c) Partnership deed
 - d) Prospectus
- vi) IT has a significance impact on which of the following industries?
- a) Agriculture
 - b) Airlines
 - c) Mining
 - d) Handcrafts
- vii) Which of the following is NOT a form of business ownership?
- a) Sole proprietorship
 - b) Partnership
 - c) Co-operative society
 - d) Branch office
- viii) Which of the following is a key factor in sustaining a competitive edge through IT?
- a) Unlimited resources
 - b) Protecting IT innovation
 - c) Outsourcing operations
 - d) Expanding geographically
- ix) The use of IT in business strategy mainly helps in:
- a) Reducing operational costs
 - b) Creating a monopoly
 - c) Enhancing employee satisfaction
 - d) Building a competitive advantage
- x) Which of the following is a strategic framework used for IT in business?
- a) SWOT analysis
 - b) Value chain analysis
 - c) Porter's Five Forces
 - d) PEST analysis

SECTION – II

- Q. 2 Explain the concept of business as an economic activity. (08)
- Q. 3 List and explain features, merits and demerits of Sole Proprietorship. (08)
- Q. 4 Discuss the impact of the Industrial Revolution on the evolution of modern business. (08)
- Q. 5 Explain in detail public Enterprise as a form of ownership. (08)
- Q. 6 Elaborate how company documents plays an important role in modern business. (08)
- Q. 7 Write short notes on ANY TWO of the following: (08)
- a) Securities Industry
 - b) Strategic role of IT in Business
 - c) Capital Subscription

SECTION – III

- Q. 8 You are a sole proprietor looking to convert your business into a joint stock company. Explain the benefits and challenges of this transition and how it can impact your business. (10)
- Q. 9 A software company wants to gain a competitive edge by integrating IT into its marketing strategies. What IT tools can the company use to enhance its marketing and how can these tools create a competitive advantage? (10)

BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2022 COURSE)

B.C.A. Sem-I : WINTER: 2025

SUBJECT: DISCRETE MATHEMATICS

Day : Tuesday
Date : 02/12/2025

W-25955-2025

Time : 02:00 PM-05:00 PM
Max. Marks : 60

N.B.:

- 1) Q.No.1 is **COMPULSORY**.
- 2) Section – I (MCQ Type), should be attempted in **SEPARATE** OMR sheet and will be collected within the first 20 minutes.
- 3) Attempt **ANY FIVE** questions from Section – I and attempt **ANY ONE** questions from Section – II.
- 4) Answers to both the sections should be written in the **SAME** answer book.
- 5) Figures to the right indicate **FULL** marks.

SECTION – I

Q.1 MCQ's

[10]

- 1) Empty set is a _____.
a) Infinite set b) Finite set c) Unknown set d) Universal set
- 2) Let f and g be the function from the set of integers to itself, defined by $f(x) = 2x + 1$ and $g(x) = 3x + 4$. Then the composition of f and g is _____.
a) $6x + 9$ b) $6x + 7$ c) $6x + 6$ d) $6x + 8$
- 3) Probability can be _____.
a) Greater than or equal to 10 c) Less than 0
b) Greater than 1 d) Between 0 and 1
- 4) Let P : This is a great website, Q : You should not come back here. Then 'This is a great website and you should come back here'. Is best represented by?
a) $\sim P \vee \sim Q$ b) $P \wedge \sim Q$ c) $P \vee Q$ d) $P \wedge Q$
- 5) Two matrix can be added if _____.
a) Rows of both the matrices are same.
b) Columns of both the matrices are same.
c) Both rows and columns of both the matrices are same.
d) Number of rows of first matrix should be equal to number of column of second matrix.
- 6) 5P_2 is _____.
a) 5 b) 10 c) 20 d) 120
- 7) nC_r means _____.
a) $n! / r! (n - r)!$ b) $n! / r!$ c) $n! / r! (r - n)!$ d) $r! / n!$
- 8) When we throw a coin then what is the probability of getting head?
a) $1/2$ b) 3 c) 4 d) 1
- 9) If $n(A) = 20$ and $n(B) = 30$ and $n(A \cup B) = 40$ then $n(A \cap B)$ is?
a) 20 b) 30 c) 40 d) 10
- 10) The intersection of the sets $\{1, 2, 8, 9, 10, 5\}$ and $\{1, 2, 6, 10, 12, 15\}$ is the set
a) $\{1, 2, 10\}$ b) $\{5, 6, 12, 15\}$ c) $\{2, 5, 10, 9\}$ d) $\{1, 6, 12, 9, 8\}$

P.T.O.

SECTION – II

Q.2 Define Set. Given $U = \{1, 2, \dots, 9\}$ [08]
 $A = \{1, 2, 3, 4\}$, $B = \{3, 4, 5, 6, 7\}$, $C = \{2, 3, 5, 7\}$.
 Find : $A \cup B$, $A \cap C$, $A \cap B$.

Q.3 What is Logic? Construct the truth table for following statement: [08]
 $(p \wedge q) \vee (\sim p \wedge \sim q)$

Q.4 Given, $A = \begin{bmatrix} 2 & 3 & 3 \\ 3 & 2 & 1 \\ 1 & 2 & 3 \end{bmatrix}$ $B = \begin{bmatrix} 1 & 4 & 5 \\ 2 & 1 & 3 \\ 3 & 4 & 2 \end{bmatrix}$ [08]
 Find : $A + B$, $A - B$, A^T , B^T .

Q.5 What is a Function? Explain composite function with suitable example. [08]

Q.6 Find the number of permutations that can be formed from all the letters of the word: [08]
 a) MADAM b) INDIA

Q.7 Write short notes on ANY TWO of the following: [08]
 a) Principle of Inclusion and Exclusion
 b) Representation of matrix in computers
 c) Venn diagram

SECTION – III

Q.8 Find the inverse of the matrix $A = \begin{bmatrix} 2 & 3 \\ 1 & 2 \end{bmatrix}$ by adjoint method. [10]

Q.9 An unbiased die is thrown. Find the probability of getting a score: [10]
 a) an odd number
 b) a prime number

* * * *

BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2022 COURSE)
B.C.A. Sem-I : WINTER: 2025
SUBJECT: FUNDAMENTALS OF INFORMATION TECHNOLOGY

Day : Friday
Date : 28/11/2025

W-25952-2025

Time : 02:00 PM-05:00 PM
Max. Marks : 60

N.B.:

- 1) All Sub -Questions of Q. No. 1 is **COMPULSORY**.
- 2) Section -I (MCQ) write the Sub question No. and the chosen alternative (eg. ib, iic) in the answer book.
- 3) Attempt any **FIVE** questions from Section - **II**. Each questions carries **08** marks.
- 4) Attempt any **ONE** questions from Section - **III**. Each questions carries **10** marks.
- 5) Figures to the right indicate **FULL** marks.
- 6) Answers to **Section I, II and III** should be written in same answer book.

Q. 1 MCQ's

(10)

- i) Analog computers deal with:
 - a) Numbers
 - b) Logical operations
 - c) Continuous data
 - d) Discrete data
- ii) The CPU stands for:
 - a) Central Processing Unit
 - b) Computer Process Unit
 - c) Control Program Unit
 - d) Central Program Utility
- iii) The mouse is an input device used for:
 - a) Typing
 - b) Drawing and pointing
 - c) Printing
 - d) Storing data
- iv) A device that converts images or text into a digital format is called a:
 - a) Printer
 - b) Scanner
 - c) Monitor
 - d) CPU
- v) What is computer memory used for?
 - a) Displaying output
 - b) Storing data and instructions
 - c) Inputting data
 - d) Printing documents
- vi) RAM stands for:
 - a) Random Access Memory
 - b) Read access Memory
 - c) Read and Modify
 - d) None of the above

P. T. O.

vii) The software required to perform a specific task is called:

- a) System software
- b) Application software
- c) Language software
- d) Support software

viii) A WAN covers:

- a) A room
- b) A building
- c) A city
- d) A large geographical area

ix) System software includes:

- a) MS Word
- b) Antivirus
- c) Operating System
- d) Photoshop

x) Which language requires an assembler?

- a) Machine Language
- b) High- Level Language
- c) Assembly Language
- d) Scripting Language

SECTION-II

Q.2 What is Input device and Output device? Explain with example.

(08)

Q.3 What is primary memory? Discuss its different types in detail.

(08)

Q.4 What is Computer Network? Explain types of network.

(08)

Q.5 What is Software? Explain in detail system software with proper example.

(08)

Q.6 Define Computer. List and explain different characteristics of computer.

(08)

Q.7 Write short notes on ANY TWO of the following:

(08)

- a) Secondary Memory
- b) DBMS
- c) Network topologies

SECTION-II

Q.8 What is Mail Merge? Explain in detail various steps involved in mail merge with proper example. (10)

Q.9 Relax Tourism wants to do promotion of their business. Explain various steps to do advertisement using power point presentation. (10)

BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2022 COURSE)
B.C.A. Sem-I : WINTER: 2025
SUBJECT: C PROGRAMMING

Day : Wednesday
Date : 26/11/2025

W-25953-2025

Time : 02:00 PM-05:00 PM
Max. Marks : 60

N.B.:

- 1) **Q. No. 1 is COMPULSORY.**
- 2) Attempt **ANY THREE** questions from Section-II. Each question carries **10** marks.
- 3) Attempt **ANY TWO** questions from Section-III. Each question carries **10** marks.
- 4) Figures to the right indicate **FULL** marks.
- 5) Answers to section-I, section-II and Section-III should be written in **SAME** answer book.

SECTION - I

Q.1 MCQ's

[10]

- 1) _____ developed C language?
 - a) ☐ Dennis Ritchie
 - b) ☐ Denic Ric
 - c) ☐ Ric Den
 - d) ☐ Den Ricd
- 2) Which of the following operators takes only integer operands?
 - a) ☐ +
 - b) ☐ *
 - c) ☐ /
 - d) ☐ %
- 3) The first expression in a for... loop is _____.
 - a) ☐ Step value of loop
 - b) ☐ Value of the counter variable
 - c) ☐ Condition statement
 - d) ☐ Unstep value of loop
- 4) In C, What is a function primary used for?
 - a) ☐ Decision Making
 - b) ☐ Variable Declaration
 - c) ☐ Code generation and reusability
 - d) ☐ Printing Output

P.T.O.

- 5) Array index starts at ____.
- a) ☐ 0
 - b) ☐ 1
 - c) ☐ 3
 - d) ☐ 5
- 6) Which header file is necessary for strlen() function?
- a) ☐ conio.h
 - b) ☐ strings.h
 - c) ☐ string.h
 - d) ☐ stdio.h
- 7) What is the size of a C structure?
- a) ☐ C structure is always 128 bytes
 - b) ☐ Size of C structure is the total bytes of all elements of structure
 - c) ☐ Size of C structure is the size of largest element
 - d) ☐ As size of first element only
- 8) Which of the following symbol is used to declare pointer in c?
- a) ☐ @
 - b) ☐ %
 - c) ☐ &
 - d) ☐ *
- 9) What is the purpose of if statement in C?
- a) ☐ To iterate over a block of code
 - b) ☐ To declare a variable
 - c) ☐ To execute a block of code conditionally
 - d) ☐ To define a function
- 10) Which keyword is used to end a case in a switch statement in C?
- a) ☐ end
 - b) ☐ break
 - c) ☐ stop
 - d) ☐ exit

SECTION – II

- Q.2 Define an algorithm and explain five essential characteristics that make an effective algorithm. [10]
- Q.3 Define and differentiate between the following fundamental components of C language: keywords, identifiers, and variables. [10]
- Q.4 Explain the different character input/output functions in C such as getch(), getchar(), and putchar() with example. [10]
- Q.5 Discuss the while and do-while loops in C. Explain their syntax, functionality, and differences with examples. [10]
- Q.6 Explain one-dimensional arrays in C programming. Discuss array definition, declaration, initialization. [10]
- Q.7 Write Short Notes on: (Any Two) [10]
a) Storage classes
b) Nested for loop
c) Union

SECTION – III

- Q.8 Write a program in C to count the digits of a given number using recursion. [10]
- Q.9 Create a C program to maintain 10 student database using array of structures. [10]
- Q.10 Write a C program to Display Prime Numbers Between Two Intervals. [10]

* * * *