

**BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2022 COURSE)**  
**B.C.A. Sem-I : WINTER : 2023**  
**SUBJECT : FUNDAMENTALS OF INFORMATION TECHNOLOGY**

Day : Saturday  
Date : 2/12/2023

**W-25952-2023**

Time : 10:00 AM-01:00 PM  
Max. Marks : 100

**N.B. :**

- 1) Attempt **ANY FIVE** questions from **Section – I** each questions carries **12** marks.
- 2) Attempt **ANY TWO** questions from **Section – II** each questions carries **20** marks.

**SECTION-I**

- Q.1** Define computer? List and explain important characteristics of a computer. (12)
- Q.2** What is input device? Explain in detail any two input devices of computer system. (12)
- Q.3** What is primary memory? Explain various primary memories available for computer system. (12)
- Q.4** What is software? Explain in detail system software with proper example. (12)
- Q.5** What is Network? Explain types of network with its advantages and disadvantages. (12)
- Q.6** Explain various steps involved in MS-power point presentation with example. (12)
- Q.7** Write a short notes on **ANY TWO** of the following: (12)
- a) Generations of computer
  - b) Printer
  - c) Hard Disk

**SECTION-II**

- Q.8** Explain with example various steps involved in creating graphs using Excel. (20)
- Q.9** What is Network Topology? Explain in detail various types of Topologies with its advantages and disadvantages. (20)
- Q.10** What is Mail Merge? Explain in detail various steps used in mail merge with proper example. (20)

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BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2022 COURSE)  
B.C.A. Sem-I : WINTER : 2023  
SUBJECT : C PROGRAMMING

Day : Tuesday

Time : 10:00 AM-01:00 PM

Date : 5/12/2023

W-25953-2023

Max. Marks : 100

**N.B:**

- 1) Attempt any **FIVE** questions form Section-I. Each question carries 12 marks.
- 2) Attempt any **TWO** questions form section –II. Each questions carries 20 marks.

**Section-I**

- Q.1** What is dynamic memory allocation? Explain with example. (12)
- Q.2** Explain data types in 'C' with its syntax. (12)
- Q.3** Write an algorithm to find maximum and minimum number from 1 dimensional array. (12)
- Q.4** What is pointer? Explain declaration and initialization of pointer. (12)
- Q.5** Explain the standard string library functions with its example (Any Six) (12)
- Q.6** Write **Short Notes** on ANY TWO : (12)
- a) Structure
  - b) Storage Classes
  - c) Pointer Arithmetic

**Section-II**

- Q.7** a) Write a C program to find factorial of a given number using recursion. (10)
- b) Write a C program to store student information using structure. (10)
- Q.8** a) Write a C program to access array elements using pointer. (10)
- b) Write a 'C' program to find length of a string. (10)
- Q.9** a) Write a C program to print prime numbers between 1 to 100. (10)
- b) Write a C program to swap two numbers without using third variable. (10)

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**BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2022 COURSE)**  
**B.C.A. Sem-I : WINTER : 2023**  
**SUBJECT : ORGANIZATION OF IT BUSINESS**

Day : Thursday  
Date : 7/12/2023

**W-25954-2023**

Time : 10:00 AM-01:00 PM  
Max. Marks : 100

**N.B.**

- 1) Attempt **ANY FOUR** questions from Section – I.
- 2) Attempt **ANY TWO** questions from Section – II.
- 3) Figures to the **RIGHT** indicate **FULL** marks.
- 4) Answers to both the sections should be written in **SAME** answer book.

**SECTION – I**

- Q.1** Explain the concept and nature of Business. What factors are important to be considered for success in modern business? (15)
- Q.2** What is Memorandum of Association? Explain its role in business with proper example. (15)
- Q.3** Why is business considered as an economic activity? Explain in detail growth of Indian business. (15)
- Q.4** What is corporate strategy? Explain in detail a framework for the strategic use of IT. (15)
- Q.5** List and explain various stages involved in Formation of a Company. (15)
- Q.6** What is Joint Hindu Family Business? Explain with proper example its advantages and disadvantages. (15)
- Q.7** Write short notes on **ANY THREE** of the following : (15)
- a) Industrial revolution
  - b) Securities Industry
  - c) Joint Stock Company
  - d) Prospectus

**SECTION – II**

- Q.8** With suitable example, explain how we can integrate technology with business environment. (20)
- Q.9** Explain how we can create new type of organization with: (20)
- a) Design using IT variables
  - b) Adding peoples to the design
- Q.10** You intent to start a business of an ice-cream parlor. Give its limited scale, you have decided to either form a Sole-proprietorship business or Partnership form. Which would you choose and why? (20)

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**BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2022 COURSE)**  
**B.C.A. Sem-I : WINTER : 2023**  
**SUBJECT : DISCRETE MATHEMATICS**

Day : Saturday  
Date : 9/12/2023

**W-25955-2023**

Time : 10:00 AM-01:00 PM  
Max. Marks : **100**

**N.B.:**

- 1) Attempt **ANY FIVE** questions from Section – I and **ANY TWO** questions from Section – II.
- 2) Answers to both the section should be written in **SAME** answer book.
- 3) Use of non-programmable **CALCULATOR** is allowed.
- 4) Figures to the right indicate **FULL** marks.

**SECTION – I**

- Q.1** Given  $U = \{1, 2, 3, \dots, 9\}$  [12]  
 $P = \{1, 2, 3, 4\}$        $Q = \{3, 4, 5, 6, 7\}$        $R = \{6, 7, 8, 9\}$   
Find: a)  $P \cup Q$       b)  $Q \cap R$       c)  $P' \cup R'$       d)  $Q \cup R'$
- Q.2** What is a Composite Function? [12]  
Let  $f : R \rightarrow R$  and  $g : R \rightarrow R$  be given by  $f(x) = x^2$  and  $g(x) = x^2 - 1$ .  
Find: a)  $f \circ g$       b)  $g \circ f$
- Q.3** Find the truth tables for the following statements: [12]  
a)  $(\sim p \rightarrow \sim q) \vee (p \wedge q)$       b)  $(p \vee q) \rightarrow (\sim p \wedge \sim q)$
- Q.4** Given :  $A = \begin{bmatrix} 3 & 1 & 5 \\ 4 & 2 & 7 \end{bmatrix}$        $B = \begin{bmatrix} 2 & 2 & 3 \\ 1 & 2 & 1 \end{bmatrix}$  [12]  
Find: a)  $B + A$       b)  $A - B$       c)  $A^T$       d)  $B^T$
- Q.5** An unbiased die is thrown. Find the probability of getting a score. [12]  
a) an odd number      b) a prime number      c) greater than 4
- Q.6** Explain the following with suitable examples: [12]  
a) Principle of Inclusion and Exclusion  
b) Sum and Product Rule Principle
- Q.7** Write short notes on **ANY TWO** of the following: [12]  
a) Relation  
b) Venn Diagram  
c) Conditional Probability

**SECTION – II**

- Q.8** Find the inverse of the matrix using adjoint method: [20]  
 $A = \begin{bmatrix} 1 & 0 & -4 \\ 0 & -1 & 2 \\ -1 & 2 & 1 \end{bmatrix}$
- Q.9** a) From a group of 7 men and 6 women, five persons are to be selected to form a committee so that at least 3 men are there in the committee. In how many ways can it be done? [10]
- b) Find the number of words, with or without meaning that can be formed with the letters of the word 'INDIA'. [10]
- Q.10** A box contains 5 black, 6 white and 4 green balls. Two balls are drawn at random from this box. Find the probability that, [20]  
a) both are black balls      c) only one ball is black  
b) one is black and the other is green      d) atleast one ball is white