

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

Day : Saturday

Time : 10:00 AM-01:00 PM

Date : 2/12/2023

W-25952-2023

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)**

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

Day : Saturday

Time : 10:00 AM-01:00 PM

Date : 9/12/2023

W-25955-2023

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