OCT_NOV_2024 WINTER EXAMINATION
12329 Bachelor of Computer Application(BCAsci) NEP 2.0
Sub. Name: Problem Solving Techniques
Sub. Code: 109809

Day and Date: FEBRUARY ,18-02-2025

Time: 10:30 AM To 12:30 PM

Total Marks: 60

Instructions: 1. Figures to the right indicate full marks

Special Inst.: Que.1 and Que. 7 are compulsory.
Attempt any THREE questions from Q.No.2 to Q.No. 6.

Q1) Solve following MCQ. **[10]**

i. When an algorithm is written in the form of a programming language, it becomes a _____.
- A. Flowchart
- B. Program
- C. Pseudo code
- D. Syntax

ii. A system wherein items are added from one and removed from the other end.
- A. Stack
- B. Queue
- C. Linked List
- D. Array

iii. In which type of control structure no statement is skipped and no one is repeated?
- A. Sequence
- B. Selection
- C. Repetition
- D. All

iv. Assembly language is a _____ level programming language.
- A. High
- B. Low
- C. Machine
- D. None of these

v. ASCII stands for_____?
- A. American Stable Code for International Interchange
- B. American Standard Case for Institutional Interchange
- C. American Standard Code for Information Interchange
- D. American Standard Code for Interchange Information

[1]

vi.   The 1's complement of binary number 0101 is ____.
    A. 1001
    B. 0111
    C. 1011
    D. 1010

vii. In the statement ++variable; ++ is used as ____.
    A. post-increment operator
    B. pre-decrement operator
    C. pre-increment operator
    D. post-decrement operator

viii. The 'break' statement cannot be simply used within _____.
    A. do-while
    B. if-else
    C. for
    D. while

ix.   What is the purpose of return statement in a function?
    A. To declare the function's return type
    B. To exit the program
    C. To return a value from the function
    D. To define a function

x.   What is the highest index for an array with 10 elements in C?
    A. 5
    B. 9
    C. 10
    D. 11

Q2) Explain problem solving steps with suitable example. **[10]**

Q3) Identify different kinds of repetitions in the problem. **[10]**

Q4) Discuss different generations of programming language. **[10]**

Q5) Explain the process of binary search with suitable example. **[10]**

Q6) How to translate algorithm in C program? Illustrate with suitable example. **[10]**

Q7) Write short notes (Any Four) **[20]**

    a. Role of Data Structures in Problem Solving **[5]**

    b. Operator Precedence and Associativity **[5]**

c.	Flowchart	[5]
d.	Characteristics of Algorithms	[5]
e.	Switch Case statement	[5]
f.	Recursion	[5]

End Of Question Paper

Important Note for Chief Exam Officer / SRPD Coordinator / Sr Supervisor/ Student -

This Question Paper may be distributed for following Subjects as common code.

सदरची प्रश्नपत्रिका खालील विषयांकरिता वितरित करता येईल.

1] (12329) Bachelor Of Computer Application (NEP2.0)   (109809) Problem Solving Techniques   Part 1   SEM 1