

**Central Tribal University of Andhra Pradesh**  
**End Semester Examinations-June/July-2024**

**Name of the Programme: B.Sc. (Artificial Intelligence)**

**Name of the Subject : Programming for Problem Solving using C**

**Subject Code: BAI151**

**Semester: II**

**Max. Time: 3 Hours**

**Max. Marks: 70**

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**Part-A**

**Answer the following questions. Each Carries 1 mark (10qx1m = 10M)**

1. Define Program
2. How to declare variable.
3. The purpose of do statement
4. Loops.
5. What is String.
6. Multidimensional Array.
7. What do you mean by Structure.
8. Types of functions.
9. Dynamic memory allocation.
10. Name some storage classes in 'C'

**Part-B**

**Answer any four short answer questions each question carries 5 marks (4qx5m = 20M)**

11. Differentiate Identifiers, Constants and Variables with suitable example for each?
12. Briefly demonstrate about Switch Statement with suitable example program in 'C' ?
13. Explain in detail about the concept of Pointer Arithmetic in 'C' ?
14. What is dynamic memory allocation? Discuss about the Operators used to implement it?
15. Explain about the following?
  - i) Command Line Arguments
  - ii) Scope of Variables
16. Write C programs that use both recursive and non-recursive function through a pointer variable to find the sum of 'n' elements from an array?

**Part-C**

**Answer all the long answer questions either A or B each carrying 10 marks (4qx10m = 40M)**

17. a) Write the following programs in 'C'?
  - i) Write a program to find whether the given number is a prime number or not?
  - ii) Write a program that shows the binary equivalent of a given positive number between 0 to 255.

**(OR)**

- b) Explain about the following with suitable examples ?
  - i) Syntax and Logical Errors?
  - ii) Symbolic Constants?