

Exam.Code:5143  
Sub. Code: 14324

2125  
B.Sc. (Hons.) Bio-Informatics (FYUP)  
Third Semester  
BIFD-302: Programming Language in C  
(Common with B.Sc. 3<sup>rd</sup> Semester NEP)

Time allowed: 3 Hours

Max. Marks: 60

*NOTE: Attempt five questions in all, including Question No. I which is compulsory and selecting two questions from each Unit.*

x-x-x

**I. (Compulsory Question)**

- a. What are identifiers? Give two rules for creating identifiers in C. (6×2=12)
- b. What are relational operators? What kind of output they provide? List available relational operators in C.
- c. Give any two properties of an array.
- d. What is modular programming?
- e. Define Union. Give syntax for creating Union and explain with an example.
- f. List and explain various modes for operating with files in C.

**UNIT – I**

- II.** a. What are data types? What is their role in programming languages? Explain various data types available in C. (6, 6)
- b. What are decision making statements? Explain if statement along with its syntax and examples.
- III.** Differentiate between: (4×3=12)
  - i. Variables and constants
  - ii. if and switch statements
  - iii. Character array and String
- IV.** a. Write a program in C to multiply two square matrices. (6, 6)
- b. What are loops? Where do we use them? Explain for loop with the help of syntax and example.

P.T.O.

UNIT – II

- V. a. What are functions? Explain characteristics of functions and their uses. (6, 6)  
Also give example of a function.
- b. Write a program to create an array of elements of structure student with fields rollNo, name, class and phoneNumber.
- VI. Differentiate between the following taking suitable examples: (6, 6)
- i. Call by Value and Call by Reference
- ii. Top down and bottom up approach
- VII. a. What are recursive functions? What are the conditions for implementing recursion? In what kind of problems recursion can be used? Give example. (6, 6)
- b. What are pointers? What are the characteristics of a pointer variable? Explain the use of & and \* operators with reference to pointers through a program.