

2411001102010001
EXAMINATION FEBRUARY-MARCH 2024
B.SC. (I. T.) (M.SC.(I.T.) 5 YEAR INTEGRATED COURSE)
(SECOND SEMESTER) (NEP)
MAJOR-1 FUNDAMENTAL OF PROGRAMMING
USING C – II-LEVEL 1

[Time: As Per Schedule]

[Max. Marks: 50]

Instructions:

1. Fill up strictly the following details on your answer book

- a. Name of the Examination : **B. SC. (I. T.) (M. SC. (I. T.) 5 YEAR INTEGRATED COURSE) (SECOND SEMESTER) (NEP)**
 - b. Name of the Subject :**MAJOR-1 FUNDAMENTAL OF PROGRAMMING USING C – II - LEVEL 1**
 - c. Subject Code No : **2411001102010001**
2. Sketch neat and labelled diagram wherever necessary.
 3. Figures to the right indicate full marks of the question.
 4. All questions are compulsory.

Seat No:

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Student's Signature

Q.1 Attempt any Ten

10

- 1) Write a syntax to create array of pointers.
- 2) How do we declare a pointer to a pointer?
- 3) What is the difference between `int *a[5];` and `int (*a)[5];` ?
- 4) _____ is used to release allocated memory in C.
- 5) What is the use of `rewind ()`?
- 6) _____ is used to declare a Macro in C.
- 7) The size of the union variable is the total number bytes occupied by all the Union members. (True or False)

8) Which of the following statements are invalid for pointer operations on a pointer *P1?
A) P1- P2 B) P1+1
C) P1>P2 D) P1-2

9) Which of the following operator is called indirection operator?
A) % B) *
C) + D) /

10) What will be output of the following code?

```
#include <stdio.h>
int main()
{
    int arr[5]={ 10,20,30,40,50};
    int *p=arr;
    printf("%d",*p);
    return 0;
}
```

11) Which of the following statements is true.

1. ++(*ptr) increments the value pointed by ptr.
2. *(ptr++) evaluates the value currently pointed by ptr and increments the value of ptr.

12) Bit fields can be declared as part of a structure only. (True/False)

Q.2 (A): Answer following questions (Any Two)

10

- 1) Explain fopen() with different File opening modes.
- 2) What is a Structure? Explain creating, declaring, initializing and accessing a structure with an appropriate example. How is it different from Union?
- 3) Write a note on Dynamic Memory allocation.

- Q.2 (B): Answer following question (Any One) 4**
- 1) Explain slack byte and bit field in C.
 - 2) Differentiate between call by value & call by reference
- Q.3 (A): Answer following questions: (Any Two) 10**
- 1) Explain storage classes in C with example.
 - 2) What is pre-processing? How it can be accomplished in C? Explain conditional compilation in C with proper example.
 - 3) Explain recursion with example.
- Q.3 (B): Answer following questions: (Any One) 4**
- 1) Write a note on: Function pointer
 - 2) Write a note on command line arguments in C.
- Q.4 Attempt any three of the following: 12**
- 1) Write user-defined function to calculate factorial of an integer using recursion.
 - 2) Write C program to create a structure Student with members Roll No, Name, Percentage. Read at least 5 records and display the records.
 - 3) Write C program to copy content of one text file into another text file.
 - 4) Write user defined function to calculate length of a string using pointer.
