



2023

1st Semester Examination (CCFUP : NEP)

COMPUTER SCIENCE

Paper : MJ 1-T (Single Core Major)

(Programming in C)

Full Marks : 40

Time : Two Hours

The figures in the margin indicate full marks.

*Candidates are required to give their answers
in their own words as far as practicable.*

Group - A

Answer any **five** questions : $2 \times 5 = 10$

1. What are the basic differences between constant and static variable with example?
2. What will be the output of c if $c = a/b$ and $a = 5$, $b = 2$, where a, b and c are integer?
3. Write down the flow diagram of for loop.
4. Why header files are necessary in C programming?
5. What will be the output? `int a=5,b,c; b=++a; c=a+++b--; printf("%d%d %d", a,b,c);`

P.T.O.

(2)

6. What is the difference between ++a and a++?
7. Describe the difference between = and == symbols in C programming.
8. What are the differences between & and && with proper example?

Group - B

Answer any **four** questions : 5×4=20

9. What are the different storage class specifiers in C?
Explain any one with proper example. 2+3
10. What do you mean by declaration of a function? What are the differences between Actual Parameters and Formal Parameters? How is a user defined Function declared in C language? 2+2+1
11. What is pointer variable? What do you mean by array of pointer? 2+3
12. What is the use of ternary operator? Explain with proper example. What is the difference between structure and union? 1+2+2
13. Define a float array of size 10 and assign 10 values to it. What will happen when you access the array more than its dimension? 1+2+2

(3)

14. Write a program to determine whether a person is eligible for casting his/her vote based on following criteria :

(a) Age ≥ 18

(b) Valid ID Card : (Yes/No).

using switch-case.

5

Group - C

Answer any *one* question : $10 \times 1 = 10$

15. (a) What is recursion? What are the advantages and disadvantages of recursion?

(b) Write a function to calculate a^b using recursion.

$(2+3)+5$

16. (a) Write a C program to find the length of a given string without using library function.

(b) Write down the differences between pointer and variable.

(c) Define NULL pointer.

$5+3+2$
