

22U365S

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Name:

Reg. No:

THIRD SEMESTER B.Voc. DEGREE EXAMINATION, NOVEMBER 2023

(Information Technology)

CC18U GEC3 PC09 – PROBLEM SOLVING USING ‘C’

(2018 to 2020 Admissions – Supplementary)

Time: Three Hours

Maximum: 80

Marks

PART A

Answer *all* questions. Each question carries 1 mark.

1. The _____ operator can be used to determine the length of array and structures.
2. The standard mathematical functions are included in the _____ header file.
3. The _____ statement causes the next iteration of the loop structure.
4. The C program is converted into machine language with the help of _____
5. All keywords in C are in _____
6. If p is an integer pointer with a value 1000 and an int is 4 bytes long, then the value of p + 5 is _____
7. The maximum number of characters that can be held in the string variable char a[40] is _____
8. What will the output after execution of the following statements?

```
void main()
{
    int i = 065, j = 65;
    printf ("%d %d", i, j);
}
```

9. The _____ symbol is used to declare a pointer.
10. _____ is the default return type of a function in C if not specified.

(10 × 1 = 10 Marks)

Part B

Answer any *eight* questions. Each question carries 2 marks.

11. Define character set.
12. What are the steps involved in executing a C program?
13. What are escape sequences? Define.
14. Write a note on goto statements.
15. Distinguish between break and continue statement.

16. Discuss the limitations of using getchar() and scanf() functions for reading strings.
17. Explain function call.
18. Compare automatic and external variables.
19. Differentiate structure and union.
20. Define malloc().
21. Explain getc and putc functions
22. Explain the declaration of a pointer variable.

(8 × 2 = 16 Marks)

Part C

Answer any *six* questions. Each question carries 4 marks.

23. Give the syntax and function of for loop using an example.
24. Write a program to check whether a number is palindrome or not.
25. What are actual parameters and formal parameters? Illustrate with example.
26. What is structure? Explain the C syntax of structure declaration with example.
27. Discuss various input and output functions available in file.
28. What are the different data types used in C? Explain each.
29. Explain the basic structure of C programs with example.
30. Compare pointers and character strings with example.
31. Write a C program to find sum of Natural numbers from 1 to N using while loop.

(6 × 4 = 24 Marks)

Part D

Answer any *two* questions. Each question carries 15 marks.

32. a) Explain different string handling functions in C. (10 marks)
- b) What are constants? How are they classified? Explain. (5 marks)
33. a) What are the different categories of user defined functions with suitable examples? (10 marks)
- b) Explain the concept of array of structures with suitable example. (5 marks)
34. a) Explain different operators in C. (10 marks)
- b) What is the purpose of scanf() and printf() statement? (5 marks)

35. a) Explain the different types of if statement. (10 marks)
- b) What are entry controlled loop? Explain with example. (5 marks)

(2 × 15 = 30 Marks)
