

19U370

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Name:

Reg. No:

THIRD SEMESTER B.Voc. DEGREE EXAMINATION, NOVEMBER 2020

(Regular/Supplementary/Improvement)

CC18U GEC3 PC09 - PROBLEM SOLVING USING 'C'

(Information Technology)

(2018 Admission onwards)

Time: Three Hours

Maximum: 80 Marks

PART A

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

1. The _____ are certain reserved words that have standard, predefined meaning in C.
2. The size of () operator returns _____
3. Type casting is used to convert _____
4. Write the logical operator which is used to combine multiple conditions and execute only if all conditions are evaluated to true.
5. Write the name of the entry controlled loop in C.
6. The statement that transfers control to the beginning of the loop is _____
7. If $x=10$; $y=x++ -5$; What will be the values of x and y after the execution?
8. Write the declaration statement for a three-dimensional integer array.
9. For multiline comment we use _____
10. _____ function is used to check the end of file.

(10 x 1 = 10 Marks)

Part B

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

11. Explain declaration and initialization of one and two dimensional arrays.
12. Write the syntax of conditional operator in C.
if ($a\%2==0$)
 printf("Even");
else
 printf("Odd");
Rewrite the above using conditional operator.
13. What are the advantages of using functions?
14. What are preprocessor directives?
15. Write the different modes of opening a file in C?
16. Define structure.
17. Define arithmetic operators in C.
18. Write a program in C to find the factorial of a number using recursion.
19. Write a note on type conversions in C.

20. What are the elements of user-defined functions?
21. Differentiate the global and local variables.
22. What are the pointer variable and pointer expression?

(8 x 2 = 16 Marks)

Part C

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

23. What is the different between passing by value and passing by reference?
24. Explain the following with examples.
 - a. printf() and scanf()
 - b. Puchar() and getchar()
25. What is meant by dynamic memory allocation? Explain various memory allocation function.
26. Explain any 4 functions available in <string.h> with an example.
27. Write the syntax to declare a union. How is union different from structure? If a Union variable has 3 fields – a character array of size 10, a float and an integer, what is the maximum size occupied by this variable in memory?
28. What is meant by pointers? How to declare and initialize pointers? Explain with example.
29. Explain the operator precedence and associativity.
30. Explain the functioning of a switch statement. Illustrate with an example.
31. What is a string? How do you declare and initialize string?

(6 x 4 = 24 Marks)

Part D

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

32. a) Explain the basic structure of C programs with example. (10 marks)
b) Write a program in C to multiply two materials. (5 marks)
33. a) Define a function. What are the important categories of functions? Explain each with suitable example. (10 marks)
b) In detail, explain the C tokens. (5 marks)
34. a) Explain any three string manipulation functions and math library functions in C with suitable example. (10 marks)
b) What is the relationship between the pointer and arrays? How do access character string through pointers. (5 marks)
35. a) Explain decision making and branching statements with example. (10 marks)
b) What are the steps involved in executing a C program? (5 marks)

(2 x 15 = 30 Marks)
