

**E 2501**

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Reg. No.....

Name.....

**B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, MAY 2016**

**Second Semester**

Vocational Course—PROGRAMMING LANGUAGE I—ANSI-C

(For Vocational Subject—Computer Applications of Model II Physics)

[2013 Admission onwards]

Time : Three Hours

Maximum Marks : 60

*Candidates can use Non-Programmable Scientific calculator / Mathematical tables.*

**Part A**

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

1. What is the hierarchy of commonly used operators in C ?
2. What is the main difference between variable and constant ?
3. Explain escape sequence character in C.
4. What do you mean by console IO functions ?
5. Write a syntax of while loop.
6. What is output of following program ?

```
main ()  
{ int a[7] = {11, 12, 13, 14, 15, 16, 17};  
  int i;  
  printf("content of array");  
  for(i = 0; i <= 6; ++i);  
  { printf("%d\t",a[i]); }  
}
```

7. What are the rules to declare one dimensional array ?
8. Explain recursion.

(8 × 1 = 8)

**Turn over**

**Part B**

Answer any six questions.  
Each question carries 2 marks.

9. Enlist the features of C.
10. If  $a = 10$ ,  $b = 12$ ,  $c = 0$ , find the values of the expressions given below :
  - (a)  $a != 6 \ \&\& \ b > 5$
  - (b)  $a == 9 \ || \ b < 3$
11. Explain type identifiers in C.
12. Convert the following mathematical expressions into C expressions :
  - (a)  $z = e^x + \log y + pqr(s-t)$
  - (b)  $T = \sin(a)\cos(b) - |g-h| + \sqrt{ab}$
13. Write a short note precedence and order of evaluation.
14. Explain any two bitwise operators with suitable example.
15. Explain the following *g* functions :
  - (i) `getch()` and
  - (ii) `clrscr()`.
16. Explain switch statement with its syntax and example.
17. Explain nested for loop with an example.
18. What is recursion ? Explain with suitable example.

(6 × 2 = 12)

**Part C**

Answer any four questions.  
Each question carries 4 marks.

19. Write a C Program to find the maximum of three numbers using conditional operators.
20. Write a C Program to print transpose of matrix.
21. Write a C Program to print equivalent hex number of given decimal number.
22. Write a C Program to find sum of  $1 + 2 + 3 + \dots + n$
23. Write a C language program using recursion to calculate  $m^n$ .
24. Write a C language program using recursion in terms of Fibonacci series.

(4 × 4 = 16)



**Part D**

*Answer any two questions briefly.  
Each question carries 12 marks.*

25. Write a C Program to find the position of given number in array.
26. Write a C language program to display the largest element in the matrix.
27. Write a C language program to generate and print a Floyd's triangle.
28. Write a C language program to read one matrix and find the sum of its diagonal elements.

(2 × 12 = 24)