E 1410 **(Pages : 3)** **Reg. No.....**

Name.....

C.B.C.S.S. – B.Sc. DEGREE EXAMINATION, APRIL 2011

Second Semester

Vocational Course – PROGRAMMING LANGUAGE I – ANSI–C

(For the Vocational Subject Computer Applications of Model II B.Sc. Physics)

Time : Three Hours Maximum Weight : 25

Part A

Answer **all** *questions from this section.*

Each bunch of four questions carries a weight of 1.

I. Fill in the blanks with appropriate words :

1. A '# define' instruction defines value to a ——— for use in the program.
2. The backslash character constant '\t' means———.
3. ——— is the output for the expression 9-(12/(3+3)*2)–1.
4. Arithmetic operator has higher priority over ——— operators in ANSI–C.

II. Fill in the blanks with appropriate words :

5. The ——— operator return the number of bytes the operand occupies.
6. The conversion spicier ——— is used to print integers in hexadecimal form.
7. For using character function we must include the header file ——— in the program.
8. The ——— statement, when executed in switch statement causes immediate exit from the structure.

III. Select the most appropriate :

9. Range of signed character (char) type :
   (a) –126 to 127. (b) –128 to 127.
   (c) +128 to –127. (d) –127 to 128.
10. Choose the correct expression for the algebraic expression of (ab/c) :
   (a) a x b-c. (b) a*b/c.
   (c) a/c*b. (d) a x b/c.
11. Which is not 'math' function ?
   (a) pow (x, y). (b) cos (x).
   (c) sec (x). (d) sqrt (x).

Turn over

12. Output for the expression 'for (n=1; n+=2; n<10)' :
    (a) 23 (b) 24
    (c) 22 (d) 25

IV. Select the most appropriate :

13. Which is not a rule for **'identifier'**?
    (a) Can't use keyword.
    (b) Must not contain white space.
    (c) Only first 31 characters are significant.
    (d) Can use functions.

14. Which is **'special'** operator in C?
    (a) Relational operator. (b) Comma operator.
    (c) Bitwise operator. (d) Arithmetic operator.

15. Which **'scanf'** code is used to read single character?
    (a) % char. (b) % d.
    (c) % c. (d) c%.

16. Choose the correct shorthand operator for the statement **' a = a* (n–1)'** :
    (a) a x = n + 1. (b) a* = n + 1.
    (c) a (n + 1) = *a. (d) a* = n – 1.

(4 × 1 = 4)

Part B

Answer any **five** *questions from this section.*
Each question carries a weight of 1.

17. Describe logical 'AND' (Logical AND) operator with an example.
18. What is Scope resolution operator ? Describe its function.
19. Explain the general form of Output function used in C-language.
20. What is meant by tokens ?
21. Describe the function of 'GOTO' Statement.
22. How does the two dimensional arrays are initialized?
23. What are all the different types of 'IF' statements used in C ? Explain any one.
24. What is Conditional Operators ? Explain.

(5 × 1 = 5)

Part C

Answer any **four** *questions from this section.*
Each question carries a weight of 2.

25. Write a C–Program to find the roots of quadratic equation.
26. Write a program to find sum of the first n-odd integers (i.e. : 1 + 3 + 5 + ... + 2n – 1).
27. Write a C–program to convert the given temperature in Fahrenheit to Celsius.
28. Write a program to count the number of boys whose weight is less than 50 kg and height is greater than 170 cm.
29. Read four values 'a,b,c & d' from the terminal and evaluates the ratio of (a+b) to (c–d) and prints the result (c–d) is not equal to zero.
30. Given the four sides of rectangle. Write a program to find out its area and perimeter.

(4 × 2 = 8)

Part D

Answer any **two** *questions from this section.*
Each question carries a weight of 4.

31. What is function ? Write a program with function to add, subtract, multiply and divide two complex numbers (X+iY) and (A+iB).
32. Write the Syntax for 'Do-While' statement ? Write a program to explain it.
33. Write a C-Program using recursive function to evaluate
$F(X) = X - X^3/3\,! + X^5/5! - X^7/7! + ...$

(2 × 4 = 8)