

SECOND SEMESTER B.Sc. DEGREE EXAMINATION, MAY 2014

(U.G.—CCSS)

Complementary Course—Computer Science

CS 2C 02—PROGRAMMING IN 'C'

Time : Three Hours

Maximum : 30 Weight

Section A*Answer all questions.*

1. Which of the following is not a valid C variable name ?

- | | |
|--------------------------|-----------------|
| (a) int number. | (b) float rate. |
| (c) int variable_ count. | (d) int \$main. |

2. What is the output of this C code ?

```
# include < stdio. h >
# define a 10
int main ()
{
    const int a = 5 ;
    printf (" a = % d\n", a) ;
}
```

- | | |
|------------------------|--------------------|
| (a) a = 5. | (b) a = 10. |
| (c) Compilation error. | (d) Runtime error. |

3. What is the output of the following C code ?

```
# include < stdio.h >
int main ()
{ int i = 0 ;
  int x = i ++, y = ++ I ;
  printf (" %d %d\n", x, y) ;
  return 0 ;
}
```

- | | |
|-----------|----------------|
| (a) 0, 2. | (b) 0, 1. |
| (c) 1, 2. | (d) undefined. |

Turn ov

4. Which of the following cannot be used as LHS of the expression in for (exp 1 ; exp 2 ; exp 3) ?
- (a) Variable. (b) Function.
(c) Typedef. (d) Macros.
5. How many actual arguments shall be used for a "normal function call" for each formal argument ?
- (a) 2. (b) 3.
(c) 0. (d) 1.
6. String is a data type (TRUE/FALSE).
7. Which of the following is not a storage class in C ?
- (a) Auto. (b) Struct.
(c) Extern. (d) Static.
8. What is the associativity of the conditional operator ?
- (a) Left to Right. (b) Right to Left.
(c) Top to Bottom. (d) Bottom to Top.
9. What is the output of the following function ?
- ```
int f1 (int a , int b)
{
 return (f2 (20)) ;
}

int f2 (int a)
{
 return (a* a) ;
}
```
10. Size of a union is determined by size of the \_\_\_\_\_.
- (a) First member in the union. (b) Last member in the union.  
(c) Biggest member in the union. (d) Sum of the sizes of all members.

11. The process of allocating memory at run time is called \_\_\_\_\_.
12. Which type of files can't be opened using fopen () ?
- (a) .txt. (b) .bin.  
(c) .c. (d) None of the mentioned.

(12 × ¼ = 3 weightage)

### Section B

*Answer all questions.*

13. What is an identifier ?
14. Define an array. How arrays can be declared ?
15. What is purpose of register storage class ?
16. Define a pointer.
17. What is precedence of operators ?
18. Distinguish between break and continue statement in C.
19. What is union ?
20. Define recursion.
21. What are formal arguments ?

(9 × 1 = 9 weightage)

### Section C

*Answer any five questions.*

22. Explain the structure of a C program.
23. Explain the working of do-while with an example.
24. Differentiate between a variable and a keyword.
25. Explain the syntax of else if ladder with suitable examples.
26. Write a program to reverse a number.
27. Write a program to find the sum of two matrices.
28. What is structure variable? How a structure variable can be accessed using pointer ?

(5 × 2 = 10 weightage)

**Turn over**

**Section D**

*Answer any two questions.*

29. (a) Write a program to merge two sorted array in to a single sorted array in ascending order.  
(b) Write a function to remove duplicates from an ordered array.
30. What are strings ? How they are represented in memory ? Write a program to reverse a string.
31. What are sequential files ? Explain various file handling functions with suitable examples.

(2 × 4 = 8 weightage)