

**SECOND SEMESTER (CUCBCSS—UG) DEGREE EXAMINATION, MAY 2019****Microbiology**

MBY 2C 07—C LANGUAGE, DATABASE MANAGEMENT SYSTEM AND SQL

Time : Three Hours

Maximum : 64 Marks

**Section A***Answer all questions.**Each question carries  $\frac{1}{2}$  mark.*

1. Which of the following is a not a valid data type in C ?  
(a) int. (b) char.  
(c) string. (d) double.
2. ———Symbol is used in C for bitwise AND operation.
3. Which of the following qualifier is used for printing double **data type** in scientific form in C ?  
(a) %s. (b) %e.  
(c) %lf. (d)
4. What will be the output of the following C code ?

```
#include<stdio.h>
```

```
int main()
```

```
inta=1,b=1,c;
```

```
c=a+++b;
```

```
printf("%d,%d", a, b);
```

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

Turn over

5. What will be the default storage class for local variables in C ?  
(a) Auto. (b) local.  
(c) register. (d) None of the above.
6. In Relational model, cardinality is termed as  
(a) Number of tuples. (b) Number of attributes.  
(c) Number of tables. (d) None of the above.
7. Relational Database consists of  
(a) Fields. (b) Tables.  
(c) Records. (d) Keys.
8. DML stands for
9. In SQL, the \_\_\_\_\_ command is used for deleting a table from the database.
10. BCNF stands for
11. Say True or False :  
*volatile* is a valid keyword in C.
12. Say **True** or False :  
Cartesian product in relational algebra is binary operator.

(12 x V2 = 6 marks)

### Section B

Answer **all** questions.

Each question carries 2 marks.

13. What is a flowchart ?
14. List the different logical operators in C.
15. Explain the syntax of *if-else* construct in C.
16. What is recursive function ?
17. Explain the use of *break* statement in C.

18. What do you mean by pointer variable in C ?
19. List any *two* aggregate functions in SQL.
20. Distinguish between primary key and foreign key.
21. What do you mean by functional dependencies ?
22. Define Views.

(10 x 2 = 20 marks)

### Section C

*Answer any six questions.*

*Each question carries 3 marks.*

23. Write a C program to print the **Fibonacci number from 1 to 50.**
24. **Explain the syntax of *do..while* loop construct in C.**
25. **Explain the differences between *structure* and *union*.**
26. **Describe the purpose of database management systems.**
27. **What is DDL ? Explain the syntax and function of any one SQL DDL statement.**
28. **What do you mean by normalization ? Explain INF with illustration.**
29. **Explain the responsibilities of DBA.**
30. **Create a student table with following attributes Name, RegNo, Subject, Mark 1, Mark 2 and Mark 3 and write following SQL queries:**
  - (a) **List the Name and RegNo of all students whose total mark in all the three subject is greater than 80 % of the total mark.**
  - (b) **List the Name and RegNo of the student who received highest marks in physics subject.**

*[Hint : Mark 1, Mark 2 and Mark 3 are limited to maximum 100 and each represent different topic in each subject]*

(6 x 3 = 18 'marks)

**Turn over**

## Section D

*Answer any two questions.*

*Each question carries 10 marks.*

31. What is a user-defined function in C ? How it differs from library functions in C ? Illustrate the way of prototyping, declaring and defining a user-defined function in C.
32. Give a detailed account on different relational algebra operation with example.
33. What is entity-relationship diagram ? Explain it with suitable example.

(2 x 10 = 20 marks)