C 83016 (Pages : 3) Name.....

Reg. **No**.....

SECOND SEMESTER B.Sc. DEGREE EXAMINATION, MAY 2015

(CUCBCSS–UG)

Complementary **Course—Microbiology**

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

Time : Three Hours Maximum : 80 Marks

Part A

Answer **all** *questions.*
Each question carries ½ *mark.*

_____ is an entity whose value remains fixed.

2. What is the output of the following program ?

```
# include <stdio.h>.c) ;
int main 0

int a = 300, b.c ;
if (a> = 400)
b = 300
c = 200
printf("%d%d\n"b,c) ;
return 0;
```

3. Address of a floating point variable is always a whole number. (True/False)
4. Structure **elements** can be accessed through a structure variable using
5. The storage size of float type is _____.
6. If two strings are identical, then **strempf( )** function returns _____
7. A collection of related data is known as _____
8. _____is a collection of programs that enables used to create and maintain a database.
9. The database conceptual schema **is defined** using _____language.

Turn over

10. The aggregate function used to find the total number of records of a table is
11. AS clause is used in SQL for
12. Duplication of data in a database is called

(12 x ½ = 6 marks)

Part B

Answer **all** *questions.*
Each question carries 2 *marks.*

13. **What are the purpose of main ( ) function ?**
14. **Explain the general form of if.... else statement with example.**
15. **What do the header files usually contains ?**
16. **What is a conditional operator ? Give its syntax.**
17. **Define external and register storage classes.**
18. **What are the advantages of using a DBMS ?**
19. **Define primary key of a relation.**
20. **What is an E-R diagram ? What are its components ?**
21. **What is the difference between TRUNCATE and DROP statements.**
22. **Explain the duties of Data Base Administrator.**

(10 x 2 = 20 marks)

Part C

Answer any **six** *questions.*
Each question carries 5 *marks.*

23. **Define algorithm and flowchart with a suitable example.**
24. **Using conditional operator determine whether the character entered is a lower case alphabet or not.**
25. **Write a program to find the sum of digits of a number into a single digit.**
26. **Define function prototype. Write a function to find the prime factors of a number.**
27. **What are the advantages and disadvantages of DBMS ?**
28. **Define 2NF, 3NF and BCNF.**
29. **Distinguish between relational algebra and relational calculus.**
30. **Consider the following relations**

    Emp(eid. ename. **age. salary)**

    Works(eid. **did, time)**

    Dept(did. dname. **budget.** managerid)

    Write SQL DDI statements required to create the above relations.

(6 x 5 = 30 marks)

Part D

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

31. **What are operators ? Explain different types of operators in C with suitable examples.**

32. **What are strings ? Explain any three string handling functions with suitable examples.**

33. **With the help of a neat diagram, explain about the architecture of a DBMS.**

(2 x 12 = 24 marks)