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Reg. No:...........................

Name: ....

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Fourth Semester B.Sc Degree Examination, March/April 2020

BCSS4B06 – Fundamentals of Database Management Systems & RDBMS

(2018 Admission onwards)

Time: 3 hours

Max. Marks: 80

PART A

Answer all questions. Each question carries *one* mark

1. Relational algebra is :

    a) data definition language

    b) meta language

    c) procedural query language

    d) non procedural language

2. Consider the join of a relation R with a relation S. If R has m tuples and S has n tuples. The maximum and minimum size of the join respectively are :

    a) m+n and 0

    b)m+n and [m+n]

    c)mn and m+n

    d)mn and 0

3. The minimal super keys are called:

    a) Primary key

    b) Candidate key

    c) Foreign key

    d) Reference key

4. The entity relationship set is represented in E-R diagram as

    a) Double diamonds

    b) Undivided rectangles

    c) Dashed lines

    d) Diamond

5. Which one of the following design is both software and hardware independent?

    a) view

    b) conceptual

    c) physical

    d) none of these

6. The common column is eliminated in

    a)Theta join

    b)Inner join

    c)Natural join

    d)Composed join

7. A relation in third normal form is in…………..............form

8. What is the degree of a table with 100 rows and 10 columns?

9. A person who has central control over the system is called a……………………..

10. For each attribute, there is a permitted set of values called……………………………

11. Rollback of transactions is normally used to ....

12. Duplicate data is referred to as.....................

(12x1=12 Marks)

PART B
Answer all questions. Each carries *two* marks

13. What is DBA?

14. Define database recovery.

15. What do you mean by views?

16. Explain the various data types in SQL.

17. What is OQL in dbms?

18. Name two integrity rules.

19. What is weak and strong entity?

(7x2=14 Marks)

PART C
Answer any *six* questions. Each carries *five* marks

20. Define Data Independence and list its types

21. Compare unique key and primary key.

22. Discuss the concept of joins.

23. What are the properties of transaction?

24. Explain the syntax of any four DDL commands.

25. What is trigger? List the requirements needed to design a trigger.

26. Why do we need multimedia database?

27. List and explain ACID properties.

(6x5=30 Marks)

PART D
Answer any *three* questions. Each question carries *eight* marks

28. Explain three level schema architecture of DBMS.

29. Explain two-phase locking protocol.

30. Explain ER model.

31. Explain normalization in detail.

32. What is cursor? Explain the working of cursor.

(3x8=24 Marks)

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FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE
Fourth Semester BSc Degree Examination, March/April 2020
A13- Object Oriented Programming Using C++
(2018 Admission onwards)

Time: 3 hours   Max. Marks: 80

PART A
Answer all questions. Onemark each

1. Function is an example for .... data type.

2. Give an example for OOP language (other than C++).

3. .... is the notation for *address of a member of a class*.

4. <cctype> header file is used for ....

5. The stream that supplies data to the program is known as ....

6. Which is *get from* operator?

7. .... is an exit controlled loop.

8. dynamic_cast is used for ....

9. tellg() is used for ....

10. Write the prototype for constant function.

11. .... is the base class of ostream.

12. →* is used for ....

                                              (12 x 1 = 12 Marks)

Part B
Answer all questions. 2 mark each

13. What is destructor?

14. What are the characteristics of procedure-oriented programming?

15. What is encapsulation?

16. What are the bitwise operators used in C++?

17. What are the characteristics of static member variable?

18. What are the different ways to create symbolic constants?

19. What is *this* pointer?

                                              (7 x 2 = 14 Marks)

Part C
Answer any six questions. 5 mark each

20. What is inline function? Illustrate it with an example.

21. Write a program to store odd and even numbers in two different files.

22. Give an example to return an object from the function.

23. Discuss about different programming approaches.

24. What are the applications of OOPs?

25. What are the user-defined data types in C++?

26. Distinguish between virtual base class and virtual function.

27. What are the functions used to do I/O operations on files? Explain with an example.

(6 x 5 = 30 Marks)

Part D
Answer any three questions. 8 mark each

28. Explain the characteristics of OOP.

29. Write a program to print the marklist using array of structures.

30. What are the parameter passing techniques used in functions. Give examples

31. Explain various operators available in C++.

32. Write a program to find the area of a circle, sphere and rectangle using function overloading.

(3 x 8 = 24 Marks)

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PART - A

Answer all questions, Each question carries One mark

1. The capacity to provide failure free service is called _____.

2. The capability to understood, learned and used is called _____.

3. SDLC stand for _____.

4. The measure of degree of independence between modules is called _____.

5. The context of the software to be developed is represented in Level _____ of the DFD.

6. Validation is the process of _____.

7. Locating and correcting errors is called _____.

8. Unit testing is done by _____.

9. OOAD stands for _____.

10. CFG stands for _____.

(10x1=10 Marks)

PART - B

Answer all questions, Each question carries Two marks

11. Differentiate Process and Product.

12. What are functional requirements?

13. What is Entity Relationship diagram?

14. Define Inspection in the coding process.

15. What is Loop Testing?

(5x2=10 Marks)

PART - C
Answer any *Five* Questions, Each question carries Four Marks

16. Explain Evolutionary and Throw Away Prototyping.

17. Differentiate Time boxing model and Build and Fix Model.

18. What are Cardinality and Modality?

19. Explain Feasibility Analysis.

20. What is Critical Design Review?

21. What are Top-down Programming and Bottom-up Programming?

22. What are the characteristics of a Software Test?

23. Discuss Black Box Testing.

(5x4=20 N

PART - D
Answer any *Five* Questions, Each question carries Eight Marks

24. Explain various Software Quality Attributes.

25. Illustrate Waterfall model with its merits and demerits.

26. Explain Use Case Diagram with a suitable example.

27. What is Cohesion and what are the various types of cohesion?

28. Discuss Design Methodology with its major steps.

29. Give a detailed note on Software Code along with its characteristics.

30. What is a test plan and what are its components?

31. Explain testing with its Levels?

(5x8=40 N