AF-1611 **BIT4C1**

B.Sc. DEGREE EXAMINATION, APRIL 2010

Fourth Semester

Information Technology

DATABASE MANAGEMENT SYSTEM

(CBCS—2008 Onwards)

Duration : 3 Hours Maximum : 75 Marks

Part - A (10 × 2 = 20)

Answer **All** the questions.

1. How does data base differ from a data file ?

2. Name any two entities and attributes in a college system.

3. Define Domain.

4. What is meant by Normalisation ?

5. List any two network types.

6. How to define distributed database ?

7. Define Table.

8. What is a view ?

9. Give the expansion for SQL.

10. What is meant by a Trigger ?

Part - B (5× 5 = 25)

Answer **All** the questions.

11. (a) Give the purpose of having database system.

Or

(b) What are the blocks used in an ER diagram ?

12. (a) Discuss on First Normal Form.

Or

(b) Explain the concept of Functional dependency.

13. (a) Mention the need for paralled systems.

Or

(b) How Query processing occurs in distributed databases ?

14. (a) What is meant by data integrity ?

Or

(b) Explain the concept of Indexing.

15. (a) How to initiate the Triggery ?

Or

(b) How Query processing occurs in SQL ?

Part - C (3 × 10 = 30)

Answer any **Three** questions.

16. Construct a ER diagram for the occurrence of transactions in order processing system.

17. How Redundancy can be controlled through Normalisation ?

18. Compare and contrast Homogeneous database with Heterogeneous databse.

19. How to create and maintain tables ?

20. State the differences between procedure and function.

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AF-1609 **BIT2C1**

B.Sc. DEGREE EXAMINATION, APRIL 2010

Second Semester

Information Technology

PROGRAMMING IN C AND DATA STRUCTURES

(CBCS)

(2008 Onwards)

Duration : 3 Hours Maximum : 75 Marks

Part - A (10 × 2 = 20)

Answer **All** Questions

1. Differentiate Break and Continue Statements.

2. What is a Macro ?

3. How arrays can be initialised ?

4. What is Dynamic memory allocation ?

5. Define a Structure.

6. What is a Datafile ?

7. Differentiate Prefix with that of Postfix by an example.

8. What is a Queue?

9. Specify any two applications of Binary trees.

10. Define a List.

Part - B (5 × 5 = 25)

Answer **All** questions.

11. (a) Write down the rules to form identifiers and compare it with keywords.

(*Or*)

(b) How can you define and access a function ?

12. (a) How arrays has been processd ?

(*Or*)

b) Explain the String Handling functions of C.

13. (a) Discuss about unions in detail.

(*Or*)

(b) How can you create a datafile? Explain.

14. (a) Describe Stack operations in brief.

(*Or*)

b) Explain Queue representation in brief.

15. a) Write briefly about Binary trees and its Traversal.

(*Or*)

b) Discuss about any one application of Binary trees.

PART - C

(3 × 10 = 30)

Answer any **Three** Questions.

16. Describe the branching and looping structures in 'C' .

17. Write a 'C' program to sort the given set of numbers.

18. Write a 'C' program to copy the content of one file to another file.

19. Describe the representation of stacks in 'C' .

20. How lists can be represented in 'C' ? Explain.

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AF-1610 **BIT3C1**

B.Sc. DEGREE EXAMINATION, APRIL 2010

Third Semester

Information Technology

PROGRAMMING IN C++ AND ALGORITHMS

(CBCS)

(2008 Onwards)

Duration : 3 Hours Maximum : 75 Marks

Part - A (10 × 2 = 20)

Answer **All** Questions**.**

1. What is the need for type cast operator ?

2. What is the application of the scope resolution operator in C++ ?

3. What is a Constructor ?

4. Give the importance of Destructors.

5. Describe the syntax of an operator function.

6. What is the purpose of 'this' pointer ?

7. List out the merits and demerits of depth - first search.

8. Define Backtracking.

9. What is Huffman Code.

10. What is the longest - common sequence problem.

Part - B (5 × 5 = 25)

Answer **All** Questions**.**

11. (a) How are classes and member functions defined in C++ ?

(*Or*)

(b) Explain Function overloading with example.

12. (a) Explain copy constructor with example program.

(*Or*)

(b) Write a program to construct a matrix of size $m \times n$.

13. (a) Write a program to implement scalar multiplication of a vector. Overload the * , >> and << operators using friend functions.

(*Or*)

(b) Explain virtual base class with an example.

14. (a) Write a program to perform Binary search.

(*Or*)

(b) Write a program to perform insertion sort.

15. (a) Explain Prim's algorithm.

(*Or*)

(b) Explain the algorithm of Warshall.

Part - C (3 × 10 = 30)

Answer any **Three** Questions.

16. Explain the following :

(a) Array of objects.

(b) Objects as function arguments.

(c) Pointer to member.

17. Write a program to perform Data conversion using Constructor.

18. Explain different forms of inheritance with example.

19. Explain Quick sort algorithm.

20. What is coin changing problem ? How do you apply Knapsack technique to solve it ?

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AF-1608 **BIT1C1**

B.Sc. DEGREE EXAMINATION, APRIL 2010

First Semester

Information Technology

PRINCIPLES OF INFORMATION TECHNOLOGY

(CBCS)

(2008 Onwards)

Duration : 3 Hours Maximum : 75 Marks

Part - A (10 × 2 = 20)

Answer **All** questions

1. What is computer ?

2. What is server ?

3. What do you mean by user interface ?

4. what is spread sheet ?

5. What do you mean by online information service ?

6. What is called communications channel ?

7. What do you mean by compression ?

8. What do you mean by master file ?

9. Define MIS.

10. What do you mean by programming ?

Part - B (5 × 5 = 25)

Answer **All** Questions.

11. a. Write a note on types of computers.

(Or)

b. Explain about interactive communications in detail.

12. a. How do you create charts in MS Excel? Explain with example.

Or

b. What do you mean by project management software? Explain about it.

13. a. Write about FTP and Telnet.

Or

b. What are the functions performed by a communications software before establishing connections? Explain in detail.

14. a. What six factors can be used to distinguish secondary storage device?

Or

b. Write the disadvantages of file management system.

15. a. Define System. Explain its purpose with example.

Or

b. Explain about OOP.

PART - C (3 × 10 = 30)

Answer any **Three** questions.

16. Explain the revolution in computers and communications in detail.

17. Explain database software in detail with suitable examples.

18. How will you handle shared resources over networks? Explain.

19. Explain about the data management systems.

20. What are the six phases of system analysis and design? Explain with neat diagram.

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