AF-1577 **BCE4C1**

B.Sc. DEGREE EXAMINATION, APRIL 2010

Fourth Semester

Computer Science

JAVA PROGRAMMING

(CBCS—2008 Onwards)

Duration : 3 Hours Maximum : 75 Marks

Part - A (10 × 2 = 20)

Answer **All** the questions.

1. How are data and methods organized in an object-oriented program ?

2. What is world wide web ?

3. What are the relational operators supported by Java ?

4. What is an empty statement ?

5. When do we declare a member of a class static ?

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6. What are the applications of wrapper classes ?

7. What is a package ?

8. How do we start a thread ?

9. What is a local applet ?

10. How is Java's coordinate system organized ?

Part - B (5 × 5 = 25)

Answer **All** the questions.

11. (a) Write down the features of Java.

Or

(b) What is a token ? List the various types of tokens supported by Java.

12. (a) Explain any five mathematical functions in Java.

Or

(b) Compare while and do....while.

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13. (a) What is a constructor ? What are its special properties ?

Or

(b) Describe the various forms of implementing interfaces.

14. (a) How do we design a package.

Or

(b) Explain how exception handling mechanism can be used for debugging a program.

15. (a) Describe the various sections of webpage.

Or

(b) Explain the purpose of each argument used in the method drawArCC.

Part - C (3 × 10 = 30)

Answer any **Three** questions.

16. Discuss the basic concepts of OOP.

17. Write a Javaprogram to complete the sum of the digits of given integer number.

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18. Describe different forms of inheritance with examples.

19. Explain the complete life cycle of a thread.

20. Write applets to draw the circle inside a square.

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AF-1575 BCE2C1

B.Sc. DEGREE EXAMINATION, APRIL 2010

Second Semester

Computer Science

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 purpose of reference variable ?

2. How do structures in C and C++ differ ?

3. How is dynamic initialization of objects achieved ?

4. Describe the importance of destructors.

5. Why is it necessary to overload an operator ?

6. When do we make a class virtual ?

7. Define Topological sorting.

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8. What is depth first search ?

9. What is coin changing problem ?

10. What is longest - common - subsequence problem ?

PART - B (5 × 5 = 25)

Answer ALL Questions

11. a. Explain static member variables and member functions.

(*Or*)

b. Discuss the structure of a C++ program

12. a. Explain parameterized constructors.

(*Or*)

b. Explain copy constructor.

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13. a. Write a program to overload '*' operator to perform scalar multiplication of a vector using friend function.

(*Or*)

b. Explain with example, the virtual functions.

14. a. Explain Strassen's matrix product algorithm.

(*Or*)

b. Explain insertion sort algorithm

15. a. Explain continuous Knapsack algorithm

(*Or*)

b. Explain Knuskal's algorithm

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PART - C

(3 × 10 = 30)

Answer any THREE Questions.

16. Explain various control structures available in C++.

17. Create two classes DM and DB which store the value of istances in meters, centimeters and feet, inches respectively. Write a pro gram that can read values for the class objects and add one object DM with another object of DB using friend function.

18. Explain various forms of inheritance with example.

19. Write a C++ program to perform Quick sort.

20. Write Dijkstra's algorithm and implement it using C++.

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AF-1576 **BCE3C1**

B.Sc. DEGREE EXAMINATION, APRIL 2010

Third Semester

Computer Science

DATA BASE MANAGEMENT SYSTEMS

(CBCS / 2008 Onwards)

Duration : 3 Hours Maximum : 75 Marks

Section - A (10 × 2 = 20)

Answer ALL Questions.

1. What are the two types of database sub system ?

2. Define four types of mapping cordinalities.

3. What are the two ways of using functional dependencies ?

4. Define third normal form.

5. Define two types of server system.

6. What is hash partitioning in I/O parallelis ?

7. What is data integrity ?

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8. Define view.

9. Differentiate between procedure and function.

10. What is cursor ?

Section - B (5 × 5 = 25)

Answer ALL Questions.

11. a. List out some representative applications of data-base system.

(*Or*)

b. Write short notes on aggregation.

12. a. Write short notes on larger schema.

(*Or*)

b. Explain how to name attributes and relationships

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13. a. What are the most prominent architectural models for parallel machines ?

Or

b. Write short notes on data transparency.

14. a. Write short notes on data manipulation statement with example.

Or

b. Write short notes on views

15. a. Explain Triggers with example

Or

b. Write short notes on transaction.

Section - C (3 × 10 = 30)

Answer any THREE Questions.

16. Explain database Architecture.

17. Explain specialization and generalization concept of E-R diagram.

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18. Explain distributed transaction and its structure. Also, explain possible failure modes.

19. Who are privilege users ? Explain their role in database administration.

20. Explain procedures and functions with examples.

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AF-1574 BCE1C1

B.Sc. DEGREE EXAMINATION, APRIL 2010

First Semester

Computer Science

PROGRAMMING IN C AND DATA STRUCTURE.

(CBCS / 2008 Onwards)

Duration : 3 Hours Maximum : 75 Marks

PART - A (10 × 2 = 20)

Answer ALL Questions.

1. What is a symbolic constant ? How is a symbolic constant defined ?

2. What is the purpose of break and continue statements ?

3. What is meant by dynamic memory allocation ?

4. In what way does an array differ from an ordinary variable ?

5. What is a union ? How does it differ from a structure ?

6. State the different file type specifications used in fopen function

7. Define Queue.

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8. What are the drawbacks of using sequential storage to represent stacks and Queues ?

9. Define binary search tree ?

10. What is meant by strictly binary tree

PART - B (5 × 5 = 25)

Answer either (a) or (b) of the following :

11. a. Explain the various types of constants in C.

(*Or*)

b. Explain the following Input / Output functions used in C :

i) get char and put char

ii) gets and puts

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12. a. Explain the operations used on pointers.

(*Or*)

b. Write a program in C to sort a list of strings alphabetically using a two-dimentional character array.

13. a. Explain the usage of command Line parameters with an example.

(*Or*)

b. Write short notes on self-referential structures.

14. a. Explain how to insert and remove nodes from a list

(*Or*)

b. Explain the algorithm for evaluating a postfix expression.

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15. a. Write a nonrecursive routine to traverse a binary tree in inorder.

(*Or*)

b. Write short notes on binary tree representations.

PART - C (3 × 10 = 30)

Answer THREE out of FIVE

16. Explain the looping statements use in C with examples.

17. Explain how to pass functions to other functions.

18. Explain the difference between pass by value and pass by reference with examples.

19. Explain how to implement the push and pop operations of a stack.

20. Explain how to represent lists as Binary Trees.

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