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18CS45

Fourth Semester B.E. Degree Examination, June/July 2024 Object Oriented Concepts

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Explain various features of Object Oriented Paradigm. (08 Marks)
- b. "Name Space helps in preventing pollution of Global name space". Justify. (04 Marks)
- c. What is function overloading? Write a C++ program with three overloaded function to find, sum of two integers sum of two floating point number and sum of three integers. (08 Marks)

OR

- 2 a. List the difference between object oriented programming and procedure oriented programming? Mention the drawbacks of procedure oriented programming. (08 Marks)
- b. Explain inline function with an example. List out the conditions where inline function cannot be used. (04 Marks)
- c. Write a C++ program to create a student class with member variables : Stud_id, Stud_name and Marks for three test, Member function : to get the data using getdata(), display data on Console using display (). (08 Marks)

Module-2

- 3 a. Demonstrate array declaration, array initialization and print first n Even numbers in array using for-each loop in Java. (08 Marks)
- b. How "Compile once run anywhere" is implemented in Java? (04 Marks)
- c. Explain the structure of Java program and its keywords with example. (08 Marks)

OR

- 4 a. List and explain Java Buzzword. (08 Marks)
- b. Explain constructor and write a program for copyconstructor in C++. (04 Marks)
- c. Define polymorphism. Explain different types of polymorphism with example. (08 Marks)

Module-3

- 5 a. Describe the various levels of access protection available for classes and their implementation with suitable example. (08 Marks)
- b. Explain usage of super in Java with example. (08 Marks)
- c. Give the importance of finalize () method in garbage collection. (04 Marks)

OR

- 6 a. Elucidate the concept of inheritance and its classification using suitable sketches. (08 Marks)
- b. Write a Java program to illustrate Exception handling when a number is divided by zero and array has a negative index value. (08 Marks)
- c. When constructors are called in class hierarchy. (04 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

Module-4

- 7 a. Briefly explain role of interfaces while implementing multiple inheritance in Java with example. (08 Marks)
- b. Define package. What are the steps involved in creating user defined package with example. (04 Marks)
- c. How synchronization can be achieved between threads in Java? Explain with example. (08 Marks)

OR

- 8 a. Define the concept of multithreading in Java and explain different phases in life-cycle of a thread. (08 Marks)
- b. Explain isalive () and join () function in Thread with example. (04 Marks)
- c. Explain producer and consumer problem with example. (08 Marks)

Module-5

- 9 a. Explain the delegation Event model used to handle events in Java. What are events, event listeners and event handler in Java. (10 Marks)
- b. Explain key features of swings, write a swing program for implementing jbuttons. (10 Marks)

OR

- 10 a. Explain Adapter class and Inner class in detail. (10 Marks)
- b. Write a brief note on components and containers in swings. Explain Jcombobox, Jtextfield and Jlist with suitable code. (10 Marks)

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