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## Fourth Semester B.E. Degree Examination, June/July 2023 Object Oriented Concepts

Time: 3 hrs.

Max. Marks: 80

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

### Module-1

- 1 a. Differentiate between class and object. Write a C++ program to define a class called TIME with hour, minute and second as data members and read(), display() a member functions. (10 Marks)
- b. Explain the terms, encapsulation, polymorphism and inheritance in object oriented programming. (06 Marks)

OR

- 2 a. What is copy constructor? When the copy constructor is employed? Explain with syntax. (08 Marks)
- b. What is abstract class? How it supports runtime polymorphism? (02 Marks)
- c. What is function overloading? Explain with example. (06 Marks)

### Module-2

- 3 a. Explain different access specifiers in Java, with example. (06 Marks)
- b. List and explain the Java buzz words.
- i) `int num, den ;`  
`if (den != 0 && num/den > 2)`  
`{ }` (08 Marks)
- ii) `Int num, den ;`  
`if (den != 0 & num/den == 2)`  
`{ }`
- Compare and explain the above 2 code snippets. (02 Marks)

OR

- 4 a. What are command line arguments? Write a java program to read a number as command line argument and check whether it is odd or even. (06 Marks)
- b. What is type casting? Illustrate with an example? What is meant by automatic type promotion? (10 Marks)

### Module-3

- 5 a. Which is the alternative approach to implement multiple inheritances in Java? Explain with an example. (06 Marks)
- b. Create a try block that is likely to generate three types of exceptions and incorporate necessary catch blocks to handle them. (08 Marks)
- c. Write short notes on final keyword. (02 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.

OR

- 6 a. When will you define a method as static? What is the importance of static variable? What are the restrictions imposed on static method? Explain with an example. (05 Marks)
- b. What is instance variable hiding? How you overcome it? (05 Marks)
- c. Explain method overriding with an example. (06 Marks)

**Module-4**

- 7 a. What is meant by thread priority? How is it assigned? (06 Marks)
- b. Explain the two ways of creating a thread in Java, with example. (10 Marks)

OR

- 8 a. What is the need for synchronization? Explain with an example, how synchronization is implemented in Java? (08 Marks)
- b. Explain the adapter class with example. (04 Marks)
- c. Explain any two keyboard events. (04 Marks)

**Module-5**

- 9 a. What are applets? Explain the different stages in the life cycle of an applet? (10 Marks)
- b. Write the steps to create JTable. Write a program to create a table with column heading "Fname, Lname, Age" and insert atleast 5 records in the table and display. (06 Marks)

OR

- 10 a. Name and explain different types of swing buttons. Give their syntax. (10 Marks)
- b. Explain getDocumentbase and getcodebase in applet class. (06 Marks)

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