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## Fourth Semester B.E. Degree Examination, Jan./Feb. 2021 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. List out the differences between Procedure Oriented Language and Object Oriented Language. (06 Marks)
  - b. What is friend function in C++? List out the rules to declare the friend function in C++.

(06 Marks)

c. What is function overloading? Write a C++ program to define three overloaded functions area() to find area of circle, triangle and rectangle. (08 Marks)

OR

2 a. Explain the various features of OOC.

(06 Marks)

b. What is a constructor? Mention its types. Explain copy constructor with suitable code.

(08 Marks)

c. What is an inline function? Write a C++ function to find the factorial of a given number using inline function. (06 Marks)

Module-2

3 a. List and explain the Java Buzzwords.

(08 Marks)

b. Why Java Language is Platform Independent Language? Justify your answer.

(06 Marks)

c. Write a Java program to find the average and sum of following array elements {4, 8, 12, 16, 20} using foreach in Java. (06 Marks)

OR

4 a. List the different types of operators. Explain any three.

(08 Marks)

b. What is an array? Write a Java program to print sum of each row of two dimensional array.

For example: 
$$\begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \end{bmatrix}$$

O/p should be  $\begin{bmatrix} 6\\15\\24 \end{bmatrix}$ 

(08 Marks)

c. Explain switch case with an example.

(04 Marks)

Module-3

- 5 a. What is an exception? Explain exception handling in Java. (10 Marks)
  - b. What is package in Java? How package is created and imported, explain with an example program (including Execution steps). (10 Marks)



OR

- What is an interface? Explain how an interface can be implemented with suitable code.
  - What is Inheritance? Differentiate method overloading and method overloading with
  - Explain any four Built-in exception classes with an example program.

(06 Marks) (08 Marks)

Module-4

- What are threads? Explain two ways of creation of threads with suitable code. What is synchronization in Java? Explain synchronization can be implemented with producer-consumer example program. (10 Marks)
- OR 8 What is meant by deadlock? How to avoid deadlock? Give example. What is Event handling in Java? Write a Java program to demonstrate Mouse Events (10 Marks)
- Module-5 What is an applet? Explain the life cycle of an applet? 9 Explain passing parameters in Applets with suitable code. (10 Marks) (10 Marks)
- Explain the following with a suitable code: 10
  - (i) JLabel
  - (ii) JTextField
  - (iii) JList
  - (iv) JTable

(20 Marks)