

# CBCS SCHEME

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15CS45

Fourth Semester B.E. Degree Examination, June/July 2018

## 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. State the important features of Object Oriented programming paradigm. (08 Marks)  
b. Write a C++ program to get employees details (empno, ename, bsalary(initialized to 1000 by constructor) and allowance) of Employee class through keyboard using the method Getdata( ) and display them using the method Dispdata( ) on console in the format empno, ename , bsalary, allowance. (08 Marks)

OR

- 2 a. Describe function Prototype, with an example. (04 Marks)  
b. Explain namespace, with an example. (04 Marks)  
c. Define Function Overloading and write a C++ program for finding areas of circle ( $\pi * r * r$ ), rectangle ( $l * b$ ) and square ( $x * x$ ) by getting r, l, b and x through keyboard and printing the areas on console using the method Area( ) applying the concept of function overloading. (08 Marks)

### Module-2

- 3 a. State the features used in C++ which are eliminated in Java. Why? (04 Marks)  
b. Discuss briefly the concept of byte code in Java. (04 Marks)  
c. Explain the structure of a Java program and its keywords with an example. (08 Marks)

OR

- 4 a. How arrays are defined in Java? Explain with an example. (04 Marks)  
b. Elucidate how Java is a platform independent language, with neat sketches. (06 Marks)  
c. Write a Java program to print factorial of the number 'n' using for loop. (06 Marks)

### Module-3

- 5 a. Explain package and its types and import command in Java with examples. (08 Marks)  
b. Write a Java program to define an interface called Area which contains method called Compute( ) and calculate the areas of rectangle ( $l * b$ ) and triangle ( $1/2 * b * h$ ) using classes Rectangle and Triangle. (08 Marks)

OR

- 6 a. Define the role of Exception handling in software development. (02 Marks)  
b. Write a Java program for illustrating the exception handling when a number is divided by zero and an array has a negative index value. (06 Marks)  
c. Elucidate the concept of inheritance and its classifications in Java with sketches. (08 Marks)

### Module-4

- 7 a. Define the concept of multithreading in Java and explain the different phases in the life cycle of a thread, with a neat sketch. (08 Marks)  
b. Discuss briefly Synchronization in Java (2). (02 Marks)  
c. Write an example Program for implementing static synchronization in Java. (06 Marks)

1 of 2

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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.

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OR

- 8 a. Elucidate the two ways of making a class threadable, with examples. (08 Marks)  
b. Describe the delegation event model and explain what happens internally at a button click. (08 Marks)

**Module-5**

- 9 a. Briefly explain Applets. (03 Marks)  
b. Elucidate Lucidly the skeleton of an Applet. (05 Marks)  
c. Write a Java program to play an audio file using Applet. (08 Marks)

OR

- 10 a. Write the advantages of swing over AWT. (04 Marks)  
b. Write a brief note on Containers in swing. (04 Marks)  
c. Write a swing program for displaying anyone of the options. C , C++ , Java, Php through the selection of Combo box by clicking show button. (08 Marks)

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