

## CBCS Scheme

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15CS45

**Fourth Semester B.E. Degree Examination, June/July 2017**  
**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. How do name space helps in preventing pollution of the global namespace. (04 Marks)  
 b. What is function polymorphism? Write a program in C++ using overloaded function area to find area of circle, triangle and rectangle. (06 Marks)  
 c. Explain how one can bridge two classes using friend function. Write a C++ program to find the sum of two numbers using bridge friend function add(). (06 Marks)

OR

- 2 a. Can you overload constructor and destructor? Justify with suitable program. (06 Marks)  
 b. What is reference variable? Explain. Also write a program in C++ to swap two int values and display the values before and after swapping. (05 Marks)  
 c. What are static member of a class? Write a C++ program to count the number of objects created. (05 Marks)

Module-2

- 3 a. How "compile once and run anywhere" is implemented in JAVA? Discuss. (04 Marks)  
 b. Write a program to calculate the average among the elements {8, 6, 2, 7} using for each in Java. How for each is different from for loop? (06 Marks)  
 c. Explain type conversion, with an example. (06 Marks)

OR

- 4 a. List and explain the java buzzwords. (08 Marks)  
 b. Explain the concepts of arrays in Java with examples. Also write a program that creates and initializes a four integer elements array. Find the sum and average of its values. (08 Marks)

Module-3

- 5 a. Briefly explain the role of interfaces while implementing multiple inheritances in Java. (06 Marks)  
 b. Compare and contrast method overloading and method overriding with suitable examples. (06 Marks)  
 c. When constructors are called in the class hierarchy? (04 Marks)

OR

- 6 a. With example, give two uses of super. (05 Marks)  
 b. Define exception. Write a program which contains one method which will throw IllegalAccessException and use proper exception handlers so that exception should be printed. (06 Marks)  
 c. Define package. What are the steps involved in creating user defined package with an example. (05 Marks)

**Module-4**

- 7 a. How synchronization can be achieved for threads in Java? Explain with syntax. (06 Marks)  
b. Explain the adaptor class with an example. (04 Marks)  
c. With the syntax explain the use of isAlive( ) and Join( ) methods. (06 Marks)

**OR**

- 8 a. What are the differences between suspending and stopping the threads? (05 Marks)  
b. Discuss delegation event model with suitable examples. (06 Marks)  
c. Explain inner class with example. (05 Marks)

**Module-5**

- 9 a. What are the two types of applets? Explain the skeleton of an applet. Enlist applet tags. (06 Marks)  
b. Write steps to create JTable, also write a program to demonstrate the same. (05 Marks)  
c. Explain the applet architecture and demonstrate how to pass parameters for font size and font name in applets. (05 Marks)

**OR**

- 10 a. Explain briefly the components and containers used in swings. (05 Marks)  
b. Explain JLabel and ImageIcon with program. (06 Marks)  
c. What are applets? Explain different stages in the lifecycle of an applet. (05 Marks)

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