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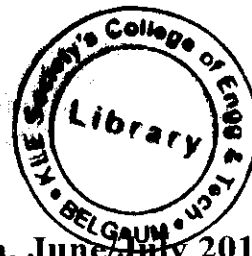
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CBCS SCHEME



USN

2 K L I B C S O I 9

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)

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)

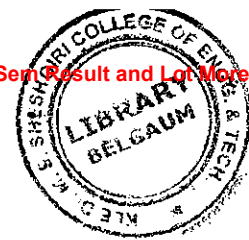
Module-5

- 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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15CS45

Fourth Semester B.E. Degree Examination, Dec.2017/Jan.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. List out the difference between procedure oriented program and object oriented program. (05 Marks)
- b. Explain function overloading with example. (05 Marks)
- c. What is constructor? List the different type of constructors and explain default constructor with example. (06 Marks)

OR

- 2 a. Explain the concept of object oriented program
 - i) Encapsulation
 - ii) Polymorphism
 - iii) Inheritance
 - iv) Data initialization. (08 Marks)
- b. Explain function prototyping with example. (05 Marks)
- c. How do namespace help in preventing pollution of the global name space? (03 Marks)

Module-2

- 3 a. Explain how java is robust and interactive. (05 Marks)
- b. Write java program to sum only first five elements of the array using for each looping. (05 Marks)
- c. Explain the operation of the following operators with example. (06 Marks)
 - i) %
 - ii) >>>
 - iii) &&

OR

- 4 a. Write java program to initialize and display different types of integer and floating point variables. (06 Marks)
- b. What is type casting? Illustrate with an example. What is meant by automatic type promotion? (06 Marks)
- c. How to declare two dimensional arrays in java? Explain with simple example. (04 Marks)

Module-3

- 5 a. Describe the various levels of access protections available for packages and their implications. (08 Marks)
- b. Give the basic form of an exception handling block. (04 Marks)
- c. What is the importance of the clause finally? (04 Marks)

OR

- 6 a. Define inheritance. List the different types of inheritance. (05 Marks)
- b. Illustrate with example a super class variable can reference a subclass object. (06 Marks)
- c. Compare and contrast method overloading and overriding. (05 Marks)

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Module-4

- 7 a. What is Thread? Explain two ways of creation of thread. (05 Marks)
b. What is synchronization? When do we use it? (05 Marks)
c. Explain KeyEvent and MouseEvent class. (06 Marks)

OR

- 8 a. Explain Delegation event model used to handle events in java. (08 Marks)
b. Explain the role of synchronization with producer and consumer problem. (08 Marks)

Module-5

- 9 a. What is an applet? Explain five main methods of applet. (08 Marks)
b. Explain with syntax the following :
i) JLabel
ii) JTextField
iii) JButton
iv) JCheckBox (08 Marks)

OR

- 10 a. Create swing applet that has two buttons named beta and gamma. When either of the buttons pressed, it should display "beta pressed" and "gamma was pressed" respectively. (08 Marks)
b. Explain getDocumentbase and getCodebase in applet class. (08 Marks)



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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)



15CS45

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 apple. 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)

