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RAMAIAH
Institute of Technology

(Autonomous Institute, Affiliated to VTU)
(Approved by AICTE, New Delhi & Govt. of Karnataka)
Accredited by NBA & NAAC with 'A' Grade

SEMESTER END EXAMINATIONS – MAY/JUNE 2018

Course & Branch	: B.E. : Information Science and Engineering	Semester	: VI
Subject	: Java and J2EE	Max. Marks	: 100
Subject Code	: IS624	Duration	: 3 Hrs

Instructions to the Candidates:

- Answer one full question from each unit.

UNIT- I

1. a) Create a package called college, with base class student with data members (USN, Name, Age) , derive a new class ug student from base class with data members (semester, total credit) Write a java program to include the methods for getting input, display and find the semester wise average age for all ug students. Import the above package and test it. — CO1 (08)
   b) With an example program, demonstrate the working of nested try block. — CO1 (06)
   c) Explain autoboxing and unboxing in method call and execution. — CO1 (06)

2. a) Implement integer stack basic operations using interface concept. — CO1 (08)
   b) — CO1 (06)

i) Find the errors in the following code.

```
class ThrowsDemo{
        static void throwOne(){
        System.out.println("inside throwOne");
        throw new IllegalAccessException("demo");}
        public static void main(String args[]){
        throwOne();
        }
        }
```

ii)Is the following code legal?

```
try {
    ---
} finally {
}
```

   c) Consider the following enum: — CO1 (06)

```
enum Answers {
 NO, YES, MAYBE, LATER, SOON, NEVER
 }
```

Write a program to generate a random answer using Answers.

UNIT- II

3. a) List the benefits and limitations using wrappers instead of primitive data types. Explain any six List interface methods at work. — CO2 (08)
   b) Write a program to create two LinkedList objects, merge them and remove every second element from the final list. — CO2 (06)
   c) Write a Java program to demonstrate storing user-defined Objects in a collection. — CO2 (06)

4. a) With an example discuss how do you obtain an array from an ArrayList. — CO2 (04)
   b) What are the different ways to traverse a List? Illustrate each of them with an example. — CO2 (07)
   c) Create a Linked list which stores 10 Integer elements. Write a java program to find the sum of elements in this list and display it using an Iterator. — CO2 (09)

UNIT- III

5. a) List any ten Java Swing Components and explain. CO3
   b) Write a Java Swing program to create Address book application that takes First Name, Middle Initial, Last Name, Phone Number, Email and Address. Align the layout using setBounds method. When insert button is clicked, If the phone number size is less than 10 pop up message dialog box to print "Reenter Phone Number" by focusing on the text box. CO3

6. a) Write a Java Swing program to create a restaurant order of list of items. CO3
      i. Pizza, Burger, Pasta (Check Box)
      ii. Coffee, Tea (Radio Button)
   On click of a button display the order details in a text area in another frame.
   b) List and explain the following methods with prototype: CO3
      i. Get icon from labels
      ii. Get label of a radio button
      iii. Get columns in text area
      iv. Get item count in combo box
      v. Get text from labels.

UNIT- IV

7. a) With a neat diagram explain interaction of JDBC with databases. List and explain the benefits of Prepared Statements over Statements in JDBC. CO4 (10)
   b) Write a Servlet program to insert details of book on to a database with following details: Book Name, Author Name, Publisher Name, Book Synopsis Print appropriate messages of success or failure of creating database. CO4 (10)

8. a) Create a Servlet program to enter student information like name, USN, age, date_of_birth, place_of_birth, 10^{th} marks, 12^{th} marks and store it in the database. CO4 (10)
   b) Discuss the life cycle of thread with a neat diagram. CO4 (10)

UNIT- V

9. a) Discuss the different types of enterprise java beans. CO5 (08)
   b) Create a HTML page to accept register number, name and age of the student. Transfer these details to the server-side processing file names acceptStudent.jsp. If the age of the student is greater than 30, then the control is transferred to a jsp called showStudent.jsp along with a message else deliver a welcome message to acceptStudent.jsp. CO5 (12)

10. a) Discuss the life cycle of JSP. CO5 (05)
    b) What are the features of Enterprise Bean? Briefly elaborate. CO5 (08)
    c) Using the action elements of java server pages write java programs. The first file "sample.jsp" accepts a parameter called **param** from a file called "accept.jsp" The value held by this parameter let's say "Hello" . The value held by this parameter is as shown below. CO5 (07)

```
Hello
elloH
lloHe
loHel
oHell
```

If the parameter, **param** holds a blank value, i.e., "sample.jsp" file does not receive a parameter from "accept.jsp". Show the output as above with param value as "blank"

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