

**IS612/IS604**

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M S RAMAIAH INSTITUTE OF TECHNOLOGY(AUTONOMOUS INSTITUTE, AFFILIATED TO VTU)
BANGALORE - 560 054**SEMESTER END EXAMINATIONS - JUNE 2015**

Course & Branch : **B.E.- Information Science & Engg.** Semester : **VI**
Subject : **Advanced Programming using JAVA** Max. Marks : **100**
Subject Code : **IS612/IS604** Duration : **3 Hrs**

Instructions to the Candidates:

- Answer one full question from each unit.

UNIT - I

1. a) Differentiate between (06)
 - i. interface and abstract class.
 - ii. checked and unchecked exception.
- b) How does HashSet is implemented in Java, How does it uses Hashing? (06)
- c) Create a user defined package to find all roots of a quadratic equation. (08)
Write a program to use this package.
2. a) Create a main class to prompt the user to enter his/her age and hisCGPA. (10)
The user application for a job will be rejected either if his age is greater than 25 years or his CGPA is less than 8. You should declare two nested try-throw-catch blocks; one to handle the AgeOutOfRangeException and the other to handle the owCGpaException. If the user enters acceptable age andCGPA, display the message "Your application is accepted and is under study".
- b) Illustrate the following (06)
 - i. How maps work in java a
 - ii. Iterating over a Map in Java.
- c) Why insertion and deletion in ArrayList is slow compared to LinkedList? (04)

UNIT - II

3. a) Write a swing application which create three check box c programming, (08)
c++ programming and java programming when user chose checkbox show message regarding user choice as c is simple ,c++ is stage for java and java combined c and C++ respectively in the frame window.
- b) Write a program to handle mouse events. (08)
- c) Explain JFC. (04)
4. a) Create a Swing application that has two buttons "MSRIT","PESET". When (06)
the Button is clicked it has to Display appropriate welcome message.
- b) What is the delegation event model? Write a program to handle key events. (08)
- c) Explain Swing Layered Model. (06)

UNIT - III

5. a) What are JSP Directives? What are the types of directive tags? (06)
- b) Write a JSP Program to keep track of the number of visitors, who visited the (06)
web page and display the counter with proper headings.
- c) Explain the Following. (08)
 - i. What JSP lifecycle methods can I override?
 - ii. difference between include directive and include action.



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6. a) Give the difference between JSP and Servlet. Write a JSP code to greet the login user. Make use of the expression elements to display the message in blue color. (10)
- b) Illustrate the following using JSP (10)
- How to include other files
 - forwarding Jsp page to another Jsp page

UNIT - IV

7. a) Create a simple java servlet program using doGet method to change the background color of the page based on the color selected by the user and explain difference between doGet and doPost. (10)
- b) List and explain different types of JDBC drivers? (10)
8. a) What is the Servlet? What are the uses of Servlet? What are the phases of the servlet life cycle? (10)
- b) What is JDBC? Write a java program that connects to the database college as user student with password msrit, display the message if it was successful or the error string. Write a program to display the Students whose cgpa is below 9 and also update the student table to change the cgpa of student named "john" from 8.96 to 9.4. finally display the results and disconnect from the database.(assume student table with required fields). (10)

UNIT - V

9. a) Design a multithreaded program to get the following output using Interthread communication. (10)
- Tick tock
Tick tock
Tick tock
Tick tock
Tick tock
- b) Explain the various methods of registering and gaining access to the Remote Object. (10)
10. a) Distinguish between the following (04)
- Thread.start() and Thread.run()
 - Sleep and wait
- b) What is RMI? Write an RMI Application which contains one remote object with one remote method, which receives two strings objects as parameters and returns the total number of characters in the strings as an integer. write an application to test this. (10)
- c) Illustrate the different ways of creating Threads. (06)
