A – 6543

Reg. No. : ....

Name : ....

Fifth Semester B.Tech. Degree Examination, October 2016
(2013 Scheme)
13.506 : OBJECT ORIENTED DESIGN AND JAVA PROGRAMMING (R)

Time : 3 Hours

Max. Marks : 100

PART – A

Answer **all** questions :

1. Draw a class diagram showing generalization and specialization for the travel agent who needs to book a bus ticket through online payment.

2. What are different layout manages in Java ?

3. How abstract class is different from an interface ?

4. What is the purpose of creating ODBC data source in establishing a connection between java application and database ?

5. Compare and contrast the advantages and disadvantages of swings over AWTs.

(5×4=20 Marks)

PART – B

Answer **any one** question from **each** Module.

Module – I

6. Consider an online job portal system that has the following requirements :

   i) Secure registration and login facilities for both Seeker as well as Employer.

   ii) Captcha has to be used in all registration forms to ensure that no spam user is able to register at the website.

   iii) An intelligent search engine which enables :

      a) The job seekers to search for jobs in a particular Qualification/Experience in a certain field.

      b) The Job Seeker should have an option of updating his C.V.

P.T.O.

iv) An intelligent search engine which enables :

    a) The Employer to search for Job Seekers with a particular Qualification/ Experience in a certain Field.

    b) Employers should be notified if any Job Seeker has shown interest in their vacancy.

    c) The Employer should have an option for downloading the C.V. of the Job Seeker.

Draw the following diagrams for the above system :

    i) Use case Diagram with use case descriptions.

    ii) Sequence Diagram.

State the assumptions if any made during analysis. **20**

<p align="center">OR</p>

7. a) Define OMT and explain its techniques from Rumbaugh's point of view. **10**

    b) Explain in detail about Jacobson's view of OOSE. **10**

Module – II

8. a) Explain the concept of exceptional handling and its different types in detail with suitable example. **10**

    b) Write a Java program to define a class salesman with the attributes name, salesman code, sales amount and commission. The company calculates the commission of a salesman according to the following formula :

      i) 8% if sales < 2000

      ii) 10% if sales >= 2000 but <= 5000

      iii) 12% if sales exceeds 5000

Create salesman objects and find the commission for the sales. Create custom exceptions if the sales amount is less than 0. **10**

<p align="center">OR</p>

9. a) What are the uses of interface ? How does one implement an interface to perform a stack operation ? **10**

    b) Write a program for a package which includes all the access modifiers for the class members. **10**

Module – III

10. a) Write a Java Program that uses two threads to find the product of two matrices. The first thread should multiply the odd numbered rows and the second thread multiplies the even numbered rows. Print the result matrix. Ensure that bad inputs and errors are handled appropriately.   **10**

b) Describe synchronization with respect to multithreading. What are the methods in Java for inter-thread communication ? Discuss with an example. **10**

OR

11. a) Write a server side and client side socket program for a String Reverse Service. The client sends a string to the server in the request and the server responds with the reverse of the string. Make necessary assumptions.   **10**

b) Explain the basic life cycle of an applet with a suitable example.   **10**

Module – IV

12. a) What are mouse events ? With a suitable example illustrate how will you handle them ?   **10**

b) Write a program for banking application using JDBC (consider 5 customer create a/c no and type, set some minimum balance do credit and debit operation and print consolidated report for monthwise transaction.)   **10**

OR

13. a) Create a Swing GUI that get an input and reverse the input.   **10**
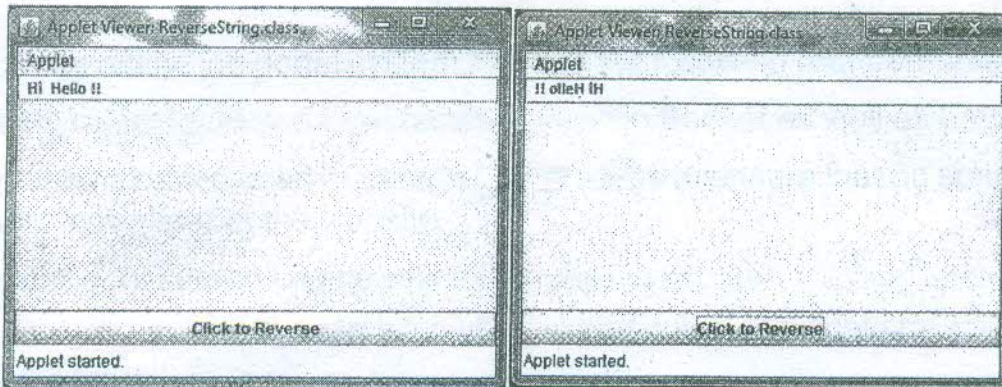
b) Explain the Action Event and the Action Listener Class of the event package. **10**