15266

B. Tech 7th Semester Examination

Internet Technology (OS)

IT-7004

Time : 3 Hours   Max. Marks : 100

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Candidates are required to attempt five questions in all selecting one question form each of the sections A, B, C and D of the question paper and all the subparts of the question in section E. Use of non-programmable calculator is allowed.

SECTION - A

1. (a) Explain the role of constructor in Java and justify your answer by writing a program to calculate the volume of a box through constructor.   (10)

   (b) Differentiate checked and unchecked exceptions. Also write a program to create your own checked exception.   (10)

2. (a) What is polymorphism? In how many ways it is implemented in Java? Write a Java program to dynamic method dispatching (runtime polymorphism).   (10)

   (b) Why java is suitable for internet programing? Explain advantages of Java over C++.   (10)

SECTION - B

3. (a) What is the difference between multithreading and multiprocessing? Explain life cycle of a thread in Java.   (10)

   (b) Write a java program to implement any three threads by implementing Runnable interface.   (10)

4. (a) Explain event delegation model and write an AWT program to create menu bar.   (10)

   (b) Why the anonymous classes are important? Justify your answer with an example.   (10)

SECTION - C

5. What are benefits of java swings over AWT? Write a program with the help of swing to implement a calculator which can perform +,-,* and / operations.   (20)

6. Create a student information registration page using swings in order to save student information in database using JDBC. The student information page should have save, clear and display buttons to save the information in database, to clear all fields and to display the stored information respectively.   (20)

SECTION - D

7. (a) What is the difference between static and dynamic web pages? Explain how servlets are used to create dynamic web pages with a suitable example.   (10)

   (b) Explain servlet lifecycle methods.   (10)

8. (a) Why java bean are important? Explain the procedure of creating a simple java bean.   (10)

   (b) Explain bean component model briefly.   (10)

SECTION - E

9. Write short note on following:

   (a) *static* keyword.

   (b) abstract classes.

   (c) Differentiate objects and classes.

   (d) Vector class.

   (e) *this* and *super* keyword.

   (f) Java bytecode.

   (g) *String.equals()* versus == for strings.

   (h) Explain the significance of Java line *public static void main(String args[ ])* { }.

   (i) *Thread.join()* method.

   (j) Exceptions versus Error.   (10×2=20)