POKHARA UNIVERSITY

Level: Bachelor | Semester: Fall | Year : 2023
Programme: BE | | Full Marks:100
Course: Advanced Programming with Java | | Pass Marks: 45
| | Time :3hrs.

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

__Attempt all the questions.__

1. a) Explain the Java architecture and significance of class path. Differentiate between error and exception. — 8

   b) Define Package. Explain the types of access modifiers in Java. — 7

2. a) Define interface. Write Java program that override methods (getUserValue() and displayUserDetail()), where getUserValue() is defined to get user detail(name, address, age) and displayUserDetail() to display user detail. — 8

   b) Define subclass and super class. How can we achieve multiple inheritance in Java? Explain. — 7

   OR

   Differentiate between Java abstract class and interface with a sample program

3. a) Write a program to create a Frame that has two TextField components, one Label, and a Button. When the user clicks on the button, calculate the sum of the values entered in the first and second TextField and display the result on the third Label. — 8

   b) What are the pros and cons of JavaFX. Explain any two JavaFX layout managers. — 7

4. a) Create a TCP client server application where the client sends a string and the server responds by echoing the same string in upper case. — 8

   b) What is JavaMail API? Explain type of protocol used in JavaMail API. — 7

   OR

   Define RMI stubs and skeleton. Create an RMI application where a client can remotely invoke a method that sends the sum of any two given integers.

5. a) A table tbl_student consists of id, name and program. Write a   8
program that asks users to enter a program name and displays all the
students records enrolled in that program.

b) Differentiate between GET and POST methods. Write java program   7
that depict Sessions and Cookies.

6. a) Explain life cycle methods of servlet. Write a servlet program that   8
accept input string from user through form and then check if it is
palindrome or not.

b) Why do we need design patterns? Explain Singleton Pattern and   7
Factory Method Pattern in detail.

7. Write short notes on: (Any two)   2×5
a) SQL Injection
b) ORM
c) CORBA