

PURBANCHAL UNIVERSITY

2022

Bachelor in Information Technology (B.I.T.)/Sixth Semester/Final
Time: 03:00 hrs. Full Marks: 80/Pass Marks: 32

BIT376CO: Advance Object-Oriented Programming (New Course)

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

Figure in the margin indicate full marks.

Group A

$2 \times 12 = 24$

Answer TWO questions.

1. Explain the basic concepts of object-oriented programming. Why is Java known as platform-natural language? Explain the concept of virtual machine in Java Programming language along with block diagram. 4+4+4
2. Define socket. What are the use of TCP and UDP socket? Write a TCP socket program to send "Hello server" text to the remote machine listening on 9999 port and having 192.168.10.20 IP address. 1+3+8
3. Difference between Swing and AWT Java GUI Packages. Explain Swing Components along with example. 4+8

Group B

$7 \times 8 = 56$

Answer SEVEN questions.

4. What are the difference between an array and a vector? Explain the advantage and disadvantage of both. 4+4
5. Write an applet program to calculate x^y where both x and y are integers. 8
6. Write a JDBC connection program with following details.
 - (a) Driver: com.mysql.jdbc.Driver.
 - (b) Host: localhost:
 - (c) Database: students
 - (d) User: root
 - (e) Password : secret
 - (f) Port: 3306

Contd. ...

(2)

7. Discuss how object serialization and object deserialization are achieved.
8. Explain the lifecycle of Servlet with block diagram.
9. What is thread synchronization? Explain the concept of multithread in Java with suitable example.
10. What is code reusability? Explain different mechanism to reuse the code in Java.
11. What are Stub and Skeleton in Distributed Application? Explain its function with block diagram.
12. Write short notes on any TWO:
 - (a) Polymorphism
 - (b) Applet vs. Application
 - (c) Marshalling and Unmarshalling

$$2 \times 4 = 8$$