

B.Sc. (Data Science) NEP - Semester-III
BSCDS034 - Java Programming

P. Pages : 1

Time : Two Hours



GUG/W/24/16141

Max. Marks : 40

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1. a) Explain key features of Java that make it distinct from other programming languages. 4
- b) What are control structures in Java? Explain using Example. 4
- OR**
- c) List and explain the different primitive data types in Java. 4
- d) Explain how array are used in Java. Discuss some of the common methods associated with array. 4
2. a) Explain the concept of objects in Java. 4
- b) What are the different access and non-access modifiers in Java for classes, methods, and data members? 4
- OR**
- c) What are data hiding and encapsulation in Java? How do they help in designing secure software? 4
- d) What are packages in Java, and how do they help in organizing code? 4
3. a) Discuss are the different types of exceptions in Java? 4
- b) Explain the concept of multithreading in Java and describe the life cycle of a thread. 4
- OR**
- c) How are exceptions handled in an inheritance hierarchy in Java? 4
- d) Explain the role of the try, catch, finally, and throws keywords in Java's exception handling mechanism. 4
4. a) Explain the key components provided by the Abstract Window Toolkit (AWT) in Java? 4
- b) Discuss the importance of layout managers in Java's AWT. 4
- OR**
- c) Explain the life cycle of an applet in Java. 4
- d) Describe the roles of event sources and listeners in Event Delegation model. 4
5. a) List and explain the different primitive data types in Java. 2
- b) Differentiate between method overloading and method overriding in Java. 2
- c) Explain how to create custom exception in Java? Provide an example. 2
- d) How can applets communicate with each other in a webpage? 2
