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Total No. of Pages :02

Total No. of Questions : 07

BCA (Sem.–5)
PROGRAMMING IN JAVA
Subject Code :UGCA-1932
M.Code :90315
Date of Examination:29-11-2025

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.

SECTION-A

1. Write briefly:

- a) List four features of Java that support-platform independence and security.
- b) What is the JRE and how does it differ from the JDK?
- c) Write the general form of an if—else if ladder and state one use-case.
- d) When would you prefer switch over multiple if-else statements? Mention two constraints.
- e) What do break and continue do in nested loops?
- f) Define constructor and state two properties of constructors in Java.
- g) What is the difference between String and StringBuffer?
- h) Explain primitive data types.
- i) Name any four stream classes (byte/character) and one usage of each.
- j) Write the basic life-cycle methods of an Applet.

SECTION-B

2. Explain looping constructs, including loop control (break, continue, labeled break). Provide short examples that illustrate each.
3. Describe classes and objects in Java: access modifiers, passing arguments, constructors (default/parameterized/overloaded), this, static members, and garbage collection.
4. Explain inheritance and polymorphism: single inheritance, overriding, super and constructor chaining, abstract classes vs interfaces, access specifiers, and packages (creation, access, and import/static import). Include small examples.
5. Explain multithreading in Java: thread creation (Thread vs Runnable), scheduler, priorities, joining and synchronization (intrinsic locks synchronized methods/blocks).
6. Write notes on Java I/O: stream hierarchy (byte vs character, buffered/filtered), File/Path, random access file; safe I/O with try-with-resources. Briefly add Applet graphics and event handling overview.
7. Design classes Account and SavingsAccount with methods deposit, withdraw, and interest calculation. Demonstrate overriding and use of super.

NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.