

MCA (SEM- IV)
Java Programming
(OCT-16)

Q.P. Code : 511900

(3 Hours)

[Total Marks : 100]

- N.B. :** (1) Question **No.1** is **compulsory**.
(2) Attempt **any four** questions out of the remaining questions **2** to **7**.

1. (a) What are layout managers in java? Explain with suitable example. **10**
(b) Explain difference between C++ and java language. **10**
 2. (a) What is the difference between an applet and an application? Explain life cycle of an applet. **10**
(b) Explain use of super keyword with suitable example. **10**
 3. (a) What is Exception handling in Java? Write program to handle Number format exception. **10**
(b) Explain program to create GUI using Swing components. **10**
 4. (a) Explain constructor overloading and function overloading with an example. **10**
(b) What is Inner Class in Java? Write a program to implement inner classes in java. **10**
 5. (a) Explain multithreading concept in Java. Write a program showing multiple threads working upon single object using synchronized keyword. **10**
(b) Explain wrapper class in Java. Explain the concept Boxing and unboxing. **10**
 6. (a) Explain the different types of drivers in JDBC. **10**
(b) What is serialization and deserialization? Write a program to implement it in Java. **10**
 7. Write short note on (**any four**) : **10**
 - (a) Data types supported in Java
 - (b) Interface in Java
 - (c) Statics keyword
 - (d) Package in Java
 - (e) Input stream classes
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