

Wednesday, May 22, 2019 02:30 pm - 05:30 pm 1T00143 - M.C.A. (Sem. III)(Choice Based) / 56302 - Java Programming 24277

(3 Hours)

[Total marks : 80]

- N.B. : (1) Question No. 1 is **compulsory**.  
 (2) Attempt any **three** from remaining **five** questions.

1. Attempt Any Four 20
  - a) Java is Platform independent and Architecture Neutral- Explain
  - b) Spring Framework Architecture
  - c) Compare Servlet Life Cycle with JSP Life cycle
  - d) Explain Annotations with suitable examples
  - e) Explain difference between Abstract classes and Interfaces
  
2. (a) What is Multithreading in java? Write a program to demonstrate use of synchronized keyword. 10  
 (b) Explain Lambda Expression with an example? What are the different objectives of Lambda Expressions? 10
  
3. (a) What is the use of Generics in java? Write a generic class to represent Stack which implements different data types like Integer and String. 10  
 (b) Explain steps to Connect a java Program to a database using JDBC. Add a note on types of result sets. 10
  
4. (a) Explain how java program is made persistent? Write a GUI program using swing to enter a file name in one textbox and view the contents of the file it in another text. 10  
 (b) What are Packages? Explain accessibility modifiers in Java with an example. 10
  
5. (a) Define an Exception? Explain Checked and unchecked Exception. Discuss how user defined exceptions can be implemented in Java. 10  
 (b) Differentiate the following(any 2) 10
  - 1) ServletConfig and ServletContext
  - 2) LinkedList and ArrayList
  - 3) Static and final
  
6. (a) What is an Event Listener and Adapter classes? Explain the concept of the Anonymous inner class with an example. 10  
 (b) What are Actions in JSP? Explain use of "jsp:usebean" action with a suitable program.add a note on MVC. 10

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