

Reg No.: \_\_\_\_\_

Name: \_\_\_\_\_

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**  
**SECOND SEMESTER (Second Year Direct) &**  
**FOURTH SEMESTER MCA (Regular) DEGREE EXAMINATION, APRIL 2018**  
**Course Code: RLMCA272**  
**Course Name: ADVANCED JAVA PROGRAMMING**

Max. Marks: 60

Duration: 3 Hours

**PART A**

*Answer all questions, each carries 3 marks.*

- 1 Explain any three Collection API improvements in java 8? (3)
- 2 What is JVM JavaScript Engine? Give an example. (3)
- 3 Explain a solution to session tracking in Servlets? (3)
- 4 How do you remove dependencies from a java program? Explain with an example. (3)
- 5 What is Spring Boot? List out and define the features of Spring Boot? (3)
- 6 Explain Strengths of java's Servlet technology. (3)
- 7 What is Spring security? List out its advantages. (3)
- 8 Explain point-to-point messaging model and publish subscribe messaging model? (3)

**PART B**

*Each question carries 6 marks.*

- 9 a) With a neat diagram, explain Core collection interfaces and its hierarchy. (6)  
OR  
b) Explain JVM architecture with a neat diagram. (6)
- 10 a) Define bound and constrained properties of beans. (6)  
OR  
b) Explain the process of analyzing a Bean to determine its capabilities. (6)
- 11 a) What is Lambda Expression? With an example, explain the advantages of using Lambda Expressions. (6)  
OR  
b) Write a program to read local date and time and manipulate local date values in absolute way. (6)
- 12 a) Explain Servlets life cycle with a diagram. (6)  
OR  
b) Define GenericServlet and HttpServlet (6)

- 13 a) Explain life of a bean in spring container (6)
- OR
- b) Explain unit testing in Spring Framework (6)
- 14 a) How a request makes its way from the client through the components in Spring MVC? Explain with diagram. (6)
- OR
- b) Explain how data can be accessed with Spring Boot? Give an example. (6)

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