

**602204**

**May 2024**

**M.C.A. II SEMESTER  
JAVA PROGRAMMING  
(MCA-20-108)**

Time : 3 Hours]

[Max. Marks : 75

*Instructions :*

1. *It is compulsory to answer all the questions (1.5 marks each) of Part-A in short.*
2. *Answer any four questions from Part-B in detail.*
3. *Different sub-parts of a question are to be attempted adjacent to each other.*

**PART-A**

1. (a) Why Java is known as a platform-independent language?  
(1.5)
- (b) Differentiate between the class and object. (1.5)
- (c) Why Swing components are called lightweight components?  
(1.5)

- (d) What is the difference between a Window and a Frame? (1.5)
- (e) What are JSP directives? (1.5)
- (f) What is the Struts framework? (1.5)
- (g) What is a URLConnection class in Java? (1.5)
- (h) What is the purpose of an interface? (1.5)
- (i) What do you mean by Enterprise Java Bean (EJB)? (1.5)
- (j) What are the restrictions imposed on Java applets? (1.5)

**PART-B**

- 2. (a) What is JDBC? Explain the different types of the JDBC drivers. (7)
- (b) What is the purpose of the package in Java? How they are created and used? Explain it with an example. (8)
  
- 3. (a) What is a constructor? Explain the various types of constructors by giving suitable examples. (7)
- (b) What is a container in Swing? How is the menu created in Java using Swing? Explain it by taking an example. (8)
  
- 4. (a) What is Java Beans? How do you create a constrained property? Explain it by taking a suitable example. (9)

- (b) What is an exception? How are exceptions handled in Java programming? Explain with a suitable program. (6)
  
- 5. (a) What is RMI? List the advantages and disadvantages of the RMI. Give the architecture of the RMI and explain each component in brief. (7)
- (b) What is a Socket? How can you create two-way communication between the server and the client? Explain it by taking a suitable example. (8)

- 6. (a) What is the use of the layout manager? Explain the border layout by taking suitable examples. (7)
- (b) What are advantages of JSP over the Servlet? Explain the various stages of the JSP life cycle. (8)
  
- 7. Write short notes on the following :
  - (a) Multithreading.
  - (b) Event Handling.
  - (c) Implicit objects in JSP. (3×5=15)