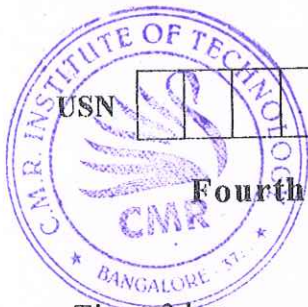


# CBCS SCHEME

16/17MCA41



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## Fourth Semester MCA Degree Examination, June/July 2019 Advanced Java Programming

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions, choosing one full question from each module.

### Module-1

- 1 a. Explain servlet life cycle. (04 Marks)  
b. Write a servlet program that handles form data. (08 Marks)  
c. Explain session tracking using session object. (08 Marks)

OR

- 2 a. Briefly explain any five HTTP status codes. (08 Marks)  
b. Briefly explain the different HTTP request headers. (08 Marks)

### Module-2

- 3 a. Write a JSP code that adds two numbers entered through form (html form). (08 Marks)  
b. Explain JSP directives.element. (08 Marks)

OR

- 4 a. With an example, describe the various tags or elements available in JSP. (08 Marks)  
b. Explain the following page directive attributes along with an example program :  
(i) Import (ii) errorPage and isErrorPage (iii) session (iv) buffer and autoflush. (08 Marks)

### Module-3

- 5 a. Explain JARs in detail. (08 Marks)  
b. What are annotations? Explain built-in annotations. (08 Marks)

OR

- 6 a. Define Java Bean and explain the terms introspection and customizers. Write a sample code for Java Bean. (10 Marks)  
b. Write a note on Java Beans API. (06 Marks)

### Module-4

- 7 a. Explain the steps in writing JDBC program with sample code. (08 Marks)  
b. Explain JDBC prepared statement.object. (08 Marks)

OR

- 8 a. Briefly explain the different basic JDBC data types. (08 Marks)  
b. Write a Java program to insert data into student Database and retrieve information based on particular queries (for example update, delete, search etc.) (08 Marks)

### Module-5

- 9 Briefly explain the following terms :  
(i) Message Driven Bean (ii) Dependency injection  
(iii) Interceptors (iv) Naming and object stores. (16 Marks)

OR

- 10 a. List the difference between stateless session bean and stateful session bean. (08 Marks)  
b. Explain the life cycle of Message Driven Bean. (08 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.