



BHARATIYA VIDYA BHAVAN'S

SARDAR PATEL INSTITUTE OF TECHNOLOGY

MUNSHI NAGAR, ANDHERI (WEST), MUMBAI – 400 058, India

(Autonomous College Affiliated to University of Mumbai)

End Semester Examination

Max. Marks: 100

Class: FY MCA

Course Code: MC506

Subject: JAVA Programming

Semester: II

Date: 03/07/2023

Time: 180 minutes

Instructions: (1) All questions are compulsory.
 (2) Assume any necessary data but justify the same.
 (3) Preferably, write the answers in sequential order.

| Q. No. | Questions | Max Marks | CO | BL |
|-----------|---|-----------|-------------|----|
| Q. 1 A | Fill in the blanks 1. _____ are predefined (already defined) in Java. 2. _____ is used for parsing tokens from the contents of the stream 3. _____ is a process of hiding the implementation details and showing only functionality to the user. 4. _____ in Java is the method to create a hierarchy between classes by inheriting from other classes. 5. _____ in Java is a concept by which we can perform a single action in different ways. | 05 | MC50 6.1 | L3 |
| Q. 1 B | Select the perfect option for the question. 1. Which of these classes contains the methods used to write in a file? a) FileStream b) FileInputStream c) BufferedOutputStream d) FileBufferStream 2. Which of these values is returned by the read() method if the end of file (EOF) is encountered? a) 0 b) 1 c) -1 d) Null 3. Which of these exceptions is thrown by close() and read() methods? a) IOException b) FileNotFoundException c) FileNotFountException d) FileInputOutputException | 05 | MC50 6.2 | L2 |



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| | <p>4. Which of these exceptions is thrown in cases when the file specified for writing is not found?</p> <p>a) IOException b) FileNotFoundException c) FileNotFountException d) FileInputException</p> <p>5. Which of these methods are used to read in from file?</p> <p>a) get() b) read() c) scan() d) readFIleInput()</p> | | | |
| Q. 1. C | <p>What is the use of following</p> <p>a. super b. final c. this d. close e. finally</p> | 10 | MC50 6.1 | L2 |
| Q. 2 | <p>Attempt any five questions</p> <ol style="list-style-type: none"> What are the different states in the life cycle of Thread? Can we call the run () method of a Thread class? what is Default Exception Handling method in java write the advantages of throws over throw Should we make our exceptions checked or unchecked? justify with proper scenario write way to select to implement Thread class Explain Components of JDBC What are the benefits of using packages? Write down the steps in creating a package and using it in a Java program with an example. List and Explain different types of Resultset. If you do not specify any ResultSet type, what will be default values of the same? | 20 | MC50 6.2 | L2 |
| Q. 3. A | What is the importance of JSP considering current technology development? Draw and explain JSP life cycle | 05 | MC50 6.3 | L2 |
| Q. 3. B | What is Dependency Management in Spring? Explain its features | 05 | MC50 6.4 | L2 |
| Q. 3 C | List and Explain AOP Terminologies. Write methods used for Types of Advice | 05 | MC50 6.4 | L2 |
| Q. 3 D | Write a Java program having a class TEACHER which contains two fields name and qualification. Extend this class to | 05 | MC50 6.1 | L3 |



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| | <p>DEPARTMENT containing deptno and deptname. Create an interface COLLEGE containing one filled name_of_college. Use above classes and interfaces to get the appropriate information and display it.</p> <p style="text-align: center;">OR</p> <p>Write a Java program to create an abstract base class ACCOUNT which has the data member balance, and two methods Deposit () and Withdraw (). Create two more classes SAVING and CURRENT which is inherited from base class ACCOUNT. Write the appropriate the overriding method of it.</p> | | | |
| Q. 4 A. | Compare between ServletConfig and ServletContext. | 05 | MC50 6.3 | L2 |
| Q. 4 B. | List and Explain different methods available with servlet processing | 05 | MC50 6.3 | L2 |
| Q. 4 C | Compare between Context Init parameters and Servlet Init parameter | 05 | MC50 6.3 | L2 |
| Q. 4 D | Draw and Explain Life cycle of Servlet. Write the advantages of using servlet over CGI. | 05 | MC50 6.3 | L3 |
| Q. 5 | <p>Design a JAVA program for electricity billing system where a person gathers data from our electricity meter. The primary objective of this project is to automate the entire process to make it seamless, convenient, and effective. The software can compute the bill amount on the basis of units of electricity consumed in a month. Electricity Billing System is considered one of the best java project ideas for beginners. The system should have the below-mentioned features:</p> <ul style="list-style-type: none"> • Accurately calculate the bill amount. • Instantaneous sharing of data between local electricity offices and users. • Extremely safe to negate the chances of tampering. <p>As part of Answer student need to write following things</p> <ol style="list-style-type: none"> 1. Draw a proper appropriate screen shot of required pages. 2. Database Schema for the billing system 3. Write the proper code for <ol style="list-style-type: none"> a. JSP b. Servlet processing the data to display the results c. Exception handling | 20 | MC50 6.1 MC50 6.2 MC50 6.3 MC50 6.4 | L5 |

