



PRESIDENCY UNIVERSITY

BENGALURU

| | | | | | | | | | | | | | | | | | | | |
|----------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Roll No. | | | | | | | | | | | | | | | | | | | |
|----------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

Make Up Examinations – December 2025

Date: 26 – 12- 2025

Time: 1.00pm to 04.00pm

| | | | |
|------------------------------|--|-----------------------|--|
| School: SOCSE | Program: B.Tech | | |
| Course Code : CSE1001 | Course Name: Problem solving using JAVA | | |
| Semester: MK | Max Marks: 100 | Weightage: 50% | |

| CO - Levels | C01 | C02 | C03 | C04 | C05 |
|--------------|-----|-----|-----|-----|-----|
| Marks | 26 | 24 | 22 | 26 | 2 |

Instructions:

- (i) Read all questions carefully and answer accordingly.
- (ii) Do not write anything on the question paper other than roll number.

Part A

Answer ALL the Questions. Each question carries 2marks.

10Q x 2M=20M

| | | | | |
|-----|--|---------|----|-----|
| 1. | Why Java is platform independent? | 2 Marks | L2 | C01 |
| 2. | What are the different flavour of Java? | 2 Marks | L2 | C01 |
| 3. | Discuss the need of this keyword with the support of an example. | 2 Marks | L2 | C02 |
| 4. | What is identifier? Explain any two rules for valid identifier | 2 Marks | L2 | C01 |
| 5. | What are the three ways to create a String object in Java. | 2 Marks | L1 | C03 |
| 6. | What is a static method? | 2 Marks | L2 | C02 |
| 7. | Define Inheritance | 2 Marks | L1 | C04 |
| 8. | Discuss the advantages of Inheritance. | 2 Marks | L1 | C04 |
| 9. | State the rules of Method Overriding. | 2 Marks | L1 | C04 |
| 10. | Define Serialization | 2 Marks | L1 | C05 |

Part B

Answer the Questions.

Total Marks 80M

| | | | | | |
|-----------|----|---|----------|----|-----|
| 11. | a. | A teacher assigned a project to students in the classroom to calculate the area of various shapes. Each student is required to compute the area based on different sets of parameters: calculating the area by passing one parameter, by passing two parameters, and for shapes with all sides equal using a single parameter. The program should use method overloading to handle these cases and display the results accordingly. | 20 Marks | L3 | C02 |
| Or | | | | | |
| 12. | a. | A teacher asked the class leader to prepare the list of student details (name, Roll number, Program and Sem) of his section by using read method and also to display the details of the students using java program. Requirements: a) Create a Class called Student with given attributes name, Rollnumber, Program, semester b) Add the Method called "void Read()" to read the values of the attributes of the class student using Scanner class c) Also Add the Method called "void Display()" to display the values read for the attributes of the class student. | 20 Marks | L3 | C02 |
| 13. | a. | Write a Java program that calculates the total cost of an order based on the number of items and a per-item cost that varies depending on the type of item. Purse Rs 500, Laptop Bag Rs 1200 and Head Phone 1000. If the user enter any other number, print invalid order item. | 20 Marks | L3 | C01 |
| Or | | | | | |
| 14. | a. | In an organization the gross salary for an employee is computed as per the below formula Gross salary = Basic salary + HRA + DA. After computing the gross salary, the net salary is computed using the below formula Net salary = Gross salary – Professional tax – income tax Requirements: a) The Basic salary, HRA and DA has to be captured and The gross salary has to be computed using the above formula b) Professional tax has to be captured (Rs.200) c) Income tax is the 10% of the gross salary if the gross salary is more than 50000 other wise it will be kept minimum charges as 2% of the gross salary d) Net salary has to be computed using the above formula e) Display the net salary drawn by the employee. | 20 Marks | L3 | C01 |

| 15. | a. | <p>A student visits the University library and in the month of June, July, and August he read fiction and non-fiction books, and magazines, both in paper copies (physical) and online (digital). You want to</p> <table border="1" data-bbox="408 309 997 533"> <thead> <tr> <th colspan="3">July</th> </tr> <tr> <th></th> <th>PAPER</th> <th>ONLINE</th> </tr> </thead> <tbody> <tr> <td>Fiction</td> <td>3</td> <td>2</td> </tr> <tr> <td>Non-fiction</td> <td>1</td> <td>1</td> </tr> <tr> <td>Magazines</td> <td>5</td> <td>3</td> </tr> </tbody> </table> <p>keep track of how many different types of books and magazines he read, and store that information in matrices. Here is the information below:</p> <table border="1" data-bbox="328 701 708 891"> <thead> <tr> <th colspan="3">June</th> </tr> <tr> <th></th> <th>PAPER</th> <th>ONLINE</th> </tr> </thead> <tbody> <tr> <td>Fiction</td> <td>2</td> <td>4</td> </tr> <tr> <td>Non-fiction</td> <td>3</td> <td>1</td> </tr> <tr> <td>Magazines</td> <td>4</td> <td>5</td> </tr> </tbody> </table> <table border="1" data-bbox="754 725 1102 904"> <thead> <tr> <th colspan="3">July</th> </tr> <tr> <th></th> <th>PAPER</th> <th>ONLINE</th> </tr> </thead> <tbody> <tr> <td>Fiction</td> <td>3</td> <td>2</td> </tr> <tr> <td>Non-fiction</td> <td>1</td> <td>1</td> </tr> <tr> <td>Magazines</td> <td>5</td> <td>3</td> </tr> </tbody> </table> <table border="1" data-bbox="552 927 914 1111"> <thead> <tr> <th colspan="3">August</th> </tr> <tr> <th></th> <th>PAPER</th> <th>ONLINE</th> </tr> </thead> <tbody> <tr> <td>Fiction</td> <td>1</td> <td>3</td> </tr> <tr> <td>Non-fiction</td> <td>2</td> <td>3</td> </tr> <tr> <td>Magazines</td> <td>4</td> <td>6</td> </tr> </tbody> </table> | July | | | | PAPER | ONLINE | Fiction | 3 | 2 | Non-fiction | 1 | 1 | Magazines | 5 | 3 | June | | | | PAPER | ONLINE | Fiction | 2 | 4 | Non-fiction | 3 | 1 | Magazines | 4 | 5 | July | | | | PAPER | ONLINE | Fiction | 3 | 2 | Non-fiction | 1 | 1 | Magazines | 5 | 3 | August | | | | PAPER | ONLINE | Fiction | 1 | 3 | Non-fiction | 2 | 3 | Magazines | 4 | 6 | 20 Marks | L3 | C03 |
|-------------|-------|--|------|--|--|--|-------|--------|---------|---|---|-------------|---|---|-----------|---|---|------|--|--|--|-------|--------|---------|---|---|-------------|---|---|-----------|---|---|------|--|--|--|-------|--------|---------|---|---|-------------|---|---|-----------|---|---|--------|--|--|--|-------|--------|---------|---|---|-------------|---|---|-----------|---|---|----------|----|-----|
| July | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PAPER | ONLINE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fiction | 3 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Non-fiction | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Magazines | 5 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| June | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PAPER | ONLINE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fiction | 2 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Non-fiction | 3 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Magazines | 4 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| July | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PAPER | ONLINE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fiction | 3 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Non-fiction | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Magazines | 5 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| August | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PAPER | ONLINE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fiction | 1 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Non-fiction | 2 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Magazines | 4 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Or

| | | | | | |
|-----|----|--|----------|----|-----|
| 16. | a. | You are building a school application. You have a Student class that stores name and roll number. Create a derived class Marks that adds subject marks. Write code to input and display student info and marks using single level inheritance. | 20 Marks | L3 | C03 |
|-----|----|--|----------|----|-----|

| | | | | | |
|-----|----|---|----------|----|-----|
| 17. | a. | (i) Explain the Exceptional handling in java (ii) Define Packages in java and what are the types of packages | 20 Marks | L3 | C04 |
|-----|----|---|----------|----|-----|

Or

| | | | | | |
|-----|----|---|----------|----|-----|
| 18. | a. | <p>Write a Java program to demonstrate multiple inheritance using interfaces. Your program should:</p> <ul style="list-style-type: none"> • Define an interface Add with a method add(). • Define another interface Sub with a method sub(). • Create a class Calculator that implements both Add and Sub. • In the main() method perform addition and subtraction and print results. | 20 Marks | L3 | C04 |
|-----|----|---|----------|----|-----|