

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING  
UNIVERSITY INSTITUTE OF ENGINEERING AND TECHNOLOGY,  
CSJM UNIVERSITY, KANPUR

**Subject- <Object Oriented Programming Using Java > (<CSE-S-204>)<Branch CSE >**

Semester- 2023-2024 (Even Semester)

Year: < II Year>,<Semester IV>

**First Mid Semester Examination,**

**Date <14-02-24>, Shift-<II>**

Time: 1:30 hours

Maximum Marks: 30

Note: All questions are compulsory.

---

**Section A**

Each question in this section carries 01 marks

1. Write any two differences between Compiler and Interpreter.
2. Write syntax of class declaration in java.
3. Explain any one function of String class.
4. Explain any two applications of % operator in java.
5. Write any four features of oops (Java).
6. Write accessibility of public keyword.
7. Write the resultant value of (a,b) for the following expression  $a=5; b=a++ * ++a$
8. Explain application of class member variables
9. Explain application of "this" keyword in java

**Section B**

Each question in this section carries 03 marks

10. Write a java program to print summation of all the digits of a given integer number
11. Write a java program to calculate the summation of the given sequence  
 $(1/2)-(3/4)+(5/6)-(7/8)+\dots\dots\dots$  up to n terms
12. Explain if-else conditional statement by using a program.

**Section C**

Each question in this section carries 06 marks

13. Explain relational operators in brief . Differentiate while and do-while loop. Write a program to read multiple strings from command line arguments and print all the strings in reverse sequence order
  14. Write any two ways to read input from User. Explain Scanner class and at least 5 functions. Write a java program to read a character by using scanner class and print it if its value is equal to 'P'
-

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING  
UNIVERSITY INSTITUTE OF ENGINEERING AND TECHNOLOGY,  
CSJM UNIVERSITY, KANPUR

**Subject- <Object Oriented Programming Using Java > (<CSE-S-204>)<Branch CSE >**

Semester- 2023-2024 (Even Semester)

Year: < II Year>,<Semester IV>

**Second Mid Semester Examination, Date <20-03-24>, Shift-<II>**

Time: 1:30 hours

Maximum Marks: 30

Note: All questions are compulsory.

---

**Section A**

Each question in this section carries 01 marks

1. Write any two ways to create strings.
2. Explain constructor overloading.
3. Explain short circuit property of relational operators.
4. Explain any two applications of bit wise operators in java.
5. Write any two limitations of static keyword .
6. Write accessibility static block.
7. Explain polymorphism by an example.
8. Differentiate char and strings by an example.
9. Explain type casting by an example.

**Section B**

Each question in this section carries 03 marks

10. Write a java program to search all the occurrences of a character in a given string
11. Write a java program to calculate the summation of all the numbers up to n which are not divisible by any prime number between[1 to 9]. Where n is entered by user.
12. Define final keyword and its applications . Define polymorphism by an example.

**Section C**

Each question in this section carries 06 marks

13. Write a program to read a char array of at least 4 characters generate all the combinations of characters.  
Ex-INPUT=[A,B,E,G] OUTPUT=[A,B,E,G.AB.AE.AG,BE,BG,EG,ABE,AEG,ABG,BEG,ABEG]
  14. Explain [2D] Arrays and its applications. Write a java program to read two un ordered arrays [1D] of integers. Merge the arrays in one array in ascending order.
-

**Oops using java (CSE-S-204)**

**Semester: 2023-24 (Even Semester)**

**Year: 2nd Year (2K22)**

**End Semester Examination**

**Time: 3 h**

**Maximum marks: 50**

**PLEASE NOTE:** All questions are compulsory

**Section A**

(10 questions of 1 mark each) [10% = 10]

- Q1. Mention any two differences between `this` and `static` keyword
- Q2. Write any two applications of `interface`
- Q3. Give an example method overriding in java.
- Q4. Write name of any two wrapper classes and any one function of a wrapper class.
- Q5. Explain Syntax of class declaration
- Q6. Explain any two type of inheritance in java
- Q7. Write any two properties of abstract class in java
- Q8. Explain how command line arguments are accessed
- Q9. Explain any two applications of `final` keyword
- Q10. Write any two differences between abstract class and interface

**Section B**

(5 questions of 4 marks each) [5% = 20]

- Q11. Write a program to read a sentence which contains at least 5 words and print the words of given sentence in ascending and descending order of number of characters.
- Q12. Explain 2D array declaration in java. Write a program for 2x2 matrix multiplication
- Q13. Explain polymorphism by an example
- Q14. Write a program to explain any 3 keywords used in exception handling.
- Q15. Explain application of `super` keyword in constructors

**Section C** (2 questions of 10 marks each) [2% = 10]

- 16.(a) Explain inheritance and its types. Is multiple inheritance possible in java, justify your answer.
- 16.(b) Write a program to generate all the numbers [from 101 to n where  $n > 101$ ] which contains following property [numbers contain at least a digit which is repeated Ex:  $\Rightarrow$  in 101 number 1 is repeated 2 times so it is common digit. [like 101, 22332, 1233----]]
- 17. Differentiate (i) `final` and `finally` (ii) `public` and `protected`  
(iii) command line arguments and scanner class for I/O
- 17.(b) Create a class which contain an integer variable and two constructors and 2 functions [ to print all the digits of number in ascending and descending order respectively]  
For example  $\Rightarrow$  [input  $\Rightarrow$  2453 then output should be 2345 and 5432]