



WEST BENGAL STATE UNIVERSITY  
B.Sc. Honours 2nd Semester Examination, 2023

CMSACOR03T-COMPUTER SCIENCE (CC3)

PROGRAMMING IN JAVA [1242211400111]

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.  
Candidates should answer in their own words and adhere to the word limit as practicable.  
All symbols are of usual significance.*

GROUP-A

1. Answer any **four** questions from the following: 2×4 = 8
- ✓(a) Why Java is called platform independent language? ✓
  - (b) What is the role of Garbage Collection?
  - ✓(c) What are the main uses of “**super**” keyword? ✓
  - ✓(d) What are exceptions?
  - ✓(e) Differentiate between C++ and JAVA. ✓
  - (f) Differentiate between abstract class and interface.
  - ✓(g) What is the difference between procedural and object oriented language? ✓
  - ✓(h) What is the difference between default constructor and parameterized constructors?

GROUP-B

Answer any **four** questions from the following

8×4 = 32

2. (a) Explain the use of final keyword in variable, method and class. 3+3+2
- (b) Describe the substring() and indexOf() methods of String class with suitable examples.
- (c) When you can use ‘**this**’ keyword?
3. (a) Describe method overloading and method overriding. ✓ 3+3+2
- (b) What restrictions are placed in method overloading and method overriding? ✓
- (c) What is the basic property of a static variable? ✓
4. (a) Java works as “pass by value” or “pass by reference” phenomenon. ✓ 2+2+4
- (b) What is the difference between String.equals( ) and == operator? ✓
- (c) Write a program to find the factorial of a given number. ✓

5. (a) How inheritance is incorporated in Java? 2+(2+4)  
(b) Is it possible in Java to have multiple inheritance? If not then how can it be implemented in Java?
6. (a) What is a thread? 2+2+4  
(b) What is an interface?  
(c) What happens if there is no 'catch' block with a 'try' block in exception handling?
7. (a) Explain public static void main (string args[ ]) in Java. 4+4  
(b) Illustrate the use of 'throw' and 'throws' in Java.
8. (a) What is the benefit of creating package in Java? 3+3+2  
(b) Explain with example, what is object reference?  
(c) What is Applet?

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