



WEST BENGAL STATE UNIVERSITY

B.Sc. Honours 2nd Semester Examination, 2021

CMSACOR03T-COMPUTER SCIENCE (CC3)

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) What is the difference between default constructor and parameterized constructor?
 - (b) What is the use of the keyword '**final**'?
 - (c) What is the role of Garbage Collection?
 - (d) What are the main uses of "**this**" keyword?
 - (e) What are the differences between Byte stream and Character stream I/O?
 - (f) Write down the benefits of multithreading.
 - (g) Differentiate between abstract class and interface.
 - (h) How does a constructor differ from a method?
 - (i) What is the function of "**super**" keyword in Java?

GROUP-B

Answer any four questions from the following 8×4 = 32

2. (a) Illustrate the immutability of Strings in Java. 4
- (b) What is the difference between "equals()" method and "==" operator for Java Strings? 4
3. (a) Differentiate between method overloading and method overriding. 3
- (b) How can objects be returned in Java? Explain with proper coding examples. 3
- (c) What is the basic property of a static variable? 2
4. (a) Write a program in Java to add two unsorted arrays of different sizes into a single sorted one. 4

- (b) What is the benefit of using packages in Java? 2
- (c) Describe the local applet and remote applet. 2
5. (a) What does JVM do? 2
- (b) What is the main objective of garbage collection in Java? 2
- (c) Write a program to find the factorial of a given number. 4
6. (a) How inheritance is incorporated in Java? 2
- (b) Is it possible in Java to have multiple inheritance? If not then how can it be implemented in Java? 2+4
7. (a) What is a thread? 2
- (b) What are the two ways of creating a thread in Java? 2
- (c) Describe the states in the life-cycle of a thread in Java. 4
8. (a) What is the difference between Java Applets and Java Application programs? 2
- (b) What are the different types of polymorphisms present in Java? Describe with examples. 2+4

N.B. : *Students have to complete submission of their Answer Scripts through E-mail / Whatsapp to their own respective colleges on the same day / date of examination within 1 hour after end of exam. University / College authorities will not be held responsible for wrong submission (at in proper address). Students are strongly advised not to submit multiple copies of the same answer script.*

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