

2023

COMPUTER SCIENCE — HONOURS

Paper : CC-12

(Object Oriented Programming)

Full Marks : 50

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Answer **question no. 1** and **any four** questions from the rest.

1. Answer **any five** questions : 2×5
- (a) What is byte code?
 - (b) What do you mean by Java applet?
 - (c) Why is inheritance used in Java?
 - (d) What is protected access specifier?
 - (e) What is the role of garbage collection in Java?
 - (f) How does a vector differ from a list?
 - (g) Why is multithreading used in Java?
 - (h) What are the different types of AWT components?
2. (a) What are the different ways to create string object?
(b) Explain the usage of lastIndexOf (int ch, int fromIndex) method in string operation.
(c) Write a program that implements a runtime exception. — ArrayIndexOutOfBoundsException. 3+3+4
3. (a) What is the difference between Method Overloading and Method Overriding?
(b) Explain Dynamic Method Dispatch with suitable examples.
(c) Write a program in Java to access static variable and static method to explain 'static' keyword properly. 3+3+4
4. (a) When is a class in Java termed as abstract class? Give an example of an abstract class having an abstract method.
(b) Write a program in Java to input a number and check whether it is Palindrome or not. 4+6

Please Turn Over

5. (a) How can thread prioritization be achieved in Java?
(b) Differentiate between private and public access specifier with the help of an example.
(c) State the differences between the string and stringbuffer classes in Java. 3+4+3
6. (a) What is the runtime exception?
(b) What is the difference between *throw* and *throws*?
(c) Design a user-defined exception handling program which will throw an exception if you entered a negative number. 2+2+6
7. (a) Differentiate between servlet and swing in Java.
(b) Write a program in Java to find out the minimum element from an array without sorting it. 4+6
8. (a) What problem can be faced due to multiple inheritance in JAVA? How can it be resolved?
(b) What is a package? Explain the different access control packages in Java. 5+5
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