

2026

COMPUTER SCIENCE — HONOURS

Paper : DSCC-8

(Object Oriented Programming)

Full Marks : 75

The figures in the margin indicate full marks.

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

1. Answer **any five** questions :

2×5

- (a) What is byte code?
- (b) Define final class in Java.
- (c) Define static block in Java.
- (d) What is the difference between JDK and JVM?
- (e) Explain the use of “this” keyword.
- (f) Differentiate between abstract class and an interface.
- (g) What is the difference between Runnable and Thread?
- (h) What is the use of the try-catch block?

Section - A

Answer **any three** questions.

5×3

- 2. State the differences between the string and stringbuffer classes in Java.
- 3. Discuss about different types of throwable exceptions in Java.
- 4. What is a package? Explain the different access control packages in Java.
- 5. Write a code snippet to find out the minimum element from an array without sorting it.
- 6. Explain static data member, static method in Java.

Please Turn Over

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Section - B

Answer *any five* questions.

7. (a) What is private access specifier? Explain with an example, how it is different from public and protected access specifiers.
(b) Explain the life cycle of an applet. (2+4)+4
8. (a) What is inheritance in Java? Explain different types of inheritance with example.
(b) Explain with the help of an example, how Java gets benefitted by using Interface. (2+3)+5
9. (a) What is the difference between 'error' and 'exception'?
(b) Illustrate the 'ArrayIndexOutOfBoundsException' exception with an example.
(c) Design a user-defined exception handling program which will throw an exception if you entered a negative number. 3+3+4
10. (a) What is the difference between Method Overloading and Method Overriding?
(b) Explain Dynamic Method Dispatch with suitable example.
(c) Write a program in Java which uses static variable and static method. 3+3+4
11. (a) What is multithreading?
(b) Explain the difference between creation of user thread by extending thread class and implementing runnable interface with an example.
(c) What is thread synchronization? How is it achieved in Java? 2+4+(2+2)
12. (a) What is a vector? How does it differ from an array and list?
(b) How is an array declared and instantiated in Java?
(c) How will you perform type casting in Java? (2+3)+2+3
13. (a) Explain the life cycle of Servlet.
(b) Explain the difference between abstract class and an Interface. 5+5
14. Write short notes on (*any two*) : 5×2
(a) JDK
(b) User defined exception
(c) Swing
(d) Threads in Java.
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