



C20-CM-WD-502

**7636**

**BOARD DIPLOMA EXAMINATION, (C-20)**

**OCTOBER/NOVEMBER—2023**

**DCME – FIFTH SEMESTER EXAMINATION**

JAVA PROGRAMMING

Time : 3 Hours ]

[ Total Marks : 80

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**PART—A**

3×10=30

- Instructions :** (1) Answer **all** questions.  
(2) Each question carries **three** marks.  
(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. Define bytecode of Java.
2. Write any three differences between Java and C++.
3. Write any three differences between abstract class and interface.
4. What is the use of 'super' keyword?
5. Define a stream. List the different types of I/O streams.
6. List any three constructors for the HashSet class.
7. What is finally block? When is it used?
8. Define deadlock.
9. What is an event?
10. List the different states in life cycle of an Applet.

**PART—B**

8×5=40

- Instructions :** (1) Answer **all** questions.  
(2) Each question carries **eight** marks.  
(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

**11.** (a) Explain the features of Java programming. 8

**(OR)**

(b) Explain one-dimensional array with a program which sorts a list of numbers. 3+5=8

**12.** (a) Describe the different types of inheritance with examples. 8

**(OR)**

(b) Explain the concept of creating and importing user defined packages. 8

**13.** (a) Write a program to access primitive data types using data input stream and data output stream. 8

**(OR)**

(b) Explain the linkedlist class by writing a program that uses constructors and methods. 8

**14.** (a) Describe the complete life cycle of a thread with a neat diagram. 8

**(OR)**

(b) Explain the concept of multi-catch statement with an example program. 8

**15.** (a) Discuss the steps involved in designing and executing an Applet. 8

**(OR)**

(b) List and explain any four event classes. 2+6=8

**PART—C**

10×1=10

- Instructions :** (1) Answer the following question.  
(2) The question carries **ten** marks.  
(3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

**16.** Design a class to represent a bank account. Include the following members :

- (a) Fields :
- (i) Name of the account holder
  - (ii) Account number
  - (iii) Balance amount in the account
- (b) Constructor :
- (i) To assign initial values
- (c) Methods :
- (i) To deposit an amount
  - (ii) To display name and balance

Write the necessary Java code for the above data.

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