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**Voc(Sem-II) —
BCA (CC – 3)**

JAVA

2022

Time : 3 hours

Full Marks : 50

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

The figures in the margin indicate full marks.

*Answer from **all** the Parts as directed.*

Part – A

(Objective Type Questions)

1. Choose the correct answer of the following:

1×5 = 5

- (a) What is the size of float and double in Java ?

- (i) 32 and 64 (ii) 32 and 32
(iii) 64 and 64 (iv) 64 and 32

- (b) Automatic type conversion is possible in
which of the possible cases ?

- (i) byte to int (ii) int to long
(iii) long to int (iv) short to int

(c) Select the valid statement :

(i) `char [] ch = new char (5)`

✓ (ii) `char [] ch = new char [5]`

(iii) `char [] ch = new char ()`

(iv) `char [] ch = new char []`

(d) When an array is passed to a method, what does the method receive ?

✓ (i) The reference of the array

✗ (ii) A copy of the array

(iii) Length of the array

(iv) Copy of first element

(e) Identity the correct definition of a Package :

(i) A package is a collection of editing tools.

(ii) A package is a collection of classes.

✓ (iii) A package is a collection of classes and interfaces.

(iv) A package is a collection of interfaces.

2. State whether true or false : $1 \times 5 = 5$

(a) Java compiler converts the Java source code into byte code. T

(b) The wrapping of data and methods into a single unit is called encapsulation. T

- (c) In an instance method or a constructor "this" is a reference to the current object. T
- (d) Constructor overloading is not possible in Java.
- (e) Assignment operator is evaluated from left to right. F

Part – B

(Short-answer Type Questions)

Answer any **four** questions in about **200** words each : $3 \times 4 = 12$

- 3. Demonstrate while statement in Java with the help of an example.
- 4. Write a program to generate Fibonacci series up to n terms.
- ✓5. Define the following :
 - (a) Polymorphism
 - (b) Inheritance
- ✓6. Demonstrate parameterized constructor in Java.
- ✓7. Write a program to demonstrate single inheritance.
- ✓8. Define the following :
 - (a) Public
 - (b) Private
 - (c) Protected

Part – C

(Long-answer Type Questions)

Answer any four questions in about 500 words each :

$$7 \times 4 = 28$$

- ✓ 9. Explain different types of inheritance in Java with the help of example.
10. Explain the features of Object Oriented Programming language.
- ✓ 11. Explain overloading methods and overriding methods with the help of example.
- ✓ 12. What is Exception ? What are the different types of Exception ? Explain.
13. Explain the following :
 - (a) Final and This keyword
 - (b) Garbage Collection
 - (c) Passing Parameters — Call by value
- ✓ 14. Explain various methods of Applet class with necessary examples.

