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Total No. of Questions : 10 ]

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# **BC-397**

**B.C.A. (Part-III) Examination, 2021**

**JAVA PROGRAMMING**

Paper - BCA-302

**(For Due Students only)**

**(For Old Scheme Students)**

*Time : 1½ Hours ]*

*[ Maximum Marks : 50*

**Note :-** Attempt *five* questions in all, selecting *one* question from each Unit. All questions carry equal marks.

## **Unit-I**

1. (a) Describe Java Virtual Machine.  
(b) Describe Java Program structure and also give an example of it.
2. (a) Describe the operators of Java in detail.  
(b) Describe the syntax of conditional and loop statements.

## **Unit-II**

3. (a) Write down the procedure of creating objects and accessing class members with suitable example.  
(b) Write a short note on constructors.
4. Explain the concept of inheritance with suitable example.

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### **Unit-III**

5. Write a program in Java for the product of two 3 by 3 matrices using arrays.
6. Define Interface. How the interface is implemented and extended ?

### **Unit-IV**

7. Explain the concept of creating threads. How to extend a thread class ? Explain with suitable example.
8. Give an example program for adding Applet to HTML file and passing parameters to Applets.

### **Unit-V**

9. (a) Describe the concept of working with Frame Windows.  
(b) Describe the concept of working with Graphics.
10. (a) Describe the concept of adding and removing controls with suitable example.  
(b) Write short notes on the following :
  - (i) Checkbox group
  - (ii) Choice control