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**BCACAC 314**

**Credit Based Fifth Semester B.C.A. Degree Examination, April 2021**  
**(Semester Scheme)**  
**(Common to all Batches)**  
**JAVA PROGRAMMING**

Time : 3 Hours

Max. Marks : 100

**Instruction :** Answer **any ten** questions from Part – A and **one full** question from **each** Unit of Part – B.

**PART – A**

1. a) What is Java Bytecode ? (10×2=20)  
b) What is data Encapsulation ?  
c) Differentiate byte and character streams.  
d) List any four methods associated with string class.  
e) Differentiate public and private access modifiers.  
f) List any two features of static methods.  
g) What are the different methods of creating threads ?  
h) What is the purpose of wait() and notify() methods ?  
i) List any four types of built in exceptions in Java.  
j) What is applet ? List its types.  
k) What is an event ? Give example.  
l) What are containers ? Mention its types.

**PART – B**

**UNIT – I**

2. a) Explain byte and character streams available in Java.  
b) List and explain any five features of Java.  
c) Explain labelled 'break' and labelled 'continue' statements with suitable example.  
d) Explain 'switch' statement with syntax and example. (5+5+6+4)

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3. a) Explain the 'while' and 'do . . . while' statement with syntax and example.
- b) With a suitable example, explain the process of reading a string from the keyboard.
- c) List and explain any five primitive data types available in Java.
- d) Explain different forms of 'if' statements with syntax. (6+4+5+5)

## UNIT – II

4. a) Explain single inheritance with suitable example.
  - b) With a suitable example, explain the uses of various types of constructors.
  - c) What is method overloading ? Explain with an example.
  - d) Explain the purpose of 'abstract' and 'final' classes. (6+6+4+4)
5. a) Explain multi-level inheritance with a suitable example.
  - b) How do you return an object from a method ? Explain with a suitable example.
  - c) With a suitable example, explain how to pass variable-length arguments in java. (8+6+6)

## UNIT – III

6. a) Explain the process of creating a thread in java with suitable example.
  - b) Illustrate the use of multiple 'catch' statements with suitable example.
  - c) Define synchronization. With an example explain how the threads are synchronized in multithreading environment using synchronization method. (8+6+6)
7. a) Explain the method of creating and implementing interface with a suitable example.
  - b) Explain how to create and use package in Java with an example.
  - c) With a suitable example, explain exception handling in Java. (8+6+6)

## UNIT – IV

8. a) Describe the method of passing parameters to an Applet with an example.
  - b) How do you handle Mouse events in Applets ? Illustrate with an example.
  - c) Write a note on : i) Button ii) JTextfield. (8+6+6)
9. a) Describe the purpose of different layout managers available in Java AWT.
  - b) With an example, explain the functioning of JCheckBox.
  - c) Explain Menu creation in java with an example. (8+6+6)