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**[5559]-194**

**S.E. (Computer Engg.) (Second Semester) EXAMINATION, 2019**

**PRINCIPLES OF PROGRAMMING LANGUAGES**

**(2015 PATTERN)**

**Time : 2 Hours**

**Maximum Marks : 50**

- N.B. :** (i) All questions are compulsory.  
(ii) Figures to the right indicates full marks

**Que. 1**

- a. What is the difference between Applets & Application programs? Draw & explain lifecycle of Applet with example. [7]  
b. What are the types of Exceptions? Explain any 3 Built-in Exceptions with suitable example. [6]

**OR**

**Que. 2**

- a. Define the following [7]  
i. Streams  
ii. Byte Streams  
iii. Character Streams  
iv. Predefined Streams  
Enlist the methods of Print Writer class with example.  
b. What are uncaught Exceptions? State the use of try(), catch(), throw() methods. [6]

**Que. 3**

- a. Define the term SDLC. What are the different phases in SDLC? Describe the Waterfall model in detail with diagram. [6]  
b. Differentiate between static & dynamic Type Checking. Explain Cartesian product model with suitable example. [6]

**OR**

**Que. 4**

- a. What is mean by Syntax & Semantics? Explain syntax & lexical rules of programming language with example. [6]  
b. What is Built-in & Primitive data types? State the primitive data types of C++ & Java. [6]

**Que. 5**

- a. State the use of following constructs in Java [6]  
i. Method Overriding  
ii. Abstract class  
iii. Use of final keyword  
b. What is mean by Packages & Interfaces in Java? Explain with suitable example. [7]

P.T.O.

OR

Que. 6

- a. What is Inheritance? How multilevel inheritance is achieved in Java? Explain with suitable example. [7]
- b. What is mean by recursion? Write a java program to find out factorial of given number. [6]

Que. 7

- a. What is mean by modularity? Which concepts are supported to achieve modularity in any programming language? [6]
- b. What are Strings in Java? Explain following operations of class Strings in Java with example.
  - i. To find length of the string [6]
  - ii. To compare two strings
  - iii. Extraction of a character from string

OR

Que. 8

- a. How to create generic module in programming language? Explain the term Template with example in C++ language. [6]
- b. Explain Java's role in internet. Justify the following features of Java
  - i. Secure [6]
  - ii. Architecture Neutral
  - iii. Distributed