D-180280

B. Tech. EXAMINATION, 2018

Semester V (CBS)

CORE JAVA (CSE, IT)

CS-502

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Time : 3 Hours   *Maximum Marks : 60*

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Attempt *one* question from each Sections A, B, C and D. Section E is compulsory. Each question carry equal marks.

Section A

1. (a) What are the different data types supported by the Java Programming Language ? Support your answer with appropriate example by specifying their memory requirement and range.

(b) Explain Byte Code. How can it help any language to become platform independent ? 12

2. (a) What are the different common GUI event types ? Explain at least five J types (e.g. J label, J text field).

(b) What is the difference between abstract class and interface ?   6+6=12

Section B

3. (a) Write down the major pillars of OOP in brief.

(b) Write a short note on Layout Manager.   12

4. (a) Explain various Stream Classes of Java.

(b) Explain the keyword 'this' and 'final' and how these are used in Java.   6+6=12

Section C

5. (a) What is difference between Abstract and Final keyword ?

(b) What is Garbage Collection ?   12

6. Consider the following source code :

```
1.  class Test {
2.  private Demo d;
3.  void start () {
4.  d = new Demo () ;
5.  this.take Demo (d);
6.  }
7.
8.  void takeDemo (Demo demo) {
9.  demo = null;
10. demo = new Demo () ;
11. }
12. }
```

(a) Explain the source code.

(b) When is the Demo object, created on line 3, eligible for garbage collection ?   **12**

Section D

7. Write any program to demonstrate abstract class. Compare its merits and demerits.   **12**

8. (a) What is Runnable Interface ?

   (b) Explain inter thread communication.   **6+6=12**

Section E

9. Explain/differentiate the following function and terms :   4×3=12

   (a) difference between JDK and a JVM

   (b) charAt( ) and getCharts()

   (c) chartAt() and setCharAt().