

D-180280**B. Tech. EXAMINATION, 2018**

Semester V (CBS)

CORE JAVA (CSE, IT)

CS-502

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 getChars()
(c) charAt() and setCharAt().