

**M. SC. BIOINFORMATICS SEM.-II (C.B.C.S.) (2013
COURSE) / ADVANCED DIPLOMA IN BIOINFORMATICS
SEM.-II (C.B.C.S.) (2013 COURSE) : SUMMER - 2018
SUBJECT : Java & Biojava Programming**

Date: **Tuesday**
Day: **10/04/2018**

Time: **02.00 PM TO 05.00 PM**
Max. Marks. **60**

S-2018-1128

N.B.

- 1) **Q.1 & Q. 5 are compulsory**
- 2) Attempt any two questions from **Q.2 to Q.4** from **Section- I** & any **two questions** from **Q.6 to Q.8** from **sections – II**
- 3) Answers to both the sections should be written in **SEPARATE** answer books.
- 4) Figures to the right indicate **FULL** marks.
- 5) Draw neat and labeled diagrams **WHEREVER** necessary

SECTION-I

- Q.1** Explain: (**ANY FIVE**) **(10)**
- a) OOPS
 - b) import and #include
 - c) Exception Hierarchy
 - d) For-each loop (with example)
 - e) Super keyword
 - f) Throws keyword
- Q.2** Answer the following: (**ANY TWO**) **(10)**
- a) Explain the execution of JAVA program with the help of JVM architecture.
 - b) Explain with example;
 - i) Bitwise operators
 - ii) Unary Operators
 - c) Describe all built-in data types in JAVA.
- Q.3** Answer the following: (**ANY TWO**) **(10)**
- a) Explain with example;
 - i) Final
 - ii) Finally
 - iii) Finalize
 - b) Differentiate between constructor overloading and method overloading with suitable example.
 - c) Write a program to implement user defined exception.
- Q.4** Write a program to find out whether the given number is palindrome or not using recursion and without recursion. **(10)**

OR

Write a program to implement array of object.

SECTION-II

- Q.5** Explain the following: **(10)**
- a) Thread Class
 - b) Extends keyword
 - c) Polymorphism
 - d) Implement keyword
 - e) Abstract class

P.T.O.

Q.6 Answer the following: **(ANY TWO)** **(10)**

- a) Explain use of super keyword with example.
- b) Explain operator overloading and method over riding.
- c) Write a program to demonstrate use of this keyword and explain multiple inheritance in JAVA.

Q.7 Answer the following: **(ANY TWO)** **(10)**

- a) Explain keyword listener interface with example.
- b) Explain components of AWT.
- c) Write an applet program for bouncing ball.

Q.8 Write short notes on: **(ANY TWO)** **(10)**

- a) Deadlock in multithreading
- b) Life cycle of thread and applet
- c) Serializable interface

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