

**M. Sc. Bioinformatics Sem.-II (C.B.C.S.) (2013 Course) / Advanced
Diploma in Bioinformatics Sem.-II (C.B.C.S.) (2013 Course) :
SUMMER - 2019**

SUBJECT : Java & Biojava Programming

Date: Wednesday
Day: 10/04/2019

Time: 02.00 PM TO 05.00 PM

S-2019-1466

Max. Marks.60

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 **SAME** 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 method overriding 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) Life cycle of thread
 - b) Package
 - c) Modifiers in JAVA
 - d) Garbage collection
 - e) Event class hierarchy

P.T.O.

- Q.6** Answer the following: **(ANY TWO)** **(10)**
- a) Create applet to demonstrate mouse events.
 - b) Create applet to draw rectangle filled with red color and circle filled with blue color.
 - c) Explain AWT controls in JAVA.
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- Q.7** Answer the following: **(ANY TWO)** **(10)**
- a) Write a program to demonstrate synchronization in threads.
 - b) Explain access specifiers in JAVA.
 - c) Write a program to find IP address of system.
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- Q.8** Answer the following: **(ANY TWO)** **(10)**
- a) Explain applet life cycle.
 - b) Explain in brief key listener interface.
 - c) Differentiate between class and interface.

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