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 Time: 02.00 PM TO 05.00 PM
Day: 10/04/2019 **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.

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.

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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