

**M. Sc. Bioinformatics Sem.-II (C.B.C.S.) (2013 Course) / Advanced
Diploma in Bioinformatics Sem.-II (C.B.C.S.) (2013 Course) :
WINTER - 2018**

SUBJECT: JAVA AND BIOJAVA PROGRAMMING

Day: Wednesday
Date: 24/10/2018

W-2018-1257

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

N.B:

- 1) **Q. No.1 and Q. NO.5** are **COMPULSORY**. Attempt **ANY TWO** from the remaining from each section.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Answer to both the sections should be written in **SEPARATE** answer books.
 - 4) Draw neat labeled diagram **WHEREVER** required.
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SECTION-I

- Q.1** Answer the following (**ANY FIVE**): **(10)**
- a) Differentiate between Interface and Abstract class
 - b) Finally block
 - c) Explain exception handling mechanism
 - d) Explain static and final keyword
 - e) Differentiate between c and java
 - f) Explain platform independency in details.
- Q.2** Answer the following: **(10)**
- a) Explain features of Java.
 - b) Explain JVM Architecture.
- Q.3** Answer the following: **(10)**
- a) Write a java program to find the max and min value from the given array.
 - b) Write a java program for Matrix multiplication.
- Q.4** Answer the following: **(10)**
- a) Write a java program to demonstrate how ArithmeticException is handled in Java.
 - b) Write an exception class to throw an exception "InvalidAge greater than 25 years" if the age is greater than 25 years otherwise display the age.

SECTION-II

- Q.5** Answer the following (**ANY FIVE**): **(10)**
- a) Explain Socket and ServerSocket
 - b) Explain AWT
 - c) Does java support multiple inheritances? Justify
 - d) What is package?
 - e) What is the use of super keyword?
 - f) Explain method overriding.
- Q.6** Answer the following: **(10)**
- a) Write a program to find whether the given number is prime or not using multithreading.
 - b) Explain synchronization with example.
- Q.7** Answer the following: **(10)**
- a) Write a java program to demonstrate mouse event handling with example.
 - b) Explain life cycle of applet with example.
- Q.8** Answer the following: **(10)**
- a) Write an applet program for bouncing ball in java.
 - b) Write an applet program to simulate traffic signal.

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