

2056

M.Sc. (Bio-Informatics) Second Semester
MBIN-8009: Programming Languages in Bioinformatics - I

Time allowed: 3 Hours

Max. Marks: 60

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting atleast one question each from Unit.

x-x-x

1. Answer the following:-

- (a) How can one convert int to string in Java?
- (b) Define type casting in Java.
- (c) What are static variables and static methods?
- (d) What is the use of the final keyword in Java?
- (e) Explain uncaught exceptions in JAVA.
- (f) What is the difference between sleep() and wait() methods?
- (g) Explain suspending, resuming and stopping of threads?
- (h) What are the problems with native methods? (8x1½)

UNIT - I

2. (a) Write a note on data types in JAVA. Write a Java program to reverse a string. (3,3)
- (b) Explain method overloading with an example program. (6)

3. Explain Object-oriented programming concepts in Java (Encapsulation, Inheritance, Polymorphism, Abstraction) with examples. (12)

UNIT - II

4. (a) What are Java packages? Describe the different ways to access packages using import statements. Also explain package hierarchy and access protection (public, protected, default, private) with examples.

(b) Explain in detail interface implementation and application in JAVA. (8,4)

5. (a) Describe the throw and throws keywords with examples.

(b) Write a java program demonstrating user-defined exception handling. (2x6)

P.T.O.

(2)

UNIT - III

6. (a) Describe thread synchronization and explain how it prevents thread interference.
(b) Describe the life cycle of a thread with a diagram. (8,4)
7. (a) Write a Java program to count the number of words in a file.
(b) Explain the difference between FileInputStream and FileReader with examples. (2x6)

x-x-x