Exam.Code:0440
Sub. Code: 3499

1059

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

Time allowed: 3 Hours Max. Marks: 60

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

x-x-x

I. Attempt the following:-

a) What is bytecode in Java?

b) What is the utility of a constructor?

c) What is meant by inner classes?

d) How the throw keyword differs from throws keyword?

e) What is the purpose of a final class?

f) What are the advantages of multithreading?

g) What is the use of volatile keyword in Java?

h) What is meant by native methods? (8x1½)

UNIT – I

II. a) Why is Java so important to the Internet? Discuss.

b) Create and use a class *Employee* that represents the employees of an organization. Include the following members:

Data Members: employee id, name of the employee, address, department, salary
Methods: to assign initial values to data members, to display the particulars of an employee, to raise the salary of an employee by a given percentage
Appropriately assume any required information yourself. (6,6)

III. a) What is an abstract class and when should it be used? Discuss in brief.

b) What is the utility of this keyword? Discuss in brief.

c) What are the advantages of inheritance? Write a program in Java to demonstrate multilevel inheritance. Appropriately assume any required information yourself.

(3,3,6)

P.T.O.

UNIT – II

IV. a) What is the advantage of using interfaces? Given two interfaces called *Alpha* and *Beta,* show how a class called *MyClass* specifies that it implements each. Appropriately assume any required information yourself.

b) Differentiate between checked and unchecked exceptions.

c) What is the use *of finally* keyword? Discuss in brief. (6,3,3)

V. a) How user defined exceptions can be created in Java? Discuss with the help of an example.

b) Create a package called *MyPack* and make class *ClassA* and interface *InterfaceA* as part of this package. Now make use of this package. Appropriately assume any required information yourself.

UNIT – III

VI. a) What is inter-thread communication? Write a program to demonstrate it. Appropriately assume any required information yourself.

b) Draw and explain life cycle of an applet. (6,6)

VII. a) Write a program to count the number of words in a text file.

b) What is meant by a deadlock? How deadlocks can be handled? Discuss in brief.

c) How runnable interface can be used to create a thread? Discuss with an example. (5,3,4)

x-x-x