S.No. : 830 ITBC 3102

No. of Printed Pages : 04

Following Paper ID and Roll No. to be filled in your Answer Book.

PAPER ID : 34001 Roll No. [redacted]

B. Tech. Examination 2022-23

(Odd Semester)

JAVA FUNDAMENTAL

Time : Three Hours] *[Maximum Marks : 60*

Note :– Attempt all questions.

SECTION – A

1. Attempt all parts of the following : 8×1=8

   (a) What do you understand by OOPS?

   (b) What is JVM?

   (c) What is super class and subclass?

   (d) What is a class in Java?

   (e) What are primitive data types?

[P. T. O.

(f) What is meant by the local variable and the instance variable?

(g) What is SDLC?

(h) What is the use of interpreter in Java?

SECTION – B

2. Attempt any two parts of the following : 2×6=12

(a) What are constructors? Explain the types of constructors in Java? Create a class to demonstrate the usage of parameterized constructors.

(b) Explain in details the features of JAVA.

(c) Explain programmatically the concept of abstract classes and interfaces. Differentiate abstrate class and interface.

(d) What is exception handling? Explain the types of exceptions in details. Explain one suitable program of exception handling.

SECTION – C

Note :– Attempt all questions. Attempt any two parts from each question. 5×8=40

3. (a) Explain encapsulation in Java. Create a one example of encapsulation that has only one field with its setter and getter methods.

(b) Explain access specifiers through suitable programs.

(c) Explain the advantages and disadvantages (if any) of available session tracking techniques.

4. (a) Write a program by creating the two objects of class and initializing the value to these objects by invoking the method.

(b) Explain the use of static, final and this keyword through suitable programs.

(c) What is JSP? Mention some advantages of using JSP to create web applications over servlet. Why we use JSP? Explain life cycle of a JSP?

5. (a) Explain the difference between method overloading and method overriding through suitable programs.

(b) What is Servlet? What are its life cycle methods. What is request object and response object in Servlets? Explain Servlet APL.

(c) Elaborate the difference between array list and linked list. Explain one example of array list and linked list in Java.

6. (a) Elaborate inheritance. Explain all types of inheritance. Create a program of multiple and multilevel inheritance.

(b) What is abstraction and encapsulation? Elaborate one example for abstraction and encapsulation in Java.

(c) Elaborate the use of collection in Java. Write a program to create and traverse (or iterate) array list. Use its methods to add and remove elements.

⌘⌘⌘