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END SEMESTER EXAMINATION – 2019

Semester : 5th (New)

Subject Code : CO-505

JAVA PROGRAMMING

Full Marks – 70

Time – Three hours

The figures in the margin indicate full marks for the questions.

Instructions :

1. Questions on PART-A are compulsory.
2. Answer any *five* questions from PART-B.

PART – A

Marks – 25

1. Fill in the blanks : 1×10=10
 - (a) Java programming language was originally developed by _____ in 1995.
 - (b) Java can be easily extended since it is based on the _____ model.

[Turn over

- (c) Java is considered to be more dynamic than _____ or _____ since it is designed to adapt to an evolving environment.
- (d) The class that inherits properties from another class is called _____.
- (e) The output of the Java compiler is executed by the _____.
- (f) _____ is the Java compiler.
- (g) The mechanism of binding data with the code that manipulates it is known as _____.
- (h) A method declared with _____ modifier cannot be overridden.
- (i) Java byte code output from the JDK compiler will be placed into a file with _____ extension.
- (j) A _____ is a collection of classes and interfaces.

2. Write true or false : 1×10=10

- (a) JAVA is an example of object oriented programming.
- (b) Java programming language was originally initiated by James Cameron.

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- (c) The class whose properties are inherited by sub class is called Base class or Super class.
- (d) The Java interpreter is known as JAVA.
- (e) The user interface classes such as Button, Checkbox and Label are not subclasses of Utility class.
- (f) An exception is an object that is generated when a run time error occurs.
- (g) Multiple inheritance is supported by Java.
- (h) Static declares a class variable that is to be shared among all instances.
- (i) Methods defined in an interface must be Public and abstract.
- (j) HTML stands for Hyper Text Makeup Language.

3. Choose the correct answer : 1×5=5

- (a) Which of the following type of class allows only one object of it to be created ?
- (i) Virtual Class (ii) Abstract Class
- (iii) Singleton Class (iv) Friend Class

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(b) Which of the following is not a type of constructor ?

- (i) Copy constructor
- (ii) Friend constructor
- (iii) Default constructor
- (iv) Parameterized constructor

(c) Which of the following statements is correct ?

- (i) Base class pointer cannot point to derived class.
- (ii) Derived class pointer cannot point to base class.
- (iii) Pointer to derived class cannot be created.
- (iv) Pointer to base class cannot be created.

(d) Which of the following is not the member of class ?

- (i) Static function
- (ii) Friend function
- (iii) Const function
- (iv) Virtual function

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(c) Which of the following concepts means detecting at runtime, what method to invoke ?

- (i) Data hiding
- (ii) Dynamic typing
- (iii) Dynamic binding
- (iv) Dynamic loading.

PART - B

Marks - 45

4. (a) Why is JAVA known as platform-neutral language ? 4

(b) How is JAVA more secured than other languages ? 5

5. (a) What is object oriented programming ? How is it different from the procedure oriented programming ? 1+4=5

(b) What are the unique advantages of an object oriented programming paradigm ? 4

6. (a) What is the task of the main method in JAVA program ? 3

(b) Describe the structure of a typical Java program. 6

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(5)

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7. (a) Differentiate between single and multithreaded program. 4
- (b) Write a multithreaded program in Java of your choice. 5
8. (a) What is token? List the various types of tokens supported by JAVA. 1+4=5
- (b) Explain JAVA and JVM architecture. 4
9. Distinguish between the following terms :
- (i) Object and class.
- (ii) Data abstraction and data encapsulation.
- (iii) Inheritance and polymorphism. 3×3=9