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END SEMESTER EXAMINATION – 2022

Semester : 5th

Branch : Computer Engg.

Subject Code : CO-505

JAVA PROGRAMMING

Full Marks – 70

Time – Three hours

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

Instructions :

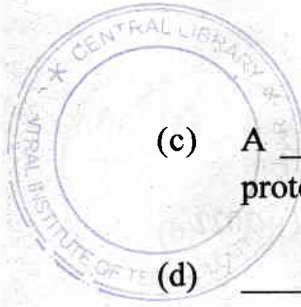
1. *All* questions of PART–A are compulsory.
2. Answer any *five* questions from PART–B .

PART – A

Marks – 25

1. Fill in the blanks : 1×10=10
 - (a) A class which inherits the properties is known as _____.
 - (b) _____ interprets the bytecode into machine code.

[Turn over



(c) A _____ is a user defined blueprint or prototype from which objects are created.

(d) _____ in Java is a mechanism to encapsulate a group of classes, sub packages and interfaces.

(e) We can use _____ method to create new file in JAVA.

(f) An _____ is an unwanted or unexpected event, which occurs during the execution of a program.

(g) _____ is a Java feature that allows concurrent execution of two or more parts of a program.

(h) To connect to other machine we need a _____ connection.

(i) Swing is a part of _____.

(j) _____ is an standard API specification developed in order to move data from frontend to backend.

2. Write whether true or false : $1 \times 10 = 10$

- (a) In single inheritance, one class cannot inherit the properties of another.
- (b) Platform independence is one of the main advantages of Java.
- (c) A class can not be public or has default access.
- (d) Package names and directory structure are closely related.
- (e) File class delete method is used to delete a file or an empty directory.
- (f) Error indicates conditions that a reasonable application might try to catch.
- (g) A thread begins its life inside run() method.
- (h) Sockets are used to establish the connection between client and server.
- (i) JFC stands for Java Fundamental Classes.
- (j) JDBC is an standard API specification.

3. Choose the correct answers : $1 \times 5 = 5$

(a) Class declarations in JAVA consists of

- (i) Modifier
- (ii) Class name
- (iii) Body
- (iv) All of these

(b) Which of the following command is not a proper ways to create object of a class ?

- (i) `Test t = new Test ();`
- (ii) `Test t 2 = (Test)t1.clone();`
- (iii) `Test = new Test();`
- (iv) `Test obj = (Test) Class. for Name ("com.pl.Test"). new Instance ();`

(c) Which of the following is not an integer data type ?

- (i) Byte
- (ii) Short
- (iii) Long.
- (iv) None of these



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(d) Which of the following is not a valid access specifier ?

- (i) Void (ii) Public
(iii) Protected (iv) None of these

(e) Class loader has the following activity

- (i) Loading (ii) Linking
(iii) Initialization (iv) All of these.

PART – B

Marks – 45

3. Define OOP. Explain the basic features/principles of OOP. 1+8=9

4. (a) Who is the father of JAVA ? Write five features of JAVA. 1+5=6

(b) Briefly explain why Java is Platform Independent ? 3

5. (a) Define package. Write and explain the types of JAVA packages. 1+4=5

(b) Write and explain the common file handling operations in JAVA. 4



6. (a) Briefly explain mechanism of creating threads in JAVA. 4
- (b) Differentiate between AWT and Swing. 5
7. (a) What is JDBC ? Write down the steps involved in connection between Java program and database. 1+5=6
- (b) Briefly explain the mechanism to establishing socket connection from client side. 3
8. (a) Explain the JVM architecture. 5
- (b) Write a JAVA program that takes three numbers as input to calculate and print the average of the numbers. 4
9. (a) Differentiate C, C++ and JAVA. 5
- (b) Differentiate between single and multi-threaded program. 4

