Code: DC60/DE123/DC113   Subject: JAVA AND WEB PROGRAMMING

DipIETE – CS/ET (Current & New Scheme)

Time: 3 Hours   **June 2019**   **Max. Marks: 100**

PLEASE WRITE YOUR ROLL NO. AT THE SPACE PROVIDED ON EACH PAGE IMMEDIATELY AFTER RECEIVING THE QUESTION PAPER.

NOTE: There are 9 Questions in all.
- **Question 1 is compulsory and carries 20 marks. Answer to Q.1 must be written in the space provided for it in the answer book supplied and nowhere else.**
- **The answer sheet for the Q.1 will be collected by the invigilator after 45 minutes of the commencement of the examination.**
- **Out of the remaining EIGHT Questions, answer any FIVE Questions, selecting THREE questions from Part A and TWO questions from Part B. Each question carries 16 marks.**
- **Any required data not explicitly given, may be suitably assumed and stated.**

Q.1   Choose the correct or the best alternative in the following: (2×10)

   a. The Java compiler generates a
      (A) .dll file   **(B)** .exe file
      (C) .obj file   **(D)** .class file

   b. Multiple Inheritance in Java is implemented by use of
      (A) package   **(B)** interface
      (C) extends keyword   **(D)** Applet

   c. An Integer type variable in Java uses _____ bytes of memory.
      (A) one   **(B)** two
      (C) four   **(D)** eight

   d. A constant in java is defined using keyword
      (A) const   **(B)** FINAL
      (C) final   **(D)** CONST

   e. To be able to use a class in a package, the package has to be
      (A) implemented   **(B)** imported
      (C) extended   **(D)** inherited

   f. Which of the following keyword is used to prevent inheriting of a class.
      (A) static   **(B)** public
      (C) abstract   **(D)** final

   g. JVM executes
      (A) machine code   **(B)** java program
      (C) byte code   **(D)** None of these

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h. Which of the following is the default access modifier in Java

    (A) friendly   **(B)** protected
    (C) private   **(D)** public

i. There are altogether _____ levels of headings in HTML.

    (A) four   **(B)** two
    (C) six   **(D)** eight

j. Which of the following is not a closed tag.

    (A)
                 (B) <BODY>
    (C) <HTML>   **(D)** <P>

PART A
Attempt any THREE questions. Each question carries 16 marks.

Q.2 a. Briefly explain the various tools available in the Java development toolkit that **(6)** are used for developing and running Java programs.

    b. Define the following:-   **(4)**
       (i)   instance variables   (ii) class variables
       (iii) local variables   (iv) static variables

    c. How Java is different from C and C++ Programming?   **(6)**

Q.3 a. Write a program in Java to generate the first ten terms of a Fibonacci series given as 1   1 2 3 5 8 13 -------------   **(6)**

    b. Briefly explain break and labelled break statement in Java along with their **(4)** syntax

    c. What is the difference between call by value and call by reference? Briefly **(6)** explain using a suitable example .

Q.4 a. Define a class Circle with appropriate data members and two methods area( ) and circum( ) to calculate the area and circumference of the circle. Also create a constructor to initialize the radius of the circle. Finally create a main class and create an object of the Circle class and test the various methods created. **(8)**

    b. What is inheritance? Briefly explain the types of Inheritance.   **(8)**

Q.5 a. What are interfaces? How are they different from classes ? How can you implement multiple inheritance using the concept of interfaces. **(8)**

    b. Briefly explain package along with its advantages. Briefly explain the various system defined packages available in Java.   **(8)**

Q.6   a. What is an exception? What are the various steps involved in exception handling. Briefly explain the purpose of try and catch block used in exception handling.   **(8)**

b. Write a program in Java to copy the contents of the source file to the destination file using command line arguments. i.e. copy <source file> <destination file>   **(8)**

PART B
Attempt any TWO questions. Each question carries 16 marks.

Q.7   a. Briefly explain static and dynamic website along with their advantages and disadvantages.   **(8)**

b. Define the following:-
   (i) URL   (ii) Domain name
   (iii) web server   (iv) web client   **(8)**

Q. 8   a. Discuss various attributer that are available for table , tr, td?   **(8)**

b. Write the code in HTML to create the following list:-   **(8)**
   I. Memory
   o Auxillary Storage

   o Primary Storage

   II. Internet
   o Modem

   o Bandwidth

   III. Pendrive
   o 2 GB

   o 8 GB

Q.9   a. Briefly explain CSS and its types.   **(8)**

b. Write a javascript code to accept two numbers from the user and find the   **(8)**
   greater of the two.