Code: DC60   **Subject: JAVA AND WEB PROGRAMMING**

DipIETE – CS

Time: 3 Hours   **JUNE 2014**   **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. Which of the following operator can take three operands?

(A) ^   **(B)** ? :
(C) ~   **(D)** >>

b. Which out of the following is not a valid data type?

(A) int   **(B)** short
(C) float   **(D)** bool

c. _____ section can be omitted in the "for" statement.

(A) initialization   **(B)** increment
(C) both the above   **(D)** none of these

d. What is the original name of Java?

(A) C   **(B)** Oak
(C) C++   **(D)** None of these

e. What is the result of the expression (1 & 2) + (3 | 4) in base ten?

(A) 1   **(B)** 2
(C) 8   **(D)** 7

f. The use of 'protected' keyword to a member in a class will restrict its visibility as follows:
(A) Visible only in the class and its subclass in the same package
(B) Visible only inside the same package

(C) Visible in all classes in the same package and subclasses in the other packages

(D) Visible only in the class where it is declared

g. URL identifies a host computer by

(A) IP address   **(B)** domain name
(C) none of these   **(D)** either of these

h. _____ provide domain to IP mapping on the internet.

(A) DNS   **(B)** HTML
(C) ICMP   **(D)** CSS

i. HTML tags define

(A) The data types of elements of document
(B) Presentation of specified elements of a document
(C) The contents of the document
(D) The structure of the document

j. Most style properties set for the body element apply to the entire page through _____

(A) Inheritance   **(B)** Polymorphism
(C) Encapsulation   **(D)** All of these

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

Q.2 a. How does Java differ from C and C++?   **(8)**

b. Explain the meaning of the following statement public static void main (string args [ ])   **(8)**

Q.3 a. What are the three things performed by declaration?   **(8)**

b. List any 7 Java operators with description, associativity and relative ranking.
                                                                                   (8)

Q.4 a. Explain the concept of Method Overloading in Java with explain.   **(7)**

b. What are vectors? How are they advantageous over arrays?   **(6)**

c. Explain 'equals()' function of the string class.   **(3)**

Q.5 a. How to extend an interface? Illustrate with an example.   **(10)**

b. List any three frequently used packages in Java with descriptions.   **(6)**

Q.6 a. Here's a piece of code that has been saved in a file called "JollyMessage.java":
// A jolly message is written to the screen!

```
 class Jollymessage
{

 public static void main(String[] args) {

  //Write the message to the terminal window
  System.out.println("Ho Ho Ho!");

 }
 }
```
The above code will produce a runtime error message. To put it another way, a mistake has been made but it won't be picked up when the program is compiled, only when it is run.

What is the mistake and what error will be returned when the compiled code is executed? How can the problem be rectified? **(8)**

b. Discuss the concept of streams in java. What are the two basic streams? **(8)**

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

Q.7 a. What are name servers? Explain. **(8)**

b. Are there any problems spacing images in toolbars? What is the solution? **(8)**

Q.8 a. How can you control the horizontal and vertical positioning of content within a cell? Explain through examples. **(8)**

b. What are the elements of design? Explain any four. **(8)**

Q.9 a. Explain the essential parts of a typical form. **(8)**

b. Describe how to embed JavaScript in a Web Page. **(8)**