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

DipIETE – ET/CS (Current & New Scheme)

Time: 3 Hours   **JUNE 2015**   **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. What is the output of this program?

```
class bool_operator {
    public static void main(String args[]){
            boolean a = true;
            boolean b = !true;
            boolean c = a | b;
            boolean d = a & b;
            boolean e = d ? b : c;
            System.out.println(d + " " + e);
    }
}
```

(**A**) false false   (**B**) true true
(**C**) true false   (**D**) false true

b. Which of the following is valid keyword in Java?
(**A**) interface   (**B**) string
(**C**) float   (**D**) unsigned

c. Which one of the following will declare an array and initialize it with five numbers?

(**A**) Array a = new Array[5];   (**B**) int [] a = {23, 45, 47, 32, 29};
(**C**) int a[] = new int[];   (**D**) int[5] array;

d. Which of the following statement is incorrect?

(**A**) Every class must contain a main() method
(**B**) Applets do not require a main() method
(**C**) There can be only one main() method in a program
(**D**) main() method must be made public

e. Which of this is correct way of inheriting class A by class B?

   (A) class B + class A { }　　　　　　**(B)** class B inherits class A { }
   (C) class B extends class A { }　　　　**(D)** class B extends A { }

f. Which is a valid declaration within an interface definition?

   (A) public double methodA();
   (B) public final double methodA();
   (C) static void methodA(double d1);
   (D) protected void methodA(double d1);

g. Which of this access specifier can be used for a class so that its members can be accessed by a different class in the different package?

   (A) public　　　　　　　　　　　　**(B)** protected
   (C) private　　　　　　　　　　　**(D)** all of the mentioned

h. What is the use of try and catch?

   (A) It allows us to manually handle the exception
   (B) It allows fixing errors
   (C) It prevents automatic terminating of the program in cases when an exception occurs
   (D) All of these

i. Which of the method of Thread class is used to find out the priority given to a thread?

   (A) get()　　　　　　　　　　　　**(B)** ThreadPriority()
   (C) getPriority()　　　　　　　　**(D)** getThreadPriority()

j. Which of the following constructor is used to create an empty String object?

   (A) String()　　　　　　　　　　**(B)** String(void)
   (C) String(0)　　　　　　　　　　**(D)** None of these

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

Q.2　a. What do you mean by command line arguments? Write a program that displays the command line arguments entered by the user.　　　　**(3+5)**

　　　b. With the help of a suitable figure, describe the different steps using which Java communicates with a web page.　　　　**(8)**

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

Q.3 a. Explain the syntax of *for* loop. Also, describe with the help of example, the *enhanced for* loop.   **(4+4)**

b. Write a program to find the number of and sum of all integers greater than 100 and less than 200 that are divisible by 7.   **(8)**

Q.4 a. What do you mean by *'final method'* and *'final class'*? Can a class be declared *final* and **abstract** at the same time? Support your answer.   **(3+3+2)**

b. Given are two one-dimensional integer arrays **A** and **B** in which numbers are stored in ascending order. Write a program to merge them into a single sorted array **C** that contains every item from arrays **A** and **B**, in ascending order.   **(8)**

Q.5 a. Describe the life cycle of a thread with the help of a figure.   **(5+3)**

b. Discuss, with the help of examples, ways of accessing the classes stored in a package using import statement and without import statement.   **(8)**

Q.6 a. What is an exception? Discuss the basic concepts of exception handling. List three common types of exceptions that might occur in Java.   **(2+3+3)**

b. Write a program that generates random integers and stores them in a file named "rand.dat". The program then reads the integers from file and display on the screen.   **(8)**

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

Q.7 a. Discuss the general syntax rules of XHTML. List and explain the core attributes for XHTML.   **(4+4)**

b. What are name servers? What are the three elements of DNS?   **(2+6)**

Q.8 a. With the help of HTML code, discuss Page Forwarding.   **(2+2)**

b. What is table in XHTML? Explain any three different attributes for the table element that controls the various formatting options for the table.   **(3+3)**

c. What is layout grid? What are the basic layout strategies generally designers use in designing a web page (any three)?   **(3+3)**

Q.9 a. Explain the process of deploying CGI programs.   **(5)**

b. Write the advantages of using cascading style sheet in web page design.   **(5)**

c. Explain how JavaScript are embedded in a web page.   **(6)**