DipIETE – CS/ET (Current & New Scheme)

Time: 3 Hours   **JUNE 2017**   **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 is a reserved word in the Java programming language?
(A) method
(B) native
(C) array
(D) subclasses

b. Which data type value is returned by all transcendental math functions?
(A) int
(B) float
(C) double
(D) char

c. What is the output of relational operators?
(A) Integer
(B) Boolean
(C) Characters
(D) Double

d. Which of the following loops will execute the body of loop even when condition controlling the loop is initially false?
(A) do-while
(B) while
(C) for
(D) None of these

e. Which of these selection statements test only for equality?
(A) if
(B) switch
(C) if & switch
(D) None of these

f. Which of these can be overloaded?
(A) Methods
(B) Constructors
(C) All of these
(D) None of these

g. Which of these keywords is used to prevent content of a variable from being modified?
(A) final
(B) last
(C) constant
(D) static

h. When does Exceptions in Java arises in code sequence?
(A) Run Time
(B) Compilation Time
(C) Can Occur Any Time
(D) None of these

i. What does XHTML stand for?
   (A) EXtensible HyperText Markup Language
   (B) EXtra Hyperlinks and Text Markup Language
   (C) EXtensible HyperText Marking Language
   (D) EXtreme HyperText Markup Language

j. Which of the below is the correct way to set a background image?
   (A) body {background-image:url(paper.gif);}
   (B) body {background-image:url('paper.gif')};
   (C) body {background-image:url('paper.gif')}
   (D) body {background-image:url('paper.gif');}

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

Q.2 a. What are the Key attributes of Java Programming Language? Explain in detail. **(8)**

b. What is Byte code? Explain the JVM concept in Java Programming Language. **(5)**

c. Explain the importance of JDK & JRE for Java Programming. **(3)**

Q.3 a. Explain Arithmetic, Logical and Relational Operator. **(6)**

b. Write a Java Program to check whether the number is palindrome or not. **(5)**

c. How Switch - Case works in Java? Explain with the help of example. **(5)**

Q.4 a. Explain the final variable, final method and final class. **(8)**

b. Write a Program to add two matrices and store and display result through 3rd matrix. **(8)**

Q.5 a. Define package. List out some API Packages already available in Java with their uses. **(4)**

b. What is the importance of Interface in Java? **(4)**

c. What is Thread? Explain the life cycle of thread. **(8)**

Q.6 a. Differentiate between exception and error. Explain exception handling in Java. **(8)**

b. Write a Java program to read a file using byte array. You need to read fixed size of content each time, read multiple times, till end of the file. **(8)**

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

Q.7 a. What is the importance of HTTP? Explain HTTP Request and HTTP Response methods in detail. **(6)**

b. What is the importance of Nameserver? **(4)**

c. Explain any three XHTML core attributes with the help of Example `**(6)**

Q.8 a. How to control the horizontal and vertical positioning of content within a cell? Explain with the help of example. **(8)**

b. What are the things to be taken care of while designing a webpage or website? **(8)**

Q.9 a. What is CGI? Explain its components in brief. **(8)**

b. Write a Java Script code to implement Countdown Timer. **(8)**