

**DiplETE - CS**

Time: 3 Hours

**DECEMBER 2013**

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. 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 C++ feature missing from C# is \_\_\_\_\_.
- (A) Encapsulation (B) Macros  
(C) Inheritance (D) None of these
- b. \_\_\_\_\_ technology is used by microsoft to enable interprocess communication.
- (A) OLE (B) COM  
(C) .NET (D) None of these
- c. \_\_\_\_\_ is responsible for loading and executing programs in .NET framework.
- (A) CLR (B) Framework base classes  
(C) user and prg. interfaces (D) None of these
- d. \_\_\_\_\_ is the Boolean literals in C# programming language.
- (A) 0 & 1 (B) True & False  
(C) T & F (D) None of these
- e. The size of double precision numbers in C# programming language is \_\_\_\_\_
- (A) 2 bytes (B) 4 bytes  
(C) 6 bytes (D) 8 bytes
- f. Default value of a Boolean variable in C# is \_\_\_\_\_
- (A) 0 (B) true  
(C) false (D) 1

- g. Using which of the following modifier, a method can be accessed with in the class in which it is defined and from a derived class.
- (A) private (B) public  
(C) protected (D) static
- h. The ternary operator available in C# is
- (A) ?: (B) ++  
(C) << (D) !:
- i. An interface in C# is a \_\_\_\_\_
- (A) static type (B) reference type  
(C) constructor type (D) none of these
- j. The process in which more than one method is created with the same name is called \_\_\_\_\_
- (A) Overloading (B) Overriding  
(C) Virtual functions (D) Inheritance

**Answer any FIVE Questions out of EIGHT Questions.  
Each question carries 16 marks.**

- Q.2** a. List and briefly explain the characteristics of C# (8)  
b. Explain CLR of .NET framework. (8)
- Q.3** a. With a block diagram, explain a general C# program structure. (8)  
b. Write a C# program to convert decimal number into its equivalent binary format.(8)
- Q.4** a. Write a program in C# to print multiplication table using do-while loop. (8)  
b. Differentiate between pass by value and pass by reference using suitable examples. (8)
- Q.5** a. Distinguish between write and writeline methods. Write a C# program that demonstrates the application of these methods. (8)  
b. Explain compare(), equals() methods and == operator used to compare strings with an example for each. (8)
- Q.6** a. Explain the use of regular expressions in C# with an example. (8)  
b. Explain C# access modifiers used to control member access. (8)

- Q.7** a. Illustrate method overriding in C# using an example program. (4)
- b. When do we use static methods? What is the difference between a static method and an instance method? (4)
- c. What are abstract classes? What are abstract methods? Explain with an example for each. (8)
- Q.8** a. What is the need of operator overloading? Write a program to demonstrate overloading of unary minus. (8)
- b. Explain delegate methods and delegate instantiation with examples in C# (8)
- Q.9** a. Can the Threads priority be set? Write a C# program that illustrate the use of priority property. (8)
- b. With an example code, explain how we can throw our own exception. (8)