

AMIETE – CS/IT

Time: 3 Hours

JUNE 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. _____ is a metalanguage.

- (A) IDL (B) CSL
(C) CTR (D) None of these

b. The entity that compiles CIL into meaningful CPU instructions is termed as _____.

- (A) JIT compiler (B) metadata compiler
(C) CIL compiler (D) None of these

c. _____ classes are types that cannot function as a base class to other types.

- (A) abstract (B) final
(C) sealed (D) none of these

d. The namespace which defines a number of stock container objects is _____.

- (A) system.data (B) system.collections
(C) system.IO (D) none of these

e. In C#, every data type is derived from a common base class called _____.

- (A) System.All (B) System.Base
(C) System.Object (D) All of these

f. When do variables of reference type die ?

- (A) When the managed heap is garbage collected
(B) When it fall out of the defining scope
(C) None of these
(D) Both (A) & (B)

Code: AC73/AT73**Subject: C# AND .NET**

- g. You may construct methods that take interfaces as parameter as well as methods that return values.
- (A) True (B) False
- h. Every MBR type may be configured to be activated using
- (A) WKO (B) CAO
(C) None of these (D) Either of these
- i. The default interface of a class may be populated by
- (A) Methods (B) Properties
(C) Public field data (D) Any of these
- j. _____ methods do not supply default implementation.
- (A) Derived (B) Abstract
(C) Overridden (D) None of these

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

- Q.2** a. Explain the concepts of CTS and CLS (Common Language Specification). (8)
b. List any 4 .NET Namespaces and briefly explain their purpose. (8)
- Q.3** a. With an example, explain how you compile multiple Source files. (8)
b. List and briefly explain any four predefined XML documentation elements. (8)
- Q.4** a. Write the anatomy of basic C# class. Write the variations of main() method. (8)
b. List and explain the string formatting flags of C#. (8)
- Q.5** a. Explain three pillars of OOP: Encapsulation, Inheritance and polymorphism. (8)
b. Explain abstract classes and abstract methods with example program. (8)
- Q.6** a. What do you understand by errors, bugs and exceptions? Give the important members of the system exception class. (8)
b. Discuss the difference between catch and throw exceptions. (8)
- Q.7** a. Explain in detail, the concept of interfaces with multiple base interfaces. (8)
b. Distinguish between shallow and deep copy, as applied to cloning. How would you implement cloning for a custom class using ICCloneable interface. (8)

- Q.8** a. Which are the inherited members of System.MulticastDelegate. What is their purpose? (8)
- b. What do you understand by asynchronous delegates in C#. Explain with an example. (8)
- Q.9** Write short notes on the following:
- (i) Problem with COM versioning and COM deployment. (8×2)
- (ii) Single file and multifile assemblies. (8×2)