Module 1

Pseudo-Code

--Defensive programming

--Testing: Black box, white box

--Coupling Cohesion

--Exception handling.

-- Complexity

Web Basics:

--Escape in JS, decode

SQL:

NOCHECK constraint

Sql-variant

Fetch and offset

Types of Constraints: Domain, Entity, Referential etc.

Having, groupBy clause

View types

OOP UML:

Definitions of diagrams and symbols

Virtual keyword

Composition Aggregation

Module 2:

C-sharp:

Strongly typed

Implicitly typed local variables:

RULES:

* + Must be initialized on the same line only
  + Use New keyword for storing arrays. Eg: var arr={10,20,30} gives error. Use var arr=new
  + Can’t give null values directly while declaring
  + Cannot be used as a return type or a function parameter

Type casting

Substring method

Nullable types: Only for value types

Syntax: Nullable<Int32> OR int?

Reference types, value types

--Datetime is value type

Hybrid objects

Indexers

Diff between class and structure

--no default constructor or destructor in structure

Constructors in depth

Reference and Out Parameters(ref and out keywords.)

Value vs reference

--Out parameters need not be initialized before passing to a method, but ref parameters need to be initialized

--Extension methods (example of switchboard and extension box)

--In case of inheritance, after creating an object of child class without parameters, first the default constr of parent is created and then the default const of child. Same in case an object of child class with parameters. If base keyword is not used besides child para. Constructors, then default const of parent is called

Eg.class Manager extends Employee

Manager mg1=new Manager();//default c of both parent and child

Manager mg2=new Manager();//default c of parent and para. C of child

If Base is given as para const, then para c of both wil be called.

--Exceptions are run time errors

--Ienumerable and Ienumerator and their return types

-- Each collection class must implement Ienumerable interface

Constraints used on Generics

--Foreach loop is read-only

Yield expression

Icomparable and Icomparer

Enumerator and enumeration

Event handler (parameters are objects and EventArgs)

Delegates and generic delegates

Anonymous methods

Access Specifiers protected and internal

IPrintable

Override keyword

Native code

Manifest, assembly

Parallel extension

Asynchronous

New features: extension methods with using.