KUMARAGURU
college of technology
character is life

B.TECH DEGREE EXAMINATIONS: MAY 2017

(Regulation 2014)

Sixth Semester

INFORMATION TECHNOLOGY

U14ITTE12**:** C# and .NET Programming

COURSE OUTCOMES

CO1: Compare and Contrast the features of C# over Java and vice versa
CO2: Explain how C# provides support for OOPS concepts and event handling
CO3: Develop the web based applications using ADO .NET in C#
CO4: Apply XML in the .NET environment to create Web Service-based applications
CO5: Summarize the basics of Asynchronous programming

Time: Three Hours   **Maximum Marks: 100**

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. Match the folders in List I with its corresponding contents in List II   CO3   [K$_2$]

List I	List II
A. App_Browsers	i. WSDL files
B. App_Code	ii. Database files
C. App_Data	iii. Browser definitions
D. App_WebReferences	iv. Class files

	A	B	C	D
a)	ii	i	iii	iv
b)	iii	iv	ii	i
c)	ii	iv	iii	i
d)	iii	i	ii	iv

2. Which of the following is correct about the C# .Net Code Snippet   CO1   [K$_2$]

int d;

d = Convert.ToInt32(!(30 < 20));

a) A value 0 will be assigned to d   b) A value 1 will be assigned to d

c) A value -1 will be assigned to d   d) The code reports an error

3. Which of the following are NOT Relational operators in C#.NET?   CO1 [K₂]

    1. >=

    2. !=

    3. Not

    4. <=

    5. <>=

| a) | 1,3 | b) | 3,5 |
| c) | 1,4 | d) | 3 only |

4. Choose the incorrect statement about delegates?   CO2 [K₂]
    1. delegates are not type safe
    2. delegates cannot be used to implement callback notification
    3. delegate is a user defined type
    4. delegates permits execution of a method in an asynchronous manner

| a) | 1,2 | b) | 2,3 |
| c) | 1,4 | d) | 3,4 |

5. Assertion (A): Events offer a publish/subscribe mechanism to delegates   CO2 [K₂]

Reason (R): Events can exists without using delegates also

| a) | Both A and R are Individually true and R is the correct explanation of A | b) | Both A and R are Individually true but R is not the correct explanation of A |
| c) | A is true but R is false | d) | A is false but R is true |

6. UDDI is   CO4 [K₁]

| a) | Universal Description, Discovery and Integration | b) | United Description, Discovery and Integration |
| c) | Universal Discovery, Description and Integration | d) | Union Discovery, Description and Integration |

7. Arrange the steps for ado.net connection in correct order: CO3 [K₂]
    1. Display the data using any display control.
    2. Read using data reader
    3. Create a connection string and Open the Connection
    4. Pass a query through command object

| a) | 2-3-4-1 | b) | 1-3-2-4 |
| c) | 3-4-2-1 | d) | 4-1-3-2 |

8. What are partial views in MVC?

    CO4 [K$_2$]

   a) It is the resource file for a view   b) View that has strongly-type models

   c) Same as MasterPage in asp.net   d) Reusable view

9. Assertion (A):Multithreading enables the user to utilize the idle time in most programs

    CO5 [K$_2$]

   Reason (R): Multithreaded programming is a process in which two or more parts of same process run simultaneously

   a) Both A and R are Individually true and R is the correct explanation of A   b) Both A and R are Individually true but R is not the correct explanation of A

   c) A is true but R is false   d) A is false but R is true

10. Which feature enables is to obtain information about the use and capabilities of types at runtime?

    CO5 [K$_2$]

   a) Runtime Type ID   b) Reflection

   c) Assemblies   d) Attributes

PART B (10 x 2 = 20 Marks)
(Answer not more than 40 words)

11. What are the differences between C# and Java?	CO1	[K$_2$]
12. Distinguish between ref and out parameters.	CO1	[K$_2$]
13. Distinguish between event-based and task-based asynchronous patterns.	CO2	[K$_1$]
14. Differentiate String and StringBuilder in C#.	CO2	[K$_2$]
15. List out any 4 server side controls in C#.	CO3	[K$_1$]
16. What are the advantages of ADO .NET model over ADO?	CO3	[K$_2$]
17. List out the advantages of MVC based web application.	CO4	[K$_2$]
18. Define Web Services	CO4	[K$_1$]
19. What is reflection?	CO5	[K$_1$]
20. Differentiate private and shared assemblies	CO5	[K$_2$]

Answer any FIVE Questions:-
PART C (5 x 14 = 70 Marks)
(Answer not more than 300 words)

Q.No. 21 is Compulsory

21. Explain the steps involved in the creation and testing of a Calculator Web Service.	CO4	[K$_3$]

22.	(i) List out the various value and reference types supported in C#.	(6)	CO1	[K$_2$]
	(ii)What is a jagged array? Explain its use with a simple example	(8)		

23.	Build a web based application to accept the reservation details of a train ticket and to store the details in a database table. Use drop down list box to choose the train number and name. Accept source and destinations in text boxes. Allow the user to enter the date of journey one month in advance. Assume that in each train, there are thirty tickets and every booking should have a unique number.	CO3	[K$_3$]

24.	Explain in detail about delegates and events	CO2	[K$_2$]

25.	Explain the concept of state management techniques in asp .net	CO3	[K$_2$]

26.	Explain in detail about threads and synchronization	CO5	[K$_2$]

27.	Implement the following classes to demonstrate abstract function in C#	CO1	[K$_3$]

Class employee: [Fields: name, emp_id, basic_sal, Methods: abstract method compute_Bonus(), virtual method compute_sal()]

Class manager: Derived from employee

[Fields: Total_sales,

Methods:

1. compute_Bonus() to give 5% of basic_sal as bonus if Total_sales > 10,000 and 2% of basic_sal as bonus if Total_sales <10,000
2. compute_sal() to calculate the salary as basic_sal + 12% DA + Bonus]

Write driver program to create an array of 3 managers and display their total salary. Use appropriate constructors.

****