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ANNA UNIVERSITY (UNIVERSITY DEPARTMENTS)

B.E. / B. Tech / B. Arch (Full Time) - END SEMESTER EXAMINATIONS April/May 2024

Semester VI

IT5014 & C# and .NET Programming
(Regulation 2019)

Time: 3hrs

Max.Marks: 100

CO 1	Understand the difference between .NET and Java framework.
CO 2	Work with the basic and advanced features of C# language.
CO 3	Create applications using various data providers.
CO 4	Create web applications using ASP.NET
CO 5	Create mobile applications using .NET compact framework.
CO 6	Integrate all the features of C# language and build complex web applications in .NET framework.

BL – Bloom's Taxonomy Levels

(L1 - Remembering, L2 - Understanding, L3 - Applying, L4 - Analysing, L5 - Evaluating, L6 - Creating)

PART- A (10 x 2 = 20 Marks)
(Answer all Questions)

Q. No	Questions	Marks	CO	BL
1	What is the use of tuple in C#?	2	CO2	L2
2	Why C# is called type safe language?	2	CO2	L2
3	Write a C# code to construct a jagged array.	2	CO2	L2
4	What is the purpose of using the finally block?	2	CO2	L2
5	Differentiate SAX and DOM.	2	CO2	L2
6	Define localization.	2	CO2	L2
7	Give the XML element type Format of web server controls.	2	CO4	L2
8	What are the two types of server side controls?	2	CO4	L1
9	Define metadata.	2	CO5	L1
10	Define Marshaling.	2	CO5	L1

PART- B (5 x 13 = 65 Marks)
(Restrict to a maximum of 2 subdivisions)

Q. No	Questions	Mark s	CO	BL
11 (a) (i)	Describe the architecture of .NET framework with neat diagram.	10	CO1	L1
(ii)	Find the output of the given code: Mention the type of error if any. <pre>private void button1_Click(object sender, EventArgs e) { int startLoop = 11; int endLoop = 1; int answer = 0; for (int i = startLoop; i < endLoop; i++) { answer = answer + i; } MessageBox.Show("answer =" + answer.ToString()); }</pre>	3	CO1	L2
OR				
11 (b)	What are indexers? Write a C# code to demonstrate Indexer	9	CO2	L2

(i)	overloading.			
(ii)	How the managed code and unmanaged code are executed by .Net framework? Show it with necessary diagram.	4	CO2	L2
12 (a)	Explain the following with an example code. 1) Anonymous Method 2) Lambda Expression	13	CO2	L5
OR				
12 (b)	Consider that the system has to periodically checks the system time, if there is a change in the current time then all the subscribers have to be notified, and has to update its own state. Write a C# code to implement Events with delegates. Assume that the registered no. of subscribers $\neq 0$.	13	CO2	L3
13 (a)	Discuss in detail about ADO.NET transaction using simple C# program.	13	CO3	L2
OR				
13 (b)	Create an Employee database and create required table and apply all database related queries to maintain the employee details for name, age, salary, grade(A,B,C,D). <ul style="list-style-type: none"> Insert all employee details Update 1000rs for employees who are getting more than lakh. Select employees name who are under "A grade" category 	13	CO3	L3
14 (a) i	Explain in detail Data Webserver controls of ASP.NET.	7	CO4	L2
14 (a) ii	Compare ASP and ASP.NET.	6	CO4	L2
OR				
14 (b)	Explain in detail about .NET remoting architecture with necessary diagram.	13	CO5	L2
15 (a)	Discuss in detail about the following operations using compaction edition data store. i. Creating table. ii. Creating foreign key and indexing.	(5+8) 13	CO5	L6
OR				
15 (b) i	Explain in detail about .net framework deployment features.	7	CO5	L2
15 (b) ii	Explain the advantages of packaging in .net framework.	6		

PART- C (1 x 15 = 15 Marks)

(Q.No.16 is compulsory)

Q. No	Questions	Marks	CO	BL
16.	Implement a user authentication system using ASP.NET Identity, allowing users to sign up, sign in. <ul style="list-style-type: none"> Create a database schema for storing product information such as name, description, price, and inventory. Develop CRUD (Create, Read, Update, Delete) functionalities for managing products, accessible only to admin users. Design a shopping cart system that allows users to add products, update quantities, and remove items. Ensure that the shopping cart state persists across sessions, allowing users to resume shopping even after logging out and logging back in. Implement robust error handling mechanisms to handle exceptions and prevent application crashes. 	15	CO4	L3

