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# SATHYABAMA UNIVERSITY

(Established under section 3 of UGC Act, 1956)

Course & Branch: B.E-CSE/DCS

Title of the Paper: C# and .NET

Sub. Code: 511502-611502

Date: 15/11/2010

Max. Marks: 80

Time: 3 Hours

Session: FN

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PART - A

(10 X 2 = 20)

Answer ALL the Questions

1. Enumerate the major services provided by the CLR.
2. How do you create a dynamic array?
3. What is inclusion polymorphism?
4. What are the characteristics of multicast delegate?
5. State any 2 reasons why C# is deal for building Windows applications.
6. Give two typical examples where events are used.
7. Differentiate between Windows forms and Web forms.
8. Give an example for asynchronous I/O.
9. List any two differences between ASP and ASP.NET.
10. What is disconnected data architecture? What is the advantages in it?

PART – B  
Answer ALL the Questions

(5 x 12 = 60)

11. Explain the looping construction in C# with syntax and examples.  
(or)
12. Write a program to implement the stack data structure and perform the operations push and pop.
13. Define operator overloading. Write a C# program to perform addition and multiplication of Complex numbers by overloading the '+' and '\*' operators respectively.  
(or)
14. Discuss in detail about inheritance. Write a program with the following constraints.

Assume that a bank account maintains two kinds of accounts for customer, one called savings account and the other current account. The savings account provides compound interest and withdraw facilities but no cheque book facility. The current account provides cheque book facility but no interest. Current account holders should maintain a minimum balance and if the balance falls below this level, a service charge is imposed.

Create a class Account that stores customer name, account number and type of account. From this derive the classes Current\_Acc and Saving\_Acc to make them more specific in their requirements. Include the necessary member methods in order to accomplish the following tasks

Accept deposit from a customer and update the balance.

Display the balance.

Compute and deposit interest.

Permit withdraw and update the balance

Check for the minimum balance, impose penalty if necessary and update the balance.

Do not use constructors. Use member methods to initialize the class members.

15. List out the categories of control supported in windows based application and explain the importance of each.

(or)

16. Write a C# Windows program to create five buttons and display the caption in label control when the buttons are clicked.

17. Write a Windows application program to change the background color by using 3 scroll bars in C#.

(or)

18. Explain the process of creating a window based calculator with your own UI.

19. Explain the steps involved in extracting information from a database using ADO.NET.

(or)

20. Explain how to create, discover and deploy web services in the .NET environment.