Software Development Fundamentals(Ch1 + Ch2)

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Learner Name:

Grade:

Date:

Team Name:

Team Principles:

Instructions:

1. Read each question carefully.

2. No crying, weeping or whining Please! :)

3. You have 60 minutes to complete the test.

*4. You get 5% extra for remembering the team name and **ALL** team principles. :O*

*5. Answer **ALL** questions on this paper, every unanswered question has a 5% penalty. :(*

*6. **Lastly, I know we are a team, but no helping each other with this test.***

1. Which of the following is not a valid variable declaration?

       a. int _num1 = 10;

       b. int num_1 = 10;

       c. int 1_num = 10;

       d. int _1num = 10;

2. Which of the following statements correctly tell the differences between '=' and '==' in C#?

       a. '==' operator is used to assign values from one variable to another variable. '=' operator is used to compare value between two variables.

       b. '=' operator is used to assign values from one variable to another variable '==' operator is used to compare value between two variables

       c. No difference between both operators

       d. None of the mentioned

3. What is the correct syntax for the do-while loop ?

```
a) do;
   {
     statement;
   }while (condition);
b) do(condition)
   {
     statement;
   }while;
c) do
   {
     statement;
   }while (condition)
d) do
   {
       statement;
   }while (condition);
```

4. What does the following code output ?

```
1.    static void Main(string[] args)
2.    {
3.        int i;
4.        for (i =-3; i <= 3; i++)
5.        {
6.            switch (i)
7.            {
8.            case 0:
9.                Console.WriteLine("zero");
10.               break;
11.           }
12.           if (i > 0)
13.               Console.WriteLine("A");
14.           else if (i < 0)
15.               Console.WriteLine("B");
16.       }
17.       Console.ReadLine();
18.   }
```

    a. B B zero A AA

    b. B zero A A A

    c. B B B zero A A A

    d. A A A zero B B B

5. Which of the following is true about try block in C#?

    a. A try block identifies a block of code for which a particular exception is activated.

    b. It is followed by one or more catch blocks.

    c. None of the above.

    d. Both a. and b.

6. Difference between for and foreach is that:

    a. The foreach statement repeats a group of embedded statements for each element in an array or an object

    b. The for loop executes a statement or a block of statements repeatedly until a specified expression

    c. For repeats fixed number of times whereas foreach repeats for infinite number of times

    d. a. and b.

7. Default case in switch statements is :

    a. Executed if any of the case is not executed

    b. Executed if all the cases execute successfully

    c. Never executed

    d. None of the above

8. What is Recursion in C# ?

    a. Recursion is another form of class.

    b. Recursion is another process of defining a method that calls other methods repeatedly

    c. Recursion is a process of defining a method that calls itself repeatedly.

    d. Recursion is a process of defining a method that calls other methods which in turn calls this method.

9. Boolean variables result in values

    a. True and False.

    b. 0 and 1.

    c. Both a and b.

    d. None of the above.

10. Which of following loops is executed at least once even if condition is not true:

    a. for loop

    b. while loop

    c. do-while loop

    d. None of the above

11. Which of the following is an Inheritance mechanism?

    a. Using an existing functionality of base class

    b. Override the existing functionality of base class

    c. Implements new functionality in derived class

    d. All of the above

12. If you want a method to return information:

    a. Add a return statement inside the method.

    b. Add void keyword as a return type.

    c. Add return statement outside the method.

    d. None of the above

13. For loop different from while and do while loops in following ways

    a. A for loop has a terminating condition given

    b. A for loop does not works with a wrong condition like do while loop does.

    c. A for loop can not be nested

    d. A for loop is not different from while and do while loops

14. Process by which we can control parts of a program that can access members of a class is called

    a. Polymorphism

    b. Abstraction

    c. Encapsulation

    d. Inheritance

15. Data members of a class should always be:

    a. Public

    b. Private

    c. Protected

    d. None of the above

16. The capability of an object in C# to take number of different forms and hence display behavior as according is known as:

    a. Encapsulation.

    b. Polymorphism.

    c. Abstraction.

    d. None of the Above.

17. Consider the following code Snippet:

```
1.  public class sample
2.  {
3.      public static int x = 100;
4.      public static int y = 150;
5.
6.  }
7.  public class newspaper :sample
8.  {
9.      new public static int x = 1000;
10.     static void Main(string[] args)
11.     {
12.         console.writeline(sample.x + "  " + sample.y + "  " + x);
13.     }
14. }
```

What is the output of the given code ?

    a. 100 150 1000

    b. 1000 150 1000

    c. 1000 150 100

    d. 100 150 100

18. Difference between reference type and value type is that

    a. Reference types always contains a value but a value type can be null

    b. Value type always contains a value but a reference type can be null

    c. Both can either have values or can be null

    d. b and c

19. What are decision tables and why are they important ?

20. What is the main difference between a high level and a low level programming language?

21. When would you use a constant variable ?

22. Write the number 179 in Binary.

23. What is an access modifier ? What happens when it is set to public for class members ?

24. What is the main difference between reference type and a value type variables?

25. What is an object in OOP?

26. What is the main use of a namespace ?

27. Why do we need classes in our programs ?

28. Define the following?

Inheritance, Encapsulation, Abstraction and Polymorphism.