QUIZ COMPETITION

Team ID	
Team Name	
Member 1	
Member 2	

Instructions

Read these instructions carefully.

- Before anything else fill out the above table correctly.
- This test consists of three parts having 10 questions each.
- You have 25 minutes to complete this quiz.
- Do not write too much on the test paper.
- Just circle or mark the answer you think is correct.
- Do not choose multiple answers for one question.

Author

Sayam Qazi
BSCS Final year (Morning)

Section A
(I got brains!)

Q1. In a series given by 7, 10, 8, 11, 9, 12 which number should come next.

1. 12
2. 11
3. 10
4. 9

Q2. A program generates an alpha (A to Z uppercase only) string of length 4. What is the probability for it generating "UBIT".

1. 1 in a billion
2. 1 in a 456976
3. 1 in 1024
4. It will never generate this word

Q3 If the radius of earth suddenly doubles and everything is scaled proportionally. The area covered by oceans will.

1. Stay the same
2. Get doubled
3. Become quadrupled
4. Shrink to half

Q4. There are three fields shaped like circle, equilateral triangle and a square and cover exactly the same area. Which field will require the greatest length of rope to draw a fence
.
1. Circle
2. Equilateral Triangle
3. Square
4. Every field will require the same length of rope

Q5. If we take the product of first n primes and add 1 to it, the resultant number will be

1. Definitely a prime
2. Definitely the $(k+1)^{th}$ prime.
3. Both 1 and 2
4. Definitely a composite
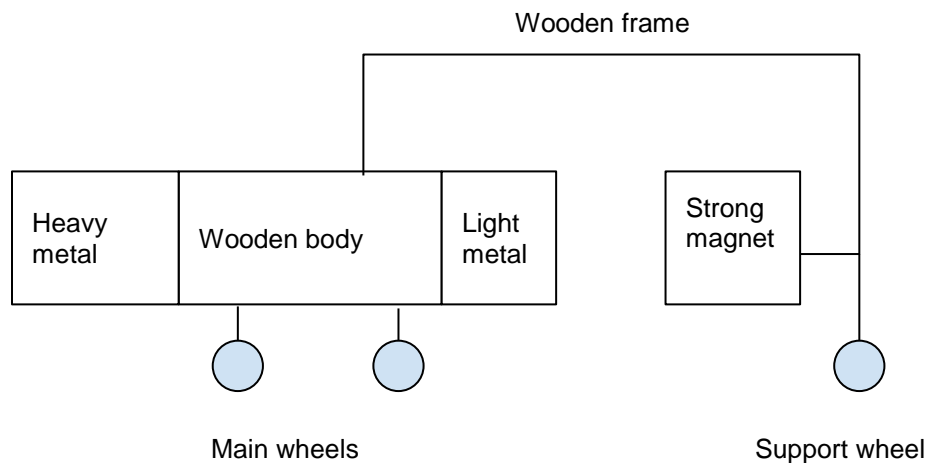
Q6. How many times the digit 5 appears in counting from 1 to 100.

Ans. _____

Q7. A student of mathematics is asked to write five random facts about geometry and he writes these facts. You have to determine which of them are true.
   a. Every square is a polygon.
   b. Every square is also a rectangle.
   c. Every quadrilateral is a rectangle.
   d. Every rectangle is a quadrilateral.
   e. Every quadrilateral is a polygon.

   1. Statements a, b, c and e are true.
   2. Statement a is the only true statement.
   3. Statements a, b, d and e are true.
   4. Statements d and e are the only true statements.

Q8. An engineer was very eager to test his new toy car whose design is given below.

Wooden frame

| Heavy metal | Wooden body | Light metal | | Strong magnet |

Main wheels   Support wheel

He went into his backyard and set this model car free. What do you think what did he observe.

   1. The car moved backward
   2. The car moved forward
   3. The car kept vibrating and then moved backward due to heavier metal.
   4. The car did not move at all

Q9. How many handshakes will happen in a room of ten people if everyone shook hands with everyone else with no repeating pairs.

1. 100
2. 50
3. 90
4. 45

Q10. Is it possible to find the center of a circle using a pencil, ruler and a compass if the large part of a circle is erased/torn out?

1. Yes, it is absolutely possible
2. It is not possible
3. Only possible if at least a quarter of the circle is present
4. Possible but must need other equipment.

Section B
(Did you just call me a nerd?)

Q1. When buying a Graphics card / GPU which set of metrics you will use to determine the performance for video games. You are not allowed to mix two sets of metrics.

1. VRAM size, Frequency, Number of fans
2. VRAM size, Graphics cores count, Frequency
3. Frequency, Texture units count, DirectX version support
4. Video Output ports count, cooling mechanism, Dimensions

Q2. The file extension [.bat] is usually used on windows systems for what

1. To run highly specialized commands on windows kernel
2. To store commands to be run in sequence without typing them repeatedly
3. To create hyperlinks.
4. To store system failures and error reports.

Q3. Which one of the following home media server is not open source

1. XBMC
2. Kodi
3. Plex
4. LibreELEC

Q4. "Making video games is harder than rocket science". This is a famous quote said by whom. He actually was a aerospace engineer who later became a game developer.

1. Don Knuth
2. Benedict Cumberbatch
3. Bill Gates
4. John Carmack

Q5. There are two common types of touch screens. Which one is the most used in today's smartphones.
1. Capacitive touch
2. Resistive touch
3. None of above
4. I am not sure

Q6. The latest series of graphics card were numbered as GTX 10XX (1070, 1080, 1080 Ti) etc. What was the name of the architecture of these GPUs.
   1. Fermi
   2. Volta
   3. Pascal
   4. Fury X

Q7. At their early age computer games were not considered to be a significant entertainment market. Recently a video game actually broke many records to become the most revenue generating entertainment product ever. Amassing 1 Billion dollars just three days after launch. What was the name of this game

   1. Red dead redemption
   2. Grand theft auto 5
   3. Rise of the Tomb raider
   4. Uncharted 4 A thief's end

Q8. In recent year the focus of companies making processors has shifted from increasing clock frequencies to what?

   1. Reducing die size to achieve better performance per watt
   2. Increase die size to put more transistors on a single chip
   3. Stacking layers of transistors to save space.
   4. None of the above

Q9. The size of the transistors in the latest of the processors is around

   1. 25nm
   2. 5nm
   3. 40nm
   4. 12 nm

Q10. An intel CPU has a number 4790K written on it. What generation of intel i-series does it belong to.

   1. 47th generation
   2. 9th generation
   3. 4th generation
   4. 7th generation

Section C
(I dream in code then I code my dreams)

Q1. which one of this is a distinct type that consists of set of named constants

1. Enum
2. Class
3. Variable
4. Loop

Q2. What is the output of this short section of code

```
int a = 0;
int b = a++;
int c;
c = ++b + a;
Console.WriteLine(a + b + c);
```

1. 3
2. 3 1 1
3. 1 1 3
4. 4

Q3. What is the output of following program.

```
If ( !(true && false) && (true || false))
      Console.Writeline("I AM AWESOME");
else {
      Console.Writeline("I AM SUPER AWESOME");
}
```

1. Compiler will give error about if clause missing curly brackets.
2. I AM AWESOME
3. I AM SUPER AWESOME
4. Program will crash without any error or warning

Q4. You cannot name your variables the same as these

1. Data types
2. Compilers
3. Keywords
4. Loops

Q5. What do you think this program does?

```
Console.WriteLine("2");
for (int i = 3 ; i < 100 ; i+= 2) {
    int f = 0;
    for (int j = 2;  j < i ; j++) {
        if (i % j == 0)
            f ++;
    }
    if (f == 0)
        Console.WriteLine(i);
}
```

1. It prints out all numbers below hundred.
2. It prints out all prime numbers below hundred
3. It prints out all the even numbers below hundred
4. It prints out all the odd numbers below hundred

Q6. In the following code if you remove **'else'** keywords what will happen to its output.

```
//suppose there is a variable named num
//with a random integer assigned to it
//in the range (1 TO 1024)
if (num % 2 == 0)
    Console.WriteLine("Number is even");
else if (num % 2 != 0)
    Console.WriteLine("Number is odd");
else if (num % 4 == 0)
    Console.WriteLine("Number is divisible by 4");
```

1. The output will be different
2. The output will not change at all.
3. The program will give errors
4. The program will run then crash

Q7. How many times the string **Hello** will get printed by this program.

```
for (int i = 1 ; i < 50 ; i++) {
    if (i % 2 == 0 || i % 5 == 0)
        Console.WriteLine("Hello");
}
```

1. 50
2. 25
3. 29
4. 10

Q8. What is the value of **a** after this piece of code runs.

```
int a = 16;
a % 2 == 0 ? ++a : a--;
```

1. 17
2. 16
3. 15
4. 18

Q9. Which part of this code is unreachable

```
if (num % 2 == 0)
    Console.WriteLine("Even");
else if (num % 2 != 0)
    Console.WriteLine("Odd");
else
    Console.WriteLine("Neither even nor Odd");
```

1. The if part
2. The else if part
3. The else part
4. None of above

Q10. c# is a _____ language
.

1. Low level Language
2. Intermediate level language
3. Scripting language
4. High level language