

Tech Quiz Questions

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Q.

Monkeys and bananas:

Suppose 8 monkeys take 8 minutes to eat 8 bananas.

(a) How many minutes would it take 3 monkeys to eat 3 bananas?

Sol:each mky takes 8 min to eat a banana

(b) How many monkeys would it take to eat 48 bananas in 48 minutes

Ans.

$$8m=48$$

$$m=6$$

There is five digit number,where the third number is one higher than the sum of first and second digits .Fourth digit is twice of fifth and third digit is twice of the fourth .second digit is five more than the first digit .what is number?

Ans.: let us take 'abcde' is the number

Given

$$C=a+b+1\text{-----}(1)$$

$$D=2e\text{-----}(2)$$

$$C=2d\text{-----}(3)$$

$$b=a+5\text{-----}(5)$$

(1),(4) gives $c=2a+6$ that means an even number more than 6,.e. 8

So $d=4$ by (3) that means $e=2$ by (2) ans also $a=1$ and $b=6$

The given number is 16842

Q.

A girl has stolen two bars of solid gold, each weighing 20 pounds, and is running from some police. On the path she is on, she comes up to a rope bridge with a sign saying that the rope bridge can hold a maximum weight of 130 pounds, and that if any more weight is placed on the bridge it will collapse.

The girl knows her weight is 100 pounds, so she walks across the bridge carrying both gold bars, and the bridge does not break. How is this possible?

Ans.

Gold is weighed using the Troy system, where there are only 12 ounces to a pound. The maximum weight specified on the bridge will be using the normal imperial system for measuring weight, where there are 16 pounds to an ounce.

Because of this 40 pounds of gold (weighed using the Troy system), will only weight 30 standard imperial pounds. This means that her total weight, including both gold bars, is 130 pounds, the exact capacity of the bridge.An alternative answer, as submitted by a Zuzzle.com visitor is as follows:The girl would simply throw the gold bars up in the air while holding the other in a juggling manner.

Thus, she would never be holding more than 120 pounds as long as she threw the opposite bar up before she caught the other

Q.

What it Means to Declare Something in C and C++

Ans.

When you declare a variable, a function, or even a class all you are doing is saying: there is something with this name, and it has this type. The compiler can then handle most (but not all) uses of that name without needing the full definition of that name. Declaring a value--without defining it--allows you to write code that the compiler can understand without having to put all of the details. This is particularly useful if you are working with multiple source files, and you need to use a function in multiple files. You don't want to put the body of the function in multiple files, but you do need to provide a declaration for it.

Q

You have 5 boxes and each box has 5 marbles in it. Marbles in 4 bags weight 10g each and in one bag weight 9g each. You don't know which bag has 9g marbles and you are given a chance to use a weight scale for one time. How can you find the bag with 9g marbles?

Ans.

Number the bags from 1 through 5. Take 1 marble from bag 1, 2 marbles from bag 2, 3 marbles from bag 3, 4 marbles from bag 4 and 5 marbles from bag 5. Now put them on the weight scale. Now there are 5 possible measurements. If all marbles would weigh 10g, the total would be 150g. But one or more marbles weigh 9g. So if you took one 9g marble, the total would be 149g. If you took two 9g marbles, the total would be 148g. And so on.

Therefore, $150 - (\text{Measured Weight})$ gives the bag number which contain 9g marbles.

(Ex: If measured weight is 147g, $150 - 147 = 3$ is the bag number as you have taken three 9g marbles from bag number 3)

Q.2

$2+3=8$ $3+7=27$ $4+5=32$ $5+8=60$ $6+7=72$ $7+8=??$

Ans.

$$2+3=8 \dots 2+3 = 5 \times 2 = 10 - 2 = 8$$

$$3+7=27 \dots 3+7 = 10 \times 3 = 30 - 3 = 27$$

$$4+5=32 \dots 4+5 = 9 \times 4 = 36 - 4 = 32$$

$$5+8=60 \dots 5+8 = 13 \times 5 = 65 - 5 = 60$$

$$6+7=72 \dots 6+7 = 13 \times 6 = 78 - 6 = 72$$

$$7+8=82 \dots 7+8 = 15 \times 7 = 105 - 7 = 98$$

Q.

If $137+276=435$

How much is $731+672$?

Ans.

first, check the given problem with hint($137+276=435$).
you can understand that they are in reverse form($137+276=731+672$).
so the answer is reverse of 435 i.e., 534.
ANSWER IS 534

Q.

XYZ

+AB

CDEF

XYZ

-AB

BGA

Find the values for X,Y,Z,G.

Ans.

Adding a two digit number to a 3 digit number is resulting 4 digit number...which will be between 1001 to 1198
so $C = 1$;

Two digit number can be max 99 so the 3 digit number is greater than or equal to 901

so $X = 9$ Confirm;

if $YZ > AB$ then $XYZ - AB$ should result $X _ _$ but it is resulting $B _ _$ means

$YZ < AB$ and in this case B can be nothing but 8 only

so till now

$X = 9$; $B=8$; $C = 1$;

XYZ can be max 999 and min 901

AB can be min 10 and max 99 so addition will not cross

9 Y Z

+ A 8

=====

1 D E F

9 Y Z

- A 8

=====

8 G A

Now D can be only 0 or 1 as 5 digit number will be between 1001 to 1198

Since c is already 1 so $D = 0$;

Till now

$X = 9$; $B = 8$; $C = 1$; $D = 0$;

Remaining Y Z A E F G are among 2,3,4,5,6,7,

Take the addition case

if $z = 2$ then F should be 0 so which is not possible so Z is not 2

if $z = 3$ then F will be 1 again not possible

if $z = 4$ then F will be 2 possible

sub case then A will be 6

remaining Y E F among 3,5,7

Check others if fails increasing Z and try again

and so on you will reach

$D = 0$; $C = 1$; $E = 2$; $F = 3$; $Y = 4$; $Z = 5$; $G = 6$; $A = 7$; $B = 8$; $X = 9$;

Q.

Who put the @ in emails first?

Ans.

Ray Tomlinson is credited with inventing the email as we know it today. He worked on apranet the first system of linked widely distributed computers the ancestor of the internet. He choose @ so that the computer system would recognise it as an email message and the symbol meant "at" before emails. See link below for the history of email

Q.

Form 8 digit numbers from by using 1, 2,3,4,5 with repetition is allowed and must be divisible by4?

Ans.

In order to be divisible by 4, the two least significant digits must be

12, 24, 32, 44, 52 (a total of 5 choices)

The other 6 digits can be any of the five allowed digits.

The total number of possible numbers is

$$(5^6) * (5) = 5^7 = \mathbf{78125}$$

Q.

What is the symbol table?

Ans.

In computer science, a **symbol table** is a data structure used by a language translator such as a compiler or interpreter, where each identifier in a program's source code is associated with information relating to its declaration or appearance in the source, such as its type, scope level and sometimes

Q.

What is the row size in the SQL server 2000?

Ans.

8060 bytes

Q.

What do the following numbers have in common

3-7-10-17-11-12-73-77?

Ans.

When you are writing all these numbers into words it consisting vowel E

Q.

Write down the equivalent pointer expression for referring the same element a[i][j][k][l]?

Ans.

$a[i] == *(a+i)$ $a[i][j] == (*(a+i)+j)$ $a[i][j][k] == (*(a+i)+j)+k)$

$a[i][j][k][l] == (*(a+i)+j)+k)+l$

Q.

While covering a distance of 24 km, a man noticed that after walking for 1 hour and 40 minute, the distance covered by him was 5/7 of the remaining distance. What was his speed in metres per second?

Ans.

Let the speed be x km/hr.

Then, distance covered in 1 hr: 40 min. i.e., $1 \frac{2}{3}$ hrs = $5x/3$ km.

Remaining distance = $[24 - 5x/3]$ km.

$\therefore 5x/3 = 5/7[24 - 5x/3] \Leftrightarrow 5x/3 = 5/7[72 - 5x/3] \Leftrightarrow 7x = 72 - 5x$

$\Leftrightarrow 12x = 72 \Leftrightarrow x = 6$

Hence, speed = 6 km/hr = $[6 * 5/18]$ m/sec = $5/3$ m/sec = $1 \frac{2}{3}$ m/sec

Q.

```
Int main()
```

```
{
```

```
Char str1[20]="Morning";
```

```
Printf("%u", "Good");
```

```
Printf("%u", "Good");
```

```
Printf("%u", str1);
```

```
Printf("%u", str1);
```

```
Return 1;
```

```
}
```

Give the technical conclusion.

Ans.

It will print the address of value

Q.

If you are using C language to implement the heterogeneous linked list, what pointer type will you use?

Ans.

Void pointer.

Q.What is the difference between having and where clause in SQL?

Ans.

The difference between the having and where clause is best illustrated by an example. Suppose we have a table called emp_bonus as shown below. Note that the table has multiple entries for employees A and B.

emp_bonus

Employee	Bonus
A	1000
B	2000
A	500
C	700
B	1250

If we want to calculate the total bonus that each employee received, then we would write a SQL statement like this:

```
select employee, sum(bonus) from emp_bonus group by employee;
```

Q.

What is the difference between AWT UI and swing UI?

Ans.

Awt is a Java interface to native system GUI code present in your OS. It will not work the same on every system, although it tries.

Swing is a more-or-less pure-Java GUI. Using awt it creates an operating system window, and then it paints pictures of buttons, labels, text, checkboxes, etc., into that window and responds to all of your mouse-clicks, key entries, etc., deciding for itself what to do instead of letting the operating system handle it. Thus Swing is 100% portable and the same across platforms. (Although it is skinnable and has a "pluggable look and feel" that can make it look more or less like the native windows and widgets would look.)

These are vastly different approaches to GUI toolkits and have a lot of consequences. A full answer to your question would try to explore all of those. :) Here are a couple:

Awt is a cross-platform interface and so even though it is using the underlying OS or native GUI toolkit for its functionality, it doesn't provide access to everything that those toolkits can do. Advanced or newer widgets that might exist on one platform might not be supported. Features of widgets that aren't the same on every platform might not be supported, or worse, they might work different on each platform. People used to invest lots of effort, including trying to make calls into native code from Java, to get their Awt applications to work consistently across platforms.

Because Awt uses native GUI widgets, your OS knows about them and handles putting them in front of each other, etc. Whereas with Swing your widgets are just meaningless pixels within a window; Swing handles deciding how your widgets lay out and stack. Mixing the two is highly unsupported and can lead to ridiculous results, such as native buttons that obscure everything else in the dialog box in which they reside because everything else was created with Swing.

Because Swing tries to do everything possible in Java other than the very raw graphics routines provided by a native GUI window, it used to incur quite a performance penalty over Awt. This made Swing unfortunately slow to catch on. However, this has shrunk dramatically over the last several years, due to more optimized JVMs, faster machines, and (I presume) optimization of the Swing internals. Today a Swing application can run fast enough to be serviceable or even zippy, and almost indistinguishable from an application using native widgets. Some will say it took far too long to get to this point, but most will say that it is well worth it.

Finally, you might also want to check out SWT (the GUI toolkit used for Eclipse, and an alternative to both Awt and Swing), which somewhat of a return to the Awt idea of accessing native Widgets through Java.

Q.

What is an orthogonal base class in C++?

Ans.

If two base classes have no overlapping methods or data they are said to be independent of, or orthogonal to each other. Orthogonal in the sense means that two classes operate in different dimensions and do not interfere with each other in any way. The same derived class may inherit such classes with no difficulty

Q.

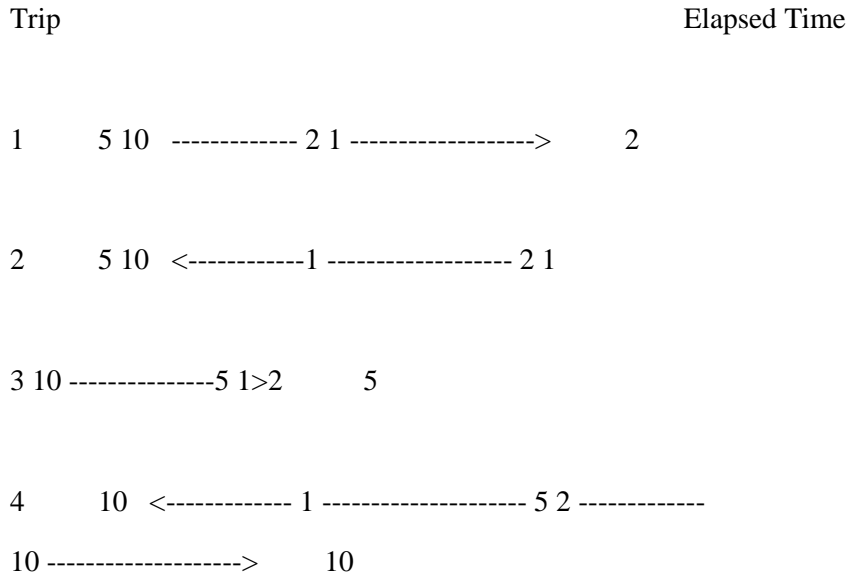
Four people need to cross a rickety rope bridge to get back to their camp at night. Unfortunately, they only have one flashlight and it only has enough light left for seventeen minutes. The bridge is too dangerous to cross without a flashlight, and it's only strong enough to support two people at any given time.

Each of the campers walks at a different speed. One can cross the bridge in 1 minute, another in 2 minutes, the third in 5 minutes, and the slowest camper takes 10 minutes to cross. How can the campers make it across in exactly 17 minutes ?

Ans.

Let's start out trying to solve this problem by re-stating some of the facts that we have: only 2 travelers can cross the bridge at a time, there is only one flashlight, each traveler has a different speed, and our goal is to have all travelers cross the bridge in exactly 17 minutes. It always helps to restate the relevant facts so that we can narrow down the parameters of the problem.

So, it's clear that there will need to be someone who brings back the flashlight every time. This means that it makes the most sense to have 2 people cross the bridge at a time, but only have one person bring back the flashlight. And, why not just have the fastest person bring back the flashlight every time – the 1 minute person? Here's what it would look like if each line represents a separate trip, and if we just use their time in numbers to refer to the campers:



Total Elapsed time: 19 minutes

Q.

What does WPA stands for?

Ans.

WPA stands for the Works Progress Administration which was a relief measure which was established in 1935. WPA offered work to the unemployed on an unprecedented scale by spending money on a wide variety of programs such as: highways and building construction, slum clearance, reforestation, and rural rehabilitation

Q.

A family I know has several children. Each boy in the family has as many sisters as brothers but each girl has twice as many brothers as sisters.

Can you find the total number of children in the family?

Ans.

Suppose x boys and y girls

so $x-1=y$

and $2(y-1)=x$

on solving we get $x=4, y=3$

Q.

What is the difference between theoretical research and empirical?

Ans.

Theoretical research has its findings based on existing theories and hypothesis...there is no practical application in the research.

Empirical research has its findings based on the verification through experiments, experiences and observations.....

Q.

Convert the expression $((A + B) * C - (D - E) ^ (F + G))$ to equivalent Prefix and Postfix notations.

Ans.

1. **Prefix Notation:** $- * +ABC ^ - DE + FG$

2. **Postfix Notation:** $AB + C * DE - FG + ^ -$

Q.

Explain what is the dashboard in business intelligence

Ans.

A dashboard in business intelligence allows huge data and reports to be read in a single graphical interface. They help in making faster decisions by replying on measurable data seen at a glance. They can also be used to get into details of this data to analyze the root cause of any business performance. It represents the business data and business state at a high level. Dashboards can also be used for cost control. Example of need of a dashboard: Banks run thousands of ATM's. They need to know how much cash is deposited, how much is left etc.

Q.

If it takes 2 garage mechanics 3 hours to repair 6 cars, how many mechanics would it take to repair 22 cars in 5 hours?

Ans.

5 mechanics, with a little time

left over

Q.

Simon, Steve and Stewart are all apple farmers who pool their crop each year to make Cider. For this year's harvest, Steve supplied three times as many apples as Stewart and Simon supplied twice as many apples as Steve. If the total number of apples supplied is 900 tonnes, how many did each of them contribute?

Ans.

Steve = 270

Simon = 270

Stewart = 90

Q.

There are three switches downstairs. Each corresponds to one of the three light bulbs in the attic. You can turn the switches on and off and leave them in any position. How would you identify which switch corresponds to which light bulb, if you are only allowed one trip upstairs?

Ans.

Keep the first bulb switched on for a few minutes. It gets warm, right? So all you have to do then is.. Switch off,

Switch another one on, walk into the room with bulbs, Touch them and tell which one was switched on as the

First one (the warm one) and the others can be easily

Identified

Q.

How to remove only one column values from the duplication of values in that column without using any other

column references in that table?

Ans. Use unique key Run query such way - insert ignore into the table.

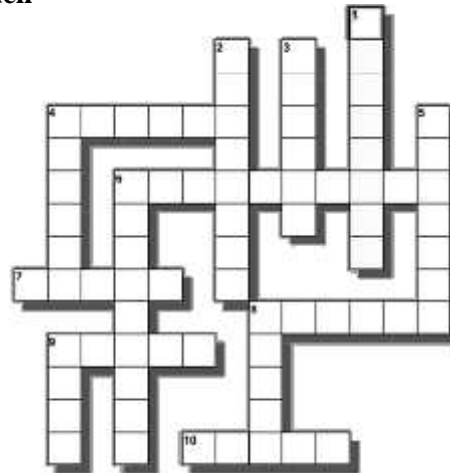
Q.

Crossword Clues :Across

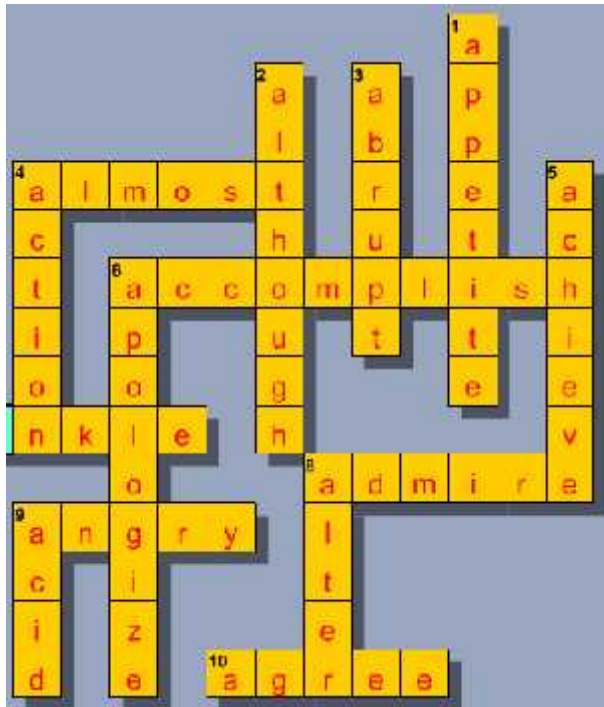
- 4. Not completely**
- 6.To succeed in finishing something**
- 7. Part of the body between the leg and the foot**
- 8. To think well of and have respect for someone**
- 9. Feeling strong displeasure**
- 10. To agree with someone's idea**

Down

- 1. A Physical need for food**
- 2. However in spite of ; even if**
- 3. not expected**
- 4. something that someone does**
- 5. to accomplish something**
- 6.to say that you are sorry about something**
- 8.to change something; or make something be different**
- 9. a liquid which in strong form could burn you if you touch**



Ans.



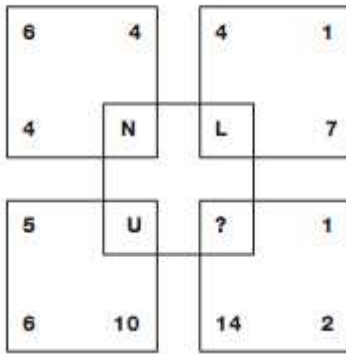
Q. Who is Alan Turing and what was he famous for?

Ans.

He was instrumental in the breaking of the German Enigma code in WW2 (Codename Ultra) at Station X, Bletchley Park. A computer named Colossus was built which deciphered messages: The error in the code was that no letter pressed on the keyboard would replicate itself. The British were at great pains not to let the Germans know of its ability to detect & decode messages. The Enigma machine had 3 or 4 rotors and was highly complex. Turing was one among many who made this detection possible. Yes, Alan Turing was a famous scientist. He was a key member of the British Intelligence team that broke the "Enigma" code that the Nazis used in World War II. He also created the "Turing Test" to determine the "intelligence" of a computer. He is considered to be one of the creators of the concept of "Artificial Intelligence".

Q

Which letter replaces the question mark?



Ans.

Adding the three numbers in each square together gives the numerical value of the letter at the centre of each square.

Q.

1	6	5	4	7	8	2	9	3
7	9	2	5	6	3	8	1	4
8	4	3	9	1	2	7	5	6
5	3	8	6	9	1	4	7	2
2	7	6	3	4	5	9	8	1
4	1	9	8	2	7	3	6	5
6	8	1	7	3	4	5	2	9
9	5	4	2	8	6	1	3	7
3	2	7	1	5	9	6	4	8

Ans.

Sudoku

1		5		7	8		9	3
		2		6	3	8		
	4				2			6
5		8						
			3	4		9		1
				2				
			7	3	4	5		
9								
	2		1			6		

