

TCS NQT Practise Paper

APTITUDE

1. Find the greatest number that will divide 148 246 and 623 leaving remainders 4 6 and 11 respectively.

- 1) 20
- 2) 12
- 3) 6
- 4) 48

Solution: Option 2

$$148-4=144$$

$$246-6=240$$

$$623-11=612$$

Now from the options lets check which of the 4 divide 144,240 and 612 leaving 0 as remainder. Hence these 3 are divided by 12 leaving remainder 0 which mean 12 divides 148, 246 and 623 leaving remainder 6 and 11 respectively.

2. On a 26-question test, five points were deducted for each wrong answer and eight points were added for each correct answer. If all the questions were answered, how many were correct if the score was zero?

- 1) 10
- 2) 11
- 3) 12
- 4) 13

Solution: Option 1

If x number of questions are wrong and y number of questions are correct then,

$-5*x+8*y=0$ and $x+y=26$. By solving these equations, we get

$$x=16 \text{ \& } y=10$$

3. George can do some work in 8 hours, Paul can do the same work in 10 hours while Hillary can do the same work in 12 hours. All the three of them start working at 9 a.m while George stops work at 11 a.m and remaining two complete the work. Approximately at what time will the work be finished?

- 1) 11:30 am
- 2) 1 pm
- 3) 12:30 pm
- 4) 12 noon

Solution: Option 2

$$\text{L.C.M}(8,10,12) = 120$$

so, let the total work = 120 unit

George can do 15 unit work in 1 hr and Paul can do 12 unit and Hillary 10 unit in 1 hr.

$$\text{so, } 2 \times (15+12+10) + t \times (12+10) = 120$$

On solving, $t=3$. So the answer will be (11 am+3 hr) = 1 pm

4. Apple costs L rupees per kilogram for first 30 kgs and Q rupees per kilogram for each additional kilogram. If the price of 33 kilograms is 1167 and for 36 kgs of Apples is 1248 then the cost of the first 10 kgs of Apples is

- 1) Rs. 350
- 2) Rs. 1053
- 3) Rs. 117
- 4) Rs. 281

Solution: Option 1

Given that

$$30L + 3Q = 1167$$

$$30L + 6Q = 1284$$

Solving we get $Q = 39$, $L = 35$

So cost of first 10 kgs of apples = $35 \times 10 = 350$

PROGRAMMING :

1. What is a linker program?

- A. Places the program in the memory for the purpose of execution.
- B. Relocates the program to execute from the specific memory area allocated to it.
- C. Links the program with other programs needed for its execution.**
- D. Interfaces the program with the entities generating its input data.

The correct answer is A linker program "**links the program with other programs needed for its execution.**"

2. Which is NOT a function of a loader?

- A. Allocation
- B. Translation**
- C. Relocation
- D. Loading

The correct answer is "**translation**" is not a function of a loader.

3. What happens when you perform a bitwise operation on these numbers?

The result of the expression $4 \wedge 12$ is:

- A. 2
- B. 4
- C. 8**
- D. 12

The result of the expression $4 \wedge 12$ computes to 8. \wedge is the XOR operator. The binary form of 4 is 0100 and that of 12 is 1100. Therefore, $0010 \wedge 1100$ evaluates to 1000, which is equal to 8 in decimal format.

**4. How are data/variables stored inside a computer? The ASCII notation? Truly an important question!
Binary Coding for the letter X is _____**

A. 01011000

B. 00111000

C. 10001000

D. 00010100

The binary coding for the letter X is 01011000. Here, 0101 is the zone whereas 1000 is the digit. The alphabets from P to Z have the zone 0101.

5. The in-order and pre-order traversal of a binary tree is D B E A F C G and A B D E C F G, respectively. The post-order traversal of the binary tree is:

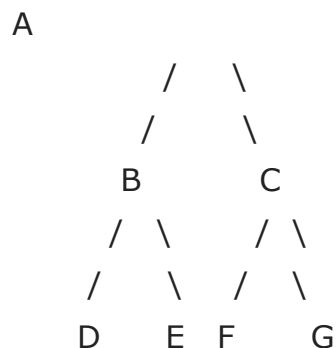
A. D E B F G C A

B. E D B G F C A

C. E D B F G C A

D. D E F G B C A

Below is the given tree.



6. Identify the line number in which the error exists?

```
# include<stdio.h>
# include<conio.h>
void main()
{
    float a = 100.00;
    {
        auto float a = 250.14;
```

```

{
    auto float b = 325;
    printf("\n%f %f", a, b);
    b++;
}
a++;
printf("\n%f %f", a, b);
a++;
}
printf("\n%f", a);
}

```

- A. line number 5
- B. line number 7
- C. line number 9**
- D. line number 14

The variable 'b' is declared in the inner block and is accessed in the outer block. Declare 'b' globally to remove the error.

English:

Q. 1) A greenhouse is a glass-covered structure **(1)** _____ (uses, using, used) to grow plants. It has transparent glass that allows sunlight to pass **(2)** _____ (out, though, inside), but does not allow the heat inside to escape. The same **(3)** _____ (effect, affect) occurs on the earth. The **(4)** _____ (sun's, suns, sun) radiation **(5)** _____ (passes, passing) through the atmosphere to heat the earth's surface. When heated, the earth's surface produces infrared radiation, which has a longer wavelength than that of sunlight. This infrared radiation rises into the atmosphere where gases, such as carbon dioxide, **(6)** _____ (prevents, prevent, prevented) the infrared radiation from escaping into space. The concentrations of these gases, **(7)** _____ (that, those, which) are called greenhouse gases, control how much-infrared radiation escapes.

Q. 2) Chatbots are now part of **1)** _____ cultural narrative and are **2)** _____ even more sophisticated. It is hard to find **3)** _____ who has not had an interaction with a chatbot or virtual assistant. As chatbots and virtual assistants **4)** _____ more sophisticated, they **5)** _____ to respond with increasing empathy and personalization, **6)** _____ tracking the customer **7)** _____. Whether voice or text activated, bots **8)** _____ able to help users find **9)** _____ and answers 24 X 7, on any device or channel faster than ever **10)** _____. In fact, more and more people are rating messaging as a top choice for customer service.

Q. 3) Technology has **1)** _____ our lives and influenced nearly **2)** _____ industry, including fitness. From apps to wearables, technology is constantly **3)** _____ the way **4)** _____ fitness industry functions. Mobile technology, fitness wearables and data, and smart equipment **5)** _____ shaping the way health clubs **6)** _____ equipment manufacturers operate today. Engaging members via mobile with digital fitness challenges, reward programs, push notifications and wearable integration not only **7)** _____ fitness operators to **8)** _____ existing relationships with clients **9)** _____ also build **10)** _____ them.

Q. 4) Rainforests **1)** _____ a wide variety of ecosystems services, from regulating rainfall to purifying groundwater and keeping fertile soil from **2)** _____; deforestation in one area can seriously damage food production and **3)** _____ to clean water in an entire region. The value of global ecosystem services **4)** _____ estimated at 33 trillion USD each year (almost half of global GDP), **5)** _____ these services have been taken for granted without a mechanism to make the market reflect their value. Rainforests are also a home and **6)** _____ of income for a huge number of people in Africa, Asia and South America. **7)** _____ this, economic pressures frequently drive both local communities **8)** _____ national governments in the developing world to **9)** _____ these forests in ways that are unsustainable, clear-cutting vast areas **10)** _____ fuel, timber, mining or agricultural land.

Q. 5) In recent years, there have been a lot of talk about cloud computing and cloud storage. Almost everything in the digital world _____Q1_____ connected to the cloud in some way or other-unless it is kept in local storage for security reasons. A tech giants and startups _____Q2_____ new ways to organize, process and present data, cloud computing ____Q3____ become a more and more integral part of our lives. So what is cloud computing? And what is the impact of cloud computing on future business strategies? Cloud computing is the _____Q4____ of using network of remote servers ____Q5____ on the internet to store manage and process data, rather than a local server or personal computer.

Q1

1. are
2. **is**
3. was

Q2.

1. founded
2. found
3. **find**

Q3.

1. would
2. **will**
3. shall

Q4.

1. Practices
2. Practicing
3. **Practice**

Q5.

1. hosting
2. **hosted**
3. host

Q. 6) The internet Of Things (IOT) is ____Q6____ rapidly evolving technology, and ____Q7____ any other technology, it can ____Q8____ challenges with respect to ____Q9____ implementation and management. Given the ____Q10____ inter connectivity required, and the large volumes of data generated, setting up an IOT ecosystem can be a complex task.

Q6.

1. the
2. an
3. **a**

Q7.

1. likeness
2. **like**
3. likely

Q8.

1. **pose**
2. position
3. post

Q9.

1. Its
2. It is
3. **Its**

Q10.

1. advancing
2. **advanced**
3. advance

Q. 7) Human-machine collaboration ____Q11____ the production line has become ____Q12____ flexible, versatile and therefore more productive. Today's robots are much more capable of ____Q13____ tasks that they could not perform well earlier such as ____Q14____ around objects placed ____Q15____ and sorting out complex wiring issues in industries like aerospace.

Q11.

1. at
2. two
3. **on**

Q12.

1. **more**
2. most
3. much

Q13

1. learned
2. learn
3. **learning**

Q14

1. move
2. **moving**
3. to move

Q15.

1. **Chaotically**

- 2. Chaos
- 3. Chaotic