Interview Questions of

tcs | TATA CONSULTANCY SERVICES

By : SREEJITA DHAR

Important Questions for TCS NQT Interview

(Asked in TCS NQT INTERVIEW 2024)

Technical Interview Questions

Data Structures and Algorithms :-

1. What are the sorting techniques? Difference between merge sort and quick sort. Which one is better?
2. What is bubble sort. Time complexity in best case.
3. Quick sort algorithm
4. Binary search algorithm
5. **All searching & sorting algorithms (pseudo code)** (Most Important)
6. **Kadane's Algorithm, Sieve Algorithm** (Most Important)
7. What is linked list?
8. Write a code for creating doubly linked list and deleting node in doubly linked list
9. How to free the memory of linked list when a node is deleted in java.

10. How to insert a node at the end of linked list?

11. Insert node at the beginning.

12. **Dijkstra's Algorithm, Kruskal's Algorithm** (Most Important)

13. Binary search trees

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SQL :-

1. Write SQL query to find Second highest salary & maximum salary.

2. Join operation, results (Left outer, right outer)

3. **There was a purchase table and Customer table in which 10 years of purchase history was there. So, write a SQL Query to find the customer ID who purchased products of highest amount?** (Most Important)

4. Statements in SQL

5. If some attacker performs SQL injection in your database, how will you prevent this?

6. Print students name where marks > average marks

7. SQL vs NoSQL

8. **Write a SQL query to find the 4th highest salary.** (Most Important)

9. Where can you find .config file when you install MySQL software?

10. Port number for default server when you install MySQL software in your local machine?

11. What are the types of joins?

12. What is Cartesian join? Give example.

13. What is view? What are its uses?

14. What is SQL injection?

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DBMS :-

1. Truncate, Commit, Grant
2. Candidate key could be null?
3. Difference between foreign key and candidate key
4. BCNF in normalisation
5. XML full form
6. Consider a scenario where my bank account has 10,000 rupees. So if me and my father are trying to debit the 10,000 rupees at the same time, what will happen in the case of database?
7. DBMS views and indexes

Coding Questions :-

1. **Write a code for multiplying and dividing a number without using arithmetic operator.** (Most Important)
2. Fibonacci series
3. **Swap number without 3rd variable.** (Most Important)
4. Odd, even, prime no.
5. Reverse a string in one line
6. **Find the largest perfect square in an array.** (Most Important)
7. sum of numbers
8. Unique elements from array
9. Write a code for missing no. in array

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10. Write a code for if there is an array with duplicate numbers you need to print the highest index position of that duplicate numbers

11. <mark>What was code in your NQT?</mark> (Most Important)

   (Those two coding questions which were asked in NQT written exam)

12. Find no. of occurrences of one string in another string

13. 2nd smallest number

14. 2nd largest number

15. How to calculate length of the string without using strlen() ?

16. Write a code to print the pattern

   1

   12

   123

   1234

17. <mark>Print * pyramid pattern.</mark> (Most Important)

C++ :-

1. **Why do you choose C++ as your primary coding language?** (Most Important)
2. Difference between interpreter and compiler?
3. What is pointer?
4. How can we run a C++ program in command prompt?
5. syntax for print
6. What is indentation error?
7. What is type error?
8. What is EOL?
9. Uses of C++ in real life

10. Difference between multithreading and multitasking?

11. Type casting

12. **Memory Leak in C++** (Most Important)

13. C++ is a compiled or interpreted, meaning of interpreted language?

OOPS :-

1. Multiple Inheritance
2. Exception handling
3. Null pointer exception

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4. Method Overloading
5. Method Overriding
6. Constructor
7. Pure virtual functions, Abstract class
8. **Write Polymorphism code (Definition + Real life example)** (Most Important)
9. **Write Encapsulation code (Definition + Real life example)** (Most Important)

10. **Write Abstraction code (Definition + Real life example)** (Most Important)

11. **Write Inheritance code (Definition + Real life example)** (Most Important)

12. What is object?

13. **Difference between function overloading & function overriding?** (Most Important)

14. Definition of Constructor & Destructor

ML + Data Science :-

(If you have Data Science or, ML project in your resume, then interview questions will be asked according to your project. Here is some sample questions of ML & Data Science)

1. Linear regression

2. How to handle missing values?

3. What is EDA?

5. Random Forest

6. Least mean square

7. Is Data cleaning process in machine learning and deep learning same?

8. Box plot

9. **How do you clean data, what is procedure?** (Most Important)

10. **What do you do if there are null values in any column?** (Most Important)

11. What is dummy variable?

12. Difference between decision tree and random forest

13. **How do you evaluate a model?** (Most Important)

14. SVM, CNN, RNN

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15. What is F1 score for precision and recall?

16. Explain about any one ml algorithm

17. They asked my difference between linear regression and logistic regression?

18. **What is Overfitting and underfitting in ML? How to overcome those?** (Most Important)

19. Why do you prefer svm over logistics regression?

20. Why knn classifier is used?

21. How to select the value of K in knn classifier?

22. Types of ensemble learning (bagging and boosting)?

23. How to remove outliers in a normal distribution and Quartile range?

24. What is label encoding and what is one hot encoding?

25. What we prefer low variance and low bias or high variance and high bias?

26. Types of data you use for your ML projects and where you get your datasets?

27. Can u develop any application for day-to-day life using ML and ai such that it makes work easier?

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Questions of Other Latest Technologies :-

1. Explain Cloud Computing
2. **Explain OSI model in cn** (Most Important)
3. What is data science?
4. types of data in data science
5. What is AI, ML, Big data?
6. What is hosting?
7. **What is kernel?** (Most Important)
8. Suppose you have 5ltr bucket, 3ltr bucket and an empty bucket. You are supposed to fill 4ltr in the 5ltr bucket. You have an infinite supply of water. How would you fill it? Explain
9. What is AWS?

10. What is s3 bucket?

11. Three different types of permissions in s3 bucket?

12. Port numbers for Http and HTTPS?

13. desc() and library used for desc()?

14. What is blockchain?

15. What is Lamda function?

16. How to integrate reCAPTCHA in your website?

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HR Interview Questions

HR Questions :-

1. How long will you work here?
2. Why do you like to join TCS?
3. What motivates you to choose this company?
4. What do you know about TCS?
5. Strengths and weakness
6. Suppose you are given a new project to complete in 7 days. How do you complete that?
7. How u come to today's interview?
8. If you are working in a large project in a big MNC company and you are stuck in some problem with your project how will you handle it?
9. How did you manage conflicts?

10. What if we give you a project which uses different technologies?

11. Where do you see yourself in 5 years?

12. Who is the CEO of TCS ?

13. Who is the founder of TCS ?

14. How JRD Tata related to Ratan Tata ?

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15. What is the full form of JRD in JRD Tata ?

16. There are many worthy candidates. So, why do we choose you only? How do you stand out from them?

17. Do you have any questions?