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Subject wise Important Interview Questions list

(technical and managerial Round interview Questions)

<https://www.instagram.com/himanshu.codes?igsh=ZDE1MWVjZGVmZQ==>

1)Step By Step Guide For Placements

1. Any One Programming Language (first learn C programming language then choose any one cpp or java or python or javascript)
2. Aptitude (quantitative , logical reasoning , non verbal)
3. Data Structures And Algorithms(DSA)
4. Database Management System
5. Structured Query Language
6. Object Oriented Programming Systems
7. Computer Networks
8. Operating Systems
9. Software Development Life Cycle
10. Most Asked Interview Questions
11. Hr Interview Questions
12. Any Technology To Build Projects For Resume
13. Cmd / Linux Commands
14. Git/Github

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2) 10 most asked coding Questions

1. Palindrome (of string, number):

- Implement a function `isPalindromeString` that takes a string as input and returns true if it's a palindrome, false otherwise.

- Write a function `isPalindromeNumber` to determine if a given integer is a palindrome.

2. Fibonacci Series (using loop, recursion):

- Write a function `generateFibonacciLoop` that takes an integer `n` and generates the first `n` numbers of the Fibonacci series using a loop.

- Implement a function `generateFibonacciRecursion` to generate the Fibonacci series up to the nth term using recursion.

3. String Compress (using loop, recursion):

- Implement a function `compressStringLoop` that takes a string and compresses it by counting consecutive repeated characters using a loop.

- Write a function `compressStringRecursion` to achieve the same string compression using recursion.

4. Fizz Buzz:

- Write a program that prints the numbers from 1 to 100. But for multiples of three, print "Fizz" instead of the number, and for the multiples of five, print "Buzz." For numbers that are multiples of both three and five, print "FizzBuzz."

5. Character Occurrence:

- Implement a function `countCharacterOccurrences` that takes a string and returns a dictionary mapping each unique character to its occurrence count.

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6. Prime Number (prime or not, prime no in a range, total prime number in a range):

- Write a function `isPrime` to determine if a given positive integer is a prime number.
- Implement a function `generatePrimesInRange` that takes two integers `start` and `end` and returns a list of prime numbers in that range.
- Write a function `countPrimesInRange` that counts the total number of prime numbers in a given range.

7. Modify String Format:

- Implement a function `modifyStringFormat` that takes a string containing spaces and converts it to a new string where spaces are replaced with underscores.

8. Second Highest Number:

- Write a function `findSecondHighest` that takes a list of integers and returns the second-highest number.

9. Armstrong Number:

- Implement a function `isArmstrongNumber` that takes an integer and returns true if it's an Armstrong number, false otherwise.

10. Factorial Number:

Write a function `calculateFactorial` to calculate the factorial of a given non-negative integer.

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1. Tell Me About Yourself ?
2. What Are Your Greatest Strengths/Weakness ?
3. Where Do You See Yourself In The Next 5 Years ?
4. How Do You Feel About Working Late Or During The Weekends ?
5. Why Should We Hire You ?
6. Have You Faced Any Difficult Situations In Your Past Work Or College Experiences? How Did You Handle Them?
7. Can You Work Under Pressure ?
8. Tell Me About Yourself That Is Not Mentioned In Your Resume ?
9. Why Do You Want This Job ?
10. Why Do You Want To Work For Our Company ?
11. What Is Your Biggest Achievement So Far ?
12. What Do You Know About This Company ?
13. What Motivates You At Work ?
14. How Do You Handle Stress/Pressure ?
15. Do You Have Any Questions For Us ?

4) DBMS interview Questions

1. What Is Data?

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3. What Is A Database Management System?
4. Explain A Few Advantages Of Dbms ?
5. What Are The Different Types Of Dbms ?
6. Difference Between DBMS And Rdbms ?
7. What Is The Difference Between A File System And Dbms ?
8. What Are The Different Types Of Languages In Dbms ?
9. What Is 2-Tier Architecture ?
10. What Is 3-Tier Architecture ?
11. Explain Level Of Data Abstraction In A DBMS ?
12. What Is A Schema?
13. What Are The Different Types Of Keys In The Database?
14. What Is A Foreign Key?
15. Difference Between Foreign Key And Primary Key ?
16. What Are Ddl Commands ?
17. What Are Dml Commands ?
18. What Are Dcl Commands ?
19. What Are Tcl Commands ?
20. Difference Between Drop , Delete And Truncate ?
21. What Is Meant By An Entity-Relationship(E-R) Model ?
22. What Is Meant By Entity, Attributes?

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24. What Are The Different Types Of Relationships?
25. What Is Meant By Normalisation And Normalisation?
26. Explain Different Types Of Normalisation Forms In Dbms ?
27. What Is Join And Its Types ?
28. What Is A Transaction ?
29. What Are Acid Properties In Dbms ?
30. What Is The Schedule And Its Type ?
31. What Is Meant By Extension And Intension?
32. What Is Indexing And Its Types ?
33. What Is 2-Phase Locking ?

5) SQL interview Questions

1. What is SQL ?
2. What is SQL and why is it used ?
3. What is the table and fields in db ?
4. Explain different types of SQL commands ?
5. What is the difference between SQL and my SQL ?
6. What are DDL and DML languages ? Give an example ?

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8. What is the primary key and unique key ?
9. What is a foreign key?
10. Why do we use case statements in SQL? Give an example?
11. What is the difference between union and union all ?
12. What is an alias in SQL?
13. What are the constraints in SQL and their types?
14. What is the difference between the groupby and orderby ?
15. What is joins?
16. What is the difference between inner , left , right , and full join ?
17. What is the difference between district and groupby ?
18. What are aggregate functions? Name and example different types of aggregate function in SQL?
19. What are ACID properties?
20. Nested subquery vs correlated subquery?
21. SQL vs noSQL ?
22. What is pattern matching given as an example ?
23. Varchar vs varchar2 ?
24. What are triggers ?
25. What is the difference between RANK , DENSE_RANK AND ROW_NUMBER window function ?
26. Can we aggregate function as a window function if yes , then how do we do it ?

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28. What are sub queries and where can we use them ?
29. Difference between where and having clauses ?
30. What are indexes and why do we use them ?
31. SQL vs noSQL ?
32. What is pattern matching give example ?
33. Varchar vs varchar2 ?
34. What are triggers ?
35. What is the difference between RANK , DENSE_RANK AND ROW_NUMBER window function ?
36. Can we aggregate function as a window function if yes , then how do we do it ?
37. How do you convert a text into date format? Consider the given example text as "31-3-2023" ?
38. What are sub queries and where can we use them ?
39. Difference between where and having clauses ?
40. What are indexes and why do we use them ?
41. How to use the group by and having clause in a select statement ?
42. How do you use the join clause to combine data from multiple tables ?
43. Use subquery in a select, insert, update, delete statement ?
44. Use functions in SQL, such as avg , sum , count, max , min ?
45. How do you handle transactions in SQL to ensure data consistency and integrity ?
46. How do you optimise the performance of a db and SQL query ?

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48. Find the third highest salary from the employee table ?
49. Find the duplicate rows in a table ?
50. Display the first and last record of the employee table ?
51. Retrieve the list of employees working in the same department ?
52. Fetch details of employees whose emp the last name ends with an alphabet 'a' and contains five alphabets ?
53. Query to delete the duplicate records from the employee table ?
54. Query to find no of employees whose DOB is between 1/6/1996 to 30/6/1998 and are grouped according to gender ?
55. Fetch all the records from the employee table ordered by department in ascending order and salary in the descending order ?
56. Display the total salary of each employee after adding a 10% increment in the salary?
57. Retrieve two min and Max salary ?
58. Fetch employee name and replace the space with '_' ?

6) OOPS interview Questions

1. What are OOPs?
2. What is the need for OOPs?
3. What are some major object-oriented programming languages?
4. What are the main features of OOPs ?
5. What are the advantages of using oops ?

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7. What is an object?
8. How much memory does a class occupy ?
9. What is constructor and its type?
10. What is a copy constructor ?
11. Explain inheritance with an example ?
12. What are different types of inheritance?
13. Why doesn't java support multiple inheritance?
14. What is subclass and superclass ?
15. What is polymorphism and its type?
16. What is method overloading ?
17. What is the method overriding ?
18. What is an access specifier ?
19. What is super and this keyword?
20. What is data abstraction ?
21. What is an abstract class ?
22. What is an abstract method ?
23. What is an interface ?
24. Why are interface variables public static and final ?
25. What is encapsulation ?

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1. What is an operating system?
2. What are the functions of os ?
3. What are the different types of operating system ?
4. What is process State and PCB?
5. What is the difference between an operating system and a firmware ?
6. What is the role of a kernel in an operating system ?
7. What is system call() ?
8. What is fork() ?
9. What is the difference between threads and processes?
10. What is multitasking in an os ?
11. What is multithreading in an os?
12. What is a scheduler in os?
13. What is the difference between preemptive and non preemptive ?
14. What is the difference between multiprogramming and multitasking ?
15. What is process synchronisation ?
16. What is the purpose of virtual memory in an OS ?
17. What is paging and segmentation in an os ?
18. What is demand paging in an os ?
19. What is semaphore in an os ?

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21. What is the difference between a mutex and a binary semaphore?
22. What is interrupt handling in an os?
23. How does an opening system manage I/O operations?
24. What is the device driver in an os ?
25. What is file system management in an OS ?
26. What is virtualization and its type?
27. What is micro kernel and monolithic kernel ?
28. What is the chmod command ?
29. What is internal, external fragmentation?
30. What is the difference between Spatial locality vs Temporal locality ?
31. What is meant by virus, worm , Trojan, malware, Spywar

8) Computer Networks interview Questions

1. What is a computer network?
2. What are the different types of computer networks?
3. What is the OSI model?
4. What is the difference between LAN and a WAN ?
5. What is the difference between a switch and a router ?
6. What is an IP address ?

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8. What is the difference between public and private IP addresses ?
9. How does DHCP work ?
10. What is the purpose of DNS ?
11. What is the difference between confidentiality, integrity and availability ?
12. What is the difference between stateful and stateless firewalls ?
13. What is encryption and how does it work ?
14. What is the purpose of VPN ?
15. What is a protocol ?
16. What is the difference between TCP AND UDP ?
17. What is the purpose of the HTTP and HTTPS protocol ?
18. What is the purpose of DNS protocol ?
19. What is the purpose of the FTP protocol
20. What is the process for troubleshooting network issues ?
21. What tools would you use to diagnose network issues ?
22. What is the process for testing network connectivity ?
23. What is the TCP/IP suite?
24. What is the role of IP in CN ?
25. What is a router ?
26. What is a switch ?

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28. What is a hub ?
29. What is a modem in CN ?
30. What is network security ?
31. What is network topology ?
32. What are the different types of network topologies ?
33. What does mesh topology ?
34. What is meant by star topology ?
35. What is bus topology ?
36. What is a routing table ?
37. What is network routing ? What is the default gateway in CN ?
38. what is the router protocol ?
39. What is SNMP ?
40. What is throughput in CN ?
41. What is bandwidth in CN ?
42. What is Ethernet/ WI-FI/Bluetooth/ zigbee in CN ?
43. What happens when you enter google.com in the web browser ?

9) Software development life Cycle Interview Questions

1. What Is Sdlc?

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3. What Are The Phases Of Sdlc ?
4. What Are The Models In Sdlc ?
5. What Is The Requirement Gathering Phase ?
6. What Is Srs ?
7. What Is A Feasibility Study ?
8. What Is The Difference Between Crs And Srs ?
9. What Is The Difference Between The Fs Document And The Srs Document ?
10. What Is The Design Phase ?
11. What Is The Coding Phase?
12. What Is The Testing Phase ?
13. What Is The Deployment Phase ?
14. What Is The Maintenance Phase ?
15. What Is Meant By The Waterfall Model ?
16. What Is Meant By V Model ?
17. What Is Meant By The Incremental Model?
18. What Is Meant By The Rad Model ?
19. What Is Meant By The Agile Model ?
20. What Is Meant By An Iterative Model ?
21. What Is Meant By The Spiral Model ?

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23. What Are The Advantages And Disadvantages Of The Waterfall Model ?
24. Explain The Difference Between Waterfall Model And Agile Model ?
25. How Do You Manage Changes In Requirements During The Sdlc Process ?

10) Git/GitHub interview Questions

1. What is the command to set up your git username and git email
2. What is the command to initialise a git repository
3. What is the command to add a file or multiple files to the staging area in git
4. What is the command to commit changes with a message in git
5. What is the command to see your commit history in git
6. What is the command to create new branch in git
7. What is the command to switch to a another branch in git
8. What is the command to list branches in git
9. What is the command to create a branch in git and switch to it immediately
10. What is the command to delete a branch in git
11. What is the command to merge two branches in git
12. What is the command to abort a conflicting merge git
13. What is the command to pull or push changes in git

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15. What is the command to fetch remote repository changes in git
16. What is the command to force a push request in git
17. What is the command to add a remote reporting git
18. What is the command to rename files in git
19. What is the command to ignore files in git
20. What is the command to remove tracked files from the current working tree in git
21. What is the command to rollback the last commit in git
22. What is the difference between git and GitHub
23. What is difference between repository and branch in git
24. What is difference between get pull and git push
25. What is the difference between git pull and git fetch
26. What is difference between git clone and git remote
27. What is the difference between git diff and git status
28. What is the difference between git merge and get rebase
29. What is a git repository and how to create it
30. How to fix a broken commit
31. What happens if the git directory gets deleted
32. What is the use of staging area or indexing in git
33. What are the different get repository hosting function
34. What is version control system

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36. What is difference between GIT and SVN
37. What does the command git config do
38. What is the functionality of git ls-tree
39. What does git stash, git stash apply, git Stash pop and git Stash drop commands do
40. What does git annotate command do
41. What does GIT cherry-pick command do
42. What is the difference between get revert and reset
43. What do you mean by commit message
44. How to revert a bad commit which is already pushed
45. What is the difference between the head , working tree and index in git
46. What has to be run to squash multiple commits into a single commit
47. What does git reflag do
48. Can you recover a deleted branch in git
49. What is a conflict in get and how to resolve it

Reference

<https://www.youtube.com/@GateSmashers>

<https://www.youtube.com/@nesoacademy>

[Quick Notes for Placements - Object-Oriented Programming | OOPS | Tech Placements](#)



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