

# COMPLETE PLACEMENT PREPARATION

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## For Reference follow

1. <https://www.geeksforgeeks.org/>
2. <https://www.javatpoint.com/cpp-tutorial>
3. <https://www.tutorialspoint.com/index.html>
4. GATE Smasher youtube - <https://www.youtube.com/channel/UCJihyK0A38SZ6SdJirEdlOw>
5. Knowledge GATE youtube - <https://www.youtube.com/channel/UCA6yfpYhy5sWMjRGOT-OAIQ>

## Important Aptitude topics

Mainly 3 types of Aptitudes-

1. Quantitative Aptitude
2. Logical Reasoning
3. Verbal Aptitude

Follow Careerride for explanation and concept videos and important questions -

<https://www.careerride.com/online-aptitude-test.aspx>

Quants Important Topic -

- [Numbers](#)
- [Problems on Numbers](#)
- [Profit and Loss](#)
- [Problems on H.C.F and L.C.M](#)
- [Alligation or Mixture](#)
- [Ratio and Proportion](#)
- [Chain Rule](#)
- [Boats and Streams](#)
- [Problems on Trains](#)
- [Permutations and combinations](#)
- [Decimal](#)

- [Fraction](#)
- [Probability](#)
- [Time and Distance](#)
- [Height and Distance](#)
- [Time and Work](#)
- [Average](#)
- [Problem on Ages](#)
- [Simple Interest](#)
- [Percentage](#)
- [Compound Interest](#)
- [Area](#)
- [Volume and surface area](#)
- [Calendar](#)
- [Clock](#)
- [Stock and shares](#)
- [Simplification](#)
- [Square Root and Cube Root](#)
- [Pipes and Cistern](#)
- [Races and games](#)
- [Odd man out series](#)
- [True discount](#)
- [Banker discount](#)

## Important Topics Subject wise

### DBMS interview questions-----

For SQL Query solving, follow GATE Smasher(Youtube) -

<https://www.youtube.com/playlist?list=PLxCzCOWd7aiHqU4HKL7-SITyuSlcD93id>

1. Diff RDBMS & DBMS and where is used \*\*
2. Explain top-n analysis in DBMS
3. All Normalization techniques 1NF, 2NF, 3NF & BCNF and how to identify them? ( Youtube – Knowledge GATE, GATE Smasher)
4. All DDL, DML, DCL Commands separately and their functions?
5. Indexing and its different types and what do they do?
6. Explain diff file systems in DBMS?
7. What to keep in mind while making a DB
8. What to keep in mind while making a project which has a server, code, DB, and how to connect all three

9. Paging and Segmentation?
10. Diff btw Function and Procedure(<https://www.geeksforgeeks.org/difference-between-function-and-procedure/> )
11. Diff btw Stored Procedures and
12. Tell me about Joins (Types and what are they used for)
13. Left and Right Join \*\*
14. How to change the name of the column?
15. Difference btw DROP and DELETE?
16. What is a primary key? (Not null ...)
17. Diff btw primary key and Unique key and foreign and super key?
18. Diff btw Primary and Foreign key?
19. Diff btw Union and Union all
20. Cross join
21. Explain all DCL and DML commands
22. All types of Normalization and uses( <https://www.geeksforgeeks.org/normal-forms-in-dbms/> )
23. Specifically BCNF(Boyce cod Normal form)
24. Find 2nd largest (Salary) write the query
25. All types of keys
26. Entity?
27. ACID property and all its meanings
28. How to remove Duplicate value from DB ( <http://www.besttechtools.com/articles/article/sql-query-to-delete-duplicate-rows> )

## OOPs interview questions\*\*\*\*\*

1. Encapsulation in C++ = <https://www.geeksforgeeks.org/encapsulation-in-c/?ref=lbp>
2. Abstraction in C++ = <https://www.geeksforgeeks.org/abstraction-in-c/?ref=lbp>
1. Polymorphism in C++ = <https://www.geeksforgeeks.org/polymorphism-in-c/?ref=lbp>
2. Virtual Function in C++ = <https://www.geeksforgeeks.org/virtual-function-cpp/?ref=lbp>
3. Abstract class and Virtual Function = <https://www.studytonight.com/cpp/abstract-class-and-pure-virtual.php#:~:text=Abstract%20Class%20is%20a%20class,will%20also%20become%20abstract%20class.>
4. Inheritance in C++ = <https://www.geeksforgeeks.org/inheritance-in-c/>
5. Virtual Destructor = <https://www.geeksforgeeks.org/virtual-destructor/?ref=lbp>
6. Virtual Constructor(Advanced C++) = <https://www.geeksforgeeks.org/advanced-c-virtual-constructor/?ref=lbp>
9. Copy Constructor in C++ = <https://www.geeksforgeeks.org/copy-constructor-in-cpp/?ref=lbp>
10. Constructors in C++ = <https://www.geeksforgeeks.org/constructors-c/?ref=lbp>
11. Pure Virtual Functions and Abstract Classes in C++ = <https://www.geeksforgeeks.org/encapsulation-in-c/?ref=lbp>

# Theory Of OOPs and DS

1. What are data structures and their types with examples?
2. Constructs of OOPs and their features
3. Advantages of using OOPs (<https://www.roberthalf.com/blog/salaries-and-skills/4-advantages-of-object-oriented-programming> )
4. What is OOPs
5. Explain all concepts with example
6. What is operator loading and polymorphism\*\*
7. What is a class with an example?
8. What's a constructor with example and sample code?
9. Diff Btw Constructor and method
10. Inheritance with example
11. Overriding and Overloading and it's diff with example
12. Virtual constructor
13. Why is virtual used ( to make abstract) <https://www.geeksforgeeks.org/difference-between-virtual-function-and-pure-virtual-function-in-c/?ref=rp>
14. Calloc and Malloc delloc
15. Use of Try Block, Catch, finally?
16. Difference between Structure and class
17. Why is C++ better than Java
18. Why is C++ better than python
19. Why is Python better than C++
20. What is thread, class, inheritance (For Java)
21. What is an interface (For Java)

## Software Development Life Cycle -----

1. <http://tryga.com/what-are-the-software-development-life-cycle-sdlc-phases/#:~:text=There%20are%20following%20six%20phases,Implementation%20or%20coding>
2. <https://www.javatpoint.com/software-development-life-cycle>
3. All the stages with explanation?
4. Different levels of testing? (Water model, agile model and, V-shaped model... explain few steps to make it clear)
5. All types of Testing with examples ( Very Important)\*\*\*\*\*
6. Use cases of a project
7. What all to keep in mind while making a project or any software. Real-life
8. Process of making software from start to deployment

## Operating System -----

6. Virtual Memory
7. Cache Memory
8. Demand Paging
9. External fragmentation problem
10. Paging and Segmentation?
11. Paging and why to use it
12. PCB(Process Control Block) <https://www.geeksforgeeks.org/process-table-and-process-control-block-pcb/>
13. Schedulers & types and why is used
14. Scheduling Algorithms \*\*\*\*\*
15. Best Scheduling Algorithm ( Advantage & Disadvantage)
16. Deadlock and its conditions\*\*\*\*\*
17. LINUX commands creation, run, save ( <https://www.hostinger.in/tutorials/linux-commands> )
18. Diff Linux & Windows
19. Android OS in phones and why
20. Thrashing, Starvation

## Computer Networks -----

7. Basic definitions of various networking devices ( e.g. Bus, Hub, Switch, routers,....etc)
8. Basic questions on all 7 layers of OSI Model Layers in details ( example - [https://youtu.be/vv4y\\_uOneC0](https://youtu.be/vv4y_uOneC0) )
9. Handshake
10. Protocols
11. Must refer Youtube ( GATE Smasher)\*\*\*\*\*

## C/C++ Interview questions -----

1. <https://www.geeksforgeeks.org/learn-cpp-programming-step-by-step-a-20-day-curriculum/?ref=leftbar-rightbar>
2. <https://www.geeksforgeeks.org/difference-and-similarities-between-php-and-c/?ref=rp>
3. Diff btw C and C++ (time complexity and space comp)
4. Diff btw Local and global variable
5. Diff btw call by value and call by reference and call by address
6. Use of static keyword with example
7. What is recursion?

8. What is Java Virtual Machine (JVM)
9. Is delete, next, main, exit, or null keyword in java
10. Merge sort, with space and type complexity
11. What is GP series?
12. What is palindrome number?
13. Armstrong and Fibonacci?
14. Optimize the prime number program
15. Find all prime number between 1 to 100
16. Find factorial using big integers
17. Find the greatest of 3 numbers(Most optimal answer)

## Important Reference link topic wise -----

1. <https://www.javatpoint.com/cpp-interview-questions>
2. <https://www.javatpoint.com/operating-system-interview-questions>
3. <https://www.javatpoint.com/html-interview-questions>
4. <https://www.javatpoint.com/css-interview-questions>
5. <https://www.javatpoint.com/javascript-interview-questions>
6. <https://www.javatpoint.com/document-object-model>
7. <https://www.javatpoint.com/dbms-interview-questions>
8. <https://www.javatpoint.com/sql-interview-questions>
9. <https://www.javatpoint.com/pl-sql-interview-questions>
10. <https://www.javatpoint.com/networking-interview-questions>
11. <https://www.javatpoint.com/python-interview-questions>
12. <https://www.javatpoint.com/cloud-computing-interview-questions>
13. <https://www.javatpoint.com/mariadb-interview-questions>
14. <https://www.javatpoint.com/software-development-life-cycle>
15. <https://www.javatpoint.com/php-interview-questions>
16. <https://www.javatpoint.com/http-interview-questions>
17. <https://www.javatpoint.com/jquery-interview-questions>

## For Cracking Coding Rounds -----

1. Download the full course from torrent of this course as it covers all the questions that can be asked in a coding interview – ( <https://www.udemy.com/course/datastructurescncpp/> )
2. Solve as many medium level questions as possible in the geeks for geeks practice section – ( <https://practice.geeksforgeeks.org/explore/?category%5B%5D=CPP&difficulty%5B%5D=-1&difficulty%5B%5D=0&difficulty%5B%5D=1&page=1&category%5B%5D=CPP> )
3. Program to reverse a Linked List
4. What is dynamic programming(2 methods – tabular

5. Count All Palindrome Sub-Strings in a String
6. longest common subsequence of sum given key

## PROJECTS

Expect all types of Questions on Projects that you've built and have mentioned in the resume, so have a thorough knowledge of all the technologies, platforms, languages used in your project

## HR Interview Questions -----

@) Tell me something about yourself? / Introduce Yourself?

1. Name
2. Native Place
3. Highest qualification ( College name and pursuing ),
4. Skills and Experience (worked on Projects and have an acute knowledge to answer the questions asked to you based on your projects)
5. hobbies and interests

\*It's very important not to FK up the grammar and the flow of the sentence, so be fluent and practice your intro in front of a mirror

@) Tell me something about your family background?

→ About the family (Fathers occupation, Mothers occupation and about siblings education and job)

@) What is your dream company?

→ Don't specify any company name. Instead, highlight the qualities that you are looking for in a company such as reputation, good ethics, good working environment, better growth probability, good training, quality projects, and how they treat freshers

@) How do you update yourself?

→ Tell about your latest projects you've been working on and what you are doing to be up to date with the upcoming and rising technological requirements.

@) Why do you want to join (Company Name)?

--> Advantages of joining ..... (Huge Exposure, learning new technologies.....The working environment is very enthusiastic and creative, \_\_\_\_ is a very good company for freshers

@) Why Should we hire you?

→(Learn on what technologies the company is working on currently ) As (Company name) uses these..... languages and I have good knowledge on these languages..... and have done few projects that'll prove to be advantageous for the company as being experienced in some of the domains and for myself, as I can implement my current knowledge along with all the new technologies that I'll learn in the company, I'll try to complete my work in the given time with utmost precision and dedication and altogether I'll prove to be a valuable asset and a good choice to the company

@) Tell me something that is not on your resume?

--> Be creative and answer yourself

@) Where do you see yourself in 5 years?

→I see myself working at a senior post in the company with better pay and an improved set of skills and knowledge to lead the next generation with good projects and experience. (can add more or less according to your capacity and guts)

@) What are your strengths and weaknesses?

→In weakness ...mention a small weakness and do specify exclusively about how did you overcome it.

@) Whose your Role Model and why?

→ Parents or Famous sportsperson or actor or a great leader(Jim Carrey) who's inspired you. Be ready with a short inspirational story in case the interviewer asks about your role model in depth

@) What will you contribute to the world after 10 years from now?

→Be creative and answer Yourself

@) Should attendance be mandatory? (Related to online classes if lockdown situation persist)

→Yes, coz this is one of the key factors and if it won't be mandatory so many may bunk and may not get the knowledge they would from the faculties even though we learn mostly by reading and implementing ourselves but the faculties experience to knowledge is diff and would always be beneficial

@) Future of sports in India?

→PV Sindhu, Saina Nehwal example as a few years back there was not a great scope in India regarding a badminton career but these 2 remarkable players won many international level tournaments that made India proud and increased the chance of growth in sports career. (Pro Kabaddi, Football is rising)

@) Views on Online Exams?

→I believe online exams are a very good method of conducting exams as students can easily give exams from their homes

@) How digitalization is helping?

→Amazon, Flipkart, Zomato, growers are key examples of how customer service and ease of availability of goods at your doorstep...etc



@) What are your hobbies?

→ Working out, watching movies and tv series, and exploring new technologies(MERN stack and cloud)

@) Do you have any Questions?

→ On what technologies will I be working on once I get selected?

→ How much time will it take for me to reach a senior post in the company

*BEST OF LUCK FOR PLACEMENTS*

*BE CONFIDENT*

*BE BOLD*

*BE POSITIVE*