

HCL Technical / Computer Fundamentals – 200 Practice Questions (Exam-based Question)

By – Durgesh StudyHub

 Technical / Computer Fundamentals – MCQ Set

Topic 1 – Operating System (10 Questions)

Q1. Which of the following is not an operating system?

- A) Linux
- B) Windows
- C) Oracle
- D) macOS

Answer: C) Oracle

Explanation: Oracle is a database software.

Q2. Process is a _____.

- A) Program in execution
- B) Single instruction
- C) Stored program
- D) Hardware function

Answer: A) Program in execution

Q3. Which scheduling algorithm is used by most operating systems?

- A) FIFO
- B) Round Robin
- C) SJF
- D) Priority

Answer: B) Round Robin

Q4. Deadlock occurs when processes are stuck waiting for _____.

- A) CPU
- B) Memory
- C) Resources
- D) System clock

Answer: C) Resources

Q5. Which memory is volatile?

- A) ROM
- B) EEPROM
- C) RAM
- D) Flash

Answer: C) RAM

Q6. What is thrashing?

- A) Too many context switches
- B) Memory fragmentation
- C) Virus attack
- D) Disk failure

Answer: A) Too many context switches

Q7. Semaphore is used for _____.

- A) Memory allocation
- B) Synchronization
- C) Scheduling
- D) Paging

Answer: B) Synchronization

Q8. Page fault occurs when:

- A) Page is not in RAM
- B) Page is in cache
- C) Page size is large
- D) Disk full

Answer: A) Page is not in RAM

Q9. Kernel is the _____ of the operating system.

- A) User interface
- B) Main part
- C) Hardware device

D) Virus protection tool

Answer: B) Main part

Q10. Which OS is used in mobile phones?

A) Android

B) Linux

C) Windows XP

D) Unix

Answer: A) Android

Topic 2 – DBMS / SQL (10 Questions)

Q11. DBMS stands for _____.

A) Data Base Management System

B) Data Basic Management Storage

C) Data Backup Managing System

D) Data Broad Managing Set

Answer: A

Q12. Which language is used to query the database?

A) XML

B) HTML

C) SQL

D) C++

Answer: C

Q13. Primary key:

A) Allows duplicate values

B) Cannot be NULL

C) Is always numeric

D) Both A & C

Answer: B

Q14. Which command is used to remove a table?

A) DELETE

B) DROP

C) REMOVE

D) CLEAR

Answer: B

Q15. Foreign key establishes _____.

A) Security

B) Relationship between tables

C) Backup

D) Query

Answer: B

Q16. Normalization removes _____.

A) Data redundancy

B) SQL errors

C) Memory leakage

D) Deadlock

Answer: A

Q17. Which SQL clause filters records?

A) WHERE

B) FROM

C) ORDER BY

D) SELECT

Answer: A

Q18. Query to find all records from a table?

A) SELECT * FROM table;

B) GET * table;

C) SHOW table;

D) FIND * FROM table;

Answer: A

Q19. Which join returns common records?

A) Outer join

B) Cross join

C) Inner join

D) Natural join

Answer: C

Q20. ER diagram represents _____.

- A) Memory
- B) Relationships
- C) CPU cycles
- D) Interfaces

Answer: B

Topic 3 – Computer Networks (10 Questions)

Q21. TCP stands for

- A) Transmission Control Protocol
- B) Transfer Control Program
- C) Time Control Protocol
- D) Transfer Channel Process

Answer: A

Q22. IP address is used for _____.

- A) Playing music
- B) Identifying a device on network
- C) Graphics
- D) Printer speed

Answer: B

Q23. HTTP is used for _____.

- A) Network security
- B) Page transfer on web
- C) Virus protection
- D) Video streaming

Answer: B

Q24. The device that connects two networks is:

- A) Switch
- B) Router
- C) Hub
- D) Modem

Answer: B

Q25. Which layer is responsible for routing?

- A) Application
- B) Session
- C) Network
- D) Data link

Answer: C

Q26. POP and IMAP are used for:

- A) Email
- B) Games
- C) Browsers
- D) Printing

Answer: A

Q27. Bandwidth means:

- A) Network speed
- B) Cable length
- C) Server time
- D) Domain name

Answer: A

Q28. Wi-Fi stands for:

- A) Wireless Fidelity
- B) Wide Fire
- C) Wired Frequency
- D) None

Answer: A

Q29. Topology where all devices connect to a single cable:

- A) Star
- B) Ring
- C) Bus
- D) Mesh

Answer: C

Q30. Ping command is used to check:

- A) Disk space
- B) Connection between two systems
- C) Virus

D) Database

Answer: B



OOPS & Programming – MCQ Set (10 Questions)

Q31. OOPS stands for:

- A) Object Oriented Program Style
- B) Object Oriented Programming System
- C) Online Object Programming System
- D) Overall Object Program Solution

Answer: B

Explanation: Full form of OOPS is Object Oriented Programming System.

Q32. Which of the following is NOT a feature of OOPS?

- A) Encapsulation
- B) Inheritance
- C) Polymorphism
- D) Compilation

Answer: D

Explanation: Compilation is a program translation process, not an OOPS feature.

Q33. Wrapping data and functions together is called:

- A) Data hiding
- B) Encapsulation
- C) Inheritance
- D) Polymorphism

Answer: B

Explanation: Encapsulation binds data & methods in a class.

Q34. Using the same function name with different parameters is:

- A) Function Overloading
- B) Function Overriding
- C) Abstraction
- D) Association

Answer: A

Explanation: Overloading = same name + different parameters.

Q35. Constructor is used for:

- A) Ending a program
- B) Destroying objects
- C) Initializing objects
- D) Compiling code

Answer: C

Explanation: Constructor initializes objects automatically at creation.

Q36. The concept of deriving one class from another is called:

- A) Inheritance
- B) Polymorphism
- C) Abstraction
- D) Composition

Answer: A

Explanation: Inheritance allows reuse of existing class.

Q37. Which keyword is used to inherit a class in C++?

- A) derived
- B) extends
- C) inherits
- D) public

Answer: D

Explanation: Syntax: `class B : public A { };`

Q38. Runtime polymorphism is achieved using:

- A) Operator overloading
- B) Function overloading
- C) Virtual functions
- D) Constructor

Answer: C

Explanation: Virtual functions enable dynamic binding.

Q39. Data hiding is achieved using:

- A) Public
- B) Private
- C) Friend
- D) Global

Answer: B

Explanation: Private members restrict direct access.

Q40. Which of the following is NOT a valid OOP language?

- A) C++
- B) Java
- C) Python
- D) C

Answer: D

Explanation: C is procedural, not object-oriented.

🧠 Programming MCQs (C / C++ / Java / Python / DSA / OOPS / DBMS / OS / CN)

Total – 200 Questions

🔑 I will provide 20–20 per topic with options + correct answer + explanation.

Programming in C (20 Questions)

(Medium to Hard Level)

Q1. What will be the output of the following code?

```
#include <stdio.h>
int main() {
    int x = 5;
    printf("%d %d %d", x, x++, ++x);
    return 0;
}
```

- A) 5 5 7
- B) 7 5 6
- C) Undefined behavior
- D) 5 6 7

Answer: C) Undefined behavior

Explanation: Modifying and accessing a variable more than once between sequence points leads to *undefined behavior*.

Q2. What is the size of `int` in 64-bit GCC compiler?

- A) 2 bytes
- B) 4 bytes
- C) 8 bytes
- D) Depends on OS

Answer: B

Explanation: In most compilers (including 64-bit GCC), `int` = 4 bytes.

Q3. Which storage class provides global lifetime and local scope?

- A) `auto`
- B) `extern`
- C) `register`
- D) `static`

Answer: D – `static`

Explanation: `static` inside function keeps value alive across calls but scope remains inside function.

Q4. Which operator cannot be overloaded in C++?

- A) +
- B) =
- C) ::
- D) []

Answer: C – Scope resolution operator ::

Q5. Which concept binds data & function together?

- A) Polymorphism
- B) Inheritance
- C) Encapsulation
- D) Abstraction

Answer: C – Encapsulation

Q6. Which searching algorithm works best in sorted array?

- A) Linear Search
- B) Binary Search
- C) Jump Search
- D) Interpolation Search

Answer: D – Interpolation Search

Q7. Time complexity of Merge Sort?

- A) $O(n)$
- B) $O(n \log n)$
- C) $O(n^2)$
- D) $O(\log n)$

Answer: B

Q8. In DBMS, which normal form removes transitive dependency?

- A) 1NF
- B) 2NF
- C) 3NF
- D) BCNF

Answer: C – 3NF

Q9. Which protocol is connection-oriented?

- A) UDP
- B) IP
- C) TCP
- D) ARP

Answer: C – TCP

Q10. What is a deadlock?

- A) High memory usage
- B) Infinite loop
- C) Resources waiting cyclically forever
- D) Process termination

Answer: C

Q11. Python is __ typed language.

- A) Static & Strong
- B) Dynamic & Strong
- C) Static & Weak
- D) Dynamic & Weak

Answer: B

Q12. In SQL, DELETE FROM table removes:

- A) Entire table structure
- B) Specific rows
- C) All rows but not structure
- D) Both rows & structure

Answer: C

Q13. OS uses paging to:

- A) Manage process scheduling
- B) Provide virtual memory

- C) Manage CPU time
- D) Manage I/O operations

Answer: B

Q14. Full form of OOPS?

- A) Object-Oriented Programming System
- B) Object Operator Program System
- C) Optional Object Programming
- D) None

Answer: A

Q15. Which data structure works on FIFO?

- A) Stack
- B) Queue
- C) Graph
- D) Linked List

Answer: B

Q16. In TCP/IP model, routing is done at:

- A) Application layer
- B) Transport layer
- C) Network layer
- D) Physical layer

Answer: C

Q17. What is pointer?

- A) Stores character
- B) Stores address
- C) Stores boolean
- D) Stores object

Answer: B

Q18. Which SQL keyword removes duplicate records?

- A) UNIQUE
- B) DELETE DUP
- C) DISTINCT
- D) REMOVE

Answer: C

Q19. What is Object?

- A) Variable
- B) Function
- C) Instance of class
- D) Block

Answer: C

Q20. Which tree is height-balanced?

- A) Binary Search Tree
- B) AVL Tree
- C) Heap
- D) B-Tree

Answer: B

🧠 Programming MCQs (C / C++ / Java / Python /
DSA / OOPS / DBMS / OS / CN)

Total – 200 Questions

🔑 I will provide 20–20 per topic with options + correct answer +
explanation.

Programming in C (20 Questions)

(Medium to Hard Level)

Q1. What will be the output of the following code?

```
#include <stdio.h>
int main() {
    int x = 5;
    printf("%d %d %d", x, x++, ++x);
    return 0;
}
```

- A) 5 5 7
- B) 7 5 6

- C) Undefined behavior
- D) 5 6 7

Answer: C) Undefined behavior

Explanation: Modifying and accessing a variable more than once between sequence points leads to *undefined behavior*.

Q2. What is the size of `int` in 64-bit GCC compiler?

- A) 2 bytes
- B) 4 bytes
- C) 8 bytes
- D) Depends on OS

Answer: B

Explanation: In most compilers (including 64-bit GCC), `int` = 4 bytes.

Q3. Which storage class provides global lifetime and local scope?

- A) `auto`
- B) `extern`
- C) `register`
- D) `static`

Answer: D – `static`

Explanation: `static` inside function keeps value alive across calls but scope remains inside function.

Q4. Which operator cannot be overloaded in C++?

- A) +
- B) =
- C) ::
- D) []

Answer: C – Scope resolution operator ::

Q5. Which concept binds data & function together?

- A) Polymorphism
- B) Inheritance
- C) Encapsulation
- D) Abstraction

Answer: C – Encapsulation

Q6. Which searching algorithm works best in sorted array?

- A) Linear Search
- B) Binary Search
- C) Jump Search
- D) Interpolation Search

Answer: D – Interpolation Search

Q7. Time complexity of Merge Sort?

- A) $O(n)$
- B) $O(n \log n)$
- C) $O(n^2)$
- D) $O(\log n)$

Answer: B

Q8. In DBMS, which normal form removes transitive dependency?

- A) 1NF
- B) 2NF
- C) 3NF
- D) BCNF

Answer: C – 3NF

Q9. Which protocol is connection-oriented?

- A) UDP
- B) IP
- C) TCP
- D) ARP

Answer: C – TCP

Q10. What is a deadlock?

- A) High memory usage
- B) Infinite loop
- C) Resources waiting cyclically forever
- D) Process termination

Answer: C

Q11. Python is __ typed language.

- A) Static & Strong
- B) Dynamic & Strong
- C) Static & Weak
- D) Dynamic & Weak

Answer: B

Q12. In SQL, DELETE FROM table removes:

- A) Entire table structure
- B) Specific rows
- C) All rows but not structure
- D) Both rows & structure

Answer: C

Q13. OS uses paging to:

- A) Manage process scheduling
- B) Provide virtual memory

- C) Manage CPU time
- D) Manage I/O operations

Answer: B

Q14. Full form of OOPS?

- A) Object-Oriented Programming System
- B) Object Operator Program System
- C) Optional Object Programming
- D) None

Answer: A

Q15. Which data structure works on FIFO?

- A) Stack
- B) Queue
- C) Graph
- D) Linked List

Answer: B

Q16. In TCP/IP model, routing is done at:

- A) Application layer
- B) Transport layer
- C) Network layer
- D) Physical layer

Answer: C

Q17. What is pointer?

- A) Stores character
- B) Stores address
- C) Stores boolean
- D) Stores object

Answer: B

Q18. Which SQL keyword removes duplicate records?

- A) UNIQUE
- B) DELETE DUP
- C) DISTINCT
- D) REMOVE

Answer: C

Q19. What is Object?

- A) Variable
- B) Function
- C) Instance of class
- D) Block

Answer: C

Q20. Which tree is height-balanced?

- A) Binary Search Tree
- B) AVL Tree
- C) Heap
- D) B-Tree

Answer: B