

MCA TECHNICAL APTITUDE TEST

Placement Preparation Workshop | Technical + Logical Level

Total Questions: 50 Time: 75 Minutes

SECTION A – DBMS & OPERATING SYSTEMS (1–20)

1. Which normal form removes transitive dependency?
a) 1NF b) 2NF c) 3NF d) BCNF
2. Which SQL command removes all rows permanently and resets identity?
a) DELETE b) DROP c) TRUNCATE d) REMOVE
3. Which is not a database key?
a) Primary b) Foreign c) Super d) Alternate value
4. Which isolation level avoids dirty reads?
a) Read Uncommitted b) Read Committed c) Repeatable Read d) Serializable
5. Deadlock occurs when processes wait indefinitely for resources.
6. Which scheduling may cause starvation?
a) FCFS b) Round Robin c) Priority d) Multilevel
7. Memory management is handled by:
a) Kernel b) Shell c) Loader d) Compiler
8. Best page replacement algorithm theoretically is:
a) FIFO b) LRU c) Optimal d) Random
9. UNIX process creation uses:
a) exec b) fork c) wait d) exit
10. Thrashing is caused by excessive paging.
11. Which index uses balanced tree?
a) Hash b) Bitmap c) B-Tree d) Dense
12. SQL privilege command is:
a) ALLOW b) GRANT c) PERMIT d) ACCESS
13. Context switching occurs during CPU process change.
14. Fastest memory is:
a) Cache b) RAM c) Disk d) Virtual
15. Random access file allocation is best supported by:
a) Contiguous b) Linked c) Indexed d) Sequential
16. Inner join returns only matching rows.
17. Linux is an example of:
a) Proprietary b) Open source c) Embedded d) Real-time
18. UNIQUE constraint avoids duplicates.
19. Preemptive scheduling example:
a) FCFS b) SJF c) Round Robin d) Non-preemptive Priority
20. DROP command removes table structure.

SECTION B – COMPUTER NETWORKS (21–35)

21. Encryption is handled by which OSI layer?
a) Network b) Transport c) Session d) Presentation
22. TCP is a connection-oriented protocol.
23. Email sending protocol is:
a) POP3 b) SMTP c) FTP d) HTTP
24. Switch operates at which layer?
a) Physical b) Data Link c) Network d) Transport
25. IPv6 address size is:
a) 32 b) 64 c) 128 d) 256 bits
26. Most reliable topology is:
a) Bus b) Star c) Ring d) Mesh
27. ARP resolves:
a) MAC to IP b) IP to MAC c) Port to IP d) Host to Port
28. Full duplex supports simultaneous two-way communication.
29. Secure web protocol is HTTPS.
30. Reliable data transfer is ensured by Transport layer.
31. HTTP uses port:
a) 21 b) 23 c) 80 d) 443
32. Router connects different networks.
33. File transfer protocol is FTP.
34. Globally unique address is MAC address.
35. Topmost OSI layer is Application layer.

SECTION C – JAVA & PYTHON (36–50)

36. Java inheritance keyword is:

a) inherit b) extends c) implements d) super

37. Unchecked exception is:

a) IOException b) SQLException c) RuntimeException d) ClassNotFoundException

38. Collection without duplicates is Set.

39. JVM stands for Java Virtual Machine.

40. Highest access level is public.

41. `print(type([]))` output is .

42. Python function keyword is def.

43. Immutable data type is tuple.

44. PEP stands for Python Enhancement Proposal.

45. Loop executing at least once is do-while.

46. Runtime polymorphism uses method overriding.

47. Floor division operator is //.

48. Scanner class belongs to java.util package.

49. break stops loop execution.

50. Comparable interface is used for sorting.

ANSWER KEY

1-c, 2-c, 3-d, 4-b, 5-b, 6-c, 7-a, 8-c, 9-b, 10-a, 11-c, 12-b, 13-b, 14-a, 15-c, 16-d, 17-b, 18-c, 19-c, 20-c, 21-d, 22-b, 23-b, 24-b, 25-c, 26-d, 27-b, 28-c, 29-c, 30-b, 31-c, 32-d, 33-b, 34-a, 35-a, 36-b, 37-c, 38-c, 39-b, 40-d, 41-b, 42-c, 43-d, 44-b, 45-c, 46-b, 47-c, 48-c, 49-c, 50-c