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# QUESTION BOOKLET – ADVANCED TEST FOR RECRUITMENT TO TECHNICAL CADRE POSTS

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|---|---|
| Post: | Technician |
| Department | CSE |
| Advt.: | 01/2026 dated 09.01.2026 |
| Date of Exam: | 05-08-2026 |
| Duration: | 2 Hours |
| Total Marks: | 200 (100 Q X 2 M each) |
| No. of Questions: | 100 (MCQs) |
| Negative Marking: | 1/4th mark for every wrong answer |

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## INSTRUCTIONS TO THE CANDIDATES

1. This is an Advanced Test comprising 100 Multiple Choice Questions (MCQs), to be conducted in MCQ mode only.
2. The duration of the test is 2 hours.
3. Answers must be marked on the OMR Answer Sheet using a blue or black ballpoint pen only. Use of pencils is not permitted.
4. Candidates must write/mark their Roll Number, Post applied for, and other required details in the designated space on the OMR Answer Sheet.
5. Answers marked on the Question Booklet or on any sheet other than the OMR Answer Sheet will not be evaluated.
6. For each question, darken the circle corresponding to the correct answer completely and clearly on the OMR Answer Sheet.
7. Each question carries equal marks. There will be a negative marking of ¼ th mark for every wrong answer. No marks will be deducted for questions not attempted.
8. Mark only one answer for each question. Marking more than one circle for a question will be treated as a wrong answer.
9. Overwriting, cutting, or erasing that leaves the OMR Answer Sheet unclear may result in the answer not being evaluated.
10. No candidate shall leave the examination hall during the test.
11. Any attempt to copy, use unfair means, or communicate with others will result in immediate disqualification.
12. The use of electronic gadgets, calculators, mobile phones, smart watches, or any written/printed material is strictly prohibited.
13. Rough work, if any, should be done only on the separate sheet provided for the purpose.
14. Ensure that the OMR Answer Sheet is duly filled and handed over to the Invigilator before leaving the examination hall.
15. Failure to submit the OMR Answer Sheet will result in cancellation of candidature.
16. All material provided, including rough sheets, must be returned before leaving the examination hall.

**Q.1. Which loop is guaranteed to execute at least once?**
A. for
B. while
C. do-while
D. foreach

**Q.2. An organization stores password hashes instead of plain-text passwords in its database. What is the primary advantage?**
A. Passwords can be recovered quickly.
B. Passwords remain protected even if the database is compromised.
C. Users do not need passwords.
D. Login becomes faster.

**Q.3. Which Excel function counts only the cells containing numeric values?**
A. COUNTA()
B. COUNT()
C. COUNTIF()
D. SUM()

**Q.4. Which security practice is the most effective in reducing the impact of stolen passwords?**
A. Using the same password everywhere
B. Multi-Factor Authentication (MFA)
C. Disabling password expiry
D. Sharing passwords with supervisors

**Q.5. Which SQL statement is used to permanently remove a table and its structure?**
A. DELETE
B. TRUNCATE
C. DROP
D. REMOVE

**Q.6. Which of the following best describes Confidentiality?**
A. Ensuring information is available when needed
B. Preventing unauthorized disclosure of information
C. Verifying software licenses
D. Improving network speed

**Q.7. Which of the following is an example of application software?**
A. Windows 11
B. Linux
C. Microsoft Excel
D. BIOS

**Q.8. What is the primary purpose of HTTPS?**
A. To compress web pages
B. To encrypt communication between the client and the server
C. To increase internet speed
D. To block unwanted advertisements

**Q.9. A Linux server is responding very slowly. Which command provides a real-time view of CPU and memory utilization by running processes?**
A. `top`
B. `pwd`
C. `mkdir`
D. `cp`

**Q.10. A malicious program spreads automatically from one computer to another over a network without requiring user action. It is most likely a:**
A. Trojan Horse
B. Worm
C. Spyware
D. Rootkit

**Q.11. A system administrator wants a Linux server to start the Apache web server automatically after every reboot. Which command should be used?**
A. `systemctl enable httpd`
B. `systemctl stop httpd`
C. `systemctl restart httpd`
D. `systemctl status httpd`

**Q.12. Which scheduling algorithm gives the CPU to the process that arrives first?**
A. Round Robin
B. Shortest Job First
C. First Come First Served (FCFS)
D. Priority Scheduling

**Q.13. Which Excel function returns the highest value from a selected range of cells?**
A. HIGH()
B. MAX()
C. LARGE()
D. TOP()

**Q.14. A database administrator accidentally deletes several records but had taken a backup the previous night. Which technique can be used to restore the lost data?**
A. Database Recovery using Backup
B. Normalization
C. Index Rebuilding
D. Data Encryption

**Q.15. Which service automatically assigns IP addresses to computers on a network?**
A. DNS
B. DHCP
C. FTP
D. SMTP

**Q.16. Which of the following is the primary objective of information security?**
A. Ensuring continuous internet connectivity
B. Protecting information from unauthorized access, modification, and destruction
C. Improving the performance of information systems
D. Maximizing the availability of computing resources

**Q.17. A branch office cannot access the Head Office server after a router configuration change. The network cables and switches are functioning correctly. What should the administrator verify first?**
A. The router's routing table and static routes
B. The DNS server configuration on client computers
C. The subnet mask configured on the branch office PCs
D. The hostname configured on the branch office computers

**Q.18. A user reports that a file cannot be deleted even though they have write permission on the file itself. What is the most likely reason?**
A. The containing directory does not permit deletion.
B. The file is too large.
C. The monitor is disconnected.
D. The CPU temperature is high.

**Q.19. An administrator wants to terminate a process that is not responding. Which command is commonly used?**
A. `kill`
B. `mkdir`
C. `chmod`
D. `uname`

**Q.20. A government office maintains employee attendance in Excel and wants to generate a department-wise summary without manually creating formulas. Which feature is most suitable?**
A. Pivot Table
B. SmartArt
C. Conditional Formatting
D. Mail Merge

**Q.21. A university stores student details in one table and department details in another. Which key should be used to establish the relationship between these tables?**
A. Candidate Key
B. Foreign Key
C. Composite Key
D. Super Key

**Q.22. Which keyword is used to terminate a loop immediately?**
A. continue
B. stop
C. break
D. exit

**Q.23. Which protocol is primarily used to transfer web pages between a web browser and a web server?**
A. FTP
B. HTTP
C. SMTP
D. SSH

**Q.24. Which firmware initializes hardware and starts the operating system during the boot process?**
A. Compiler
B. BIOS/UEFI
C. Device Driver
D. Antivirus

**Q.25. Which component is known as the brain of the computer?**
A. Hard Disk
B. Motherboard
C. CPU
D. RAM

**Q.26. Which layer of the OSI model is responsible for logical addressing and routing?**
A. Data Link Layer
B. Network Layer
C. Transport Layer
D. Session Layer

**Q.27. A developer wants to prevent direct access to class data members and allow access only through public methods. Which OOP principle is being applied?**
A. Inheritance
B. Encapsulation
C. Polymorphism
D. Recursion

**Q.28. A database server suddenly runs out of disk space. Which command should be used first to identify directories consuming the most storage?**
A. `du -sh /*`
B. `df -h`
C. `passwd`
D. `history`

**Q.29. Student Table**

|ID|DeptID|
1 10
2 20
3 10

**Department Table**

|DeptID|Name|
10 CSE
20 IT
30 Civil

**Query**

```
SELECT COUNT(*) FROM Student s INNER JOIN Department d ON
s.DeptID=d.DeptID;
```

Output?
A.2
B.3
C.4
D.5

**Q.30. During a presentation, the presenter wants to view speaker notes while the audience sees only the presentation slides. Which feature should be used?**
A. Presenter View
B. Slide Show View
C. Outline View
D. Reading View

**Q.31. Which SQL query displays the names of employees whose salary is greater than ₹50,000?**
A.
SELECT name FROM employee WHERE salary > 50000;

B.
SELECT salary > 50000 FROM employee;

C.
GET name FROM employee;

D.
DISPLAY employee WHERE salary > 50000;

**Q.32. The three fundamental principles of information security are collectively known as:**
A. CIA Triad
B. TCP/IP Model
C. ACID Properties
D. RAID Levels

**Q.33. In an ER diagram, a rectangle represents:**
A. Relationship
B. Entity
C. Attribute
D. Primary Key

**Q.34. A website displays "403 Forbidden" when users try to access a page. What is the most likely reason?**
A. The requested page does not exist.
B. The server has denied access due to insufficient permissions.
C. The DNS server is unavailable.
D. The user's browser cache is full.

**Q.35. Which Linux command is used to display the IP address assigned to network interfaces?**
A. `ip addr`
B. `chmod`
C. `whoami`
D. `grep`

**Q.36. A developer needs to frequently insert and delete elements in the middle of a collection. Which data structure is generally more suitable than an array?**
A. Linked List
B. Stack
C. Queue
D. Hash Table

**Q.37. An administrator wants to increase the speed of searches on the Employee ID column, which is frequently used in the `WHERE` clause. What should be created?**
A. View
B. Trigger
C. Index
D. Sequence

**Q.38. A Linux server is running normally, but users report that they cannot create new files because the message "No space left on device" appears. Which command should the administrator execute first?**
A. `df -h`
B. `date`
C. `whoami`
D. `hostname`

**Q.39. A Windows user notices that a particular application is not responding. Which built-in utility can be used first to terminate the application?**
A. Disk Cleanup
B. Task Manager
C. Device Manager
D. Registry Editor

**Q.40. A system administrator notices repeated failed login attempts from different countries against the organization's VPN server. Which attack is most likely occurring?**
A. Brute Force Attack
B. SQL Injection
C. Packet Fragmentation
D. Buffer Overflow

**Q.41. A network administrator discovers that an attacker is secretly capturing unencrypted network traffic using a packet analyzer. Which type of attack is being performed?**
A. Packet Sniffing
B. Phishing
C. Social Engineering
D. Brute Force

**Q.42. Which memory management technique allows a process to use more memory than the physically installed RAM?**
A. Virtual Memory
B. Buffering
C. Spooling
D. Caching

**Q.43. A user downloads a free PDF converter from an unknown website. After installation, the computer starts displaying unwanted advertisements and browser redirects. The system is most likely infected with:**
A. Adware
B. Spyware
C. Trojan Horse
D. Ransomware

**Q.44. A file of 500 MB is transferred over a 100 Mbps network.**
**Ignoring protocol overhead and latency, approximately how much time will the transfer take?**
A. 5 seconds
B. 20 seconds
C. 40 seconds
D. 80 seconds

**Q.45. A web page displays correctly but the "Submit" button does not perform any action when clicked. Which technology is most likely responsible for handling this client-side interaction?**
A. HTML
B. CSS
C. JavaScript
D. DNS

**Q.46.** A computer has the following IP configuration:

- IP Address: **172.16.35.145**
- Subnet Mask: **255.255.255.224**

What is the **network address**?
A. 172.16.35.128
B. 172.16.35.144
C. 172.16.35.160
D. 172.16.35.224

**Q.47. A company wants to allow internal computers to access the Internet using a single public IP address. Which technology should be configured?**
A. VLAN
B. NAT
C. DHCP
D. DNS

**Q.48. Which PowerPoint feature is used to apply a common design and formatting to all slides in a presentation?**
A. Slide Sorter
B. Slide Master
C. Notes Page
D. Reading View

**Q.49. Users in an office can communicate with each other on the local network but cannot access any external websites. Which device should be checked first?**
A. Local Switch
B. Gateway Router
C. Printer
D. Scanner

**Q.50. Which protocol provides encrypted remote login to a Linux server?**
A. FTP
B. SSH
C. HTTP
D. Telnet

**Q.51. A network administrator needs to securely configure a router from a remote location over the Internet. Which protocol should be used?**
A. Telnet
B. SSH
C. HTTP
D. FTP

**Q.52. Which notation is commonly used to express the time complexity of an algorithm?**
A. Big-O Notation
B. Binary Notation
C. Decimal Notation
D. Hexadecimal Notation

**Q.53. A Linux administrator wants to find all files in the `/home` directory with the extension `.log`. Which command is most appropriate?**
A. `find /home -name "*.log"`
B. `grep ".log" /home`
C. `ls /home/*.log`
D. `pwd *.log`

**Q.54. Which of the following data structures stores elements in contiguous memory locations?**
A. Linked List
B. Queue implemented using Linked List
C. Tree
D. Array

**Q.55. Which C++ feature allows multiple functions with the same name but different parameter lists?**
A. Function Overloading
B. Function Overriding
C. Inheritance
D. Encapsulation

**Q.56. Which device primarily forwards data packets between different networks?**
A. Hub
B. Switch
C. Router
D. Repeater

**Q.57. A website loads correctly on the local server but cannot be accessed from other computers on the network. Which should the administrator check first?**
A. Firewall rules and whether port 80/443 is open
B. Monitor brightness
C. Keyboard layout
D. Installed fonts

**Q.58. Which Microsoft Word feature is used to create personalized letters for multiple recipients using a common template?**
A. Track Changes
B. Mail Merge
C. SmartArt
D. WordArt

**Q.59. A company wants employees working from home to securely access internal applications over the Internet. Which technology should be implemented?**
A. FTP
B. VPN
C. SMTP
D. DHCP

**Q.60. Which SQL clause is used to filter rows based on a specified condition?**
A. ORDER BY
B. GROUP BY
C. WHERE
D. HAVING

**Q.61. ISO/IEC 27001 is an international standard for:**
A. Software Development
B. Information Security Management System (ISMS)
C. Database Administration
D. Web Application Development

**Q.62. An employee receives an email claiming to be from the organization's IT department asking them to click a link and verify their password immediately. What type of attack is this?**
A. SQL Injection
B. Phishing
C. Brute Force Attack
D. Denial of Service

**Q.63. Which of the following memory types loses its contents when power is switched off?**
A. ROM
B. SSD
C. RAM
D. DVD

**Q.64. Which Linux command displays the current working directory?**
A. `ls`
B. `pwd`
C. `cd`
D. `who`

**Q.65. A web browser keeps track of recently visited pages so that pressing the Back button returns to the previous page. Which data structure is most suitable?**
A. Queue
B. Tree
C. Stack
D. Graph

**Q.66. Which of the following is true about arrays in C?**
A. Elements are stored randomly in memory.
B. Elements are stored in continuous memory locations.
C. Arrays can store values of different data types.
D. Array size changes automatically during execution.

**Q.67. A company wants to minimize data loss in case the primary server fails unexpectedly. Which approach is most appropriate?**
A. Disable backups
B. Maintain regular backups and a disaster recovery plan
C. Store all data on one hard disk
D. Restart the server every hour

**Q.68. What is the primary purpose of a subnet mask?**
A. Encrypt network traffic
B. Assign MAC addresses
C. Resolve domain names
D. Identify the network and host portions of an IP address

**Q.69. A user can successfully ping an IP address (e.g., `8.8.8.8`) but cannot open websites using domain names. Which service is most likely causing the problem?**
A. DHCP
B. DNS
C. FTP
D. SSH

**Q.70. Which of the following is a valid C data type?**
A. integer
B. int
C. real
D. number

**Q.71. A desktop computer powers on, but nothing appears on the monitor. Which should be checked first?**
A. Printer connection
B. Monitor power and display cable
C. Keyboard batteries
D. Internet connection

**Q.72. Which data structure follows the Last In, First Out (LIFO) principle?**
A. Queue
B. Stack
C. Linked List
D. Tree

**Q.73. After a ransomware attack, the organization successfully restores all important files without paying the ransom. Which prior security measure made this possible?**
A. Regular Offline Backups
B. Disabling Antivirus
C. Weak Password Policy
D. Shared Administrator Account

**Q.74. A web application accepts user input directly in an SQL query without validation, allowing attackers to retrieve confidential data. Which vulnerability is being exploited?**
A. SQL Injection
B. Phishing
C. Packet Sniffing
D. Brute Force

**Q.75.**
PC-A
IP
192.168.10.15
Mask
255.255.255.192
PC-B
IP
192.168.10.100
Mask
255.255.255.192
Can they communicate without a router?
A.Yes
B.No
C.Only after DNS configuration
D.Only after DHCP renewal

**Q.76. Which of the following passwords provides the highest security?**
A. Password@123
B. India2026
C. M#8vQ!4zLp@91
D. Welcome1

**Q.77. How many usable host IP addresses are available in this subnet?**
A. 30
B. 60
C. 64
D. 62

**Q.78. Which OOP concept allows one class to inherit properties and methods from another class?**
A. Encapsulation
B. Inheritance
C. Polymorphism
D. Abstraction

**Q.79. A user wants to install both Windows and Linux on the same computer so that either operating system can be selected during startup. This arrangement is called:**
A. Virtualization
B. Dual Boot
C. Partition Mirroring
D. Remote Boot

**Q.80. Which of the following best describes Personally Identifiable Information (PII)?**
A. Software license keys
B. Public advertisements
C. Information that can identify an individual
D. Computer hardware specifications

**Q.81. Which Excel feature allows data to be arranged in ascending or descending order?**
A. Filter
B. Sort
C. Freeze Panes
D. Wrap Text

**Q.82. A web application works correctly when accessed using `http://` but displays a browser security warning when accessed using `https://`. Which is the most likely cause?**
A. Invalid, expired, or improperly configured SSL/TLS certificate
B. Insufficient RAM on the client computer
C. Slow internet connection
D. Incorrect monitor resolution

**Q.83. Which of the following is not a component of the Microsoft Office suite?**
A. Microsoft Word
B. Microsoft Excel
C. Microsoft Access
D. Microsoft Edge

**Q.84. A system administrator wants to verify whether the Apache web server is running on a Linux system. Which command should be used?**
A. `systemctl status httpd`
B. `ls`
C. `pwd`
D. `chmod`

**Q.85. An administrator needs to modify a system configuration file that requires root privileges. Which command is typically used to execute the text editor with administrative permissions?**
A. `sudo`
B. `echo`
C. `pwd`
D. `date`

**Q.86. Which web development technology is primarily responsible for defining the structure of a web page?**
A. CSS
B. JavaScript
C. HTML
D. PHP

**Q.87. Which SQL JOIN returns only the rows having matching values in both tables?**
A. LEFT JOIN
B. RIGHT JOIN
C. FULL OUTER JOIN
D. INNER JOIN

**Q.88.**
```
#include<stdio.h>
int main()
{
   int a[]={10,20,30,40,50};
   int *p=a;
   printf("%d",*(p+3)-*(p+1));
   return 0;
}
```
A.10
B.20
C.30
D.40

**Q.89. Which of the following is the default port number used by HTTPS?**
A. 21
B. 25
C. 80
D. 443

**Q.90. A system becomes very slow because physical memory is almost full. Which operating system feature helps prevent applications from crashing immediately?**
A. Virtual Memory
B. Device Driver
C. BIOS
D. File Compression

**Q.91. What is the primary purpose of a cryptographic hash function?**
A. Compress files
B. Verify data integrity
C. Encrypt databases
D. Increase network speed

**Q.92. Which device learns MAC addresses and forwards frames only to the intended destination port?**
A. Hub
B. Router
C. Switch
D. Modem

**Q.93. A Linux server cannot be accessed remotely using SSH after a configuration change. Which should the administrator verify first?**
A. Whether the SSH service is running
B. Port 22 is allowed through the firewall
C. Both A & B
D. None of the above

**Q.94. Which of the following helps ensure that data has not been altered without authorization?**
A. Integrity
B. Availability
C. Confidentiality
D. Compression

**Q.95. A program that is currently being executed by the CPU is called a:**
A. Thread
B. File
C. Process
D. Service

**Q.96. An administrator notices that a particular switch port shows a large number of CRC and packet errors. What is the most likely cause?**
A. Faulty or damaged network cable
B. Speed or duplex mismatch between the switch port and the connected device
C. Incorrect VLAN assignment on the switch port
D. Incorrect IP address configured on the connected computer

**Q.97. Which command is commonly used to securely copy files from one Linux server to another over SSH?**
A. `ftp`
B. `scp`
C. `copy`
D. `move`

**Q.98.**

```
#include<stdio.h>
int fun(int n)
{
   if(n<=1)
      return 1;

   return n*fun(n-1);
}

int main()
{
   printf("%d",fun(5)/fun(3));
   return 0;
}
```

A. 5
B. 10
C. 20
D. 40

**Q.99. A newly installed computer shows the message "IP Address Conflict Detected." What is the most likely reason?**

A. Two devices are using the same IP address.
B. The computer has an incorrect subnet mask configured.
C. The default gateway is unreachable.
D. The DNS server address is incorrect.

**Q.100. An administrator divides a large office network into multiple VLANs. What is the primary benefit?**

A. Increases monitor resolution
B. Reduces broadcast traffic and improves security
C. Increases internet speed provided by the ISP
D. Eliminates the need for IP addresses

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