**Full 30-Question Test Set**

**🖥️ 1. Programming Skills**

**Q1:** What will be the output of the following Python code?

python

CopyEdit

print(2 \*\* 3 \*\* 2)

* A) 512
* B) 64
* C) 9
* D) Error

**Q2:** Which sorting algorithm has the best time complexity for nearly sorted data?

* A) Bubble Sort
* B) Merge Sort
* C) Insertion Sort
* D) Quick Sort

**🌐 2. Networking**

**Q3:** What is the default port for HTTPS?

* A) 443
* B) 80
* C) 21
* D) 25

**Q4:** Which network device works at Layer 3 of the OSI model?

* A) Switch
* B) Router
* C) Hub
* D) Repeater

**🔐 3. Cybersecurity**

**Q5:** Which attack involves tricking a user into clicking a malicious link?

* A) SQL Injection
* B) Phishing
* C) Denial of Service (DoS)
* D) Man-in-the-Middle

**Q6:** A company's database is breached because the admin used "admin123" as the password. Which attack caused this?

* A) SQL Injection
* B) Brute Force Attack
* C) Cross-Site Scripting (XSS)
* D) Ransomware

**🧠 4. Artificial Intelligence & Machine Learning**

**Q7:** What type of learning does a neural network use when trained with labeled data?

* A) Supervised Learning
* B) Unsupervised Learning
* C) Reinforcement Learning
* D) Self-Supervised Learning

**Q8:** Which algorithm is best for image classification?

* A) K-Nearest Neighbors (KNN)
* B) Decision Trees
* C) Support Vector Machine (SVM)
* D) Convolutional Neural Network (CNN)

**📊 5. Data Science & Analytics**

**Q9:** What does PCA (Principal Component Analysis) do?

* A) Increases dimensionality
* B) Predicts future values
* C) Clusters data
* D) Reduces dimensionality

**Q10:** Which visualization is best for comparing categorical data?

* A) Line Chart
* B) Bar Chart
* C) Pie Chart
* D) Histogram

**📝 6. Business Analysis**

**Q11:** What does a SWOT analysis assess?

* A) Software quality
* B) Project timeline
* C) Strengths, Weaknesses, Opportunities, and Threats
* D) Business revenue

**Q12:** What is the purpose of a KPI (Key Performance Indicator)?

* A) Track business performance
* B) Measure employee satisfaction
* C) Analyze website traffic
* D) Monitor system security

**💾 7. Database Management**

**Q13:** What type of database is best for handling structured data?

* A) NoSQL
* B) Graph Database
* C) Relational Database
* D) Blockchain

**Q14:** What does ACID in database transactions stand for?

* A) Accuracy, Complexity, Integrity, Durability
* B) Atomicity, Consistency, Isolation, Durability
* C) Association, Classification, Integration, Distribution
* D) Automation, Configuration, Information, Data

**📱 8. Mobile & Web Development**

**Q15:** What does HTML stand for?

* A) Hyper Transfer Markup Language
* B) High-Level Text Markup Language
* C) HyperText Markup Language
* D) HyperText Management Language

**Q16:** What is the role of CSS in web development?

* A) Control page layout and styles
* B) Manage backend server requests
* C) Write application logic
* D) Secure database connections

**⚙️ 9. DevOps & Cloud Computing**

**Q17:** Which cloud model offers the highest level of user control?

* A) SaaS
* B) PaaS
* C) IaaS
* D) Serverless

**Q18:** What is the purpose of CI/CD in DevOps?

* A) Continuous Integration & Continuous Deployment
* B) Customer Integration & Code Debugging
* C) Cloud Infrastructure & Configuration Development
* D) Computer Interfacing & Connectivity Design

**📢 10. Communication & Soft Skills**

**Q19:** What is the most effective way to handle workplace conflict?

* A) Avoiding the issue completely
* B) Addressing it openly and professionally
* C) Blaming the other person
* D) Ignoring it and moving on

**Q20:** Active listening involves:

* A) Interrupting to provide a quick response
* B) Nodding and summarizing key points
* C) Looking at your phone while the other person talks
* D) Thinking about your response while the other person speaks

**🏆 11. Leadership & Team Management**

**Q21:** What is the best approach for motivating a team?

* A) Offering constructive feedback and support
* B) Setting unrealistic deadlines to push performance
* C) Avoiding all criticism, even if necessary
* D) Taking credit for their work

**Q22:** Which leadership style encourages employee input?

* A) Autocratic
* B) Democratic
* C) Laissez-faire
* D) Transactional

**⚖️ 12. Logical Reasoning & Problem Solving**

**Q23:** What comes next in the pattern? **2, 6, 12, 20, ?**

* A) 28
* B) 30
* C) 32
* D) 36

**Q24:** If **A = 1, B = 2, ... Z = 26**, what is the sum of the letters in "CAT"?

* A) 20
* B) 24
* C) 28
* D) 30

**📈 13. Financial & Market Analysis**

**Q25:** What is the formula for Return on Investment (ROI)?

* A) Revenue / Expenses
* B) (Net Profit / Investment) × 100
* C) Total Assets - Liabilities
* D) Sales × Profit Margin

**Q26:** Which factor is most important in stock market analysis?

* A) Company logo
* B) Earnings reports and market trends
* C) CEO’s popularity
* D) Number of employees

**🧩 14. Creativity & Innovation**

**Q27:** Which technique helps generate creative ideas?

* A) Brainstorming
* B) Micromanaging
* C) Ignoring feedback
* D) Avoiding risks

**Q28:** Innovation is best described as:

* A) Doing the same thing repeatedly
* B) Creating something new or improving existing solutions
* C) Avoiding change
* D) Following industry norms

**💡 15. Critical Thinking**

**Q29:** A car travels 60 km in 1.5 hours. What is its average speed?

* A) 30 km/h
* B) 40 km/h
* C) 50 km/h
* D) 60 km/h

**Q30:** If a shirt costs $20 after a 20% discount, what was the original price?

* A) $22
* B) $24
* C) $25
* D) $30

**📊 Full Answer Scoring Table**

| **Q#** | **Correct Answer** | **Option A** | **Option B** | **Option C** | **Option D** |
| --- | --- | --- | --- | --- | --- |
| **Q1** | A) 512 | **4** | 1 | 0 | 0 |
| **Q2** | C) Insertion Sort | 1 | 2 | **4** | 2 |
| **Q3** | A) 443 | **3** | 1 | 0 | 0 |
| **Q4** | B) Router | 2 | **4** | 1 | 0 |
| **Q5** | B) Phishing | 1 | **3** | 1 | 2 |
| **Q6** | B) Brute Force Attack | 1 | **4** | 1 | 2 |
| **Q7** | A) Supervised Learning | **3** | 1 | 0 | 2 |
| **Q8** | D) CNN | 1 | 2 | 2 | **4** |
| **Q9** | D) Reduces dimensionality | 1 | 2 | 2 | **3** |
| **Q10** | B) Bar Chart | 1 | **4** | 2 | 1 |
| **Q11** | C) SWOT analysis | 1 | 1 | **3** | 2 |
| **Q12** | A) Track business performance | **4** | 2 | 1 | 0 |
| **Q13** | C) Relational Database | 1 | 2 | **3** | 1 |
| **Q14** | B) Atomicity, Consistency, Isolation, Durability | 1 | **4** | 1 | 0 |
| **Q15** | C) HyperText Markup Language | 1 | 2 | **3** | 1 |
| **Q16** | A) Control page layout and styles | **4** | 2 | 1 | 1 |
| **Q17** | C) IaaS | 1 | 2 | **4** | 2 |
| **Q18** | A) Continuous Integration & Deployment | **3** | 1 | 1 | 0 |
| **Q19** | B) Address it openly and professionally | 1 | **4** | 0 | 1 |
| **Q20** | B) Nodding and summarizing key points | 1 | **3** | 0 | 1 |
| **Q21** | A) Offering constructive feedback | **4** | 1 | 1 | 0 |
| **Q22** | B) Democratic | 1 | **4** | 2 | 2 |
| **Q23** | B) 30 | 2 | **4** | 1 | 1 |
| **Q24** | C) 28 | 1 | 2 | **4** | 2 |
| **Q25** | B) (Net Profit / Investment) × 100 | 1 | **4** | 1 | 2 |
| **Q26** | B) Earnings reports and market trends | 1 | **4** | 1 | 1 |
| **Q27** | A) Brainstorming | **3** | 1 | 0 | 0 |
| **Q28** | B) Creating something new or improving solutions | 1 | **4** | 0 | 2 |
| **Q29** | B) 40 km/h | 1 | **4** | 2 | 1 |
| **Q30** | C) $25 | 1 | 2 | **4** | 2 |

**How This Scoring Works**

* ✅ **Correct answers get 3 or 4 points** (highlighted in bold).
* ❌ **Incorrect answers get 1 or 2 points**, depending on relevance (to prevent zero scores).
* 🏆 **Each skill category has a score** based on question groups.

**📊 23 questions**

**Programming & Data Structures**

**Q1:** What is the output of 2 \*\* 3 in Python?  
A) 6  
B) 8  
C) 9  
D) 16

**Q2:** Which sorting algorithm is best for nearly sorted data?  
A) Bubble Sort  
B) Selection Sort  
C) Insertion Sort  
D) Quick Sort

**Networking**

**Q3:** What port number does HTTPS use?  
A) 21  
B) 80  
C) 443  
D) 8080

**Q4:** What device is responsible for directing network traffic?  
A) Switch  
B) Router  
C) Modem  
D) Firewall

**Q5:** What is the most common type of cyber attack?  
A) DDoS Attack  
B) Phishing  
C) SQL Injection  
D) Malware

**Q6:** Which attack tries every possible password combination?  
A) Dictionary Attack  
B) Brute Force Attack  
C) Social Engineering  
D) Man-in-the-Middle Attack

### ****Machine Learning & AI****

**Q7:** Which ML approach uses labeled data?  
A) Supervised Learning  
B) Unsupervised Learning  
C) Reinforcement Learning  
D) Clustering

**Q8:** What type of neural network is best for image recognition?  
A) RNN  
B) LSTM  
C) CNN  
D) GAN

**Q9:** What is the purpose of PCA in machine learning?  
A) Classifying images  
B) Increasing accuracy  
C) Data augmentation  
D) Reducing dimensionality

### ****Data Analysis & Visualization****

**Q10:** Which visualization type is best for comparing categories?  
A) Line Graph  
B) Bar Chart  
C) Pie Chart  
D) Scatter Plot

### ****Business & Management****

**Q11:** Which framework helps analyze a company’s strengths and weaknesses?  
A) PESTEL  
B) Porter’s Five Forces  
C) SWOT analysis  
D) 4Ps of Marketing

**Q12:** What is the primary purpose of a KPI?  
A) Track business performance  
B) Increase marketing leads  
C) Generate reports  
D) Improve team collaboration

### ****Databases & Web Development****

**Q13:** Which type of database organizes data in tables?  
A) NoSQL  
B) Key-Value Store  
C) Relational Database  
D) Graph Database

**Q14:** What does ACID stand for in databases?  
A) Atomicity, Consistency, Isolation, Durability  
B) Accuracy, Computation, Integration, Data  
C) Aggregation, Consistency, Input, Delete  
D) Association, Column, Index, Data

**Q15:** What does HTML stand for?  
A) HyperText Transfer Language  
B) High-Level Text Markup  
C) HyperText Markup Language  
D) Hyper Transfer Modeling Language

**Q16:** What is the role of CSS in web development?  
A) Control page layout and styles  
B) Handle database queries  
C) Write backend logic  
D) Build interactive UI elements

### ****Cloud Computing & DevOps****

**Q17:** What is an example of an Infrastructure-as-a-Service (IaaS)?  
A) Google Drive  
B) Dropbox  
C) AWS EC2  
D) Microsoft Word

**Q18:** What does CI/CD stand for in DevOps?  
A) Continuous Integration & Deployment  
B) Continuous Implementation & Development  
C) Code Integration & Debugging  
D) Cloud Infrastructure & Database

### ****Soft Skills & Teamwork****

**Q19:** How should you handle workplace conflict?  
A) Ignore it  
B) Address it openly and professionally  
C) Blame the other person  
D) Complain to HR immediately

**Q20:** What is an active listening technique?  
A) Looking away while someone talks  
B) Nodding and summarizing key points  
C) Interrupting when you have a response  
D) Checking your phone during a discussion

### ****Finance & Business Analysis****

**Q21:** What is an example of good leadership?  
A) Offering constructive feedback  
B) Taking full credit for team success  
C) Ignoring team concerns  
D) Micromanaging all tasks

**Q22:** What leadership style involves team decision-making?  
A) Autocratic  
B) Democratic  
C) Laissez-Faire  
D) Bureaucratic

**Q23:** If a company's revenue is $150,000 and costs are $120,000, what is the profit?  
A) $20,000  
B) $30,000  
C) $25,000  
D) $50,000

## ****📊 Scoring Table for Each Answer****

Each answer gets a **score between 0 and 4**, based on correctness and relevance.

| **Q#** | **Correct Answer** | **Option A** | **Option B** | **Option C** | **Option D** |
| --- | --- | --- | --- | --- | --- |
| **Q1** | B) 8 | 1 | **4** | 0 | 0 |
| **Q2** | C) Insertion Sort | 1 | 2 | **4** | 2 |
| **Q3** | C) 443 | **3** | 1 | 0 | 0 |
| **Q4** | B) Router | 2 | **4** | 1 | 0 |
| **Q5** | B) Phishing | 1 | **3** | 1 | 2 |
| **Q6** | B) Brute Force Attack | 1 | **4** | 1 | 2 |
| **Q7** | A) Supervised Learning | **3** | 1 | 0 | 2 |
| **Q8** | C) CNN | 1 | 2 | **4** | 2 |
| **Q9** | D) Reduces dimensionality | 1 | 2 | 2 | **3** |
| **Q10** | B) Bar Chart | 1 | **4** | 2 | 1 |
| **Q11** | C) SWOT analysis | 1 | 1 | **3** | 2 |
| **Q12** | A) Track business performance | **4** | 2 | 1 | 0 |
| **Q13** | C) Relational Database | 1 | 2 | **3** | 1 |
| **Q14** | B) Atomicity, Consistency, Isolation, Durability | 1 | **4** | 1 | 0 |
| **Q15** | C) HyperText Markup Language | 1 | 2 | **3** | 1 |
| **Q16** | A) Control page layout and styles | **4** | 2 | 1 | 1 |
| **Q17** | C) IaaS | 1 | 2 | **4** | 2 |
| **Q18** | A) Continuous Integration & Deployment | **3** | 1 | 1 | 0 |
| **Q19** | B) Address it openly and professionally | 1 | **4** | 0 | 1 |
| **Q20** | B) Nodding and summarizing key points | 1 | **3** | 0 | 1 |
| **Q21** | A) Offering constructive feedback | **4** | 1 | 1 | 0 |
| **Q22** | B) Democratic | 1 | **4** | 2 | 2 |
| **Q23** | B) $30,000 | 1 | **4** | 2 | 2 |

## ****📝 26-Question Skill-Based Quiz****

### ****📌 Database Fundamentals****

**Q1:** Which of the following is an example of a relational database?  
A) MongoDB  
B) Firebase  
C) MySQL  
D) Redis

**Q2:** What does SQL stand for?  
A) Structured Question Language  
B) Sequential Query Language  
C) Structured Query Language  
D) System Query Language

### ****📌 Computer Architecture****

**Q3:** What is the primary function of the ALU in a CPU?  
A) Manage memory allocation  
B) Perform arithmetic and logical operations  
C) Control input and output devices  
D) Handle network communication

**Q4:** Which memory is the fastest among the following?  
A) Hard Disk  
B) RAM  
C) Cache  
D) SSD

### ****📌 Distributed Computing Systems****

**Q5:** Which of the following best describes distributed computing?  
A) A single machine executing all tasks  
B) Multiple computers working together as a system  
C) A centralized server managing all computing tasks  
D) One processor handling multiple tasks

**Q6:** What is the primary advantage of distributed computing?  
A) Reduced redundancy  
B) Increased computational power and fault tolerance  
C) Increased complexity and cost  
D) Requires fewer hardware resources

### ****📌 Cyber Security****

**Q7:** What type of attack involves sending fraudulent emails to steal personal data?  
A) Phishing  
B) DDoS  
C) Man-in-the-Middle  
D) Ransomware

**Q8:** Which of the following best describes a firewall?  
A) A tool for encrypting files  
B) A barrier that protects a network from unauthorized access  
C) A device that increases internet speed  
D) A backup mechanism

### ****📌 Networking****

**Q9:** Which device is used to connect multiple networks?  
A) Switch  
B) Router  
C) Hub  
D) Repeater

**Q10:** What is the standard port number for HTTP?  
A) 21  
B) 80  
C) 443  
D) 8080

### ****📌 Software Development****

**Q11:** Which development methodology follows iterative development cycles?  
A) Waterfall  
B) Agile  
C) V-Model  
D) Spiral

**Q12:** Which of the following is NOT a software development life cycle (SDLC) phase?  
A) Planning  
B) Implementation  
C) Debugging  
D) Testing

### ****📌 Programming Skills****

**Q13:** What is the output of print(3 \* 2 \*\* 3) in Python?  
A) 24  
B) 18  
C) 48  
D) 36

**Q14:** Which of the following is an interpreted programming language?  
A) C++  
B) Java  
C) Python  
D) Assembly

### ****📌 Project Management****

**Q15:** What is the main goal of project management?  
A) Managing budgets and employees  
B) Achieving project objectives within constraints  
C) Improving software performance  
D) Ensuring client feedback is ignored

**Q16:** What is a Gantt chart used for?  
A) Tracking tasks and timelines  
B) Measuring CPU performance  
C) Writing SQL queries  
D) Managing network security

### ****📌 Computer Forensics Fundamentals****

**Q17:** What is the main purpose of digital forensics?  
A) Enhancing cybersecurity  
B) Identifying and investigating cybercrimes  
C) Developing software tools  
D) Increasing network speed

**Q18:** Which of the following is an important step in digital evidence collection?  
A) Modifying evidence to fit legal requirements  
B) Ensuring chain of custody  
C) Encrypting all hard drives  
D) Blocking all network traffic

### ****📌 Technical Communication****

**Q19:** Which of the following is an example of effective technical communication?  
A) Using simple, clear, and concise language  
B) Writing lengthy, complex reports  
C) Avoiding diagrams and visuals  
D) Using excessive technical jargon

**Q20:** Why is documentation important in software development?  
A) It is not necessary  
B) It helps developers understand the system and maintain code  
C) It slows down development  
D) It is only used for legal purposes

### ****📌 AI & ML****

**Q21:** What type of learning requires labeled data?  
A) Unsupervised Learning  
B) Reinforcement Learning  
C) Supervised Learning  
D) Semi-supervised Learning

**Q22:** What is overfitting in machine learning?  
A) A model that performs well on both training and test data  
B) A model that only performs well on training data but poorly on new data  
C) A model with too few parameters  
D) A model that generalizes well

### ****📌 Business Analysis****

**Q23:** Which of the following techniques is commonly used in business analysis?  
A) SWOT Analysis  
B) Hashing  
C) Load Balancing  
D) Algorithm Complexity

### ****📌 Data Science****

**Q24:** What does a data scientist primarily do?  
A) Manage databases  
B) Clean, analyze, and interpret large datasets  
C) Develop operating systems  
D) Design network architectures

### ****📌 Troubleshooting Skills****

**Q25:** What is the first step in troubleshooting a technical issue?  
A) Restart the system  
B) Identify the problem  
C) Replace hardware components  
D) Run all available updates

### ****📌 Graphics Designing****

**Q26:** Which software is commonly used for vector-based design?  
A) Photoshop  
B) Illustrator  
C) Lightroom  
D) Blender

**📊 Scoring Table for All 26 Questions**

| **Q#** | **Correct Answer** | **Option A** | **Option B** | **Option C** | **Option D** |
| --- | --- | --- | --- | --- | --- |
| **Q1** | C) MySQL | 1 | 2 | **4** | 1 |
| **Q2** | C) Structured Query Language | 1 | 2 | **4** | 1 |
| **Q3** | B) Perform arithmetic and logical operations | 1 | **4** | 2 | 1 |
| **Q4** | C) Cache | 1 | 2 | **4** | 2 |
| **Q5** | B) Multiple computers working together | 1 | **4** | 1 | 1 |
| **Q6** | B) Increased computational power and fault tolerance | 1 | **4** | 1 | 2 |
| **Q7** | A) Phishing | **4** | 2 | 2 | 2 |
| **Q8** | B) A barrier that protects a network | 1 | **4** | 1 | 1 |
| **Q9** | B) Router | 1 | **4** | 1 | 1 |
| **Q10** | B) 80 | 1 | **4** | 1 | 2 |
| **Q11** | B) Agile | 1 | **4** | 2 | 3 |
| **Q12** | C) Debugging | 1 | 2 | **4** | 2 |
| **Q13** | A) 24 | **4** | 2 | 1 | 1 |
| **Q14** | C) Python | 1 | 2 | **4** | 1 |
| **Q15** | B) Achieving project objectives | 1 | **4** | 1 | 1 |
| **Q16** | A) Tracking tasks and timelines | **4** | 2 | 1 | 1 |
| **Q17** | B) Investigating cybercrimes | 1 | **4** | 1 | 1 |
| **Q18** | B) Ensuring chain of custody | 1 | **4** | 1 | 2 |
| **Q19** | A) Simple, clear communication | **4** | 1 | 1 | 2 |
| **Q20** | B) Helps understand and maintain code | 1 | **4** | 1 | 2 |
| **Q21** | C) Supervised Learning | 1 | 2 | **4** | 1 |
| **Q22** | B) Poor performance on test data | 1 | **4** | 2 | 1 |
| **Q23** | A) SWOT Analysis | **4** | 1 | 1 | 1 |
| **Q24** | B) Clean, analyze, interpret data | 1 | **4** | 1 | 1 |
| **Q25** | B) Identify the problem | 1 | **4** | 2 | 1 |
| **Q26** | B) Illustrator | 1 | **4** | 2 | 1 |