**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. CA**

**Q3:** Which of the following memory levels has the lowest access time?  
A) L1 Cache  
B) RAM  
C) SSD  
D) Register

**Q4:** What is the primary function of a control unit in a CPU?  
A) Perform arithmetic operations  
B) Decode and execute instructions  
C) Store frequently accessed data  
D) Manage external devices

**🔐 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

🎯 **16. Troubleshooting Skills**

* **Q31:** What is the first step in troubleshooting a network issue?  
  A) Restart the computer  
  B) Identify and define the problem  
  C) Replace all network cables  
  D) Call technical support
* **Q32:** If a computer is running slow, what is the most effective first action?  
  A) Upgrade the CPU  
  B) Check for background processes and clear temporary files  
  C) Replace the RAM  
  D) Reinstall the operating system

🎨 **17. Graphics Designing**

* **Q33:** Which file format is best for a transparent background?  
  A) JPEG  
  B) PNG  
  C) BMP  
  D) TIFF
* **Q34:** What is the main purpose of vector graphics?  
  A) Storing pixel-based images  
  B) Creating scalable images without loss of quality  
  C) Storing animations  
  D) Improving color depth in images

**📊 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 |

| **Q#** | **Correct Answer** | **Option A** | **Option B** | **Option C** | **Option D** |
| --- | --- | --- | --- | --- | --- |
| Q31 | B) Identify and define the problem | 1 | 4 | 2 | 1 |
| Q32 | B) Check for background processes and clear temporary files | 1 | 4 | 2 | 2 |
| Q33 | B) PNG | 1 | 4 | 2 | 1 |
| Q34 | B) Creating scalable images without loss of quality | 1 | 4 | 2 | 1 |

**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.

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| **Skill Name in Your Database** | **Matching Name in Document** |
| --- | --- |
| Database Fundamentals | Database Management |
| Computer Architecture | (Not explicitly listed, but related to Networking & Hardware) |
| Distributed Computing Systems | Cloud Computing & DevOps |
| Cyber-Security | Cybersecurity |
| Networking | Networking |
| Development | Mobile & Web Development |
| Programming Skills | Programming Skills |
| Project Management | Leadership & Team Management |
| Computer Forensics Fundamentals | Cybersecurity (subset) |
| Technical Communication | Communication & Soft Skills |
| AI ML | Artificial Intelligence & Machine Learning |
| Software Engineering | Software Engineering (implicit in Programming & DevOps) |
| Business Analysis | Business Analysis |
| Communication Skills | Communication & Soft Skills |
| Data Science | Data Science & Analytics |
| Troubleshooting-skills | Troubleshooting Skills |
| Graphics Designing | Graphics Designing |