

# 100 Qus. Practice Set CSE 121

## # Data Science & Big Data

1. What is Data Science?

- a) Study of structured data only
- b) Study of unstructured data only
- c) An interdisciplinary field that uses scientific methods to extract knowledge from data
- d) Only focuses on big data
- Answer: c)

2. Which of the following is NOT an application of Data Science?

- a) Predictive maintenance
- b) Sentiment analysis
- c) File compression
- d) Fraud detection
- Answer: c)

3. What are the three V's of Big Data?

- a) Volume, Velocity, Variety
- b) Volume, Variety, Value
- c) Volume, Velocity, Veracity
- d) Volume, Velocity, Variability
- Answer: a)

4. Which stage is the first in the Data Science lifecycle?

- a) Data Collection
- b) Data Preparation
- c) Data Cleaning
- d) Data Modeling
- Answer: a)

5. Which of the following tools is used for Big Data processing?

- a) Tableau
- b) Apache Hadoop
- c) Excel
- d) Power BI
- Answer: b)

6. What is a common challenge of Big Data?

- a) Low cost of storage
- b) Easy data integration
- c) Data privacy
- d) Limited data sources
- Answer: c)

7. Which language is commonly used for statistical analysis in Data Science?

- a) Python
- b) Java
- c) R
- d) C++
- Answer: c)

8. What is Hadoop primarily used for?

- a) Data visualization
- b) Data processing
- c) Data collection
- d) Data cleaning
- Answer: b)

9. Which cloud platform is known for its Big Data services?

- a) AWS

- b) Heroku
- c) GitHub
- d) WordPress
- Answer: a)

10. What skill is essential for a Data Scientist?

- a) Graphic design
- b) Database management
- c) Machine learning
- d) Digital marketing
- Answer: c)

## **# Artificial Intelligence & Machine Learning**

11. What is Artificial Intelligence?

- a) The study of mechanical systems
- b) Simulation of human intelligence in machines
- c) Analysis of biological data
- d) Software development methodology
- Answer: b)

12. Which of the following is a subset of AI that deals with algorithms inspired by the structure and function of the brain?

- a) Expert systems
- b) Machine learning
- c) Neural networks
- d) Fuzzy systems
- Answer: c)

13. What is an Expert System?

- a) A type of machine learning algorithm

- b) A computer system that emulates the decision-making ability of a human expert
- c) A statistical analysis tool
- d) A type of neural network
- Answer: b)

14. What is Augmented Reality?

- a) A completely virtual environment
- b) A live direct or indirect view of a physical, real-world environment whose elements are augmented by computer-generated sensory input
- c) A type of machine learning
- d) A virtual assistant
- Answer: b)

15. Which field uses Natural Language Processing (NLP)?

- a) Image recognition
- b) Speech recognition
- c) Text analysis
- d) Weather forecasting
- Answer: c)

16. Which AI application is known for driving assistance and self-driving capabilities?

- a) Google Translator
- b) Siri
- c) Tesla Autopilot
- d) ALEXA
- Answer: c)

17. What technique is used in Google Translate for language translation?

- a) Rule-based translation
- b) Statistical machine translation
- c) Neural machine translation

- d) Dictionary lookup

- Answer: c)

18. What is a current trend in AI?

- a) Decreasing use of AI in healthcare

- b) Integration of AI with IoT devices

- c) Decrease in AI-related job opportunities

- d) Less use of AI in agriculture

- Answer: b)

19. Which tool is widely used for implementing AI algorithms?

- a) TensorFlow

- b) MySQL

- c) Photoshop

- d) WordPress

- Answer: a)

20. Which job role is specific to AI and ML?

- a) Data Analyst

- b) Database Administrator

- c) Machine Learning Engineer

- d) Network Administrator

- Answer: c)

## **# Cyber Security**

21. What is Cyber Security?

- a) The practice of protecting systems, networks, and programs from digital attacks

- b) The practice of enhancing system performance

- c) The practice of creating software applications

- d) The practice of installing hardware

- Answer: a)

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22. Which of the following is a type of malware?

- a) Firewall
- b) Antivirus
- c) Trojan
- d) VPN
- Answer: c)

23. What is Phishing?

- a) A technique used to secure a network
- b) A method of social engineering to steal sensitive information
- c) A way to install legitimate software
- d) A network monitoring tool
- Answer: b)

24. Which tool is used for network security assessment?

- a) nmap
- b) Photoshop
- c) Excel
- d) Notepad
- Answer: a)

25. What does the term "Zero-Day" refer to in cyber security?

- a) A software release date
- b) A vulnerability that is exploited before it is known to the vendor
- c) A type of encryption
- d) A secure coding practice
- Answer: b)

26. Which of the following industries is heavily impacted by cyber security threats?

- a) Healthcare
- b) Agriculture
- c) Construction
- d) Entertainment
- Answer: a)

27. What is a common method to secure web browsing?

- a) Using outdated browsers
- b) Ignoring HTTPS warnings
- c) Keeping browsers and plugins updated
- d) Disabling browser security settings
- Answer: c)

28. What is Social Engineering?

- a) The use of social media for marketing
- b) The practice of manipulating people into divulging confidential information
- c) The design of social systems
- d) The development of social networking sites
- Answer: b)

29. Which cyber security tool uses packet sniffing?

- a) Wireshark
- b) Maltego
- c) Nessus
- d) Burp Suite
- Answer: a)

30. What is a key skill needed in Cyber Security?

- a) Cooking

- b) Network defense
- c) Car repair
- d) Painting
- Answer: b)

## **#Secure Web-Browsing**

31. What indicates a secure connection in a browser?

- a) HTTP in the URL
- b) HTTPS in the URL
- c) The absence of a padlock icon
- d) A red address bar
- Answer: b)

32. What should you look for to recognize suspicious links?

- a) Short, familiar URLs
- b) URLs with common words
- c) Misspellings or unusual characters in the URL
- d) URLs from known sources
- Answer: c)

33. Why is it important to update browsers and plugins regularly?

- a) To ensure compatibility with old websites
- b) To improve browsing speed
- c) To protect against security vulnerabilities
- d) To reduce system memory usage
- Answer: c)

34. What should you do when encountering an untrusted source warning?

- a) Ignore it and proceed
- b) Update your antivirus



- c) Close the browser immediately
- d) Avoid the website and verify the source
- Answer: d)

35. Which practice can enhance social media security?

- a) Sharing passwords with friends
- b) Using the same password across all accounts
- c) Enabling two-factor authentication
- d) Keeping all posts public
- Answer: c)

### **#DevOps**

37. How does DevOps differ from traditional software development models?

- a) It uses longer development cycles
- b) It separates development and operations teams
- c) It emphasizes collaboration and integration between development and operations
- d) It does not include automated testing
- Answer: c)

38. Which tool is used for version control in DevOps?

- a) Git
- b) Docker
- c) Selenium
- d) Jenkins
- Answer: a)

39. What is Docker used for in DevOps?

- a) Continuous integration
- b) Containerization of applications
- c) Performance testing
- d) Version control

- Answer: b)

40. Which DevOps tool is used for configuration management?

- a) Puppet
- b) Git
- c) Selenium
- d) Jenkins
- Answer: a)

41. What is the primary purpose of continuous integration in DevOps?

- a) To delay deployment
- b) To ensure that code changes are automatically tested and merged
- c) To manage version control
- d) To write documentation
- Answer: b)

42. Which tool is used for continuous monitoring in DevOps?

- a) Nagios
- b) GitHub
- c) Docker
- d) Jenkins
- Answer: a)

43. What type of testing ensures that the software works as expected in a production-like environment?

- a) Unit testing
- b) Integration testing
- c) System testing
- d) Acceptance testing
- Answer: c)

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44. Which type of testing is typically performed by developers before handing over to testers?

- a) System testing
- b) Integration testing
- c) Unit testing
- d) Acceptance testing
- Answer: c)

45. What is the main goal of software testing?

- a) To increase software costs
- b) To find and fix bugs in the software
- c) To delay software release
- d) To create complex code
- Answer: b)

46. Which DevOps tool automates the deployment process?

- a) Ansible
- b) Git
- c) Selenium
- d) Puppet
- Answer: a)

47. What is a common career opportunity in DevOps?

- a) Graphic Designer
- b) DevOps Engineer
- c) Sales Manager
- d) Content Writer
- Answer: b)

## # Cloud Computing

48. What is Cloud Computing?

- a) A type of hardware device
- b) Delivery of computing services over the internet
- c) A method of local data storage
- d) A software development methodology
- Answer: b)

49. Which of the following is a type of cloud service model?

- a) SaaS (Software as a Service)
- b) BIOS
- c) VPN
- d) OS
- Answer: a)

50. Which cloud deployment model provides resources exclusively for one organization?

- a) Public cloud
- b) Private cloud
- c) Hybrid cloud
- d) Community cloud
- Answer: b)

51. What is a key benefit of using cloud computing?

- a) Increased hardware costs
- b) Scalability and flexibility
- c) Limited accessibility
- d) Increased data redundancy
- Answer: b)

52. Which tool is commonly used for cloud computing services?

- a) AWS
- b) Photoshop
- c) WordPress
- d) Excel
- Answer: a)

53. What is virtualization in cloud computing?

- a) Creating a physical version of a computer system
- b) Creating a virtual version of a computer system
- c) Using only hardware-based systems
- d) Developing mobile applications
- Answer: b)

54. Which cloud service is responsible for data analysis?

- a) IaaS
- b) PaaS
- c) SaaS
- d) DaaS (Data as a Service)
- Answer: d)

55. Which skill is important for a cloud computing job role?

- a) Cloud architecture design
- b) Cooking
- c) Mechanical engineering
- d) Car repair
- Answer: a)

56. What is an example of a Platform as a Service (PaaS)?

- a) Google App Engine
- b) Microsoft Office 365
- c) Dropbox

- d) AWS S3
- Answer: a)

57. Which type of cloud model combines both public and private clouds?

- a) Public cloud
- b) Private cloud
- c) Hybrid cloud
- d) Community cloud
- Answer: c)

### **# Full Stack Web Development and UI/UX**

58. What does full stack development involve?

- a) Only frontend development
- b) Only backend development
- c) Both frontend and backend development
- d) Only database management
- Answer: c)

59. Which language is primarily used for frontend development?

- a) HTML
- b) SQL
- c) PHP
- d) Python
- Answer: a)

60. What does CRUD stand for in database operations?

- a) Create, Read, Update, Delete
- b) Create, Replace, Update, Delete
- c) Compute, Read, Update, Delete
- d) Connect, Read, Update, Delete

- Answer: a)

61. Which framework is commonly used for backend development?

- a) Angular
- b) React
- c) Django
- d) Bootstrap
- Answer: c)

62. What is responsive web design?

- a) Designing websites that are slow to load
- b) Designing websites that work on all devices and screen sizes
- c) Designing websites with large images
- d) Designing websites with static content
- Answer: b)

63. Which tool is commonly used for version control in web development?

- a) VS Code
- b) Git
- c) MySQL
- d) WordPress
- Answer: b)

64. What is the purpose of using CSS in web development?

- a) To add functionality to a website
- b) To manage databases
- c) To style the visual presentation of a website
- d) To structure the content of a website
- Answer: c)

65. What is a Single Page Application (SPA)?

- a) A website that consists of multiple pages
- b) A website that loads all content in a single page and updates dynamically
- c) A website with no navigation
- d) A website that only works on mobile devices
- Answer: b)

66. Which database language is used to interact with relational databases?

- a) HTML
- b) CSS
- c) SQL
- d) JavaScript
- Answer: c)

67. Which job role is specific to UI/UX design?

- a) Database Administrator
- b) Frontend Developer
- c) User Experience Designer
- d) Network Engineer
- Answer: c)

68. What is the primary focus of User Interface (UI) Design?

- a) Database management
- b) Network configuration
- c) Visual elements and layout of an application
- d) Backend functionality
- Answer: c)

69. Which tool is commonly used for writing and editing code in web development?

- a) Microsoft Word
- b) Photoshop
- c) VS Code



- d) PowerPoint
- Answer: c)

70. What is mobile-first development?

- a) Designing websites primarily for mobile devices before scaling up for larger screens
- b) Designing websites that only work on desktops
- c) Designing websites with no images
- d) Designing websites that are slow to load
- Answer: a)

### # Additional Questions

71. Which of the following is a common challenge in Big Data?

- a) Small data sets
- b) High data redundancy
- c) Data privacy and security
- d) Limited data sources
- Answer: c)

72. What is the main advantage of using AI in healthcare?

- a) Increased patient privacy
- b) Reduced need for human doctors
- c) Enhanced diagnostic accuracy and personalized treatment
- d) Decreased need for medical equipment
- Answer: c)

73. Which AI application is known for its voice recognition capabilities?

- a) Google Translate
- b) Tesla Autopilot
- c) ALEXA
- d) IBM Watson

- Answer: c)

74. What does NLP stand for in the context of AI?

- a) Neural Language Processing
- b) Natural Language Processing
- c) Network Language Processing
- d) Numeric Language Processing

- Answer: b)

75. What is the primary use of an AI expert system?

- a) To perform complex calculations
- b) To simulate the decision-making ability of a human expert
- c) To design graphic content
- d) To manage databases

- Answer: b)

76. Which AI application is used for social media monitoring?

- a) Siri
- b) Chatbots
- c) Machine vision
- d) Predictive analytics

- Answer: d)

77. What is the role of a Machine Learning Engineer?

- a) To manage cloud services
- b) To develop algorithms that allow computers to learn from data
- c) To write documentation for software
- d) To repair hardware components

- Answer: b)

78. Which of the following is a benefit of using Big Data in agriculture?

- a) Increased manual labor
- b) Real-time monitoring and decision-making for crop management
- c) Less data for analysis
- d) Higher costs of farming
- Answer: b)

79. What does the term "Veracity" refer to in the context of Big Data?

- a) The speed of data processing
- b) The accuracy and reliability of data
- c) The volume of data
- d) The variety of data sources
- Answer: b)

80. Which skill is essential for a Big Data Analyst?

- a) Graphic design
- b) Data mining and analysis
- c) Network configuration
- d) Mechanical engineering
- Answer: b)

81. What is the primary focus of Cyber Security?

- a) Enhancing system performance
- b) Protecting information and systems from digital attacks
- c) Designing user interfaces
- d) Developing mobile applications
- Answer: b)

82. What is ransomware?

- a) A type of hardware
- b) A software that encrypts files and demands payment for the decryption key
- c) A network configuration tool

- d) A cloud service

- Answer: b)

83. Which type of malware replicates itself to spread to other computers?

- a) Virus

- b) Worm

- c) Trojan

- d) Spyware

- Answer: b)

84. Which of the following is a common cyber attack method?

- a) Phishing

- b) Farming

- c) Harvesting

- d) Tilling

- Answer: a)

85. What does a firewall do?

- a) Scans for malware

- b) Protects against unauthorized access to or from a private network

- c) Monitors system performance

- d) Encrypts data

- Answer: b)

86. What is a common use of AI-based cyber threat intelligence solutions?

- a) Enhancing graphic design

- b) Predicting and mitigating cyber threats

- c) Managing cloud resources

- d) Automating software testing

- Answer: b)

87. Which career opportunity is specific to Cyber Security?

- a) Data Analyst
- b) Ethical Hacker
- c) Content Writer
- d) Graphic Designer
- Answer: b)

88. What is the purpose of a secure web connection (HTTPS)?

- a) To increase website speed
- b) To encrypt data transmitted between the user's browser and the website
- c) To provide more advertisements
- d) To enhance website design
- Answer: b)

89. Which practice can improve email security?

- a) Clicking on all links in emails
- b) Using weak passwords
- c) Enabling spam filters
- d) Sharing email passwords with friends
- Answer: c)

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**# Basic Questions**

**# Data Science & Big Data**

**1. What is the primary goal of data science?**

- A. To create complex algorithms
- B. To extract actionable insights from data
- C. To design databases

- D. To visualize data

- Answer: B

2. Which of the following is NOT one of the 3Vs of Big Data?

- A. Volume

- B. Velocity

- C. Variety

- D. Validation

- Answer: D

3. Which tool is commonly used for data visualization in data science?

- A. Apache Hadoop

- B. Tableau

- C. Excel

- D. R language

- Answer: B

## # Artificial Intelligence & Machine Learning

1. What is the primary difference between AI and Machine Learning?

- A. AI is a subset of Machine Learning

- B. Machine Learning is a subset of AI

- C. AI focuses on data analysis, while Machine Learning focuses on data storage

- D. There is no difference

- Answer: B

2. Which of the following is an application of NLP (Natural Language Processing)?

- A. Image recognition

- B. Speech-to-text conversion

- C. Autonomous driving

- D. Fraud detection

- Answer: B

3. Which tool is widely used for developing deep learning models?

- A. TensorFlow
- B. Hadoop
- C. Tableau
- D. Excel
- Answer: A

## # Introduction to Cyber Security

1. What is a common type of malware?

- A. Firewall
- B. Antivirus
- C. Trojan
- D. Router
- Answer: C

2. Which tool is commonly used for network scanning and security auditing?

- A. Wireshark
- B. Nmap
- C. Maltego
- D. All of the above
- Answer: D

3. What is the primary purpose of a firewall in cybersecurity?

- A. To scan for viruses
- B. To block unauthorized access
- C. To encrypt data
- D. To monitor network traffic
- Answer: B

## **# Secure Web-Browsing**

**1. How can you recognize a secure connection in a web browser?**

- A. The URL starts with "http"
- B. The URL starts with "https"
- C. The URL starts with "ftp"
- D. The URL starts with "file"

- Answer: B

**2. What should you do if you receive a warning about an untrusted source?**

- A. Ignore it
- B. Proceed without caution
- C. Avoid the source and verify its authenticity
- D. Disable the warning

- Answer: C

## **# DevOps & Software Engineering**

**1. Which of the following is a version control tool used in DevOps?**

- A. Docker
- B. Git
- C. Kubernetes
- D. Selenium

- Answer: B

**2. What is the primary objective of software testing?**

- A. To develop new features
- B. To find and fix bugs
- C. To deploy applications
- D. To design user interfaces



- Answer: B

## # Introduction to Cloud Computing

1. Which of the following is a type of cloud service model?

- A. SaaS (Software as a Service)
- B. PaaS (Platform as a Service)
- C. IaaS (Infrastructure as a Service)
- D. All of the above

- Answer: D

2. What is virtualization in cloud computing?

- A. Creating physical servers
- B. Creating virtual versions of physical resources
- C. Deleting unnecessary files
- D. Encrypting data

- Answer: B

## # Introduction to Full Stack Web Development and UI/UX

1. Which language is primarily used for creating the structure of web pages?

- A. CSS
- B. HTML
- C. JavaScript
- D. PHP

- Answer: B

2. What does CRUD stand for in web development?

- A. Create, Read, Update, Delete
- B. Connect, Read, Update, Delete
- C. Create, Run, Update, Delete

- D. Connect, Run, Update, Delete

- Answer: A