Unit 5: Applications of Computer Science

54 MCQs. Correct option in bold. 1 mark each.

1. IoT stands for
A. Internet of Things B. Interface of Things
C. Internet of Technology D. Input of Things

2. The technology that provides automation in manufacturing, healthcare, home and traffic monitoring is
A. Blockchain B. Cloud computing
C. IoT D. Robotics

3. The number of foundational components of IoT is
A. three **B. five** C. seven D. four

4. The foundational components of IoT are sensors/devices, user interface, cloud, connectivity and
A. scanning B. printing
C. drawing **D. data processing**

5. In an IoT system, data from surroundings is collected by
A. sensors/devices B. cloud
C. user interface D. connectivity

6. The IoT component that lets users access and control IoT devices is the
A. sensor **B. user interface**
C. cloud D. connectivity

7. In IoT, data collected from devices is stored on the
A. keyboard B. printer **C. cloud** D. paper

8. IoT devices connect to the cloud through
A. keyboards
B. paper letters
C. radio only
D. cellular networks, satellite, Wi-Fi, Bluetooth or WAN

9. Wearable bands that monitor heart rate and calories are examples of
A. cloud storage B. robots
C. IoT wearables D. blockchain

10. Smart beds in hospitals monitor
A. the weather **B. vital signs of patients in real time**
C. the building D. only food

11. IoT in traffic monitoring helps to
A. monitor and analyse real-time traffic and improve traffic flow
B. block roads
C. remove cameras
D. increase traffic jams

12. Smart hotels using IoT can
A. never use sensors
B. remove electricity
C. stop guests entering
D. adjust room temperature and lighting automatically

13. A digital key sent to a guest's phone to open the room is an IoT feature in
A. traffic **B. hospitality**
C. healthcare D. farming

14. A smart grid differs from a traditional grid because it uses
A. different transformers
B. no electricity
C. different transmission lines
D. IoT devices that communicate with each other and the consumer

15. Traditional grids generate estimated bills whereas smart grids generate
A. accurate bills by measuring real-time usage
B. fixed bills
C. random bills
D. no bills

16. In smart farming, sensors monitor
A. only rainfall
B. only cost
C. light, humidity, temperature, moisture and soil acidity
D. only wind

17. A blockchain is
A. a type of robot
B. a printer
C. a CPU
D. a digital ledger of transactions that continuously grows

18. Blockchain is safe for sensitive transactions because
A. blocks can be edited easily
B. it is difficult to modify or delete a block once added
C. it is offline
D. it has no records

19. The technology used for management of supply chain is
A. Blockchain B. Cloud computing
C. IoT D. AI assistant

20. Blockchain helps to protect
A. only hardware B. only roads
C. copyright and intellectual property D. only buildings

21. In voting, blockchain makes voting
A. slower always
B. unsafe
C. more expensive
D. safer, more transparent and privacy-protecting

22. The best-known cryptocurrency is
A. Bitcoin B. Euro C. Rupee D. Dollar

23. Cryptocurrency is a
A. paper currency
B. digital (virtual) currency without intermediaries like banks
C. credit card
D. coin

24. Cryptocurrency works through a
A. single computer
B. post office
C. peer-to-peer global network without a central authority
D. central bank server only

25. In a peer-to-peer network
A. no sharing
B. all computers have the same capabilities and no central server is needed
C. one central server is needed
D. only one computer

26. The technology that enabled the existence of cryptocurrency is
A. Cloud computing B. Robotics
C. IoT **D. Blockchain**

27. Cloud computing is the delivery of
A. computing services over the Internet B. only books
C. only electricity D. paper services

28. Cloud computing is an alternative to
A. typing B. mobile phones
C. on-premises computing D. printing

29. A benefit of cloud computing is
A. higher hardware cost **B. cost reduction**
C. slower access D. no scalability

30. In cloud computing, hardware maintenance is the responsibility of
A. the cloud provider B. nobody
C. the user D. the government

31. Scalability in cloud computing means
A. fixed capacity only B. no growth
C. only buying hardware **D. scaling up or down as needs change**

32. The most common use of cloud computing is
A. education B. voting
C. file storage D. gaming

33. Speech recognition converts
A. images into text **B. human speech into text or commands**
C. voice into fingerprints D. text into speech

34. Voice recognition is a
A. biometric system B. word processor
C. network D. database

35. Voice recognition verifies a person's identity using
A. fingerprint
B. signature
C. face
D. unique voice features such as tone and pitch

36. Which is a dictation app for mobile phones?
A. Excel B. VLC **C. Gboard** D. Paint

37. Siri, Cortana and Alexa are
A. search engines only **B. AI assistants**
C. databases D. operating systems

38. The virtual assistant developed by Microsoft is
A. Cortana B. Siri C. Alexa D. Bixby

39. NLP is a branch of AI that
A. repairs networks
B. makes hardware
C. builds robots
D. gives computers the ability to understand text and spoken words like humans

40. Branch of AI that understands text and spoken words like humans is
A. Language Translation B. Digital Language Processing
C. Natural Language Processing D. Robotics

41. Spam is
A. unwanted junk email sent in bulk B. a spreadsheet
C. a file type D. important email

42. NLP email filtering works by
A. deleting all emails
B. detecting certain words or phrases that signal spam
C. printing emails
D. reading all emails by hand

43. The probable next words shown as we type in a search bar are called
A. document analysis B. internet suggestion
C. sentiment analysis **D. predictive text**

44. Sentiment analysis determines whether the tone of a text is
A. old or new B. big or small
C. positive, negative or neutral D. long or short

45. Robotics is a combination of AI and
A. engineering B. medicine
C. cooking D. history

46. Roomba is a popular
A. surgical robot B. farming robot
C. rescue robot **D. autonomous vacuum cleaner robot**

47. Robots in space exploration can work without
A. programming **B. food, water or oxygen**
C. instructions D. electricity

48. Bias in AI means
A. fast processing
B. low cost
C. unfairness or discrimination against someone
D. high accuracy

49. AI bias can result when the training data is
A. incorrect, incomplete or biased B. complete and fair
C. very large D. very clean

50. In 2015, Amazon's AI hiring algorithm favoured
A. women over men B. young over old
C. men over women D. no one

51. Violation of protection of personal data is called a
A. cache **B. privacy breach**
C. deepfake D. chatbot

52. AI systems used to spread propaganda are an example of
A. privacy protection B. voice recognition
C. cloud storage **D. social manipulation and misinformation**

53. Realistic but fake AI-generated videos are called
A. privacy breach videos **B. deepfake videos**
C. misinformation videos D. social manipulation videos

54. AI designers must ensure
A. fairness, transparency and impartiality B. secrecy of harm
C. profit only D. bias