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Question Bank (I scheme)

Name of Subject: Emerging Trends in Computer Engineering and Information Technology
Subject Code: 22618 **Courses: CW6I Semester: VI**

MULTIPLE CHOICE QUESTIONS AND ANSWERS

1- Artificial Intelligence

1. Which of these schools was not among the early leaders in AI research?
- A. Dartmouth University
 - B. Harvard University
 - C. Massachusetts Institute of Technology
 - D. Stanford University
 - E. None of the above

Ans: B

2. DARPA, the agency that has funded a great deal of American AI research, is part of the Department of:
- A. Defense
 - B. Energy
 - C. Education
 - D. Justice
 - E. None of the above

Ans: A

3. The conference that launched the AI revolution in 1956 was held at:
- A. Dartmouth
 - B. Harvard
 - C. New York
 - D. Stanford
 - E. None of the above

Ans: A

4. What is the term used for describing the judgmental or commonsense part of problem solving?
- A. Heuristic
 - B. Critical
 - C. Value based
 - D. Analytical
 - E. None of the above

Ans: A

5. What of the following is considered to be a pivotal event in the history of AI. A. 1949, Donald O, The organization of Behavior.
B. 1950, Computing Machinery and Intelligence.
C. 1956, Dartmouth University Conference Organized by John McCarthy.
D. 1961, Computer and Computer Sense.
E. None of the above

Ans: C

6. A certain Professor at the Stanford University coined the word 'artificial intelligence' in 1956 at a conference held at Dartmouth College. Can you name the Professor?
A. David Levy
B. John McCarthy
C. Joseph Weizenbaum
D. Hans Berliner
E. None of the above

Ans: B

7. The field that investigates the mechanics of human intelligence is:
A. History
B. cognitive science
C. psychology
D. sociology
E. None of the above

Ans: B

8. A.M. turing developed a technique for determining whether a computer could or could not demonstrate the artificial Intelligence,, Presently, this technique is called
A. Turing Test
B. Algorithm
C. Boolean Algebra
D. Logarithm
E. None of the above

Ans: A

9. The first AI programming language was called:
A. BASIC
B. FORTRAN
C. IPL
D. LISP
E. None of the above

Ans: D

10. What is Artificial intelligence?
A. Putting your intelligence into Computer
B. Programming with your own intelligence

- C. Making a Machine intelligent
- D. Putting more memory into Computer

Ans: C

11. Who is a father of AI?

- A. Alain Colmerauer
- B. John McCarthy
- C. Nicklaus Wirth
- D. Seymour Papert

Ans: B

12. Artificial Intelligence has its expansion in the following application.

- A. Planning and Scheduling
- B. Game Playing
- C. Robotics
- D. All of the above

Ans: D

13. The characteristics of the computer system capable of thinking, reasoning and learning is known is

- A. machine intelligence
- B. human intelligence
- C. artificial intelligence
- D. virtual intelligence

Ans: C

14. The first AI programming language was called:

- A. BASIC
- B. FORTRAN
- C. IPL
- D. LISP

Ans: C

15. The first widely used commercial form of Artificial Intelligence (AI) is being used in many popular products like microwave ovens, automobiles and plug in circuit boards for desktop PCs. What is name of AI?

- A. Boolean logic
- B. Human logic
- C. Fuzzy logic
- D. Functional logic

Ans: C

16. What is the term used for describing the judgmental or commonsense part of problem solving? A. Heuristic

- B. Critical

- C. Value based
- D. Analytical

Ans: A

17. _____ is a branch of computer science which deals with helping machines find solutions to complex problems in a more human-like fashion.

- A. Artificial Intelligence
- B. Internet of Things
- C. Embedded System
- D. Cyber Security

Ans: A

18. In _____ the goal is for the software to use what it has learned in one area to solve problems in other areas.

- A. Machine Learning
- B. Deep Learning
- C. Neural Networks
- D. None of these

Ans: B

19. Computer programs that mimic the way the human brain processes information are called as

- A. Machine Learning
- B. Deep Learning
- C. Neural Networks
- D. None of these

Ans: C

20. A _____ is a rule of thumb, strategy, trick, simplification, or any other kind of device which drastically limits search for solutions in large problem spaces.

- A. Heuristic
- B. Critical
- C. Value based
- D. Analytical

Ans: A

21. _____ do not guarantee optimal/any solutions

- A. Heuristic
- B. Critical
- C. Value based
- D. Analytical

Ans: A

22. Cognitive science is related to _____

- A. Acting like human
- B. ELIZA

- C. Think like human
- D. None of above

Ans: C

23. _____ Model should reflect how results were obtained.

- A. Design model
- B. Logic model
- C. Computational model
- D. None of above

Ans: C

24. Communication between man and machine is related with _____

- A. LISP
- B. ELIZA
- C. All of above
- D. None of above

Ans: B

25. ELIZA created by _____

- A. John McCarthy
- B. Steve Russell
- C. Alain Colmerauer
- D. Joseph Weizenbaum

Ans: D

26. The concept derived from _____ level are propositional logic, tautology, predicate calculus, model, temporal logic.

- A. Cognition level
- B. Logic level
- C. Functional level
- D. All of above

Ans: B

27. PROLOG is an AI programming language which solves problems with a form of symbolic logic known as _____.

- A. Propositional logic
- B. Tautology
- C. Predicate calculus
- D. Temporal logic

Ans: C

28. The _____ level contains constituents at the third level which are knowledge based system, heuristic search, automatic theorem proving, multi-agent system.

- A. Cognition level
- B. Gross level

- C. Functional level
- D. All of above

Ans: B

29. PROLOG, LISP, NLP are the language of ____

- A. Artificial Intelligence
- B. Machine Learning
- C. Internet of Things
- D. Deep Learning

Ans: A

30. _____ is used for AI because it supports the implementation of software that computes with symbols very well.

- A. LISP
- B. ELIZA
- C. PROLOG
- D. NLP

Ans: A

31. Symbols, symbolic expressions and computing with those is at the core of _____

- A. LISP
- B. ELIZA
- C. PROLOG
- D. NLP

Ans: A

32. _____ that deals with the interaction between computers and humans using the natural language

- A. LISP
- B. ELIZA
- C. PROLOG
- D. NLP

Ans: D

33. The core components are constituents of AI are derived from

- A. Concept of logic
- B. Cognition
- C. Computation
- D. All of above

Ans: D

34. Aristotle's theory of syllogism and Descartes and Kant's critic of pure reasoning made knowledge on _____.

- A. Logic
- B. Computation logic
- C. Cognition logic
- D. All of above

Ans: A

35. Charles Babbage and Boole who demonstrate the power of _____

- A. Logic
- B. Computation logic
- C. Cognition logic
- D. All of above

Ans: B

36. In 1960s, _____ pushed the logical formalism to integrate reasoning with knowledge.

- A. Marvin Minsky
- B. Alain Colmerauer
- C. John McCarthy
- D. None of above

Ans: A

37. Sensing organs as input, mechanical movement organs as output and central nervous system (CNS) in brain as control and computing devices is known as _____ of human being

- A. Information Control Paradigm
- B. Information Processing Paradigm
- C. Information Processing Control
- D. None of above

Ans: B

38. _____ model were developed and incorporated in machines which mimicked the functionalities of human origin.

- A. Functional model
- B. Neural model
- C. Computational model
- D. None of above

Ans: C

39. Chomsky's linguistic computational theory generated a model for syntactic analysis through _____

- A. Regular Grammar
- B. Regular Expression
- C. Regular Word
- D. None of these

Ans: A

40. Human to Machine is _____ and Machine to Machine is _____.

- A. Process, Process
- B. Process, Program
- C. Program, Hardware
- D. Program, Program

Ans: C

41. Weak AI is also known as _____

- A. Narrow AI
- B. General AI
- C. Neural AI
- D. None of above

Ans: A

42. _____ AI is able to perform dedicated task.

- A. Narrow AI
- B. General AI
- C. Neural AI
- D. None of above

Ans: A

43. Narrow AI is performs multiple task at a time.

- A. True
- B. False

Ans: B

44. Weak AI is _____

- A. The embodiment of human intellectual capabilities within a computer.
- B. A set of computer programs that produce output that would be considered to reflect intelligence if it were generated by humans.
- C. The study of mental faculties through the use of mental models implemented on a computer
- D. All of the above
- E. None of the above

Ans: C

45. Strong AI is _____

- A. The embodiment of human intellectual capabilities within a computer.
- B. A set of computer programs that produce output that would be considered to reflect intelligence if it were generated by humans.
- C. The study of mental faculties through the use of mental models implemented on a computer
- D. All of the above
- E. None of the above

Ans: A

46. Artificial intelligence is _____

- A. The embodiment of human intellectual capabilities within a computer.

- B. A set of computer programs that produce output that would be considered to reflect intelligence if it were generated by humans.
- C. The study of mental faculties through the use of mental models implemented on a computer
- D. All of the above
- E. None of the above

Ans: D

47. Apple siri is a good example of _____ AI.

- A. Narrow AI
- B. General AI
- C. Neural AI
- D. None of above

Ans: A

48. IBM Watson supercomputer comes under ____ AI.

- A. Narrow AI
- B. General AI
- C. Neural AI
- D. None of above

Ans: A

49. ____ AI is a type of intelligence which could perform any intellectual task with efficiency like human. A. Narrow AI

- B. General AI
- C. Super AI
- D. None of above

Ans: B

50. The idea behind _____AI to make such a system which could be smarter and think like a human by its own.

- A. Narrow AI
- B. General AI
- C. Super AI
- D. None of above

Ans: B

51. The worldwide researchers are now focusing on developing machines with ____ AI.

- A. Narrow AI
- B. General AI
- C. Super AI
- D. None of above

Ans: B

52. Playing chess, purchasing suggestions on e-commerce site, self-driving cars, speech recognition, and image recognition are the example of _____.

Ans: A

- A. Narrow AI
- B. General AI
- C. Super AI
- D. None of above

53. Machine can perform any task better than human with cognitive properties is known as ____ AI.

- A. Narrow AI
- B. General AI
- C. Super AI
- D. None of above

Ans: C

54. Ability to think, puzzle, make judgments, plan, learn, communication by its own is known as ____ AI.

- A. Narrow AI
- B. General AI
- C. Super AI
- D. None of above

Ans: C

55. ____ AI is hypothetical concept of AI.

- A. Narrow AI
- B. General AI
- C. Super AI
- D. None of above

Ans: C

56. Which AI system not store memories or past experiences for future actions.

- A. Reactive machine
- B. Limited memory
- C. Theory of mind
- D. None of above

Ans: A

57. Which machines only focus on current scenarios and react on it as per as possible best action.

- A. Reactive machine
- B. Limited memory
- C. Theory of mind
- D. None of above

Ans: A

58. IBM's deep blue system is example of ____.

- A. Reactive machine
- B. Limited memory

Ans: A

- C. Theory of mind
- D. None of above

Ans: A

59. Google Alpha Go is example of ____.

- A. Reactive machine
- B. Limited memory
- C. Theory of mind
- D. None of above

60. Which can stores past experiences or some data for short period time.

- A. Reactive machine
- B. Limited memory
- C. Theory of mind
- D. None of above

Ans: B

61. Self-driving car is example of ____.

- A. Reactive machine
- B. Limited memory
- C. Theory of mind
- D. None of above

Ans: B [Car stores recent speed of nearby cars, distance of others car, speed limit, other information to navigate the road]

62. Which AI should understand the human emotions, people, and beliefs and be able to interact socially like humans. A. Reactive machine

- B. Limited memory
- C. Theory of mind
- D. None of above

Ans: C

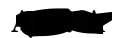
63. Which machines will be smarter than human mind?

- A. Reactive machine
- B. Limited memory
- C. Theory of mind
- D. Self-Awareness

Ans: D

64. _____machines will have their own consciousness and sentiments

- A. Reactive machine
- B. Theory of mind
- C. Self-Awareness
- D. Both B & C



Ans: C

65. Which is not the commonly used programming language for AI?

- A. PROLOG
- B. LISP
- C. Perl
- D. Java script

Ans: C

66. What is Machine learning?

- A. The autonomous acquisition of knowledge through the use of computer programs
- B. The autonomous acquisition of knowledge through the use of manual programs
- C. The selective acquisition of knowledge through the use of computer programs
- D. The selective acquisition of knowledge through the use of manual programs

Ans: A

67 _____ is a branch of science that deals with programming the systems in such a way that they automatically learn and improve with experience

- A. Machine Learning
- B. Deep Learning
- C. Neural Networks
- D. None of these

Ans: A

68. Classifying email as a spam, labeling webpages based on their content, voice recognition are the example of _____. A. Supervised learning

- B. Unsupervised learning
- C. Machine learning
- D. Deep learning

Ans: A

69. K-means, self-organizing maps, hierarchical clustering are the example of _____.

- A. Supervised learning
- B. Unsupervised learning
- C. Machine learning
- D. Deep learning

Ans: B

70. Deep learning is a subfield of machine learning where concerned algorithms are inspired by the structured and function of the brain called _____.

- A. Machine learning
- B. Artificial neural networks
- C. Deep learning
- D. Robotics

Ans: B

71. Machine learning invent by _____.

- A. John McCarthy
- B. Nicklaus Wirth
- C. Joseph Weizenbaum
- D. Arthur Samuel

Ans: D

Chapter-2 Internet of Things

1. Embedded systems are _____

- A. General purpose
- B. Special purpose

Ans: B

2. Embedded system is _____

- A. An electronic system
- B. A pure mechanical system
- C. An electro-mechanical system
- D. (A) or (C)

Ans: D

3. Which of the following is not true about embedded systems?

- A. Built around specialized hardware
- B. Always contain an operating system
- C. Execution behavior may be deterministic
- D. All of these
- E. None of these

Ans: E

4. Which of the following is not an example of a “small-scale embedded system”?

- A. Electronic Barbie doll
- B. Simple calculator
- C. Cell phone
- D. Electronic toy car

Ans: C

5. The first recognized modern embedded system is

- A. Apple computer
- B. Apollo Guidance Computer (AGC)
- C. Calculator
- D. Radio navigation system

Ans: B

6. The first mass produced embedded system is

- A. Minuteman-I
- B. Minuteman-II
- C. Autonetics D-17
- D. Apollo Guidance Computer (AGC)

Ans: C

7. Which of the following is an (are) an intended purpose(s) of embedded systems?

- A. Data collection
- B. Data processing
- C. Data communication
- D. All of these
- E. None of these

Ans: D

8. Which of the following is (are) example(s) of embedded system for data communication?

USB Mass Storage device

- A. Network router

- B. Digital camera
- C. Music player
- D. All of these
- E. None of these

Ans: B

9. What are the essential tight constraint/s related to the design metrics of an embedded system?

- A. Ability to fit on a single chip
- B. Low power consumption
- C. Fast data processing for real-time operations
- D. All of the above

Ans: D

10. A digital multi meter is an example of an embedded system for

- A. Data communication
- B. Monitoring
- C. Control
- D. All of these
- E. None of these

Ans: B

11. Which of the following is an (are) example(s) of an embedded system for signal processing?

- A. Apple iPod (media player device)
- B. SanDisk USB mass storage device
- C. Both (A) and (B)
- D. None of these

Ans: D

12. The instruction set of RISC processor is

- A. Simple and lesser in number
- B. Complex and lesser in number
- C. Simple and larger in number
- D. Complex and larger in number

Ans: A

13. Which of the following is true about CISC processors?

- A. The instruction set is non-orthogonal
- B. The number of general purpose registers is limited
- C. Instructions are like macros in c language
- D. Variable length instructions
- E. All of these
- F. None of these

Ans: E

14. Main processor chip in computers is_____

- A. ASIC
- B. ASSP

- C. CPU
- D. CPLD

Ans: C

15. Processors used in many microcontroller products need to be_____

- A. high power
- B. low power
- C. low interrupt response
- D. low code density

Ans: B

16. In microcontrollers, UART is acronym of_____

- A. Universal Applied Receiver/Transmitter
- B. Universal Asynchronous Rectified Transmitter
- C. Universal Asynchronous Receiver/Transmitter
- D. United Asynchronous Receiver/Transmitter

Ans: C

17. Which architecture is followed by general purpose microprocessors?

- A. Harvard architecture
- B. Von Neumann architecture
- C. None of the mentioned
- D. All of the mentioned

Ans: B

18. Which architecture involves both the volatile and the non-volatile memory?

- A. Harvard architecture
- B. Von Neumann architecture
- C. None of the mentioned
- D. All of the mentioned

Ans: A

19. Which architecture provides separate buses for program and data memory?

- A. Harvard architecture
- B. Von Neumann architecture
- C. None of the mentioned
- D. All of the mentioned

Ans: A

20. Harvard architecture allows:

- A. Separate program and data memory
- B. Pipe-ling
- C. Complex architecture
- D. All of the mentioned

Ans: D

21. Which of the following processor architecture supports easier instruction pipelining?

- A. Harvard
- B. Von Neumann
- C. Both of them
- D. None of these

Ans: A

22. Which of the following is an example for wireless communication interface?

- A. RS-232C
- B. Wi-Fi
- C. Bluetooth
- D. IEEE1394
- E. Both (B) and (C)

Ans: E

23. ARM stands for _____

- A. Advanced RISC Machine
- B. Advanced RISC Methodology
- C. Advanced Reduced Machine
- D. Advanced Reduced Methodology

Ans: A

24. What is the processor used by ARM7?

- A. 8-bit CISC
- B. 8-bit RISC
- C. 32-bit CISC
- D. 32-bit RISC

Ans: D

25. The main importance of ARM micro-processors is providing operation with _____

- A. Low cost and low power consumption
- B. Higher degree of multi-tasking
- C. Lower error or glitches
- D. Efficient memory management

Ans: A

26. ARM processors were basically designed for _____

- A. Main frame systems
- B. Distributed systems
- C. Mobile systems
- D. Super computers

Ans: C

27. ASIC chip is

- A. Simple in design.

- B. Manufacturing time is less.
- C. It is faster.
- D. Both A&C.

Ans: C

28. ASIC stands for

- A. Application-System Integrated Circuits
- B. Application-Specific Integrated Circuits
- C. Application-System Internal Circuits
- D. Application-Specific Internal Circuits

Ans: B

29. In microcontrollers, I2C stands for

- A. Inter-Integrated Clock
- B. Initial-Integrated Clock
- C. Intel-Integrated Circuit
- D. Inter-Integrated Circuit

Ans: D

30. _____ is the smallest microcontrollers which can be programmed to perform a large range of tasks.

- A. PIC microcontrollers
- B. ARM microcontrollers
- C. AVR microcontrollers
- D. ASIC microcontrollers

Ans: - A

31. _____ was developed in the year 1996 by ATMEL Corporation

- A. PIC
- B. AVR
- C. ARM
- D. ASIC

Ans: - B

32. AVR stands for_____. A.
Advanced Virtual RISC.

- B. Alf-Egil Bogen and Vegard Wollan RISC
- C. Both A & B
- D. None of the above

Ans: - C

33. AVR microcontroller executes most of the instruction in _____. A.
Single execution cycle.

- B. Double execution cycle.
- C. Both A& B
- D. None of the above.

Ans: - A

34. Term "the Internet of things" was coined by

- A. Edward L. Schneider B.
Kevin Ashton
- C. John H.
- D. Charles Anthony

Ans: B

35. The huge numbers of devices connected to the Internet of Things have to communicate automatically, not via humans, what is this called?

- A. Bot to Bot(B2B)
- B. Machine to Machine(M2M)
- C. InterCloud
- D. Skynet

Ans: B

36. What does "Things" in IoT refers to?

- A. General device
- B. Information
- C. IoT devices
- D. Object

Ans: C

37. Interconnection of Internet and computing devices embedded in everyday objects, enabling them to send and receive data is called_____

- A. Internet of Things
- B. Network Interconnection
- C. Object Determination
- D. None of these

Ans: A

38. _____ is a computing concept that describes the idea of everyday physical objects being connected to the internet.

- A. IOT (Internet of Things)
- B. MQTT
- C. COAP
- D. SPI

Ans: -A

39 _____ devices may support a number of interoperable communication protocols and communicate with other device and also with infrastructure.

- A. Artificial Intelligence
- B. Machine Learning
- C. Internet of Things

D. None of above

Ans: C

40. Which one is not element of IOT?

A. Process

B. People

C. Security

D. Things

Ans:C

41. IIOT stands for

A. Information Internet of Things

B. Industrial Internet of Things

C. Inovative Internet of Things

D. None of above

Ans:B

42. Name of the IOT device which is first recognized?

A. Smart Watch

B. ATM

C. Radio

D. Video Game

Ans: B

43. _____ is used by IOT

A. Radio information technology

B. Satellite

C. Cable

D. Broadband

Ans:A

44. _____ consists of communication protocols for electronic devices, typically a mobile device and a standard device.

A. RFID

B. MQTT

C. NFC

D. None of above

Ans:C

45. _____ refers to establish a proper connection between all the things of IOT.

A. Connectivity

B. Analyzing

C. Sensing

D. Active Engagement

Ans: - A

46. IOT devices which have unique identities and can perform _____.
- A. Remote sensing
 - B. Actuating
 - C. Monitoring capabilities
 - D. All of the above

Ans: - D

47. The sensed data communicated _____. A.
- Cloud-based servers/storage.
 - B. I/O interfaces.
 - C. Internet connectivity.
 - D. None of the above

Ans: - A

48. IOT devices are various types, for instance _____. A.
- Wearable sensors.
 - B. Smart watches.
 - C. LED lights.
 - D. All of the above

Ans: - D

49. _____ is a collection of wired Ethernet standard for the link layer.
- A. IEEE 802.3
 - B. IEEE 802.11
 - C. IEEE 802.16
 - D. IEEE 802.15.4

Ans: - A

50. _____ is a collection of WLAN communication standards.
- A. IEEE 802.3
 - B. IEEE 802.11
 - C. IEEE 802.16
 - D. IEEE 802.15.4

Ans: B

51. _____ is a collection of wireless broadband standards (WiMax).
- A. IEEE 802.3
 - B. IEEE 802.11
 - C. IEEE 802.16
 - D. IEEE 802.15.4

Ans: C

52 ___ is a collection of standards for LR-WPANs.

- A. IEEE 802.3
- B. IEEE 802.11
- C. IEEE 802.16
- D. IEEE 802.15.4 **Ans:D**

53. LR-WPANs standards from basis of specifications for high level communication protocol such as ___. A. Zigbee

- B. Allsean
- C. Tyrell
- D. Microsoft's Azure

Ans:A

54. _____ includes GSM and CDMA.

- A. 2G
- B. 3G
- C. 4G
- D. None of above

Ans:A

55. _____include UMTS and CDMA2000.

- A. 2G
- B. 3G
- C. 4G
- D. None of above

Ans:B

56 _____include LTE.

- A. 2G
- B. 3G
- C. 4G
- D. None of above

Ans:C

57. _____ layer protocols determine how the data is physically sent over the network's physical layer or medium.

- A. Application layer
- B. Transport layer
- C. Network layer
- D. Link layer **Ans: - D**

58 _____ layer is responsible for sending of IP datagrams from the source network to the destination network.

- A. Application layer
- B. Transport layer
- C. Network layer
- D. Link layer

Ans: C

59. ____ layer perform the host addressing and packet routing.

- A. Application layer
- B. Transport layer
- C. Network layer
- D. Link layer

Ans:C

60. _____ protocols provide end to end message transfer capability independent of the underlying network. A. Network layer

- B. Transport layer
- C. Application layer
- D. Link layer

Ans: - B

61. The ____ protocols define how the applications interface with the lower layer protocol to send the data over the network.

- A. Application layer
- B. Transport layer
- C. Network layer
- D. Link layer

Ans:A

62. 6LOWPAN stands for

- A. 6 LOW Personal Area Network
- B. IPv6 LOW Personal Area Network
- C. IPv6 over Low power wireless personal area network
- D. None of above

Ans:C

63. 802.3 is the standard for 10BASE5 Ethernet that uses _____ cable as shared medium.

- A. Twisted pair cable
- B. Coaxial cable
- C. Fiber optic cable
- D. None of the above

Ans: - B

64. IEEE 802.11 standards provide data rates _____ A.

- 10 Gbit/s.
- B. 1 Gbit/s
- C. 1 Mb/s to up to 6.75 Gb/s
- D. 250 Kb/s

Ans: - C

65. _____ of the following is a protocol related to IOT

- A. Zigbee
- B. 6LoWPAN
- C. CoAP
- D. All of the above

Ans: C

66. _____ is useful for time-sensitive application that have very small data units to exchange and do not want the overhead of connection setup.

- A. TCP
- B. UDP
- C. Transport layer
- D. None of the above.

Ans: - B

67. _____ protocol uses Universal Resource Identifiers (URIs) to identify HTTP resources.

- A. HTTP
- B. COAP
- C. WebSocket
- D. MQTT

Ans: A

68. The 10/100Mbit Ethernet support enables the board to connect to _____

- A. LAN
- B. MAN
- C. WAN
- D. WLAN

Ans: A

69. Which one out of these is not a data link layer technology?

- A. Bluetooth
- B. UART
- C. Wi-Fi
- D. HTTP

Ans: D

70. What is size of the IPv6 Address?

- A. 32 bits
- B. 64 bits
- C. 128 bits
- D. 256 bits

Ans: C

71. MQTT stands for _____

- A. MQ Telemetry Things
- B. MQ Transport Telemetry
- C. MQ Transport Things

D. MQ Telemetry Transport

Ans: D

72. MQTT is better than HTTP for sending and receiving data.

A. True

B. False

Ans: A

73. MQTT is _____ protocol.

A. Machine to Machine

B. Internet of Things

C. Machine to Machine and Internet of Things

D. Machine Things

Ans: C

74. Which protocol is lightweight?

A. MQTT

B. HTTP

C. CoAP

D. SPI

Ans: A

75 MQTT is:

A. Based on client-server architecture

B. Based on publish-subscribe architecture

C. Based on both of the above

D. Based on none of the above

Ans: B

76. XMPP is used for streaming which type of elements?

A. XPL

B. XML

C. XHL

D. MPL

Ans: B

77. XMPP creates _____ identity.

A. Device

B. Email

C. Message

D. Data

Ans: A

78. XMPP uses _____ architecture.

- A. Decentralized client-server
- B. Centralized client-server
- C. Message
- D. Public/subscriber

Ans: A

79. What does HTTP do?

- A. Enables network resources and reduces perception of latency
- B. Reduces perception of latency and allows multiple concurrency exchange
- C. Allows multiple concurrent exchange and enables network resources
- D. Enables network resources and reduces perception of latency and Allows multiple concurrent exchange.

Ans: D

80. HTTP expands?

- A. Hyper Text Transfer Protocol
- B. Hyper Terminal Transfer Protocol
- C. Hyper Text Terminal Protocol
- D. Hyper Terminal Text Protocol

Ans: A

81. CoAP is specialized in _____

- A. Internet applications
- B. Device applications
- C. Wireless applications
- D. Wired applications

Ans: A

82. Which protocol is used to link all the devices in the IoT?

- A. TCP/IP
- B. Network
- C. UDP
- D. HTTP

Ans: A

83. Data in network layer is transferred in the form of _____

- A. Layers
- B. Packets
- C. Bytes
- D. Bits **Ans:B**

84. Services provided by application layer?

- A. Web chat
- B. Error control

- C. Connection services
- D. Congestion control

Ans: A

85. TCP and UDP are called?

- A. Application protocols
- B. Session protocols
- C. Transport protocols
- D. Network protocols

Ans: C

86. Security based connection is provided by which layer?

- A. Application layer
- B. Transport layer
- C. Session layer
- D. Network layer

Ans: D

87. Using which layer in transport layer data integrity can be assured?

- A. Checksum
- B. Repetition codes
- C. Cyclic redundancy checks
- D. Error correction codes

Ans: A

88. Transport layer receives data in the form of?

- A. Packets
- B. Byte streams
- C. Bits stream
- D. both packet and Byte stream

Ans: B

89. The network layer is considered as the _____?

- A. Backbone
- B. packets
- C. Bytes
- D. bits

Ans: A

90. The network layer consists of which hardware devices?

- A. Router
- B. Bridges
- C. Switches

D. All of the above

Ans: D

91. Network layer protocol exists in_____?

- A. Host
- B. Switches
- C. Packets
- D. Bridges

Ans: A

92. Which protocol has a quality of service?

- A. XMPP
- B. HTTP
- C. CoAP
- D. MQTT

Ans: A

93. _____ is a data-centric middleware standard for device-to-device and machine-to-machine communication.

- A. Data Distribution Serviced (DDS)
- B. Advance Message Queuing Protocol (AMQP)
- C. Extensible Messaging and Presence Protocol (XMPP)
- D. Message Queue Telemetry Transport (MQTT)

Ans:A

94. _____ is a bi-directional, fully duplex communication model that uses a persistent connection between client and server. A. Request-Response

- B. Publish-Subscriber
- C. Push-Pull
- D. Exclusive Pair

Ans:D

95. ____ is a stateful communication model and server is aware of all open connection.

- A. Request-Response
- B. Publish-Subscriber
- C. Push-Pull
- D. Exclusive Pair

Ans:D

96. Which is not an IoT communication model.

- A. Request-Response
- B. Publish-Subscribe
- C. Push-Producer
- D. Exclusive Pair

Ans: C

97. In Node MCU, MCU stands for_____.

- A. Micro Control Unit
- B. Micro Controller Unit
- C. Macro Control Unit
- D. Macro Controller Unit

Ans: B

98. REST is acronym for_____

- A. Representational State Transfer
- B. Represent State Transfer
- C. Representational State Transmit
- D. Representational Store Transfer

Ans: A

99. WSN stands for

- A. Wide Sensor Network
- B. Wireless Sensor Network
- C. Wired Sensor Network
- D. None of these

Ans: B

100. Benefit of cloud computing services

- A. Fast
- B. Anywhere access
- C. Higher utilization
- D. All of the above

Ans: D

101. PaaS stands for_____

- A. Platform as a Service
- B. Platform as a Survey
- C. People as a Service
- D. Platform as a Survey

Ans: A

102. _____ as a Service is a cloud computing infrastructure that creates a development environment upon which applications may be build.

- A. Infrastructure
- B. Service
- C. Platform
- D. All of the mentioned

Ans:C

103. _____ is a cloud computing service model in which hardware is virtualized in the cloud.
- A. IaaS
 - B. CaaS
 - C. PaaS
 - D. None of the mentioned

Ans:A

104. Which of the following is the fundamental unit of virtualized client in an IaaS deployment?
- a) workunit
 - b) workspace
 - c) workload
 - d) all of the mentioned

Ans:C

105. _____ offering provides the tools and development environment to deploy applications on another vendor's application.
- A. PaaS
 - B. IaaS
 - C. CaaS
 - D. All of the mentioned

Ans.B

106. _____ is the most refined and restrictive service model.
- A. IaaS
 - B. CaaS
 - C. PaaS
 - D. All of the mentioned

Ans.C

107. _____ is suitable for IOT applications to have low latency or high throughput requirements.
- A. REST
 - B. Publish-Subscriber
 - C. Push-Pull
 - D. WebSocket

Ans:D

108. _____ is a one of the most popular wireless technologies used by WSNs.
- A. Zigbee
 - B. AllSean
 - C. Tyrell
 - D. Z-Wave

Ans:A

109. Zigbee specification are based on _____.

- A. 802.3
- B. 802.11
- C. 802.16
- D. 802.15.4

Ans:D

110. _____ is a transformative computing paradigm that involves delivering applications and services over the internet.

- A. WSN
- B. Cloud Computing
- C. Big Data
- D. None of above

Ans:B

111. The process of collecting, organizing and collecting large sets of data called as

- A. WSN
- B. Cloud Computing
- C. Big Data
- D. None of above

Ans:C

112. Does Raspberry Pi need external hardware?

- A. True
- B. False

Ans.B

113. Does RPi have an internal memory?

- A. True
- B. False

Ans.A

114. What do we use to connect TV to RPi?

- A. Male HDMI
- B. Female HDMI
- C. Male HDMI and Adapter
- D. Female HDMI and Adapter

Ans.C

115. How power supply is done to RPi?

- A. USB connection
- B. Internal battery
- C. Charger
- D. Adapter

Ans.A

116. What is the Ethernet/LAN cable used in RPi?

- A. Cat5
- B. at5e
- C. cat6
- D. RJ45

Ans.D

117. Which instruction set architecture is used in Raspberry Pi?

- A. X86
- B. MSP
- C. AVR
- D. ARM

Ans: D

118. Does micro SD card present in all modules?

- A. True
- B. False

Ans: A

119. Which characteristics involve the facility the thing to respond in an intelligent way to a particular situation? A. Intelligence

- B. Connectivity
- C. Dynamic Nature
- D. Enormous Scale

Ans: A

120. _____ empowers IoT by bringing together everyday objects.

- A. Intelligence
- B. Connectivity
- C. Dynamic Nature
- D. Enormous Scale

Ans: B

121. The collection of data is achieved with _____ changes.

- A. Intelligence
- B. Connectivity
- C. Dynamic Nature
- D. Enormous Scale

Ans: C

122. The number of devices that need to be managed and that communicate with each other will be much larger. A. Intelligence

- B. Connectivity
- C. Dynamic Nature

D. Enormous Scale

Ans: D

123. _____ in IoT as one of the key characteristics, devices have different hardware platforms and networks.

- A. Sensors
- B. Heterogeneity
- C. Security
- D. Connectivity

Ans: B

124. Devices that transforms electrical signals into physical movements

- A. Sensors
- B. Actuators
- C. Switches
- D. Display

Ans: B

125. Stepper motors are _____

- A. AC motors
- B. DC motors
- C. Electromagnets
- D. None of above

Ans: B

126. DC motors converts electrical into _____ energy.

- A. Mechanical
- B. Wind
- C. Electric
- D. None

Ans: A

127. Linear actuators are used in _____

- A. Machine tools
- B. Industrial machinery
- C.both A and B
- D.None

Ans: A

128. Solenoid is a specially designed _____

- A. Actuator
- B. Machine
- C. Electromagnet
- D. none of above

Ans: C

129. Stepper motors are_____

- A. AC motors
- B. DC motors
- C. Electromagnets
- D. None of above

Ans: B

130. Accelerometer sensors are used in_____

- A. Smartphones
- B. Aircrafts
- C. Both
- D. None of above

Ans: C

131. Image sensors are found in_____

- A. Cameras
- B. Night-vision equipment
- C. Sonars
- D. All of above

Ans: D

132. Gas sensors are used to detect _____gases.

- A. Toxic
- B. Natural
- C. Oxygen
- D. Hydrogen

Ans: A

133. Properties of Arduino are:

- A. Inexpensive
- B. Independent
- C. Simple
- D. both A and C

Ans: D

134. Properties of IoT devices.

- A. Sense
- B. Send and receive data
- C. Both A and B
- D. None of above

Ans: C

135. IoT devices are _____

- A. Standard
- B. Non-standard
- C. Both
- D. None **Ans: B**

136. What is the microcontroller used in Arduino UNO?

- A. ATmega328p
- B. ATmega2560
- C. ATmega32114
- D. AT91SAM3x8E

Ans: A

137. ___ is an open source electronic platform based on easy to used hardware and software. A. Arduino

- B. Uno
- C. Raspberry Pi
- D. Node

Ans:A

138 ___ is used latching, locking, triggering.

- A. Solenoid
- B. Relay
- C. Linear Actuator
- D. Servo motors

Ans:A

139. ___detect the presence or absence of nearby object without any physical contact.

- A. Smoke Sensor
- B. Pressure Sensor
- C. IR Sensor
- D. Proximity Sensor

Ans:D

140___ sensors include thermocouples, thermistors, resistor temperature detectors (RTDs) and integratd circuits (ICs).

- A. Smoke Sensor
- B. Temperature Sensor
- C. IR Sensor
- D. Proximity Sensor

Ans:B

141. The measurement of humidity is

- A. RH

- B. PH
- C. IC
- D. None of aboved

Ans:A

142 ____ sensor is used for automatic door controls, automatic parking system, automated sinks, automated toilet flushers, hand dryers.

- A. Smoke Sensor
- B. Temperature Sensor
- C. IR Sensor
- D. Motion Sensor

Ans:D

143 ____ sensor measure heat emitted by objects.

- A. Smoke Sensor
- B. Temperature Sensor
- C. IR Sensor
- D. Proximity Sensor

Ans:C

Chapter-3 Basics of Digital Forensics

1. Digital forensics is all of them except: A.
Extraction of computer data.
B. Preservation of computer data.
C. Interpretation of computer data.
D. Manipulation of computer data.

Ans:D

2. IDIP stands for
A. Integrated Digital Investigation Process.
B. Integrated Data Investigator Process.
C. Integrated Digital Investigator Process.
D. Independent Digital Investigator Process.

Ans: A

3. Who proposed Road Map for Digital Forensic Research (RMDFR) A.
G.Gunsh.
B. S.Ciardhuain
C. J.Korn.
D. G.Palmar

Ans: D

4. Investigator should satisfy following points: A.
Contribute to society and human being.

- B. Avoid harm to others.
- C. Honest and trustworthy.
- D. All of the above

Ans: D

5. In the past, the method for expressing an opinion has been to frame a ____ question based on available factual evidence.

- A. Hypothetical
- B. Nested
- C. Challenging
- D. Contradictory

Ans: A

6. More subtle because you are not aware that you are running these macros (the document opens and the application automatically runs); spread via email

- A. The purpose of copyright
- B. Danger of macro viruses
- C. Derivative works
- D. computer-specific crime **Ans: B**

7. There are three c's in computer forensics. Which is one of the three?

- A. Control
- B. Chance
- C. Chains
- D. Core

Ans: A

8. When Federal Bureau Investigation program was created?

- A.1979
- B.1984
- C.1995
- D.1989 **Ans:**

B

9. When the field of PC forensics began?

- A.1960's
- B.1970's
- C.1980's
- D.1990's **Ans:**

C

10. What is Digital Forensic?

- A. Process of using scientific knowledge in analysis and presentation of evidence in court
- B. The application of computer science and investigative procedures for a legal purpose involving the analysis of digital evidence after proper search authority, chain of custody, validation with mathematics, use of validated tools, repeatability, reporting, and possible expert presentation
- C. process where we develop and test hypotheses that answer questions about digital events

D. Use of science or technology in the investigation and establishment of the facts or evidence in a court of law

Ans: B

11. Digital Forensics entails _____.

- A. Accessing the system's directories viewing mode and navigating through the various systems files and folders
- B. Undeleting and recovering lost files
- C. Identifying and solving computer crimes
- D. The identification, preservation, recovery, restoration and presentation of digital evidence from systems and devices

Ans: D

12. Which of the following is FALSE?

- A. The digital forensic investigator must maintain absolute objectivity
- B. It is the investigator's job to determine someone's guilt or innocence.
- C. It is the investigator's responsibility to accurately report the relevant facts of a case.
- D. The investigator must maintain strict confidentiality, discussing the results of an investigation on only a "need to know"

Ans: B

13. What is the most significant legal issue in computer forensics?

- A. Preserving Evidence
- B. Seizing Evidence
- C. Admissibility of Evidence
- D. Discovery of Evidence

Ans: C

14. _____ phase includes putting the pieces of a digital puzzle together and developing investigative hypotheses

- A. Preservation phase
- B. Survey phase
- C. Documentation phase
- D. Reconstruction phase
- E. Presentation phase

Ans: D

15. In _____ phase investigator transfers the relevant data from a venue out of physical or administrative control of the investigator to a controlled location

- A. Preservation phase
- B. Survey phase
- C. Documentation phase
- D. Reconstruction phase
- E. Presentation phase

Ans: B

16. In _____ phase investigator transfers the relevant data from a venue out of physical or administrative control of the investigator to a controlled location

- F. Preservation phase
- G. Survey phase
- H. Documentation phase
- I. Reconstruction phase
- J. Presentation phase

Ans: B

17. Computer forensics do not involve _____ activity. A.

- Preservation of computer data.
- B. Extraction of computer data.
- C. Manipulation of computer data.
- D. Interpretation of computer data.

Ans: C

18. A set of instruction compiled into a program that perform a particular task is known as: A. Hardware.

- B. CPU
- C. Motherboard
- D. Software

Ans: D

19. Which of following is not a rule of digital forensics?

- A. An examination should be performed on the original data
- B. A copy is made onto forensically sterile media. New media should always be used if available.
- C. The copy of the evidence must be an exact, bit-by-bit copy
- D. The examination must be conducted in such a way as to prevent any modification of the evidence.

Ans: A

20. To collect and analyze the digital evidence that was obtained from the physical investigation phase, is the goal of which phase? A. Physical crime investigation

- B. Digital crime investigation.
- C. Review phase.
- D. Deployment phase.

Ans: B

21. To provide mechanism to an incident to be detected and confirmed is purpose of which phase?

- A. Physical crime investigation
- B. Digital crime investigation.
- C. Review phase.

D. Deployment phase.

Ans: D

22. Which phase entails a review of the whole investigation and identifies area of improvement?

A. Physical crime investigation

B. Digital crime investigation.

C. Review phase.

D. Deployment phase

Ans: C

23. _____ is known as father of computer forensic.

A. G. Palmar

B. J. Korn

C. Michael Anderson

D. S.Ciardhuain.

Ans: C

24. _____ is well established science where various contribution have been made A.
Forensic

B. Crime

C. Cyber Crime

D. Evidence

Ans: A

25. Who proposed End to End Digital Investigation Process (EEDIP)?

A. G. Palmar

B. Stephenson

C. Michael Anderson

D. S.Ciardhuain

Ans: B

26. Which model of Investigation proposed by Carrier and Safford?

A. Extended Model of Cybercrime Investigation (EMCI)

B. Integrated Digital Investigation Process(IDIP)

C. Road Map for Digital Forensic Research (RMDFR)

D. Abstract Digital Forensic Model (ADFM)

Ans: B

27. Which of the following is not a property of computer evidence? A.

Authentic and Accurate.

B. Complete and Convincing.

C. Duplicated and Preserved.

D. Conform and Human Readable. **Ans. D**

28. _____ can makes or breaks investigation.

- A. Crime
- B. Security
- C: Digital Forensic
- D: Evidence

Ans: D

29. _____ is software that blocks unauthorized users from connecting to your computer.

- A. Firewall
- B. Quick lauch
- C. OneLogin
- D. Centrify

Ans: A

30. Which of following are general Ethical norms for Investigator? A.

To contribute to society and human being.

- B. To avoid harm to others.
- C. To be honest and trustworthy.
- D. All of above
- E. None of above

Ans: D

31. Which of following are Unethical norms for Investigator? A.

Uphold any relevant evidence.

- B. Declare any confidential matters or knowledge.
- C. Distort or falsify education, training, credentials.
- D. All of above
- E. None of above

Ans: D

32. Which of following is not general ethical norm for Investigator? A.

To contribute to society and human being.

- B. Uphold any relevant Evidence.
- C. To be honest and trustworthy.
- D. To honor confidentially.

Ans: B

33. Which of following is a not unethical norm for Digital Forensics Investigation? A.

Uphold any relevant evidence.

- B. Declare any confidential matters or knowledge.
- C. Distort or falsify education, training, credentials.
- D. To respect the privacy of others. **Ans: D**

34. What is called as the process of creation a duplicate of digital media for purpose of examining it?

- A. Acquisition.
- B. Steganography. C. Live analysis
- D. Hashing.

Ans: A

35. Which term refers for modifying a computer in a way which was not originally intended to view Information? A. Metadata

B. Live analysis

C. Hacking

D. Bit Copy

Ans: C

36. The ability to recover and read deleted or damaged files from a criminal's computer is an example of a law enforcement specialty called?

A. Robotics

B. Simulation

C. Computer Forensics

D. Animation

Ans: C

37. What are the important parts of the mobile device which used in Digital forensic?

A. SIM

B. RAM C. ROM.

D. EMMC chip

Ans: D

38. Using what, data hiding in encrypted images be carried out in digital forensics? A. Acquisition.

B. Steganography. C.

Live analysis

D. Hashing.

Ans: B

39. Which of this is not a computer crime?

A. e-mail harassment B.

Falsification of data.

C. Sabotage.

D. Identification of data

Ans. D

40. Which file is used to store the user entered password?

A. .exe

B. .txt

C. .iso

D. .sam

Ans: D

41. _____ is the process of recording as much data as possible to create reports and analysis on user input. A. Data mining

- B. Data carving
- C. Meta data D. Data Spoofing.

Ans: A

42. _____ searches through raw data on a hard drive without using a file system.

- A. Data mining
- B. Data carving
- C. Meta data D. Data Spoofing.

Ans: B

43. What is first step to Handle Retrieving Data from an Encrypted Hard Drive?

- A. Formatting disk
- B. Storing data
- C. Finding configuration files.
- D. Deleting files.

Ans: C

Happy Learning!
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