Sample Question Paper: Internet of Things and its Application (M4-R5.1)

1. **The term IoT was coined in year**
   (a) 1998
   (b) 1999
   (c) 2010
   (d) 2005

2. **The size of MAC address is_____bits**
   (a) 16
   (b) 32
   (c) 48
   (d) 56

3. **In context to advantages of IoT, which of the following is incorrect**
   (a) Reduce waste
   (b) security
   (c) enhanced data collection
   (d) improve customer satisfaction

4. **The total resistance of three resistors connected in parallel will be____as comparedto the individual value of resistor**
   (a) less
   (b) high
   (c) same
   (d) Depends on the temperature

5. **Capacitor block AC and allows DC to pass through.**
   (a) true
   (b) false
   (c) not ascertain
   (d) it purely depends on the value of capacitor

6. **Microcontroller used in Arduino UNO prototyping board is**
   (a) ATmega328m
   (b) ATmega328p
   (c) ATmega2560
   (d) ATmega356p

7. **The size of bits in IPv4 addressing is**
   (a) 16

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(b) 32
(c) 48
(d) 56

8. **The pre-built circuit boards that fits on the top of Arduino or any other developmentboard are known as**
   (a) Vero board
   (b) FRC connectors
   (c) shields
   (d) breadboard

9. **Which layer in the TCP/IP stack is equivalent to the Transport layer of the OSI model?**
   (a) application
   (b) transport
   (c) Internet
   (d) Network Access

10. **Each IP packet contains**
   (a) Source and destination IP address
   (b) Source IP address only
   (c) destination IP address only
   (d) either of Source or destination IP address

11. **Which language is best suited for IoT analytics**
   (a) PHP
   (b) Java
   (c) Python
   (d) Scala

12. **At which layer of OSI model, router works**
   (a) Transport layer
   (b) Session layer
   (c) Datalink layer
   (d) Network layer

13. **Which of the following is not a main element of IoT**
   a) People
   b) Process
   c) Security
   d) Things

14. **To easily interface add-on modules with Arduino, we can use**

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a) General PCB
b) Connectivity circuit boards
c) Arduino shields
d) Other high-end Arduino boards

15. Which symbol is used in Arduino to calculate Modulo

(a) #
(b) $
(c) %
(d) !

16. With respect to the body language, the handshake conveys the confidence is

(a) Firm
(b) Limp
(c) Loose
(d) Incomplete knowledge

17. Botnet is often used to launch_____attack

(a) DoS
(b) DDoS
(c) Brute force
(d) Passive

18. The IIoT stands for

(a) Indepth Internet of T
(b) Innovative Internet of Things
(c) Industrial Internet of Things
(d) Information Internet of Things

19. The default method(s) in Arduino program is/are

(a) onlyloop()
(b) only setup()
(c) setup() and loop()
(d) can be either loop() or setup()

20. Which of the following communication medium supports highest data rate?

(a) Optical fiber
(b) Wifi
(c) Ethernet
(d) Bluetooth

21. Which layer in the TCP/IP stack is equivalent to the Datalink layer of the OSI model

(a) Application

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(b) host-to-host
(c) Internet
(d) Network Access

22. Which of the following is not a standard protocol used in IoT domain?
(a) Wifi
(b) Z-wave
(c) Zigbee
(d) LoMe

23. Which of the following is known as lightweight protocol?
(a) MQTT
(b) TCP
(c) IP
(d) HTTP

24. MQTT protocol is based upon
(a) Client server architecture
(b) Publish subscribe architecture
(c) Both of these
(d) None of these

25. The size IPv6 addressing is
(a) 48 bits
(b) 96 bits
(c) 128 bits
(d) 256 bits

26. Statement required in Arduino program to generate one second delay is
(a) delay(100);
(b) delay(1000);
(c) delay(10000);
(d) delay(1);

27. The size IPv6 addressing is
(a) 48 bits
(b) 96 bits
(c) 128 bits
(d) 256 bits

28. IIoT targets applications related to
(a) Health and fitness.
(b) Entertainment
(c) Both of these

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(d) None of these

29. The count of PWM pins in Arduino UNO is

(a) 2
(b) 3
(c) 5
(d) 6

30. **The analogRead method in Arduino UNO returns value range**

(a) 0-255
(b) 0-511
(c) 0-1023
(d) 0-4095

31. Open source operating system is

(a) Arduino
(b) Windows
(c) Linux
(d) Mac

32. Single line comment in C Language starts with

(a) #
(b) //
(c) !—
(d) /*

33. Which of the following Function is called only once in Arduino program?

(a) loop()
(b) setup()
(c) selay()
(d) digitalWrite()

34. In business communication, grapevine is an example of

(a) Formal communication
(b) Informal communication
(c) Group task
(d) Business talk

35. The founder of Arduino project is _____

(a) Kevin asthon
(b) Massimo Banzi
(c) Jim hungton
(d) Massimo berry

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36. _____board of Arduino family can be used to sewn into clothing

(a) Arduino nano
(b) Lilypad
(c) Arduino uno
(d) Arduino mega

37. Which of the following option is not available in Arduino IDE software?

(a) Compile
(b) Verify
(c) Terminate
(d) Serial monitor

38. Time management is primarily creating an environment

(a) Appropriate for communication
(b) Conducive to effectiveness.
(c) Best for business talk
(d) None of these

39. Program written in Arduino IDE is known as

(a) Code
(b) Source code
(c) Sketch
(d) Paint

40. The basic program in Arduino IDE contains

(a) setup () and loop () function
(b) only setup () function
(c) only loop () function
(d) none of these

41. Which of the transmission media contains central conductor and shield?

(a) coaxial cable
(b) twisted pair cable
(c) fiber-optic cable
(d) none of these

42. Radio waves are

(a) Omnidirectional
(b) Unidirectional
(c) Bidirectional
(d) None of these

43. Which of the transmission media uses light as medium of data transfer

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(a) coaxial cable
(b) twisted pair cable
(c) fiber-optic cable
(d) none of these

44. Which type of the signal is used for satellite or wireless LAN communication
(a) Radio wave
(b) Microwave
(c) Infrared
(d) None of these

45. Which of the transmission media highest data transmission rate?
(a) coaxial cable
(b) twisted pair cable
(c) fiber-optic cable
(d) none of these

46. The basic categorization of transmission media is
(a) Guided and unguided
(b) Determinate and indeterminate
(c) Fixed and unfixed
(d) None of these

47. Which of the following is/are correct in context to twisted pair cable?
(a) More the twist better is the data carrying capability
(b) Less twist more data rate
(c) Data-rate does not depend on twist in the cable
(d) None of these

48. The method of communication in which data transmission takes place in eitherdirections, but one at a time
(a) Full duplex
(b) Half duplex
(c) Simplex
(d) None of these

49. In communication satellite multiple repeaters are generally known as
(a) Modulators
(b) Earth Stations
(c) Transponders
(d) None of these

50. Which of the following device perform modulation and demodulation?
(a) Switch
(b) modulator

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(c) Modem
(d) None of these

51. **In an IoT ecosystem, devices with unique identities having monitoring, and remotesensing capabilities are known as**
(a) Things
(b) Motes
(c) Monitoring devices
(d) Edge monitors

52. **A typical IoT system design which refers to the individual node devices and theirprotocols that are utilized to create a functional IoT ecosystem, is termed as**
(a) Logical design
(b) physical design
(c) both of these
(d) none of these

53. **The different type of communication models available in an IoT ecosystem typicallyfall in following category/categories**
(a) Request-response model
(b) Push-pull model
(c) Publish-subscribe model
(d) All of these

54. **_____is a IoT system design which depicts how actually the componentsshould be arranged to complete a particular function**
(a) Logical design
(b) physical design
(c) both of these
(d) none of these

55. **IEEE 802.16 protocol stack is commonly referred as**
(a) LoRa
(b) Bluetooth
(c) WiMax
(d) none of these

56. **IoT application layer protocol include**
(a) MQTT
(b) HTTP
(c) Only MQTT
(d) Both MQTT and HTTP

57. **Bits at physical layer are converted to frames at_____layer of OSI model**

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(a) Application layer
(b) Network layer
(c) Data link layer
(d) Transport layer

58. _____type of fiber cable suffers from high signal dispersion.
(a) Single mode
(b) Multimode
(c) None of these
(d) Both of these

59. **The main function of transport layer in ISO-OSI model is:**
(a) Node to node delivery
(b) Process-to-process delivery
(c) Synchronization
(d) None of these

60. A typical microcontroller contains
(a) Timers
(b) Memory
(c) I/O ports
(d) All of these

61. The advantages of microcontroller in an electronic device include
(a) Saving cost
(b) Making circuit compact
(c) Save power consumption
(d) All of these

62. Sensors which produce continuous signals that are proportional to the sensedparameter are
(a) Analog sensor
(b) Digital sensor
(c) Light sensor
(d) Dust sensor

63. Device used to convert light energy into electrical energy is
(a) Turbine
(b) Windmill
(c) Solar cell
(d) None of these

64. Protocols used for I/O (input/output) sensor interfacing is/are
(a) SPI

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(b) I2C
(c) UART
(d) All of these

65. **IEEE protocol commonly referred as WiFi is**
(a) 802.15
(b) 802.3
(c) 802.11
(d) 802.16

66. Collection of standards for Low-rate wireless personal area network i.e. -LR-WPAN
(a) 802.15
(b) 802.3
(c) 802.11
(d) 802.16

67. Latest version of the Internet Protocol (IPv6) and Low-power Wireless Personal AreaNetworks is acronym as
(a) 6LoWPAN
(b) LoRa
(c) LoRaWAN
(d) None of these

68. The process flow of four stage IoT solution Architecture includes
(a) Sensor/actuators, data acquisition, edge IT, data center/cloud
(b) data acquisition, Sensor/actuators, edge IT, data center/cloud
(c) Sensor/actuators, data acquisition, data center/cloud, edge IT
(d) Sensor/actuators, edge IT, data acquisition, data center/cloud

69. HC-05 bluetooth module can be used in programming to work as
(a) Slave only
(b) Master only
(c) Master and slave
(d) None of these

70. _____is the rate at which the number of signal elements or changes to thesignal occurs per second when it passes through communication channel
(a) Data rate
(b) Bits rate
(c) Baud rate
(d) None of these

71. The total Bits transmitted in one-unit time is referred as
(a) Data rate

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(b) Bits rate
(c) Baud rate
(d) None of these

72. _____pins in Arduino reads data from analog sensor and convert value intodigital value
(a) Analog
(b) Digital
(c) Power
(d) None of these

73. AnalogWrite method can be used for
(a) PWM pins
(b) Hybrid pins
(c) Digital pins
(d) None of these

74. In ATmega328p, the letter p stands for
(a) Picopower
(b) Preprocessing
(c) Precise
(d) Popular

75. Inductance is measured in
(a) Ohm
(b) Farad
(c) Henry
(d) Coulomb

76. In Arduino programming,_____function is used to configure the pins asinput or output
(a) pinMode()
(b) digitalWrite()
(c) analogWrite()
(d) setPin()

77. SI unit of Resistance is
(a) Ohm
(b) Farad
(c) Henry
(d) Coulomb

78. In Arduino programming,_____function is used to make digital pin HIGH
(a) pinMode()
(b) digitalWrite()

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(c) analogWrite()
(d) setPin()

79. In Arduino programming, digital pins have_____possible values
(a) Only one
(b) Two
(c) Three
(d) Any number of values

80. Capacitance is measured in
(a) Ohm
(b) Farad
(c) Henry
(d) Coulomb

81. **The property of any conductor that opposes the flow of electric current through it is known as**
(a) Capacitance
(b) Resistance
(c) Inductance
(d) None of these

82. _____is the assurance that the information is trustworthy and accurate
(a) Confidentiality
(b) Integrity
(c) Availability
(d) None of these

83. **_____is an indispensable tool for testing, diagnosing, and troubleshootingelectrical circuits, components, and devices**.
(a) Soldering iron
(b) digital multimeter
(c) voltmeter
(d) ammeter

84. A set of rules that limits access to information is known as
(a) Confidentiality
(b) Integrity
(c) None of these
(d) Both of these

85. _____is the guarantee of reliable and constant access to your sensitive data byauthorized data
(a) Confidentiality

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(b) Integrity
(c) Availability
(d) None of these

86. _____is flooding the Internet with many copies of same message (typicallyemail)
(a) Spam
(b) Injection
(c) Spoofing
(d) DoS attack

87. _____is a type of social engineering where an attacker sends a fraudulentmessage designed to trick a person into revealing sensitive information
(a) Phishing
(b) Surfing
(c) DDoS
(d) Revealing

88. In C programming language, preprocessors are specified with_____symbol
(a) #
(b) $
(c) ^
(d) &

89. In C programming language, the output of following statement is
1 < 2 ? return 1: return 2;
(a) 1
(b) 2
(c) Depends on compiler
(d) Compile time error

90. Which of the following is not logical operator in C language?
(a) &&
(b) ||
(c) !
(d) |

91. In C language, the bitwise complement operator is
(a) !
(b) |
(c) ~
(d) &

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92. _____is a program which enters computer system by secretly attachingitself with valid computer program and later steals information.

(a) Phishing
(b) Surfing
(c) Trojan horse
(d) Wamp

93. _____is used for serial communication with devices connected withArduino

(a) I2C
(b) SPI
(c) UART
(d) None of these

94. _____is the act of secretly listening to the private conversation or communicationsof others without their consent in order to gather information.

(a) Phishing
(b) Surfing
(c) Trojan horse
(d) Eavesdropping

95. malware is designed to launch botnet attack, primarily targetingonline consumer devices such as IP cameras and home routers

(a) Darkmotel
(b) Mirai
(c) Petye
(d) whitehorse

96. The process of reading is commonly known as

(a) Encoding
(b) Decoding
(c) Codification
(d) None of these

97. _____is the document used to communicate within the organization

(a) Letter
(b) Email
(c) Memo
(d) Fax

98. The document used as evidence in legal cases is

(a) Letter
(b) Memo
(c) Notice

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(d) Minutes of meeting

99. While conversation, the most helpful feature for listeners to understand meaningis/are

(a) Tone
(b) Pitch
(c) Both of these
(d) None of these

100. Which of the following is not a valid resume format?

(a) Portfolio
(b) Chronological
(c) Functional
(d) Combination

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O-Level M1-R5.1, M2-R5.1,M3-R5.1, M4-R5.1

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