

- \_\_\_\_\_ allows us to control electronic components
  - RETful API
  - RESTful API
  - HTTP
  - MQTT

Answer: a

- MQTT stands for \_\_\_\_\_
  - MQ Telemetry Things
  - MQ Transport Telemetry
  - MQ Transport Things
  - MQ Telemetry Transport

Answer: d

- MQTT is better than HTTP for sending and receiving data.
  - True
  - False

Answer: a

- MQTT is \_\_\_\_\_ protocol.
  - Machine to Machine
  - Internet of Things
  - Machine to Machine and Internet of Things
  - Machine Things

Answer: c

- Which protocol is lightweight?
  - MQTT
  - HTTP
  - CoAP
  - SPI

Answer: a

- PubNub publishes and subscribes \_\_\_\_\_ in order to send and receive messages.
  - Network
  - Account
  - Portal
  - Keys

Answer: d

- By clicking which key the PubNub will display public, subscribe, and secret keys.
  - Pane
  - Demo Keyset
  - Portal
  - Network

Answer: b

- The messageChannel class declares the \_\_\_\_\_ class attribute that defines the key string.
  - command\_key
  - command-key
  - commandkey
  - Key\_command

Answer: a

- \_\_\_\_\_ method saves the received arguments in three attributes.
  - \_\_init
  - Init\_\_
  - \_\_Init\_\_
  - \_\_init\_\_

Answer: c

- 10. \_\_\_\_\_ and \_\_\_\_\_ saves the publish and subscribe keys that we have generated with the PubNub Admin portal.
  - public\_key and subscribe\_key
  - Public-key and subscribe-key
  - publickey and subscribekey
  - Key\_public and key\_subscribe

Answer: a

- \_\_\_\_\_ specifies the function that will be called when there is a new message received from the channel.
  - Reconnect
  - Error

- c) Connect
  - d) Callback     Answer: d
- . \_\_\_\_\_ specifies the function that will be called on an error event.
    - a) Callback
    - b) Error
    - c) Connect
    - d) Reconnect     Answer: b
- \_\_\_\_\_ Specifies the function that will be called when a successful connection with the PubNub cloud.
    - a) Callback
    - b) Error
    - c) Connect
    - d) Reconnect     Answer: c
- \_\_\_\_\_ specifies the function that will be called when a successful re-connection is completed.
    - a) Callback
    - b) Error
    - c) Connect
    - d) Reconnect     Answer: d
- \_\_\_\_\_ specifies the function that will be called when the client disconnects.
    - a) Callback
    - b) Error
    - c) Connect
    - d) Disconnect     Answer: d
- What is the java extension file in IoT?
    - a) .jar
    - b) .c
    - c) .exe
    - d) .py     Answer: a
- Do we run our program in the same computer where we have written?
    - a) True
    - b) False
    - c) May or may not
    - d) Cannot be determined     Answer: c
- Publish command message is sent from \_\_\_\_\_
    - a) Only publisher to broker
    - b) Only broker to publisher
    - c) Publisher to broker and broker to publisher
    - d) Server to client     Answer: c
- The message is sent to the input queue of a message flow that contains a \_\_\_\_\_
    - a) Subscriber
    - b) Server
    - c) Publication node
    - d) Client     Answer: d
- Does user has authority for all topics.
    - a) True
    - b) False     Answer: b
- ROSTOPIC uses \_\_\_\_\_ at the command line for representing the content of the message.
    - a) YAML\_syntax
    - b) rostopic bw
    - c) rostopic delay
    - d) rostopic echo     Answer: a
- Which command displays the band width?
    - a) rostopic hz
    - b) rostopic delay

- c) rostopic echo
- d) rostopic bw Answer: d

- rostopic delay will provide delay for \_\_\_\_\_
  - a) Topics which has header
  - b) Topics which has tail
  - c) Topics which has tail and head
  - d) To all topics Answer: a
- Which command displays messages published to a topic?
  - a) rostopic bw
  - b) rostopic delay
  - c) rostopic echo
  - d) rostopic hz Answer: c
- Which command finds out the topic?
  - a) rostopic bw
  - b) rostopic delay
  - c) rostopic echo
  - d) rostopic find Answer: d
- The number of elements in the Open IoT Architecture?
  - a) 6 elements
  - b) 8 elements
  - c) 7 elements
  - d) 3 elements Answer: c
- Global Sensor Network is built for \_\_\_\_\_
  - a) Reducing cost and time for development
  - b) Reducing cost and increasing time for development
  - c) Increasing cost and increasing time for development
  - d) Increasing cost and decreasing time for development Answer: a
- One of the main characteristics of Linked Stream Data is "Live Streaming".
  - a) True
  - b) False Answer: a
- The huge number of devices connected to the Internet of Things has to communicate automatically, not via humans. What is this called?
  - a) Skynet
  - b) Bot 2 Bot
  - c) Machine 2 Machine
  - d) Intercloud Answer: c

Internet of Things needs a lot of network connection. What is the proposed "white Space" radio standard called?

- a) Bluetooth
- b) WiMax
- c) Weightless
- d) Zigbee Answer: c

31. What is the sensor/protocol used in GSN?

- a) HTTP protocol
- b) CoAP protocol
- c) MQTT protocol
- d) XMPP protocol Answer: b

32. Which is the core wrapper of GSN?

- a) Serial
- b) UDP
- c) GPSTest
- d) ZeroMQWrapper Answer: d

33. Open IoT ontology is extending the W3C SSN ontology which supports the description of the physical and processing structure of sensors.

- a) True
- b) False      Answer: a

34. Open IoT manages the registration, data acquisition, deployment of sensors and interconnected of objects, through which network?

- a) GSN
- b) X-GSN
- c) LSM
- d) HTTP      Answer: b

35. Which environment does Global Sensor Network work on?

- a) C++
- b) JAVA
- c) HTML
- d) C      Answer: b

36. \_\_\_\_\_ is a community that is working together to establish an IoT architecture.

- a) Eclipse IoT
- b) Red Hat
- c) Intercloud
- d) Bot 2 Bot      Answer: a

37. \_\_\_\_\_ provides a middleware and application container for IoT gateway.

- a) Eclipse Kura
- b) Red Hat
- c) Intercloud
- d) Bot 2 Bot      Answer: a

38. \_\_\_\_\_ is a modular and cloud based platform.

- a) Eclipse Kura
- b) Red Hat
- c) Intercloud
- d) Eclipse Kapua      Answer: d

39. Kapua also provides a core integration framework.

- a) True
- b) False      Answer: a

40. What is the role of Bigdata in smart grid architecture of IoT?

- a) Store data
- b) Manage data
- c) Collect data
- d) Security      Answer: a

41. What is the role of Cloud in smart grid architecture of IoT?

- a) Store data
- b) Manage data
- c) Collect data
- d) Security      Answer: b

42. What is the role of Gateway in smart grid architecture of IoT?

- a) Store data
- b) Manage data
- c) Collect data
- d) Security      Answer: c

43. What is the role of Sensor in smart grid architecture of IoT?

- a) Store data
- b) Manage data
- c) Collect data
- d) Security      Answer: a

44. IoT gateway must provide \_\_\_\_\_

- a) Simple and fast installation
- b) Security with hardware
- c) Data storage
- d) Protocol abstraction    Answer: d

45. Which of the following is IoT device manageability?

- a) Protocol abstraction
- b) Simple and fast installation
- c) Security with hardware
- d) Data storage        Answer: b

46. IoT security management includes \_\_\_\_\_

- a) Protocol abstraction
- b) Simple and fast installation
- c) Security with hardware
- d) Data storage    Answer: c

47. IoT data scalability includes \_\_\_\_\_

- a) Protocol abstraction
- b) Simple and fast installation
- c) Security with hardware
- d) Data storage        Answer: d

48. What is the example for smart grid edge device for utility?

- a) Smart Meters
- b) Smart Home
- c) Smart Car
- d) Smart Collage    Answer: a

49. According to the analysis on IoT application frame work, smart grid is divided into \_\_\_\_\_ layers.

- a) 2layers
- b) 3 layers
- c) 4 layers
- d)5 layers    Answer: b

50. Monitor target of the smart \_\_\_\_\_ includes sensor objects in the power link.

- a) Perception layer
- b) Smart network layer
- c) Smart Application layer
- d) Data laye

Answer: a

51. \_\_\_\_\_ layer can be divided into the data access network and the core network.

- a) Perception layer
- b) Smart network layer
- c) Smart Application layer
- d) Data layer    Answer: b

52. In \_\_\_\_\_ layer, various application platforms are built as required by the services needs of smart grid.

- a) Perception layer
- b) Smart network layer
- c) Smart Application layer
- d) Data layer    Answer: c

53. ICT stands for \_\_\_\_\_

- a) Information and Communication Technology
- b) Internet and Communication Technology
- c) Internet and Communication of Things
- d) Information and Communication of Things    Answer: a

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

- a) TCP/IP
- b) Network

- c) UDP
- d) HTTP Answer: a

55. \_\_\_\_\_ enables seamless integration of LoWPAN devices with internet leveraging.

- a) IETF 6LoWPAN
- b) IEF CoAP
- c) RFID/NFC
- d) IEEE 802.15.4.LoWPAN Answer: a

56. \_\_\_\_\_ enables open application layer for constrained nodes.

- a) IETF 6LoWPAN
- b) IEF CoAP
- c) RFID/NFC
- d) IEEE 802.15.4.LoWPAN Answer: b

57.

\_\_\_\_\_ tags, devices, smart phones useful in identification.

- a) IETF 6LoWPAN
- b) IEF CoAP
- c) RFID/NFC
- d) IEEE 802.15.4.LoWPAN Answer: c

58. \_\_\_\_\_ supports low energy radio operation.

- a) IETF 6LoWPAN
- b) IEF CoAP
- c) RFID/NFC
- d) Bluetooth Answer: d

59. \_\_\_\_\_ specification defining the PHY and MAC layer of low power devices.

- a) IETF 6LoWPAN
- b) IEF CoAP
- c) RFID/NFC
- d) IEEE 802.15.4.LoWPAN Answer: d

60. 6LoWPAN Adaption layer contains?

- a) Header compression
- b) Fragmentation
- c) Layer 2 forwarding
- d) Header compression, Fragmentation, and Layer 2 forwarding Answer: d

61. \_\_\_\_\_ is an application layer protocol for resource constrained devices.

- a) CoAP
- b) HMTP
- c) MQTT
- d) TCP/IP Answer: a

62. Adheres to \_\_\_\_\_ approach for managing resources and support mapping to HTTP.

- a) RETful
- b) IoT
- c) Restful
- d) RESTful Answer: d

63. \_\_\_\_\_ resources are identified by Uniform Resource Identifiers.

- a) CoAP
- b) HMTP
- c) MQTT
- d) TCP/IP Answer: a

64. Which protocol interacts asynchronously over UDP?

- a) HMTP
- b) CoAP
- c) MQTT
- d) TCP/IP Answer: b

65. CoAP messages are short.

- a) True
- b) False Answer: a

66. How many messages types are there in CoAP?

- a) 2
- b) 5
- c) 3
- d) 4 Answer: d

67.

Number of methods in CoAP?

- a) 2
- b) 5
- c) 4
- d) 3 Answer: c

68. WSN stands for \_\_\_\_\_

- a) Wired Sensor Network
- b) Wireless Sensor Network
- c) Wired Service Network
- d) Wireless Service Network Answer: b

69. API enables services portability between \_\_\_\_\_

- a) Systems
- b) Devices
- c) Networks
- d) Services Answer: a

70. Ubiquitous service provision depends on \_\_\_\_\_

- a) QoS
- b) Management
- c) Interoperability
- d) Routing Answer: c

71. API architecture not only includes critical elements but also caters for \_\_\_\_\_

- a) System
- b) Devices
- c) Network
- d) Multi homing Answer: d

72. All portals are embedded into a single supercomputer, known as \_\_\_\_\_

- a) Network
- b) Web
- c) Internet
- d) System Answer: b

73. \_\_\_\_\_ is uniquely identifiable embedded computing devices.

- a) Internet
- b) IoT
- c) Bigdata
- d) Cloud Answer: b

74. Web is a mesh of computers, so too is \_\_\_\_\_

- a) IoT
- b) Bigdata
- c) Cloud
- d) Interne Answer: a

75. Without \_\_\_\_\_ computers embedded in house keys are worthless.

- a) Data
- b) Services
- c) Both Data and Services
- d) Neither data nor services Answer: c

76. \_\_\_\_\_ Services are the way in which the IoT is connected to data.

- a) Cloud
- b) Bigdata
- c) Internet
- d) Network Answer: a

77. APIs are the skybridge.

- a) True
- b) False Answer: a

78. IoT solutions are at the heart of IDC's view of the \_\_\_\_\_

- a) Three
- b) Two
- c) One
- d) Four Answer: d

79. \_\_\_\_\_ are the inter connectors.

- a) Web
- b) Internet
- c) Network
- d) APIs Answer: d

80. The IoT platforms are mainly divided into how many types

- a) 3 types
- b) 5 types
- c) 4 types
- d) 2 types Answer: c

81. In order to promote \_\_\_\_\_ the government should employ more management.

- a) eGovernment related
- b) Enterprise-based
- c) Company based
- d) Business oriented platform Answer: a

82. In order to improve their competitiveness and services assurance, the \_\_\_\_\_ require independently funded IoT projects.

- a) eGovernment related
- b) Enterprise-based
- c) Company based
- d) Business oriented platform Answer: b

82. The \_\_\_\_\_ may become an important facilitator and stimulate for the modern economy.

- a) eGovernment related
- b) Enterprise-based
- c) Company based
- d) Business oriented platform Answer: d

83. ITS stands for \_\_\_\_\_

- a) Internet Travel Services
- b) Internet Transportation Security



- c) Intelligent Transportation Security
- d) Intelligent Transportation Services Answer: d

84. The autonomous \_\_\_\_\_ based IoT platforms are used for internal management of the corresponding enterprise.

- a) eGovernment related
- b) Enterprise-based
- c) Company based
- d) Business oriented platform Answer: c

85. Does information resource management need to be integrated into market management?

- a) True
- b) False Answer: a

86. The use of RFID in product logistics may realize automatic acquisition of logistics information.

- a) True
- b) False Answer: a

87. An IoT \_\_\_\_\_ center is envisaged as an important part of the generic IoT platform to unify the organization.

- a) Individual Information
- b) Individual Integration
- c) Integrated Information
- d) Individual and Integrated Information Answer: c

88. The core element of architecture of smart city is \_\_\_\_\_

- a) Mobile Unified Service
- b) Urban Application Platform
- c) Management center
- d) Integrated Information Provider Answer: d

89. The core element is operated by \_\_\_\_\_

- a) PaaS
- b) IoT service Provider
- c) SaaS
- d) IaaS Answer: b

90. Supplementary platforms in the architecture provide support for these services.

- a) True
- b) False Answer: a

91. Who will use their own IoT business models?

- a) PaaS
- b) SaaS

- c) IaaS
- d) Service provider Answer: d

92. Which approach is used in this architecture?

- a) Top down approach
- b) Bottom up approach
- c) Top down and Bottom Up
- d) Neither Top down nor bottom up Answer: a

93. IoT promotes the creation of IoT terminal industry \_\_\_\_\_

- a) Devices
- b) Network
- c) Clusters
- d) Things Answer: c

94. What is the use of Thermostat in Nest Thermostat E?

- a) Save energy
- b) Show the use of energy
- c) Supports in some devices only
- d) Won't work at some conditions Answer: a

95. What is the main function of Nest Thermostat E?

- a) Change the temperature only when we are at home
- b) Reduce the energy used
- c) Change the temperature from anywhere
- d) Powers off when a person is not present Answer: c

96. It displays when you are close.

- a) True
- b) False Answer: a

97. Does HomePod allow voice controlling?

- a) True
- b) False Answer: a

98. Function of huge light bulb?

- a) To reduce energy and to control lightning
- b) To create lighting scenes based on your favourite photos
- c) To reduce energy and to create lighting scenes based on your favourite photos and to control lightning
- d) To controlling lightning and to create lighting scenes based on your favourite photos Answer: c

99. What is the drawback of using Lockitron?

- a) Wastage of more energy
- b) Supports in some devices only

- c) Won't work at some conditions
- d) Tough installation Answer: b

100. Sonos is a system that uses \_\_\_\_\_ wireless speakers.

- a) Wifi
- b) Hifi
- c) Zigbee
- d) Bluetooth Answer: b

101. What is the facility Sonos provides?

- a) It provides high quality 3D audio
- b) Can here only to a restricted area
- c) Call connectivity
- d) Choose to play what you want in different rooms Answer: d

102. Smart Fitness clothing mainly has which device?

- a) Battery
- b) Bluetooth
- c) Sensors
- d) Internet Answer: c

103. What are Revolv means?

- a) In built programming of all devices
- b) Movement of device
- c) A simple robot
- d) Bringing all devices under a single command Answer: d

104. IIoT stands for \_\_\_\_\_

- a) Industrial Internet of Things
- b) Internet Internet of Things
- c) Intelligence Internet of Things
- d) Internal Internet of Things Answer: a

105. IIoT is sophisticated.

- a) True
- b) False Answer: a

106. What does design provide?

- a) Technology
- b) Ecosystem
- c) Technology and ecosystem
- d) Digital revolution Answer: c

107. Which possibility ensures load balancing and peak levelling of energy consumption?

- a) Transportation and logistics
- b) Energy and utilities
- c) Automotive
- d) Connected supply chain Answer: b

108. Which possibility automatically communicates with other vehicles?

- a) Transportation and logistics
- b) Energy and utilities
- c) Automotive
- d) Connected supply chain Answer: c

109. Which possibility connects the production line to suppliers?

- a) Transportation and logistics
- b) Energy and utilities
- c) Automotive
- d) Connected supply chain Answer: d

110. Which possibility provides inter connectivity between shop floor and top floor?

- a) Transportation and logistics
- b) Energy and utilities
- c) Plant control flow operation
- d) Connected supply chain Answer: c

111. Which possibility is the highest contributor to cost overhead for manufacturing facilities?

- a) Transportation and logistics
- b) Energy and utilities
- c) Plant control flow operation
- d) Energy management and resource optimization Answer: d

112. Which axis accelerometer is mostly used in IOT?

- a) 2- axis
- b) 3- axis
- c) 1- axis
- d) Combination of all Answer: b

113. Accelerometer is the measurement of \_\_\_\_\_

- a) Velocity/time
- b) Energy/time
- c) Height/time
- d) Angle/time Answer: a

114. What is the use of accelerometer in laptops?

- a) To rotate the screen
- b) To protect hard drives from damage

- c) To get the angle on monitor
- d) To get the linear acceleration Answer: b

115. Are accelerometer used in cars?

- a) True
- b) False Answer: a

116. How many and what are the parts that are present in the accelerometer sensor?

- a) 1, capacitor sensor
- b) 3, piezoelectric effect, Analog display, digital display
- c) 2, piezoelectric effect and capacitor sensor
- d) 2, Capacitor sensor, digital Display Answer: c

117. The BGM160 gyroscope sensor is fitted with \_\_\_\_\_ interfaces.

- a) Only SPI
- b) Only I2C
- c) SPI and UART
- d) SPI and I2C Answer: d

118. Gyroscope is used for \_\_\_\_\_

- a) Anti-theft
- b) Capacitive proximity sensing
- c) Gaming
- d) Angle detection Answer: c

119. Gyroscope is used to measure \_\_\_\_\_

- a) Linear Acceleration
- b) Angular velocity
- c) Angular velocity and linear acceleration
- d) Linear velocity Answer: b

120. What is the rate noise density of gyroscope?

- a) 0.011 dps/ $\sqrt{\text{Hz}}$
- b) 0.0011 dps/ $\sqrt{\text{Hz}}$
- c) 1.11 dps/ $\sqrt{\text{Hz}}$
- d) 11.1 dps/ $\sqrt{\text{Hz}}$  Answer: a

121. How many sensing structures are there in gyroscope sensor?

- a) Two structures
- b) Three structures
- c) Depending on application
- d) Single structure Answer: d

122. Theory behind working of accelerometer can be understood from \_\_\_\_\_

- a) Rotary
- b) Liner
- c) Newtonian mechanism
- d) Reciprocating Answer: c

123. \_\_\_\_\_ is included in a system to provide desirable damping effect.

- a) Speedometer
- b) Seismic
- c) Damper
- d) Dashpot Answer: d

124. Displacement and acceleration are related by fundamental scaling law.

- a) True
- b) False Answer: a

125. \_\_\_\_\_ sensor is used for tracking rotation or twist.

- a) Gyroscope
- b) Temperature
- c) Pressure
- d) Proximity Answer: a

126. Ring laser type gyroscope operates based on \_\_\_\_\_ principle.

- a) Damper
- b) Sagnac
- c) Seismic
- d) Dashpot Answer: b

127. Which devices measures gases or liquid?

- a) Proximity sensor
- b) Pressure sensor
- c) Temperature sensor
- d) Touch sensor Answer: b

128. Which sensor measures the pressure relative to perfect vacuum?

- a) Absolute pressure sensor
- b) Gauge pressure sensor
- c) Vacuum pressure sensor
- d) Differential pressure sensor Answer: a

129. Which sensor measure the pressure relative to atmospheric pressure?

- a) Absolute pressure sensor
- b) Gauge pressure sensor
- c) Vacuum pressure sensor
- d) Differential pressure sensor Answer: b

130. Barometer is which type of sensor\_\_\_\_\_

- a) Pressure sensor
- b) Touch sensor
- c) Temperature sensor
- d) Humidity sensor Answer: a

131. Touch screen devices use which sensor?

- a) Touch sensor
- b) Temperature sensor
- c) Humidity sensor
- d) Pressure sensor Answer: d

132. What is the stability of pressure sensor?

- a) +/-0.75% FS
- b) +/-0.5% FS
- c) +/- 0.35% FS
- d) +/-0.125% FS Answer: c

133. What is the operating voltage of pressure sensor?

- a) 3.5v
- b) 1.5v
- c) 5v
- d) 3v Answer: d

134. The feature of c39 is its low insertion height.

- a) True
- b) False

Answer: a

136. What is the absolute pressure of c39?

- a) 2.0 bar
- b) 1.5 bar
- c) 1.2 bar
- d) 1.35 bar Answer: c

137. Which pressure standard is used for gauge?

- a) Dead-weight tester
- b) Manometer
- c) Pressure switches
- d) Stain gauge pressure sensor Answer: b

139. Pressure measured relative to perfect vacuum is termed as \_\_\_\_\_

- a) Absolute Pressure Measurement
- b) Differential Pressure Measurement

- c) Gauge Pressure Measurement
- d) Both Absolute and Differential Answer: a

140. In which pressure measurement, pressure of two distinct positions are compared?

- a) Absolute Pressure Measurement
- b) Differential Pressure Measurement
- c) Gauge Pressure Measurement
- d) Both Absolute and Differential Answer: b

141. \_\_\_\_\_ can be defined as a subtype of differential pressure measurement.

- a) Absolute Pressure Measurement
- b) Differential Pressure Measurement
- c) Gauge Pressure Measurement
- d) Both Absolute and Differential Answer: c

142. In computer devices and smart phones that have \_\_\_\_\_ with pressure sensor.

- a) Automotive Industry
- b) Industrial
- c) Aviation
- d) Touch screen Answer: d

144. In which place the pressure sensor is needed for monitoring gases and their partial pressures.

- a) Touch screen
- b) Automotive Industry
- c) Industrial
- d) Aviation Answer: c

145. What happens when service providers change their operating system and communication protocols?

- a) Inoperability and complexity arises
- b) Only complexity arises
- c) Only Inoperability arises
- d) Nothing arises Answer: a

146. In SOA, Service is termed as \_\_\_\_\_

- a) Software service
- b) Network service
- c) Business service
- d) Developer service Answer: c

147. Are SOA components loosely coupled.

- a) True
- b) False Answer: a

148. The SOA architecture is divided into how many layers?



- a) 5 layers
- b) 2 layers
- c) 7 layers
- d) no layers ie., only one layer Answer: b

149. Which layer in SOA delivers messages between applications?

- a) ESB(Enterprise Service Bus)
- b) Service Broker
- c) SOA registry
- d) SOA supervisor Answer: a

150. Which block is the central reference of meta-data for services?

- a) ESB(Enterprise Service Bus)
- b) Service Broker
- c) SOA registry
- d) SOA supervisor Answer: c