QUESTION 1:

In which of the following applications, IoT cannot be implemented?

a. Healthcare

b. Transportation

c. Education

d. None of the above

QUESTION 2:

M2M is a term introduced by

a. IoT service provides

b. Fog computing service providers

c. Telecommunication service providers

d. None of these

QUESTION 3:

Which of these statements regarding sensors is TRUE?

a. Sensors are input devices.

b. Sensors can be analog as well as digital

c. Sensors respond to some external stimuli.

d. All of these.

QUESTION 4:

Smart Dust can be used to measure the

a. Temperature of the industrial lathe machine

b. Heat inside a computer’s CPU

c. Chemical in the soil

d. Strength of a solid material

QUESTION 5:

Which of the following is closely related to IoT?

a. Machine-to-Machine (M2M) communications,

b. Cyber-Physical-Systems (CPS)

c. Web-of-Things (WoT)

d. All of these

QUESTION 6:

The number of possible addresses can be achieved with IPv6 addressing a. 2^6

b. 2^26

c. 2^32

d. 2^128

QUESTION 7:

IoT proxy performs

a. Active application layer functions between IoT nodes and other entities

b. As intermediate layer between IoT devices and cloud

c. As active IoT device, when connectivity lost

d. All of the above

QUESTION 8:

Which of the following notations is used to represent an IPv6 address?

a. Dotted decimal

b. Hexadecimal

c. Binary

d. None of the above

QUESTION 9:

Temperature, Speed, Pressure, Displacement, and Strain are

a. Analog quantity

b. Digital quantity

c. Sometime analog, sometime digital

d. None of these

QUESTION 10:

A mechanical actuator converts

a. rotary motion in to electrical power

b. electrical power in to rotary motion

c. rotary motion in to linear motion

d. Linear motion in to rotary motion

QUESTION 11:

The source address of a IPv6 address is of

a. 64 bit

b. 80 bit

c. 128 bit

d. 132 bit

QUESTION 12:

Based on the output, the sensors can be classified as

a. Binary and Decimal

b. Digital and Analog

c. Scalar and Vector

d. Time sensitive and Non-time sensitive

QUESTION 13:

Which of the following statements is true?

a. Physical quantities such as image and velocity can be measured by scalar sensors

b. Scalar sensors produce output signal or voltage which is generally proportional to the magnitude of the quantity being measured

c. Digital sensors produce any value from 0 to 10

d. Displacement cannot be measure by analog sensors

QUESTION 14:

An electric actuator converts

a. Mechanical energy to electrical energy

b. Mechanical force to electrical charge

c. Electrical energy into mechanical torque

d. Electrical energy to motion of a motor

QUESTION 15:

A rack and pinion mechanism attached to a motor is an example of

a. Pneumatic actuator

b. Hydraulic actuator

c. Mechanical actuator

d. None of these

QUESTION 1:

Brokers in MQTT

a. Connects publishers and subscribers

b. Classify the sensor data into topics

c. Both of the above

d. None of the above

QUESTION 2:

Collision prevention in 802.15.4 standard is provided by means of:

a. CSMA-CA

b. CSMA-CD

c. ALOHA

d. None of these

QUESTION 3:

LOADing routing uses:

a. AODV

b. DSDV

c. RIPv2

d. OSPF

QUESTION 4:

Which of the following standards is known as low data-rate WPAN? a. IEEE 802.15.2

b. IEEE 802.15.4

c. IEEE 802.15e

d. IEEE 802.15c

QUESTION 5:

MQTT topics are

a. Simple floating point

b. Simple integer

c. Simple symbol

d. Simple string

QUESTION 6:

MQTT was introduced by

a. Yahoo

b. Google

c. IBM

d. CISCO

QUESTION 7:

Which of the following is an extension of MQTT, which uses encryption based on lightweight attribute based encryption?

a. RSA MQTT

b. Secure MQTT

c. Encrypto-MQTT

d. DES MQTT

QUESTION 8:

RPL supports:

a. Message confidentiality

b. Loop detection in the routes

c. Data path validation

d. All of these

QUESTION 9:

Representational State Transfer (REST) is the standard interface between

a. Two machines in a LAN

b. HTTP client and user

c. HTTP client and servers

d. None of the above

QUESTION 10:

Which of the following is not a messaging mode in CoAP?

a. Confirmable

b. Separate

c. Direct

d. Piggyback

QUESTION 11:

Which of the following is the full form of XMPP?

a. Extension Messaging and Presence Protocol

b. Extensible Messaging and Presence Protocol

c. Extension Messaging and Privacy Protocol

d. Extensible Messaging and Privacy Protocol

QUESTION 12:

Begin message in Advanced Message Queuing Protocol (AMQP) indicates

a. Connection open

b. Session open

c. Initiate new link

d. None of these

QUESTION 13:

In 6LoWPAN address, how many bits are globally unique?

a. 16 bits

b. 32 bits

c. 64 bits

d. 128 bits

QUESTION 14:

Which of the following is true for ZigBee Router (ZR)?

a. It contains just enough functionality to talk to the parent node, and it cannot relay data from other devices.

b. This allows the node to be asleep a significant amount of the time thereby enhancing battery life.

c. Capable of running applications, as well as relaying information between nodes connected to it.

d. Memory requirements and cost of ZEDs are quite high, as compared to ZR or ZC.

QUESTION 15:

IEEE 802.15.4 uses which of the following for accessing the channel?

a. Carrier sense multiple access (CSMA)

b. Carrier sense multiple access with collision detection (CSMA‐CD)

c. Carrier sense multiple access with collision avoidance (CSMA‐CA)

d. None of these

Introduction to Internet of Things Assignment- Week 3

TYPE OF QUESTION: MCQ

Number of questions: 15 Total mark: 15 X 1 = 15

QUESTION 1:

Which of the following is true for WirelessHART?

a. Forms a true mesh network

b. It is backwards compatible to HART

c. Both a and b

d. None of the above

QUESTION 2:

In a wireless sensor network, a node which are unable to perform an operation, because of power failure and environmental effects is known as

a. normal node

b. selfish node

c. failed node

d. badly failed node

QUESTION 3:

In a super frame of HART Data Link Layer how wide are the timeslots?

a. Grouped 10ms

b. Grouped 16ms

c. Grouped 32ms

d. Grouped 20ms

QUESTION 4:

Inquiry is run by one Bluetooth device to

a. Form a connection with another device

b. discover other devices near it

c. participate in the network

d. isolate from the network

QUESTION 5:

Which of the following is the Process of forming a connection between two Bluetooth devices?

a. Inquiry

b. Connection

c. Segmentation

d. Paging

QUESTION 6:

Near Field Communication (NFC) is based on the principle of

a. Reflection

b. Refraction

c. Magnetic induction

d. Electrical conductance

QUESTION 7:

This process of bypassing radio dead-spots in Z wave is done using a message called

a. Healing

b. Beacon

c. Probe

d. None of these

QUESTION 8:

Channel blacklisting is a characteristic of which of these:

a. Z-wave

b. Bluetooth

c. HART

d. 6LoWPAN

QUESTION 9:

In which of the following modes of Bluetooth Slave become inactive until the master tells it to wake back up?

a. Active

b. Sniff

c. Hold

d. Park

QUESTION 10:

Which of the following statements is true?

a. A ZigBee module can transmit a maximum of 64kb data at a time

b. Zwave is expensive than ZigBee

c. A ZigBee module can transmit a data packet to maximum 32 receivers at a time

d. Zwave module can switch its mode to communicate with Bluetooth

QUESTION 11:

Which of the following nodes can send false routing messages and causes a threat to the integrity of the network?

a. Failed node

b. Badly failed node

c. Dumb node

d. Selfish node

QUESTION 12:

Which of the following statements is true?

a. Dumb node is similar to dead node

b. Dumb behavior of a node is temporal in nature

c. Dumb behavior is a permanent behavior of a node

d. When a node becomes dumb, it cannot return to its normal state

QUESTION 13:

Which of the following is a scheme for re-establishing the connectivity in the presence of dumb nodes in a wireless sensor networks?

a. INTSEM

b. CoRD

c. SMAC

d. DutyCon

QUESTION 14:

The HART protocol was designed for:

a. Home automation networking

b. Networked Smart Field devices

c. Vehicular networking

d. All of these

QUESTION 15:

The modulation scheme followed by Z wave is:

a. BPSK

b. QPSK

c. GFSK

d. O-QSK

\*\*\*\*\*\*\*END\*\*\*\*\*\*\*

Introduction to Internet of Things Assignment 1

1. Internet of Things (IoT) can be integrated with which of these separate domains:

a. Cloud-based storage and computing.

b. Cyber Physical Systems.

c. Big-data networks.

d. All of these.

2. In the current market scenario, IoT captures the maximum share in which one of these?

a. Industry

b. Security

c. Healthcare

d. Home automation

3. Why is IPv6 preferred over IPv4 for IoT implementations?

a. Larger addressing range

b. More security

c. Both of the above

d. Neither a or b

4. The main function of the IoT Gateway can be summarized as:

a. Forwarding packets between LAN and WAN on the IP layer.

b. Performs application layer functions between IoT nodes and other entities.

c. Enables local, short-range communication between IoT devices.

d. All of these

5. Gyroscope is a sensor which measures:

a. Acceleration

b. Velocity

c. Physical orientation

d. Pressure

6. The approximation of the measured property sensed by a digital sensor induces:

a. Quantization error

b. Hysteresis error

c. Aliasing error

d. All of these

7. Pneumatic actuators depend on for their operation.

a. Fluids

b. Powder

c. Air

d. None of these

8. A DC motor is a type of :

a. Pneumatic actuators

b. Hydraulic actuators

c. Electrical actuators

d. Mechanical actuator

9. Which of these is NOT a part of the Service Layer of the IoT Service Oriented Architecture?

a. Service integration

b. Service repository

c. Business logic

d. Data sensing and actuation protocols.

10. Which of these is NOT related to IoT scalability?

a. Flexibility within Internet.

b. Large scale deployment.

c. Real-time connectivity of billions of devices.

d. Range of each sensor node.

Introduction to Internet of Things Assignment 2

1. Which of these statements is NOT TRUE?

a. MQTT is a publish-subscribe protocol

b. MQTT is a client-server protocol

c. MQTT is a lightweight messaging protocol

d. MQTT is used in conjunction with TCP/IP

2. MQTT is designed for:

a. Remote connections

b. Limited bandwidth

c. Small-code footprint

d. All of these

3. CoAP is a:

a. Physical layer protocol

b. Application layer protocol

c. Service layer protocol

d. Network layer protocol

4. REST stands for:

a. Representational State Transfer

b. Resourceful Sensor Transfer

c. Resourceful State Transport

d. None of these

5. AMQP is designed for connecting:

a. Constrained networks

b. LANs and WANs

c. Systems and Business processes

d. None of these

6. AMQP provides the following message delivery guarantees:

a. At most once

b. At least once

c. Exactly once

d. All of these

7. Which modulation scheme is followed by IEEE 802.15.4 standard?

a. BPSK

b. QPSK

c. DSSS

d. All of these

8. Collision prevention in 802.15.4 standard is provided by means of:

a. CSMA-CA

b. CSMA-CD

c. ALOHA

d. None of these

9. Which of these is a routing protocol for low power lossy networks over IPv6?

a. RPL

b. OSPF

c. Both a and b

d. None of these

10. RPL supports:

a. Message confidentiality

b. Loop detection in the routes

c. Data path validation

d. All of these

Introduction to Internet of Things Assignment 3

1. The number of channels incorporated in physical layer of the HART standard are:

a. 10

b. 15

c. 20

d. 64

2. Channel hopping is performed at which HART layer?

a. Physical

b. Data link

c. Network

d. Application

3. Class-1 Bluetooth devices have a range of:

a. 1m

b. 10m

c. 100m

d. 1000m

4. The paging operation of a Bluetooth device is used for:

a. Forming a connection between two Bluetooth devices.

b. Trying to discover other devices near it.

c. Entering a low-power sleep mode.

d. All of these

5. The encoding scheme used in Z wave is;

a. Bipolar NRZ

b. Polar RZ

c. Manchester

d. Polar NRZ

6. This process of bypassing radio dead-spots in Z wave is done using a message called

a. Healing

b. Beacon

c. Probe

d. None of these

7. WASN stands for:

a. Wireless and Sensor networks

b. Wired and Sensor networks

c. Wireless Ad-hoc Sensor Networks

d. None of these

8. SOS in sensor web stands for

a. Sensor of a System

b. System of Sensors

c. Sensor Observation Service

d. None of these

9. Social sensing in WSNs suffer from:

a. Inability to distinguish rare events from regular events

b. Ineffective wakeup and sensing under rare event monitoring scenario

c. Both

d. None of these

10. WBAN stands for:

a. Wireless Buffer Area Networks

b. Wireless Body Area Networks

c. Wired Body Area Networks

d. Wired Buffer Area Networks

Introduction to Internet of Things Assignment 4

1. A 10-100nm EM wave incident on a Graphene layer separated by a dielectric gives rise to:

a. Surface Plasmonic Polarization

b. Surface Polarization Pulse

c. Sequential Pulse Polarization

d. None of these

2. A nano-device size is typically in the range of:

a. 10e-6m

b. 10e-9m

c. 10e-10m

d. 10e-12m

3. With respect to WSN coverage problems, the OGDC algorithm is an acronym for:

a. Optimal Geographic Density Control

b. Optimal Geographic Distance Control

c. Optimal Geographic Distance Coverage

d. Optimal geographic Density Coverage

4. A crossing with respect to WSN is if it is in the interior region of at least one node’s coverage disk.

a. Partially covered

b. Covered

c. Not covered

d. Isolated

5. MANETs are:

a. Infrastructure oriented

b. Infrastructure less

c. Partially infrastructure oriented

d. Partially infrastructure less

6. Self-CHOP property of MANETs signify:

a. Configure, Heal, Optimize, Protect

b. Communicate, Heal, Optimize, Protect

c. Configure, Heal, Organize, Protect

d. Communicate, Heal, Organize, Protect

7. A UAV network Star topology is:

a. Self-configuring

b. Multi-hop based

c. Not self-configuring

d. Both a and b

8. UAV-VANETS link-up may be used for:

a. visual guidance

b. Data-muling

c. Coverage enhancement

d. All of these

9. M2M stands for:

a. MAC to MAC communication

b. Machine to MAC communication

c. Machine to machine communication

d. MAC to machine communication

10. In a M2M ecosystem, Internet service providers:

a. Provide their infrastructures for M2M device communications.

b. are responsible for devices providing raw data.

c. is an individual or company what utilizes M2M applications.

d. None of these

Introduction to Internet of Things Assignment 5

1. Which is the device classification solution

a. Uniform Resource Identifier

b. UNSPSC

c. All of these

d. None of these

2. What kind of problems are to be solved for user interoperability?

a. Device identification and categorization for discovery

b. Syntactic interoperability for device interaction

c. Semantic interoperability for device interaction

d. All of the above

3. Before uploading the code to the Arduino board, it needs to be:

a. Verified

b. Compiled

c. Compiled and verified

d. Verified and compiled

4. The function pinmode() in Arduino programming is used to:

a. Change the read/write mode of a pin

b. Change the input/output mode of a pin

c. Change digital/analog mode of a pin

d. None of these

5. Nested loop in Arduino is:

a. Loops in the same function

b. Loop inside a Loop

c. Infinte loop

d. Not supported

Consider pin 11 is connected to an LED and pin A0 to LDR sensor, predict the output for the given code snippets in question 3 to 5.

6. void Loop(){

Value = analogRead(LDR); Serial.println(Value); delay(100);

}

a. Prints the value from the sensor to console only once

b. Prints the value from the sensor to console for 100 seconds

c. Prints the value from the sensor to console every 100 seconds

d. None of these

7. What amount of power supply is need for integration of DHT sensor with Arduino?

a. 5V

b. 3.3V

c. 12V

d. Either option 1 or option 2

8. What is the function for reading humidity from DHT sensor from Arduino?

a. dht.readHumidity()

b. dht.readTemperature()

c. dht.begin()

d. dht(pin,DHT22)

9. Which is the following is not an Actuator?

a. Servo motor

b. Stepper motor

c. DHT

d. Relay

10. What is the Arduino Servo library command to move the shaft of Servo motor back and forth across 180 degree?

a. Knob()

b. Sweep()

c. write()

d. detach()

Introduction to Internet of Things Assignment 6

1. Which of the following is used when a standard null operation is required in python?

a. Null

b. Void

c. Pass

d. Clear

2. Which of these is a user defined datatype in Python?

a. Dictionary

b. Class

c. Tuples

d. Strings

3. In the text mode in Python, which one of the following is default?

a. Read

b. Write

c. Append

d. Exclusive creation

4. What does 'b' mode stand for in Python file I/O operations?

a. Open a block

b. Open in binary mode

c. Open a block to read

d. Open a block to write

5. Which serial interface is present in Raspberry Pi?

a. I2C

b. SPI

c. UART

d. All

6. What is the maximum current drawn from the GPIO pins?

a. 50mA

b. 16mA

c. 23mA

d. None

7. Python supported library for using the GPIO pins in Raspberry is :

a. Rpi.GPIO

b. b.rpi.GPIO

c. RPi.GPIO

d. None

8. By default, the GPIO pins in Raspberry Pi are configured as?

a. Input except 14 and 15

b. Output except 14 and 15

c. Bcm

d. GPIO

9. Data collected by Raspberry Pi from the sensor can be

a. Processed in Raspberry Pi

b. Sent to other devices connected to the network

c. Used to control/activate other devices in the network

d. All of the above

10. Relay is a kind of:

a. Sensor

b. Actuator

c. Hub

d. Router

Introduction to Internet of Things Assignment 7

1. A Python method that initiates a request/server connection from the client :

a. Listen()

b. Connect()

c. Bind()

d. Send()

2. Bind() function in Python is used to:

a. Specify the port for service on the specified host

b. Read data from the socket

c. Send data to the socket

d. Initiate the connection

3. Which of the following libraries is generally used for plotting in Python?

a. Pythonplot

b. Matplotlib

c. Plotpython

d. Numpy

4. Give the value of A for the following snippet:

X=[1,2, 3, 4, 5, 6] A=X[1:3]

print A

a. [1 ,3]

b. [1, 2 ,3]

c. [2, 3]

d. [2, 3, 4]

5. SDN decouples from the traditional devices:

a. Data Plane and Control Plane

b. Data Plane and Application Plane

c. Control Plane and Application Plane

d. None of the above

6. Application program interface (API) used between data and control planes is known as:

a. Northbound API

b. Eastbound API

c. Southbound API

d. Westbound API

7. When does a switch send PAKCET-IN message to a controller:

a. Flow-rule associated with a received flow does not exist

b. All the time

c. After deleting a flow-rule

d. None of the above

8. In SDN, does the control overhead increase compared to the traditional network:

a. Depends on application and network topology

b. Yes, always

c. Not at all

d. Depends on OpenFlow protocol

9. One of the advantages of SDN-based sensor network is:

a. Real-time programmability

b. No need to replace any node

c. Both a & b

d. None of the above

10. In SDN-based sensor network, one can manage:

a. Sensor nodes

b. Sensing delay

c. Network connectivity

d. All of the above

Introduction to Internet of Things Assignment 8

1. User association to access point can be done from the latter by:

a. Placing an agent at the access point

b. Placing a master at controller

c. Both a & b required

d. None of the above

2. Typically, wireless access points use:

a. IEEE 802.15.4 protocol

b. IEEE 802.11 protocol

c. IEEE 802.15.6 protocol

d. None of the above

3. The major difference between Cluster and Grid Computing is:

a. Cluster Computing supports homogeneous and Grid Computing supports heterogeneous computing nodes

b. Grid Computing supports homogeneous and Cluster Computing supports heterogeneous computing nodes

c. Both are same

d. None of the above

4. From the below given options, which is not a characteristic of cloud computing?

a. Low management effort

b. Low level generalization of computation

c. On-demand network access

d. Configurable computing resources

5. Scalability and elasticity deals with

a. Allocation/Release of resource in short span of time

b. Variation in system performance while scale in or out

c. Static scaling of required infrastructure resources

d. None of the above

6. Pre-configure facility for allocation of virtualized resources comes under

a. Availability and reliability

b. Scalability and elasticity

c. Manageability and interoperability

d. Measured Services

7. Service Management mainly focusses on

a. Importance to desired outcomes of customers

b. Importance to desired outcomes of organizations

c. Both (a) and (b)

d. none of the above

8. Billing information is calculated using

a. Accounting Records only

b. Billing rules and Accounting records

c. Billing rules, Accounting records and Resource prices

d. None of the above

9. Cloud simulation tools provide

a. Pre-deployment tests of services

b. Evaluation of protocols

c. Controlled environment

d. All of the above

10. Which of the following is not a cloud simulator?

a. CloudSim

b. NS-3

c. DCSim

d. GroudSim

Introduction to Internet of Things Assignment 9

1. What is the function of keystone?

a. Identity service

b. Dashboard

c. Image service

d. Orchestration

2. Which component of Openstack is responsible for billing?

a. Glance

b. Heat

c. Ceilometer

d. Cinder

3. Sensor-Cloud deals with

a. Sensor-for-Service

b. Sensor-as-a-Service

c. Sensor-in-Cloud

d. None of these

4. Which of the following statement is true in sensor-cloud

a. End user procures sensors and lend these to sensor-cloud service provider

b. Sensor-cloud is based only on dumping the sensor data to the cloud

c. Single sensor nodes is shared dedicatedly with only one end user

d. None of these

5. Internal Cache (IC) in sensor-cloud

a. Takes decision whether the data should be provided directly to the end user or is it required to re-cache the data from external cache.

b. Based on a particular caching interval re-cache data

c. All of these

d. None of these

6. What is latency in fog computing?

a. Time taken by a data for processing in cloud

b. Time taken by a data for processing in nodes

c. Time taken by a data packet for a round trip

d. Time taken by a data packet to reach cloud

7. If the time-sensitive data are sent to cloud for analysis, the latency will be \_ .

a. Increased

b. Decreased

c. neither increase nor decrease

d. first increase, then decreased

8. What is a good approach to reduce latency?

a. Analyzing data close to the data source

b. Analyzing data in cloud

c. Increasing number of nodes

d. Decreasing number of nodes

9. Summaries from the nodes are .

a. Time sensitive data

b. Less time sensitive data

c. Non time sensitive data

d. None of the above.

10. From the following devices, select the device/devices, which can act as a fog node.

a. Proximity sensor

b. GPS nodule

c. Micro SD card

d. Routers

Introduction to Internet of Things Assignment 11

1. Net metering depends on –

a. Energy consumed by the consumers and energy generated by the consumers

b. Energy consumed by the consumers and energy supplied back to the grid

c. Only energy consumed by the consumer

d. None of the above

2. Smart grid enables –

a. Distributed energy management

b. Centralized energy management

c. Either of these

d. None of these

3. In smart grid, gateways communicate using – a. IEEE 802.15.4

b. IEEE 802.15.6

c. 6LowPAN

d. IEEE 802.11

4. Full form of SANETs –

a. Sensors and Actions Networks

b. Sensors and Actuator Networks

c. Smart and Active Networks

d. None of these

5. In IIoT environment, networks can

a. Communicate with each other, external environment and people.

b. Communicate with each other, but not with external environment and people.

c. Does not communicate with each other, but communicates with external environment.

d. Communicate with each other, but not with people.

6. IIoT is mainly focused on

a. Convenience of individuals

b. Efficiency, safety and security of operation and individuals.

c. Efficiency of the system.

d. Data security.

7. What is the key technology to enable V2V and V2R communication?

a. Short Range Communication

b. Dedicated Short Range Communication

c. Long Range Communication

d. Medium Range Communication

8. What do you mean by service management in IIoT?

a. Implementation and management of the quality of services

b. Collection of services

c. Features extracted from data received

d. Services which do not meet the demand of end-users.

9. Traditional RDBMS unable to process –

a. Structured data

b. Unstructured data

c. Both structured and unstructured data

d. None of these

10. Structured data is managed in database using –

a. .NET Framework

b. Structured Query Language

c. Normal Language Processing

d. All of these

Introduction to Internet of Things Assignment 12

1. Mathematical model, which represents the relationship between variables, is termed as –

a. Mathematical model

b. Statistical model

c. Variability model

d. None of the above

2. ANOVA has –

a. Two types

b. Three Types

c. Four Types

d. Any finite value

3. Which of the following option supports a long-range communication

a. ZigBee

b. GPRS

c. Bluetooth

d. All of the above

4. The primary challenges of an embedded operating system for WSN are

a. Small memory footprint

b. Low power and computing capability

c. Lack hardware parallelism

d. All of these

5. What is the network topology of Ambusens WBAN devices

a. Bus topology

b. Star Topology

c. Mesh Topology

d. None of the above

6. Which communication protocol is used between sensor devices in Ambusens WBAN system

a. 3G

b. WLAN/Wi-fi

c. IEEE 802.15.4

d. IEEE 802.15.1

7. Which privacy-aware scheme is used in Ambusens cloud framework

a. Hashing and reverse hashing of patient physiological data

b. Patient identity masking by hashing-based mechanism

c. Hashing and reverse hashing of physiological sensor ID

d. All of the above

8. Activity monitoring:

a. Provides better quality of life

b. Provides information accurately in a reliable manner

c. Provides continuous monitoring support.

d. All of these

9. Which of these sensors can be most appropriately used for activity monitoring in wearables?

a. Accelerometer

b. Cameras

c. LIDARs

d. LED

10. Statistical methods of activity recognition can work on:

a. Videos

b. Images

c. Scalar sensor data

d. All of these

1. The paging operation of a Bluetooth device is used for:

### Forming a connection between two Bluetooth devices.

* 1. Trying to discover other devices near it.
  2. Entering a low-power sleep mode.
  3. All of these

1. A DC motor is a type of :
   1. Pneumatic actuators
   2. Hydraulic actuators

### Electrical actuators

* 1. Mechanical actuator

1. In SDN-based sensor network, one can manage:
   1. Sensor nodes
   2. Sensing delay
   3. Network connectivity

### All of the above

1. Internet of Things (IoT) can be integrated with which of these separate domains:
   1. Cloud-based storage and computing.
   2. Cyber Physical Systems.
   3. Big-data networks.

### All of these.

1. In the current market scenario, IoT captures the maximum share in which one of these?

### Industry

* 1. Security
  2. Healthcare
  3. Home automation

1. The main function of the IoT Gateway can be summarized as:

### Forwarding packets between LAN and WAN on the IP layer.

* 1. Performs application layer functions between IoT nodes and other entities.
  2. Enables local, short-range communication between IoT devices.
  3. All of these

1. IIoT stands for:
   1. International Internet of Things
   2. Instrumentation Internet of Things

### Industrial Internet of Things

* 1. None of the above

1. MANETs are:
   1. Infrastructure oriented

### Infrastructure less

* 1. Partially infrastructure oriented
  2. Partially infrastructure less

1. The approximation of the measured property sensed by a digital sensor induces:

### Quantization error

* 1. Hysteresis error
  2. Aliasing error
  3. All of these

1. Terms ‘piconet’ and ‘scatternet’ are associated with:
   1. Wi-Fi
   2. ZigBee

### Bluetooth

* 1. LAN

1. Nested loop in Arduino is:
   1. Loops in the same function

### Loop inside a Loop

* 1. Infinte loop
  2. Not supported

1. In cloud computing, IaaS is:
   1. Industry-as-a-service
   2. Instrument-as-a-service
   3. Internet-as-a-service

### Infrastructure-as-a-service

1. Fog computing is very good for

### Handling time-sensitive data

* 1. Providing the huge storage space
  2. Providing high processing power
  3. None of these

1. Which of these is NOT related to IoT scalability?
   1. Flexibility within Internet.
   2. Large scale deployment.
   3. Real-time connectivity of billions of devices.

### Range of each sensor node.

1. IPv6 addresses consists of
   1. 48bits
   2. 64bits
   3. 96bits

### 128bits