

IAT-3 Question_paper and solution

✓ The equation representing the IBM IoT frame work is:

1 / 1

- Gateway+(Connect+Collect+Assemble+Manage) and Analyse = Internet of Things
- Gather+Consolidate+(Connect+Collect+Assemble+Manage) and Analyse = Internet of Things ✓
- Physical object+Internet+Manage+store+Analyse = Internet of Things
- Gateway+(Connect+Database+Organize+Analyse) = Internet of Things

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✓ The ITU-T reference model proposes (i) four layers (ii) lowest layer as device layer has device and gateway capabilities (iii) next layer to the device layer has transport and network capabilities (iv)next layer is the services and application support layer and (v) and the top most layer is Application layer

1 / 1

- (i) is incorrect
- (ii) to (v) are layers in the model and (i) is true. ✓
- only (i) is true
- (ii) and (v) are in correct

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✓ What is Geographic routing

1 / 1

- Routing done on the basis of density of nodes
- Routing done on the basis of physical position of nodes ✓
- Routing done on the basis of data contents of nodes
- Routing done on the basis of distances between the node

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✓ What is the microcontroller used in Arduino UNO?

1 / 1

- ATmega328p ✓
- ATmega2560
- ATmega32114
- AT91SAM3x8E

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✓ Connectivity interface and Edge computing is part of which M2M domain?

1 / 1

- M2M application Domain
- M2M Network Domain
- M2M device Domain
- None of the above



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✓ Find the incorrect statement

1 / 1

- Protocol is proactive or table-driven if it keep the exact information in the routing tables
- Reactive Protocol is also called as on demand protocol
- Implosion is a situation in which duplicate messages are sent to the same node
- In resource blindness the source can't see the destination hence no transmission.



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✓ Which is the software or a programming language used for controlling of Arduino? 1 / 1

- Assembly Language
- C Languages
- JAVA
- Any Language ✓

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✓ In modified OSI model for IoT presentation and session layer is combined and known as 1 / 1

- Data Adaptation layer
- Network Layer
- Application Support layer ✓
- Transport Layer

✓ Manage+Acquire+Organise and Analyse happens at which layer in modified OSI model for IoT 1 / 1

Data Adaptation

Network Layer

Application Support layer ✓

Transport Layer

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✓ Stream is associated with which layer in modified OSI model for IoT 1 / 1

Transport Layer ✓

Application Support layer

Network Layer

Data Adaptation

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✓ Gather and Enrich is associated with which layer in modified OSI model for IoT 1 / 1

- Physical cum Data-link Layer and Data Adaptation layer ✓
- Network Layer
- Application Support layer
- Transport Layer

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✓ The full form of GPSR is: 1 / 1

- Greedy Perimeter State Routing for Wireless Networks
- Greedy Perimeter Stateless Routing for Wireless Networks ✓
- Greedy Perimeter Stateless Routing
- Greedy Perimeter Stateless Routing for Networks

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✓ In ITU-T reference model Data Adaptation and Physical cum Data Link Layer is combine and named as

1 / 1

Device Layer



Network Layer

Application support layer

Application Layer

Add individual feedback

✓ Data Adaptation, conversion and change of protocol, format or code using software is known as

1 / 1

Transcoding



Privacy

Integration

fusion

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✓ Cluster head is the node which is

1 / 1

- Have the highest energy
- Near to destination node
- A gateway
- Can pass the data effectively



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✓ Polling, Event based gathering, scheduled interval, continuous monitoring are different techniques of

1 / 1

- Data dissemination
- Data handling
- Data Adaptation
- Data Gathering



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✓ Data aggregation refers to the process of joining together present and previously received data frames after removing redundant or duplicate data 1 / 1

True ✓

False

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✓ A Device Management provisions for 1 / 1

provide a unique device ID

Device activating and deactivating

Device configuration

all of the above ✓

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✓ OMA stands for

1 / 1

OpenMobile Alliance ✓

OpenMobile Association

Open M2M Alliance

None of the above

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✓ VPN stands for

1 / 1

Virtual proxy network

Virtual personal network

Vertical personal network

none of the above ✓

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✓ Suggested privacy model depends on the following components (i) trust (ii) device and application identities management (iii)authentication (iv)Authorization and (v)reputation 1 / 1

All except (vi) are true

All except (ii) are true

All except (i) are true

all are true ✓

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✓ Data enrichment before the data disseminates to the network means (i)aggregation (ii)compaction (iii)fusion (iv)adjusting data rate within the permitted limit,(v)communication as per protocol standards,(vi)formatting as per protocol specifications 1 / 1

all are true

All except (iv) and (v) are true ✓

All except (iii) and (v) are true

(i) to (iii) are true

✓ REST stands for

1 / 1

Repository state transfer

Representational State Transfer ✓

Rest State Transfer

None of the above

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✓ Short form for Routing over Low power and Loss is

1 / 1

ROLL ✓

RLPL

none

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✓ HTTP is a unconstrained protocol

1 / 1

True



False

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✓ MQTT stands for

1 / 1

MQ Telemetry Things

MQ Transport Telemetry

MQ Transport Things

MQ Telemetry Transport



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✓ MQTT is _____ protocol

1 / 1

- Machine to Machine
- Internet of Things
- Machine to Machine and Internet of Things
- Machine Things



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✓ For MQTT, which statement is correct

1 / 1

- Publishers publish the data to broker
- Subscriber subscribes to broker using title
- Broker uses store and forward operation

All of the above



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✓ XMPP Full form is _____

1 / 1

Extensible Messaging and Presence Protocol ✓

Extensible Module and presence protocol

Extensible Messaging Presence Protocol

Extensible Message and Presence Protocol

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✓ CoAP is a specialized _____ protocol.

1 / 1

Web Transfer ✓

Power

Application

Resource

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✓ Which one is main attack on application layer

1 / 1

- Reply, cryptographic
- Injection , buffer overflows
- Hello and session flooding
- Eavesdropping



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✓ A program written with the IDE for Arduino is called _____

1 / 1

- IDE source
- Sketch
- Cryptography
- Source code



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✓ What is full form of TRAMA protocol

1 / 1

- Traffic Adaptive Medium Access Control Protocol
- Traffic Adaptive Media Access Control Protocol ✓
- Traffic Adapt Media Access Control Protocol
- Traffic Adaptive Media Access Protocol

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✓ LWM2M is

1 / 1

- Less weight machine to machine protocol
- Low weight machine to machine protocol
- Light weight machine to machine protocol ✓
- Lower weight machine to machine protocol

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✓ CoAP works on

1 / 1

UDP



TCP

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✓ Data Enrichment process involves

1 / 1

Aggregation

Compaction

Fusion

All of the above



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✓ Sink hole attack occurs at which layer

1 / 1

Application layer

Network layer ✓

Data link layer

Cloud

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✓ Arduino IDE consists of 2 functions. What are they?

1 / 1

Build() and loop()

Setup() and build()

Setup() and loop() ✓

Loop() and build() and setup()

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✓ A smart home consists of

1 / 1

- Sensor networks
- Communication network infrastructure
- Intelligent control and management
- All the above



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✓ How many digital pins are there on the UNO board?

1 / 1

- 14
- 12
- 16
- 20



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✓ The gateway in IOT nodes deals with

1 / 1

Edge computing ✓

Cloud computing

Server computing

Data Computing

Add individual feedback

✓ IOT conceptual framework is defined by

1 / 1

CISCO and Oracle ✓

Microsoft and IBM

CISCO and

Amazon and Microsoft

Add individual feedback

✓ What is full form of JSON

1 / 1

Java script object notation ✓

Java script object note

Java score object notation

Java script obj notation

Add individual feedback

✓ CoAP-SMS is

1 / 1

Constrained application protocol short messaging service ✓

Constrained application protocol short message service

Constrained app protocol short messaging service

Constrained application protocol short messaging serve

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✓ What are the message communication protocols for connected devices: 1 / 1

CoAP-SMS

CoAP-MQ

MQTT

XMPP

All of the above



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✓ What are the vulnerabilities in IoT 1 / 1

Insecure web interface

Insecure network services

Ineffective authentication/authorization

Insecure device physical interface

All of the above



✓ Insecure web interface can lead to problems like

1 / 1

SQL injection



Brute force attacks

Insecure Protocols

Privacy issues

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✓ Denial-of-Service (DoS) attack is the attack in which

1 / 1

APIs are insecure

The attacker shut down a machine or network



Traffic is too much

Authentication is weak

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✓ Which is not the security requirement

1 / 1

- Identity management
- Authentication and Authorization
- Brute force attack
- Key exchange and management



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✓ What is tempering

1 / 1

- The plain text are stored without using any encryption protocol.
- The act of deliberately modifying (destroying, manipulating or editing) data through unauthorized channels
- The group network congestion attacks
- A kind of false routing



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