National Testing Agency

Question Paper Name:	5273 Components and Applications of Internet of Things 30th June 2019 Shift 1
Subject Name:	Components and Applications of Internet of Things
Creation Date:	2019-06-30 18:16:53
Duration:	180
Total Marks:	100
Display Marks:	Yes

Components and Applications of Internet of Things

Group Number :	1
Group Id :	489994197
Group Maximum Duration :	0
Group Minimum Duration :	120
Revisit allowed for view? :	No
Revisit allowed for edit? :	No
Break time:	0
Group Marks:	100

Components and Applications of Internet of Things

Section Id :	489994253
Section Number :	1
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	100
Number of Questions to be attempted:	100
Section Marks:	100
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	489994273
Question Shuffling Allowed :	Yes

Question Number : 1 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In which of the following applications can we use deep learning to solve the problem?

(a) Image classifications

(b) Protein structure prediction

(c) Detection of exotic particles

(d) All of the above

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 2 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option :
No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Statement 1: It is possible to train a network well by initializing all the weights as 0. Statement 2: It

is possible to train a network well by initializing biases as 0. Which of the statements given above is

true?

  (a) Statement 1 is true and Statement 2 is false

  (b) Statement 1 is false and Statement 2 is true

  (c) Both are true

  (d) Both are false

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 3 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option :
No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The number of nodes in the input layer is 20 and the hidden layer is 5. The maximum number of

connections from the input layer to the hidden layer are

  (a) 25

  (b) 50

  (c) 100

  (d) 200

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 4 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option :
No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which one of the following is a Keras model that provides linear stack of layers?

  (a) Dense (b) Sequential (c) Keras functional API   (d) Initializer

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 5 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

To obtain the list of weights of the layer layer, which of the following function should be used?

(a) layer.weights()   (b) layer.get_weights()

(c) layer.set_weights(weights)   (d) layer.input()

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 6 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which one of the following is a compulsory parameter for any dense layer in Keras?

(a) input shape   (b) use_bias   (c) output shape   (d) kernel_initializer

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 7 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following is the default activation function for the dense layers in Keras?

(a) softmax   (b) selu   (c) linear   (d) relu

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 8 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A dropout layer is used to

(a) introduce non-linearity   (b) prevent overfitting

(c) to flatten the input   (d) to reshape the input

Options :

1. 1
2. 2
3. 3

4. 4

**Question Number : 9 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option :
No Option Orientation : Vertical**
Correct Marks : 1 Wrong Marks : 0

Compile() method is used to

   (a) define model architecture   (b) parameter tuning

   (c) configure learning process   (d) evaluation of the model

Options :
1. 1
2. 2
3. 3
4. 4

**Question Number : 10 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option :
No Option Orientation : Vertical**
Correct Marks : 1 Wrong Marks : 0

Which of the following parameter specifies the number of times model sees the whole training data?

   (a) loss   (b) epochs   (c) batch size (d) verbose

Options :
1. 1
2. 2
3. 3
4. 4

**Question Number : 11 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option :
No Option Orientation : Vertical**
Correct Marks : 1 Wrong Marks : 0

Which of the following parameter specifies the number of training samples which are seen before

updating the weights.

   (a) loss   (b) epochs   (c) batch size (d) verbose

Options :
1. 1
2. 2
3. 3
4. 4

**Question Number : 12 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option :
No Option Orientation : Vertical**
Correct Marks : 1 Wrong Marks : 0

Which one of the following performs the training/parameter tuning in Keras?

   (a) model.compile()   (b) model.fit()

   (c) model.evaluate()   (d) model.summary()

Options :
1. 1

2. 2

3. 3

4. 4

Question Number : 13 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which one of the following is the compulsory parameter for defining Conv2D() layer in Keras?

(a) kernel_size   (b) strides   (c) activation (d) data_format

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 14 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

What is the default stride for Conv2D() layer in Keras?

(a) (1,1)   (b) (1,2)   (c) (2,1)   (d) (2,2)

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 15 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which one of the following is the default value for the parameter padding for Conv2D() layer in Keras?

(a)False   (b)True   (c) same   (d) valid

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 16 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

An ultrasonic sensor is

(a) Active sensor   (b) Passive sensor   (c) Both   (d) Neither active nor passive

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 17 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Assume that there are four possible states (s1, s2, s3, and s4) that a robot can occupy. What is the probability that the robot occupies the state s1? Assume a uniform belief.

(a) 1

(b) 0

(c) 0.25

(d) Information is insufficient to determine the probability

Options :

1. 1

2. 2

3. 3

4. 4

Sub-Section Number:	2
Sub-Section Id:	489994274
Question Shuffling Allowed :	Yes

Question Number : 18 Question Type : MSQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

. Which of the below is/are true in the context of object grasping technology as facilitated by IoRT?

(a) Objects and devices can be self-describing and can provide information about themselves to the robots

(b) Cloud based servers can serve as a repository for object model descriptors

(c) Remote servers can be a source for computationally complex, distributed processing

(d) Heavier objects can be grasped

Options :

1. 1

2. 2

3. 3

4. 4

Sub-Section Number:	3
Sub-Section Id:	489994275

**Question Number : 19 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option :
No Option Orientation : Vertical**

Correct Marks : 1 Wrong Marks : 0

. The key difference(s) between robotic things in IoRT compared to the things in IoT

(a) The robotic things are more efficient unlike the things in IoT

(b) The robotic things can directly move other things physically unlike the things in IoT

(c) The robotic things are more secure unlike the things in IoT

(d) The robotic things are can communicate better compared to the things in IoT

Options :

1. 1

2. 2

3. 3

4. 4

Sub-Section Number:	4
Sub-Section Id:	489994276
Question Shuffling Allowed :	Yes

**Question Number : 20 Question Type : MSQ Option Shuffling : No Display Question Number : Yes Single Line Question Option :
No Option Orientation : Vertical**

Correct Marks : 1 Wrong Marks : 0

Which of the following is/are enabled by IoRT over conventional robots

(a) Communication between geographically separated humans and robots

(b) Increased payload capacity

(c) Reduced power consumption

(d) Distributed localization and object recognition

Options :

1. 1

2. 2

3. 3

4. 4

Sub-Section Number:	5
Sub-Section Id:	489994277
Question Shuffling Allowed :	Yes

**Question Number : 21 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option :
No Option Orientation : Vertical**

Correct Marks : 1 Wrong Marks : 0

If the pdf is viewed as a function of the unknown parameter (with x fixed), it is called the

   (a) likelihood function

   (b) cumulative distribution function

   (c) log-likelihood function

   (d) probability mass function

Options :

1. 1

2. 2

3. 3

4. 4

**Question Number : 22 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option :
No Option Orientation : Vertical**

Correct Marks : 1 Wrong Marks : 0

The CRLB for the fisher information matrix A = [a1 a2]^T, where a1 = [5 4] and a2 = [-3 1] and T

denotes transpose of a matrix, is

   (a) 0.352942

   (b) 0.058824

   (c) -0.058824

   (d) 0.235295

Options :

1. 1

2. 2

3. 3

4. 4

**Question Number : 23 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option :
No Option Orientation : Vertical**

Correct Marks : 1 Wrong Marks : 0

The Galvanic skin response sensor records the

   (a) Intensity of human emotional state

   (b) Health condition of muscles

   (c) Electrical signals from the heart

   (d) Breathing rate

Options :

1. 1

2. 2

3. 3

4. 4

**Question Number : 24 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option :
No Option Orientation : Vertical**

Correct Marks : 1 Wrong Marks : 0

The software suite for real-time biosignals visualisation in Biosignal plux kit is

(a) MySignal

(b) OpenSignals

(c) MixSignals

(d) None of these

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 25 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following is the main spike visible on an ECG line

(a) P

(b) ST

(c) QRS

(d) PQ

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 26 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The sensor node in smart agriculture kit to integrate multiple sensors is called

(a) Wardmote

(b) Waspmote

(c) Sensonode

(d) Meshlium

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 27 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

If the order of the Recursive Least Square filter is less than the order of polynomial measurement

signal, the filter estimate will

(a) Converge

(b) Give exact solution

(c) Diverge

(d) None of these

Options :

1. 1

2. 2

3. 3

4. 4

**Question Number : 28 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option :
No Option Orientation : Vertical**

Correct Marks : 1 Wrong Marks : 0

Which of the following methods is based on weighted least squares in which previous values taken in

account for determining the future value?

(a) Bayesian method

(b) Recursive Least Square method

(c) Kalman filter method

(d) None of these

Options :

1. 1

2. 2

3. 3

4. 4

**Question Number : 29 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option :
No Option Orientation : Vertical**

Correct Marks : 1 Wrong Marks : 0

A set of recursive equations to find the optimal gain at each time step is called

(a) Adaptive least square equations

(b) Riccati Equations

(c) Gauss Equations

(d) Kalman Equations

Options :

1. 1

2. 2

3. 3

4. 4

**Question Number : 30 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option :
No Option Orientation : Vertical**

Correct Marks : 1 Wrong Marks : 0

. If X is the random variable and a and b are the constants, the variance of $aX + b$ is

(a) $aVar(X)$

(b) $aVar(X) + b$

(c) $a^2 Var(X) + b$

(d) None of these

Options :

1. 1

2. 2

3. 3

4. 4

**Question Number : 31 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option :
No Option Orientation : Vertical**

Correct Marks : 1 Wrong Marks : 0

If X is the random variable and a and b are the constants, the expectation of $aX + b$ is

(a) $aE(X)$

(b) $aE(X) + b$

(c) $a^2 E(X) + b$

(d) None of these

Options :

1. 1

2. 2

3. 3

4. 4

**Question Number : 32 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option :
No Option Orientation : Vertical**

Correct Marks : 1 Wrong Marks : 0

The zero-mean and unity-mean features in localization are used to handle

(a) Device diversity

(b) Huge volume of data

(c) Uncertainty of measurements

(d) None of these

Options :

1. 1

2. 2

3. 3

4. 4

**Question Number : 33 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option :
No Option Orientation : Vertical**

Correct Marks : 1 Wrong Marks : 0

For any unbiased estimator, the Cramer-Rao bound should be x than Mean Square Error. What is x here?

(a) Equal

(b) Lower

(c) Higher

(d) None of these

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 34 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

If the standard deviation of localization error for Localization Methods A and B are 1 m and 1.5 m, respectively. Which method is good?

(a) A

(b) B

(c) Both are same

(d) None of these

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 35 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In Kalman Filter, the measurement and process noise are

(a) Cannot be related

(b) Same

(c) Different

(d) None of these

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 36 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

What is tertiary control in a nanogrid consists of

(a) Optimization

(b) Voltage control

(c) MPPT

(d) All of the above

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 37 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The Internet of Things (IoT) paradigm refers as

(a) network of interconnected things

(b) Devices such as sensors and/or actuators, equipped with a telecommunication interface

(c) Processing and storage units

(d) All of the above

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 38 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

. What is multihop short-range transmission technologies?

(a) Bluetooth

(b) 6LoWPAN

(c) Both (a) & (b)

(d) None of the above

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 39 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Multihop routing generally yields

   (a) long communication delays

   (b) unequal energy consumption

   (c) unpredictable energy consumption among the devices

   (d) All of the above

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 40 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

For HAN, BAN and IAN communication technology can offer

   (a) 100kbps data rate up to 100m coverage range

   (b) 1000kbps data rate up to 1000m coverage range

   (c) 400kbps data rate up to 100km coverage range

   (d) None

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 41 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Suitable available communication technologies for HAN applications are

   (a) PLC, ZigBee and mesh network

   (b) WiFi mesh network, Cellular

   (c) Digital Subscriber Line (DSL) and WiMAX

   (d) All of the above

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 42 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Suitable available communication technologies for WAN applications are

(a) ZigBee and mesh network

(b) WiFi mesh network

(c) Fiber Optics

(d) None

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 43 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Nanogrid monitoring unit consists of

(a) Home server

(b) Grid server

(c) both (a) & (b)

(d) None

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 44 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Nanogrid control unit consists of

(a) closed loop voltage control

(b) reactive power control

(c) frequency control

(d) None

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 45 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

. Nanogrid consists of

(a) Battery

(b) Converters

(c) solar PV

(d) All of the above

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 46 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

. A wireless extension to a wired network can eliminate the need for new _____ to be installed.

(a) Cables

(b) Access Point

(c) Router

(d) Bridges

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 47 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

. A wireless network provides immediate connection anywhere in the wireless range of its

_____.

(a) Access Points

(b) Gateways

(c) Routers

(d) Bridges

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 48 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which one of the following RF band is allocated to the Industrial, Scientific and Medical industry?

(a) 2.4 GHz to 2.4835 GHz

(b) 4.9 GHz to 5.825 GHz

(c) 824 MHz to 849 MHz

(d) 174 MHz to 220 MHz

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 49 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A microporcessor in 1980 used about 10,000 transistors. How many of those microprocessors would

fit in a modern chip having 1 billion trnsistors?

(a) 100,000 microprocessors

(b) 100,00 microprocessors

(c) 100 microprocessors

(d) None of these

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 50 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The first Pentium micropocessor had about 3 million transistors. How many of those

microprocessors would fit in a modern chip having 1 billion transistors

(a) 10000 microprocessors

(b) 1000 microprocessors

(c) 333 microprocessors

(d) None of these

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 51 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Accoding to Moore's Law

(a) wiring complexity doubles approxumately every 18 months

(b) Chips get doubled every 2 months

(c) Integrated circuits density doubles approxumately every 18 months

(d) None of these

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 52 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Internet of Things (IoT) consists of

(a) network of physical objects—devices

(b) network of vehicles, buildings and other items

(c) embedded with electronics and software

(d) All of these

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 53 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

British entrepreneur .... first coined the term IoT

(a) Kevin Ashton

(b) David Moore

(c) William Shockly

(d) Quinn Maclusky

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 54 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

.... is a prerequisite for the Internet of Things

(a) Energy conservation

(b) Resource utilization

(c) Human intervention

(d) fault tolerance

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 55 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Value telecommunications network is proportional to the square of the number of connected users of

the system

(a) It is called Moore's Law

(b) It is called Metcalf's Law

(c) It is called Koomey's Law

(d) None of these

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 56 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The number of computations per joule of energy dissipated has been doubling approximately every

1.57 years

(a) It is called Moore's Law

(b) It is called Metcalf's Law

(c) It is called Koomey's Law

(d) None of these

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 57 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Fifth Generation of computers is defined as

(a) Present and Beyond

(b) Microprocessors generation

(c) Transistors

(d) None of these

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 58 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

An 2017 iPhone X has

(a) approx 10 billion operation/second

(b) 16 Chips

(c) 4.3B transistors (CPU only)

(d) All of the above

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 59 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

. From Metcalfe's Law of Connectivity 12 computers will have

(a) 60 connections

(b) 66 connections

(c) 50 connections

(d) 24 connections

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 60 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

. From Metcalfe's Law of Connectivity 100 computers will have

    (a) almost 1000 Connections

    (b) almost 2000 Connections

    (c) almost 5000 Connections

    (d) None of these

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 61 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Bell's Law states

    (a) A new computer class emerges roughly every year

    (b) A new computer class emerges roughly every 2 years

    (c) A new computer class emerges roughly every decade

    (d) None of these

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 62 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

network architecture defines

    (a) set of protocols

    (b) how every layer is to function

    (c) Interfaces between the layers

    (d) All of the above

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 63 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The interface faces of Protocols are

(a) service interface and peer-to-peer interface

(b) Network architecture interface

(c) service architecture

(d) None of these

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 64 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

. Protocols define

(a) format and order of messages sent

(b) actions taken on message

(c) transmission and receipt

(d) All of the above

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 65 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

OSI model has

(a) five-layer

(b) four-layer

(c) seven-layer

(d) None of these

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 66 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

tcp/ip reference model has

(a) five-layer

(b) four-layer

(c) seven-layer

(d) None of these

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 67 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

An example of Application layer protocols is

(a) HTTP

(b) IP

(c) PPP

(d) UDP

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 68 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

An example of Transport layer protocols is

(a) HTTP

(b) IP

(c) PPP

(d) UDP

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 69 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

An example of Network layer protocols is

(a) HTTP

(b) IP

(c) PPP

(d) UDP

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 70 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following transport layer protocol is used to support electronic mail?

(a) SMTP

(b) IP

(c) TCP

(d) UDP

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 71 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

IoT system with 250mAh capacity, 3V, the total energy is

(a) 0.75kJ

(b) 2.7kJ

(c) 27kJ

(d) 7.5kJ

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 72 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

What is the maximum size of data that the application layer can pass on to the TCP layer below?

(a) Any size

(b) 65536 bytes-size of TCP header

(c) 65536 bytes

(d) 1500 bytes

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 73 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A Bluetooth Low energy IoT system with 250mAh capacity, 3V, the standby current is 1 micro amp

If the system is not in use how long the the system will be active

(a) approximately 2 years

(b) approximately 28 years

(c) approximately 2.8 years

(d) approximately 2 years

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 74 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A Bluetooth Low energy IoT system with 250mAh capacity, 3V, transmit and receive current is

4mA and if it is continuous operation. How long will it work>

(a) approximately 2.6 days

(b) approximately 1.6 days

(c) approximately 2 days

(d) approximately 3 days

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 75 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A programmable timer device used to ensure that processor is running program is

(a) Real Time Clock

(b) Phase Lock Loop

(c) Watchdog Timer

(d) Simulation Time Clock

Options :

1. 1

2. 2

3. 3

4. 4

**Question Number : 76 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option :
No Option Orientation : Vertical**

Correct Marks : 1 Wrong Marks : 0

In microcontrollers, I2C stands for

(a) Inter-Integrated Clock

(b) Initial-Integrated Clock

(c) Inter-Square Circuit

(d) Inter-Integrated Circuit

Options :

1. 1

2. 2

3. 3

4. 4

**Question Number : 77 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option :
No Option Orientation : Vertical**

Correct Marks : 1 Wrong Marks : 0

PLL in microcontroller stands for

(a) Phase Lock Loop

(b) Phase Level Loop

(c) Phase Linear Lock

(d) Phase Linear Loop

Options :

1. 1

2. 2

3. 3

4. 4

**Question Number : 78 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option :
No Option Orientation : Vertical**

Correct Marks : 1 Wrong Marks : 0

A peripheral in microcontroller used to handle data transfers in a serial data protocol, where a clock

signal is required and can provide higher data rate is

(a) PLL

(b) I2C

(c) I2S

(d) ADC

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 79 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of following ARM processors have longest pipeline?

(a) Cortex-R processors

(b) Cortex-A processors

(c) Cortex-M processors

(d) ARM9E series

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 80 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Processors used in many microcontroller products need to be

(a) high power

(b) low power

(c) low interrupt response

(d) low code density

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 81 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In Cortex-MO and Cortex-MO+ processor, R14 register is a

(a) stack counter

(b) link register

(c) program loader

(d) program counter

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 82 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In pipelining, after fetching, data is

(a) initialized

(b) decoded

(c) deleted

(d) executed

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 83 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Processor used in high performance power microcontrollers are

(a) Cortex-M0 processor

(b) Cortex-M3 processor

(c) Cortex-M1 processor

(d) Cortex-M7 processor

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 84 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

RAM used for data storage in microcontroller is

(a) SRAM

(b) DRAM

(c) Flash memory

(d) Cache memory

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 85 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

When data is decoded by processor, it is

(a) initialized

(b) decoded

(c) deleted

(d) executed

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 86 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

. In microcontrollers, a peripheral to handle data transfers in a simple serial data protocol is

(a) PLL

(b) UART

(c) I2C

(d) ADC

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 87 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The instructions like MOV or ADD in ARM ISA are called as _____

(a) OP-Code

(b) Operators

(c) Commands

(d) None of the mentioned

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 88 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The instruction, ADD R1, R2, R3 in ARM ISA is decoded as ____

(a) R1<-[R1]+[R2]+[R3].

(b) R3<-[R1]+[R2].

(c) R3<-[R1]+[R2]+[R3].

(d) R1<-[R2]+[R3].

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 89 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The instruction, MLA R0,R1,R2,R3 in ARM ISA performs _____

(a) R0<-[R1]+[R2]+[R3].

(b) R3<-[R0]+[R1]+[R2].

(c) R0<-[R1]*[R2]+[R3].

(d) R3<-[R0]*[R1]+[R2].

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 90 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

. Embedded systems are programmed using

(a) Machine Code

(b) Low level

(c) High level

(d) Machine Code, Low level, High level

Options :

1. 1

2. 2

3. 3

4. 4

**Question Number : 91 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option :
No Option Orientation : Vertical**

Correct Marks : 1 Wrong Marks : 0

. Embedded C programming language support _____ instructions of normal "C" language

(a) All

(b) Some

(c) Specific

(d) None

Options :

1. 1

2. 2

3. 3

4. 4

**Question Number : 92 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option :
No Option Orientation : Vertical**

Correct Marks : 1 Wrong Marks : 0

. Assembly code embedded within C programs is called

(a) inline assembly code

(b) External assembly code

(c) Embedded Assembly code

(d) Standard Assembly Code

Options :

1. 1

2. 2

3. 3

4. 4

**Question Number : 93 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option :
No Option Orientation : Vertical**

Correct Marks : 1 Wrong Marks : 0

Which software is used to control products and systems in IOT for the consumer and industrial markets?

(a) System software

(b) Artificial intelligence software

(c) Embedded software

(d) Engineering and scientific software

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 94 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Wi-Fi embedded with IOT Device uses operating frequency of _____

(a) 0.8GHz

(b) 2.4GHz

(c) 3.5GHz

(d) None of the above

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 95 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

. Probable definition of IoT is

(a)Sensor integrated devices to enable IoT connectivity

(b)Two way communication, offers option to all the devices

(c)Solution managing all the connections offer unlimited integration

(d) All of the above

Options :

1. 1

2. 2

3. 3

4. 4

Question Number : 96 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following is a Machine to Machine(M2M)

(a)Devices connected to form work cycle using various machines and devices

(b)Action triggered events among devices

(c)cloud computing helps in interacting/data exchange

(d)All of the above

Options :

1. 1

2. 2

3. 3

4. 4

**Question Number : 97 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option :
No Option Orientation : Vertical**

Correct Marks : 1 Wrong Marks : 0

Machine to Machine (M2M) can be

(a)Wired, wireless, cellular, etc

(b) Mostly one way, based on triggered actions

(c) Requires particular communication rules, resulting minimal integration

(d) All of the above

Options :

1. 1

2. 2

3. 3

4. 4

**Question Number : 98 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option :
No Option Orientation : Vertical**

Correct Marks : 1 Wrong Marks : 0

. Which are IoT Wireless technologies ?
 (a) Z-Wave
 (b) WiMAX
 (c) ZigBee
 (d) (a) & (c)
 (e) (a) & (b)
 (f) (b) & (c)

Options :

1. 1

2. 2

3. 3

4. 4

5. 5

6. 6

**Question Number : 99 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option :
No Option Orientation : Vertical**

Correct Marks : 1 Wrong Marks : 0

Smart patrolling system management comes under which network?
(a) HAN & NAN
(b) NAN & WAN
(c) HAN & WAN
(d) All of the above

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 100 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

1. Probable definition of IoT is

(a) Digital connectivity among various devices to communicate

(b) Tandom work, work instructions given among devices

(c) Interchange of data is huge as it involves devices, machines, people, things, etc

(d) All of the above.

Options :

1. 1
2. 2
3. 3
4. 4