

Question Paper Name: 5273 Components and Applications of Internet of Things 30th June 2019 Shift 1
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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

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

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

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

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

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 (s_1 , s_2 , s_3 , and s_4) that a robot can occupy. What is the probability that the robot occupies the state s_1 ? 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

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

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 $A = [a_1 \ a_2]^T$, where $a_1 = [5 \ 4]$ and $a_2 = [-3 \ 1]$ 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

- (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) Waspote
- (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

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

- (a) $a\text{Var}(X)$
- (b) $a\text{Var}(X) + b$
- (c) $a^2 \text{Var}(X) + b$
- (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

- (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

- (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

- (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

- (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

- (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

- (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 microprocessor in 1980 used about 10,000 transistors. How many of those microprocessors would fit in a modern chip having 1 billion transistors?

- (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 microprocessor 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

- (a) wiring complexity doubles approximately every 18 months
- (b) Chips get doubled every 2 months
- (c) Integrated circuits density doubles approximately 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

- (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

- (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

- (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

- ice 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

- (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

- (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

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) 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



al in microcontroller used to handle data transfers in a serial data protocol, where a clock signal is required and can provide higher data rates

- (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

- (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

- (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

- 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) $R1 \leftarrow [R1] + [R2] + [R3]$.
- (b) $R3 \leftarrow [R1] + [R2]$.
- (c) $R3 \leftarrow [R1] + [R2] + [R3]$.
- (d) $R1 \leftarrow [R2] + [R3]$.

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) $R0 \leftarrow [R1] + [R2] + [R3]$.
- (b) $R3 \leftarrow [R0] + [R1] + [R2]$.
- (c) $R0 \leftarrow [R1] * [R2] + [R3]$.
- (d) $R3 \leftarrow [R0] * [R1] + [R2]$.

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

- (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

- (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

- (a) Devices connected to form work cycle using devices www.FirstRanker.com www.FirstRanker.com
- (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

olling system management comes under which network?

- (a) HAN & NAN
- (b) NAN & WAN
- (c) HAN & WAN
- (d) All of the above

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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

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