IoT Python

PRIME Sem6 Building IoT Applications with Python

Q.1 **Transport** layer of IoT Networks Protocol is a connection-oriented protocol?
Correct Answer:
Reference: Book name: Building IoT Applications with Python, Page no 13

Q.2 **Internet** acts as a gateway for transferring a large volume of data produced by the sensors?
Correct Answer:
Reference: Book name: Building IoT Applications with Python, Page no 13

Q.3 Automation is a part of which segment of industry revolution?

A. Industry 1.0	B. Industry 2.0
C. Industry 3.0	(D) Industry 4.0

Correct Answer:
Reference: Book name: Building IoT Applications with Python, Page no 15, Fig 1.6

Q.4 **Machine Learning** lets you analyze complex data and find valuable underlying patterns?
Correct Answer:
Reference: Book name: Building IoT Applications with Python, Page no 16, Heading 1.6.1

Q.5 Which layer of the OSI model enables the establishment of network sessions between processes on various networks stations?

A. Application	B. Data Link Layer
C. Transport	(D) Session

Correct Answer:
Reference: Book name: Building IoT Applications with Python, Page no 41, Heading 2.3.1

Q.6 Which of the following principles of smart factory refers to the ability of people and machinery, devices and sensors to connect and communicate through the Internet?

(A) Interoperability	B. Transparency in information
C. Technical Assistance	D. Decentralization of Decision

Correct Answer:
Reference: Book name: Building IoT Applications with Python, Page no 17

Q.7 **LORAWAN** is a protocol for wide area networks specially designed for supporting huge networks with millions of low power devices?
Correct Answer:
Reference: Book name: Building IoT Applications with Python, Page no 18

Q.8 **Robotics** industry combines the functions of IoT for pervasive sensing, monitoring, and tracking?
Correct Answer:
Reference: Book name: Building IoT Applications with Python, Page no 14, Heading 1.3

Q.9 Actuators work in **Reverse** direction of the sensor.
Correct Answer:
Reference: Book name: Building IoT Applications with Python, Page no 85

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Q.10 _____ is the field of study that combines domain expertise, programming skills and knowledge of mathematics and statistics to extract meaningful insights from data?
Correct Answer: Data Science
Reference: Book name: Building IoT Applications with Python, Page no 99

Q.11 _____ commands is used to create .ssh file?
Correct Answer: Echo >> ssh
Reference: Book name: Building IoT Applications with Python, Page no 30

Q.12 Which protocol is used for serial data communication?

A. TELNET	B. HTTP
C. USART	D. Bluetooth

Correct Answer:
Reference: Book name: Building IoT Applications with Python, Page no 70

Q.13 _____ is a combination of programs and utilities that run on hardware?
Correct Answer: Operating System
Reference: Book name: Building IoT Applications with Python, Page no 27

Q.14 Which layer transfers data between nodes that are connected directly?

A. Physical	B. Data-Link
C. Session	D. Presentation

Correct Answer:
Reference: Book name: Building IoT Applications with Python, Page no 41

Q.15 Which of the following is a wireless radio networking of devices which processes a large amount of data and transfers it quickly?

A. Data Distribution Services	B. Bluetooth
C. WiFi	D. ZigBee

Correct Answer:
Reference: Book name: Building IoT Applications with Python, Page no 18

Q.16 Which of the following IoT Network Protocol layer helps in data formatting?

A. Physical	B. Adaptation
C. Network	D. Application

Correct Answer:
Reference: Book name: Building IoT Applications with Python, Page no 44

Q.17 Which of the following IoT application layer protocols is based on TCP/IP communication protocol?

A. HTTP	B. MQTT
C. XAMPP	D. CoAP

Correct Answer:
Reference: Book name: Building IoT Applications with Python, Page no 44

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Q.18 Which of the following was developed by Object Management Group (OMG) as IoT standard for scalable, real-time and high-performance machine to machine communication?

(A) Data Distribution Service	B. Message Queue Telemetry Transport
Advanced Message Queueing Protocol	D. Bluetooth

Correct Answer:
Reference: Book name: Building IoT Applications with Python, Page no 17

Q.19 Which of the following is a connection-oriented protocol and thus, is not suitable for low powered environments?

(A) TCP	B. IP
UDP	D. IoT

Correct Answer:
Reference: Book name: Building IoT Applications with Python, Page no 13

Q.20 Which type of actuator uses compressed as a source of energy?

A. Hydraulic	B. Thermal
(C) Pneumatics	D. Electric

Correct Answer:
Reference: Book name: Building IoT Applications with Python, Page no 85

Q.21 How many pins does L293D have?

(A) 16	B. 18
C. 24	D. 8

Correct Answer:
Reference: Book name: Building IoT Applications with Python, Page no 89

Q.22 _____ HC-05 _____ Bluetooth module is used for receiving voice commands output in string format.

Correct Answer:
Reference: Book name: Building IoT Applications with Python, Page no 83

Q.23 Which of the following provides full duplex communication channels over TCP?

A. HTTP	B. XMPP
(C) Websockets	D. CoAP

Correct Answer:
Reference: Book name: Building IoT Applications with Python, Page no 45

Q.24 What are the advantages of using SoC? [Multiple Choice]

(A) Low power	(B) Less space
C. Low cost	D. Less energy

Correct Answer:
Reference: Book name: Building IoT Applications with Python

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Q.25 Which Layer is an OSI model is responsible for data transfer between two directly connected nodes in a network?

(A) Data Link	B. Network
C. Transport	D. Application

Correct Answer:
Reference: Book name: Building IoT Applications with Python

Q.26 What is required to download NOOBS on older versions of Raspberry Pi?

A. Pen drive	B. CD
(C) Micro SD Card	D. Full Size SD Card

Correct Answer:
Reference: Book name: Building IoT Applications with Python, Direct reference not available

Q.27 __cd__ commands helps to change directories?

Correct Answer:
Reference: Book name: Building IoT Applications with Python, Page no 54

Q.28 The Raspberry Pi has _____ Pins on its header.

A. 28	(B) 40
C. 36	D. 24

Correct Answer:
Reference: Book name: Building IoT Applications with Python, Page no 55

Q.29 Which devices is used to detect changes in the physical environment?

A. Raspberry Pi	B. Relay
(C) Sensors	D. GPIO

Correct Answer:
Reference: Book name: Building IoT Applications with Python, Page no 63

Q.30 Which form of communication protocol helps in transferring multiple bits at the same time?

A. Synchronous	B. Asynchronous
C. Serial	(D) Parallel

Correct Answer:
Reference: Book name: Building IoT Applications with Python, Page no 69

Q.31 Which vector of perceptron learning perfectly classifies positive inputs and negative outputs in data?

A. x	B. y
(C) w	D. z

Correct Answer:
Reference: Book name: Building IoT Applications with Python, page no 214, Heading 9.2.2

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Q.32 Identify the code to import TensorFlow library.

(A) Import tensorflow as tf rank_0_tensor = tf.constant (4) print(rank_0_tensor)	B. Rank_1_tensor = tf.constant ([1.6,2.0,3.0,4.0]) print(rank_1_tensor)
C. Rank_2_tensor = tf.constant ([[4,5],[6,7],[8,9]]) print(rank_2_tensor)	D. Tensor_1 = ([11,20,30,40]] Tensor_2 = tf.constant ([100,200,300,400]] Sum=tf.add(Tensor_1, Tensor_2) print(Sum);

Correct Answer:
Reference: Book name: Building IoT Applications with Python, page no 239, Heading 10.1.1

Q.33 Which function is also known as a mathematical gate?

A. Sigmoid function	(B) Activation function
C. Linear function	D. Logistics function

Correct Answer:
Reference: Book name: Building IoT Applications with Python, page no 216, Heading 9.2.4

Q.34 Identify the equation of hyperbolic tangent.

(A) $f(x) = a *tanh(x) = (e? - e??)/(e? + e??)$	B. $f(x) = s = 1/(1+e)??$
C. $f(x) = x$	D. $fx = a = max(0,x)$

Correct Answer:
Reference: Book name: Building IoT Applications with Python, page no 219

Q.35 Identify the formula for adaptive moment estimation (Adam).

A. $w_{(t+1)} = w_t - a/v(v_{t}+?) . ?J/(?w_t)$	B. $w_{(t+1)} = w_t - a/v(D_{(t-1)} + ?)v/(v_t + ?) . ?J/(?w_t)$
(C) $w_{(t+1)} = w_t - a/(v(v^_t) + ?) .m^_t$	D. $w_{(t+1)} = w_t - a ?J/(?w_t)$

Correct Answer:
Reference: Book name: Building IoT Applications with Python, page no 233

Q.36 Which layer of OSI model solves computability issues between the application and network?

A. application	(B) presentation
C. transport	D. data link

Correct Answer:
Reference: Book name: Building IoT Applications with Python, page no 41, Heading 2.3.1

Q.37 Which of the following IP based technology is used across multiple communication platforms as it has freedom of frequency band and physical layer?

A. ZigBee	(B) 6LowPan
C. HTTP	D. XMPP

Correct Answer:
Reference: Book name: Building IoT Applications with Python, page no 42, Heading 2.3.2

Q.38 Which of the following is a connectionless protocol?

A. TCP	(B) UDP
C. IP	D. IOT

Correct Answer:
Reference: Book name: Building IoT Applications with Python, page no 43, Heading 2.3.3

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Q 39 Which of the following is a lightweight messaging protocol that uses subscribe/publish operations to exchange data between clients and server?

HTTP	B. XMPP
C MQTT	D. CoPP

Correct Answer:
Reference: Book name: Building IoT Applications with Python, page no 44, Heading 2.3.4

Q 40 Identify the aggregation equation of OR function in M-P neuron.

A. $x\_1 + x\_2 < 1$	B. $x\_1 + x\_2 >= 1$
C. $x\_1 + x\_2 = 1$	D. $x\_1 + x\_2 = 2$

Correct Answer:
Reference: Book name: Building IoT Applications with Python, page no 210

Q 41 The classification of data in Perceptron Artificial neural network is based on the rule of _____ learning model.

A. Unsupervised	B. Supervised
C. Logistics	D. Decision trees

Correct Answer:
Reference: Book name: Building IoT Applications with Python, page no 212, Heading 9.2

Q 42: Identify attributes of variables that are not available with tensor. [Multiple Choice]

A. device	B. name
C. shape	D. trainable

Correct Answer:
Reference: Book name: Building IoT Applications with Python, page no 241, Heading 10.1.2

Q 43: Identify the features of Tesseract. [Multiple Choice]

A. It is quick, can detect more than 100 languages	B. It is used in Gmail spam detection and Google translator
C. It uses a neural network based on long short-term memory	D. It cannot detect languages that start from right to left

Correct Answer:
Reference: Book name: Building IoT Applications with Python, page no 254, Heading 11.2.1

Q 44: Which pre-processing technique in NLP reduces the word to its root word?

A. Tokenization	B. Lemmataization
C. Text vectorization	D. TF-IDF

Correct Answer:
Reference: Book name: Building IoT Applications with Python, page no 268, Heading 12.1.3

Q 45: Which command is used by logdir to visualize data?

A. Tensorboard—logdir=visualize	B. Tensorboard—logdir=summaries
C. Tensorboard—logdir=datasummary	D. Tensorboard—logdir=summary_data

Correct Answer:
Reference: Book name: Building IoT Applications with Python, page no 243, Heading 10.1.3

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Q 46: Which function is used to remove noise from the greyscale image in image processing step of implementation of neural networks?

A. noise	B. remove
C. highlight	D. blur

Correct Answer:
Reference: Book name: Building IoT Applications with Python, page no 256, Heading 11.2.2

Q 47: The output layer in training and testing step of implementation of neural network can be _____ or _____ [Multiple Choice]

A. linear	B. logistics
C. hyperbolic tangent	D. softmax

Correct Answer:
Reference: Book name: Building IoT Applications with Python, page no 258

Q 48: Identify steps involved in using OCR [Multiple Choice]

A. data extraction	B. data analysis
C. data comparision	D. converting data into machine-readable form

Correct Answer:
Reference: Book name: Building IoT Applications with Python, page no 252, Heading 11.1

Q 49: Identify the actions that are enabled by OCR technology. [Multiple Choice]

A. Highlighting keywords	B. Attaching file to an email
C. Incorporating content in a website	D. Deleting a file

Correct Answer:
Reference: Book name: Building IoT Applications with Python, page no 252, Heading 11.1.1

Q 50: Which among these are not benefits of OCR?

A. Saves time	B. Saves cost
C. Diminishes mistakes	D. Reports redundancy

Correct Answer:
Reference: Book name: Building IoT Applications with Python, page no 253

Q 51: Identify products that are based on Natural Language Processing. [Multiple Choice]

A. siri	B. alexa
C. google assistant	D. speech recognition

Correct Answer:
Reference: Book name: Building IoT Applications with Python, page no 266, Heading 12.1

Q 52: Which method is known as the building block of NLP?

A. Tokenization	B. Lemmataization
C. Text vectorization	D. TF-IDF

Correct Answer:
Reference: Book name: Building IoT Applications with Python, page no 266, Heading 12.1.1

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Q 53: What are the features of Stop Words? [Multiple Choice]	
A. They are a set of commonly used words	B. They are significant words in a sentence
C. Those words does not make a difference in a sentence	D. Without theses words NLP cannot be performed

Correct Answer:

Reference: Book name: Building IoT Applications with Python, page no 267, Heading 12.1.2

Q 54: _____ are the elements of GUI.	
A. Widget	B. Commands
. Syntax	D. Codes

Correct Answer:

Reference: Book name: Building IoT Applications with Python, page no 289, Heading 13.1.6

Q 55: Identify modules that are used to create a GUI in Python. [Multiple Choice]	
A. kivy	B. Jpython
C. Tkinter	. Android

Correct Answer:

Reference: Book name: Building IoT Applications with Python, page no 284, Heading 13.1.2