BRAINWARE UNIVERSITY

Term End Examination 2024-2025
Programme – Dip.RA-2022
Course Name – Introduction to IOT
Course Code - ECPE501B
(Semester V)

Full Marks : 60   **Time : 2:30 Hours**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A
(Multiple Choice Type Question)   1 x 15=15

1. *Choose the correct alternative from the following :*

(i)   Identify the full form of IoT.

   a) Internet of Technology   b) Incorporate of Things
   c) Internet of Things   d) Incorporate of Technology

(ii) Identify the year of the actual term "Internet of Things" coined.

   a) 1998   b) 1999
   c) 2000   d) 2002

(iii) Select, which of the following is not an IoT platform.

   a) Amazon Web Services   b) Microsoft Azure
   c) Salesforce   d) Flipkart

(iv) Explain the layer that is used for wireless connection in IoT devices.

   a) Application layer   b) Network layer
   c) Data link layer   d) Transport layer

(v)   Select from the following that is false about the IoT components.

   a) A light sensor (photoresistor) is an analog   b) A microphone is a digital sensor
      sensor
   c) A push button is a digital sensor   d) A keyboard is a digital sensor

(vi) Select the following command that is used to trigger the Amazon echo IOT device.

   a) Hello   b) Suri
   c) Alexa   d) Hey

(vii) Select the following that is not related to Arduino IDE IoT software.

   a) Serial monitor   b) Verify
   c) Upload   d) Terminate

(viii) MQTT is _____ oriented.

a) Data
b) Message
c) Network
d) Device

(ix) The network layer is considered as the _____ of the network layer.

a) packets
b) Backbone
c) bits
d) bytes

(x) The network layer contains _____ hardware device.

a) Bridges only
b) Routers, Bridges
c) Routers, Bridges and Switches
d) Bridges and switches

(xi) Network layer protocol exits in _____

a) Switches
b) Bridges
c) Host
d) Packets

(xii) IoT devices use _____ for security.

a) Software
b) Fog node
c) Cloud
d) Immutable

(xiii) _____ will enable the humans to access, control and manage the operation.

a) Bigdata
b) Communication
c) IoT
d) Network

(xiv) Name layer in IoT protocols that is responsible for host addressing and packet routing.

a) Link Layer
b) Transport Layer
c) Network Layer
d) Application Layer

(xv) Write the name of the communication protocol that is commonly used in IoT for low-power wireless networks.

a) Bluetooth
b) Wi-Fi
c) Zigbee
d) Ethernet

Group-B
(Short Answer Type Questions)

3 x 5=15

2. Describe the functions of control units in IoT devices. (3)
3. Describe 5 challenges associated with IoT security. (3)
4. List some common applications of IoT in everyday life. (3)
5. Discuss the way IoTivity contribute to the IoT ecosystem. (3)
6. Estimate the impact of standardization on the development of WoT architecture. (3)

OR

Evaluate the importance of using unified multitier architecture in WoT systems. (3)

Group-C
(Long Answer Type Questions)

5 x 6=30

7. Explain Advantages of IOT. (5)

8. Describe various functional blocks of IoT. (5)
9. Explain the role of RFID in IoT systems. (5)
10. Compare between tcp/ip and osi model. (5)
11. Analyze the concept of Smart meeting. (5)

12. Decide whether Smart Applications are suitable for small-scale industries, and provide supporting arguments. (5)

OR

Evaluate the effectiveness of existing IoT middleware solutions in addressing the challenges of (5) industrial IoT applications.

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