

B.Tech. DEGREE EXAMINATION, NOVEMBER 2023

Sixth Semester

18EIE306T – INDUSTRIAL INTERNET OF THINGS*(For the candidates admitted from the academic year 2020-2021 to 2021-2022)***Note:**

- (i) **Part - A** should be answered in OMR sheet within first 40 minutes and OMR sheet should be handed over to hall invigilator at the end of 40th minute.
- (ii) **Part - B & Part - C** should be answered in answer booklet.

Time: 3 hours

Max. Marks: 100

PART – A (20 × 1 = 20 Marks)Answer **ALL** Questions

Marks BL CO PO

- | | | | | |
|---|---|---|---|---|
| 1. State the number of layers in open IoT architecture.
(A) 4 (B) 5
(C) 6 (D) 7 | 1 | 1 | 1 | 1 |
| 2. _____ is not a data link layer technology.
(A) Bluetooth (B) UART
(C) WiFi (D) HTTP | 1 | 1 | 1 | 1 |
| 3. Select the transport layer protocol used by DHCP
(A) RSVP (B) UDP
(C) DCCP (D) TCP | 1 | 1 | 1 | 1 |
| 4. Pick the one that is not a networking device
(A) Router (B) Switch
(C) Bridge (D) Traffic analyzer | 1 | 1 | 1 | 1 |
| 5. The main purpose of Web of Things (WoT) in IoT is _____.
(A) Improve usability (B) Reduce security
(C) Simplifies the structure (D) Increases cost | 1 | 1 | 2 | 1 |
| 6. Arduino UNO is a type of _____.
(A) Software (B) Hardware
(C) Network (D) Protocol | 1 | 1 | 2 | 1 |
| 7. Identify the lightweight protocol
(A) IP (B) HTTP
(C) MQTT (D) CoAP | 1 | 1 | 2 | 1 |
| 8. XDSL is a very popular fixed line technology offered by
(A) Telco service (B) Reliance service
(C) RyBo service (D) BRG energy | 1 | 1 | 2 | 1 |
| 9. MQTT is a _____ protocol.
(A) M2M (B) Internet of things
(C) WoT (D) Machine thing | 1 | 1 | 3 | 1 |

10. _____ company first utilized robotic system in production line 1 1 3 1
 (A) Ford motor (B) Volkswagen
 (C) General motors (D) Toyota
11. SCADA is a _____ 1 1 3 1
 (A) Business management software (B) Computer system
 (C) System for controlling / (D) A device
 regulating
12. MDMS in context of smart grids stands for _____ 1 1 3 1
 (A) Meter data management system (B) Metric data measurement
 system
 (C) Metric data monitoring system (D) Meter data monitoring system
13. _____ property is not associated with power quality of smart grids. 1 1 4 1
 (A) Self healing (B) Frequency monitoring
 (C) Load forecasting (D) Asset management
14. _____ technology brought the first industrial revolution. 1 1 4 1
 (A) Steam power (B) Electricity
 (C) Computers (D) Semiconductors
15. Control in SCADA is _____ 1 1 4 1
 (A) Online (B) Direct
 (C) Supervisory (D) Automatic
16. A complex SCADA has _____ levels. 1 1 4 1
 (A) 3 (B) 5
 (C) 4 (D) 6
17. Pick the service component that performs the service. 1 1 4 1
 (A) WSDL (B) SCDL
 (C) XML (D) SCML
18. The term internet of things was coined by _____ 1 1 5 1
 (A) IBM (B) Ross Ihaka
 (C) Guido van Rossum (D) Kevin Ashton
19. API enables system portability between 1 1 5 1
 (A) Systems (B) Devices
 (C) Networks (D) Services
20. _____ is not an IoT platform 1 1 5 1
 (A) Flipkart (B) Amazon
 (C) Microsoft azure (D) Sales force

PART – B (5 × 4 = 20 Marks)

Answer ANY FIVE Questions

	Marks	BL	CO	PO
21. Predict the vision of 6 Low PAN for solving device power consumption in IPV6.	4	3	1	1
22. Discuss about the sublayers of data link layer.	4	1	1	1
23. List the interfaces of IoT devices.	4	2	2	1
24. Explain about 802.16 WiMax.	4	1	2	1
25. List the types of messages in CoAP.	4	1	3	1
26. Describe about IIOT architecture.	4	2	4	1
27. Discuss about a real world scenario of smart factory using IIOT.	4	3	5	1

PART – C (5 × 12 = 60 Marks)

Answer ALL Questions

	Marks	BL	CO	PO
28. a. Discuss the common features of IoT gateway with a reference model architecture.	12	2	1	1
(OR)				
b. Explain about TCP/IP protocol.	12	2	1	1
29. a. Describe about device and component integration.	12	2	2	1
(OR)				
b. Illustrate the process of IOT application development using WSN with an example.	12	2	2	3
30. a. Explain the features of advanced message queuing protocol.	12	1	3	1
(OR)				
b. Explain in detail on IEEE 802.15.4.	12	2	3	1
31. a. Explain about networked control system.	12	2	4	1
(OR)				
b. Summarize the benefits and challenges in the deployment of IIOT.	12	1	4	1
32. a. Explain about a IIOT framework for inventory management and quality control.	12	1	5	1
(OR)				
b. Describe IIOT in manufacturing industries.	12	1	5	1

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