PART – B (5 × 10 = 50 Marks)
Answer **ALL** Questions

				Marks	BL	CO	PO
26. a.	Describe about IoT protocols with a neat block diagram.			10	3	1	2
	(OR)						
b.	Explain any two IoT levels and deployment templates with flowchart.			10	4	1	3
27. a.	Discus the concept of networked manufacturing and its importance in the manufacturing system.			10	3	2	3
	(OR)						
b.	Enumerate on the overall architecture of internet of things-manufacturing system.			10	4	2	2
28. a.	Describe the hardware and software system in IoT with a case study.			10	3	3	3
	(OR)						
b.	Explain the role of various standardization activities in IoT system.			10	4	3	2
29. a.	Enumerate on the different challenges faced by IoT industry applications.			10	3	4	3
	(OR)						
b.	Describe the case study of internet of things for oil and gas industry.			10	4	4	2
30. a.	Explain the configuration of a smart shop floor with neat diagram.			10	3	5	3
	(OR)						
b.	Discuss about task driven manufacturing resource configuration module with neat flow chart.			10	4	5	2

* * * * *

Reg. No.														

B.Tech. DEGREE EXAMINATION, NOVEMBER 2022
Sixth and Seventh Semester

18MEE432T – INTERNET OF THINGS IN AUTOMATION
(For the candidates admitted from the academic year 2018-2019 to 2019-2020)

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** should be answered in answer booklet.

Time: 2½ Hours Max. Marks: 75

PART – A (25 × 1 = 25 Marks)
Answer **ALL** Questions

		Marks	BL	CO	PO
1.	In smart industry, internet of things is used for (A) Machine diagnosis system (B) Machine prognosis system (C) Predicting faults (D) Machine diagnosis, prognosis and predicting faults	1	1	1	1
2.	IPV4 – Internet protocol version 4, the network layer uses (A) 16 – bit address (B) 32 – bit address (C) 64 – bit address (D) 128 – bit address	1	1	1	2
3.	The request/ response model is a stateless communication model and each request – response pair is (A) Dependent of others (B) Independent of others (C) Interfaced (D) Interlocked	1	1	1	1
4.	A buffer, when mismatch between rate at which producers push data and the rate at which consumers pull data is known as (A) Traffic (B) Pusher (C) Queue (D) Puller	1	1	1	2
5.	A layer provides end to end message transfer, governs error control, flow control segmentation and congestion control is referred a (A) Application layer (B) Link layer (C) Transport layer (D) Internet layer	1	1	1	1
6.	A manufacturing service pool, supporting manufacturing resources sharing, integration and interoperability among different enterprises is referred as (A) Manufacturing grit (B) Manufacturing gate (C) Manufacturing grid (D) Manufacturing cloud	1	1	2	1
7.	After introducing the generalized IoT manufacturing industry, it can be devoted to address the '4Cs'. What are they? (A) Convection, communication, computing and control (B) Connection, communication, cooperate and control (C) Connecting, commanding, computing and control (D) Collection, communication, computing and control	1	1	2	2

8.	Coupled with the rapid development of embedded systems and technologies, it provides embedding of physical terminal equipment and the inter connection of M2M, which includes (A) Man to man (B) Machine to machine (C) Man to machine (D) Man to man, man to machine and machine to machine	1	1	2	1
9.	Which type of caliper can be used to capture the quality data of the work piece? (A) Internal caliper (B) Digital caliper (C) External caliper (D) Special caliper	1	1	2	2
10.	Which of the following are the key to intelligent manufacturing system? (A) Smart lighting and smart trolley (B) Smart station and smart lighting (C) Smart station and smart trolley (D) Smart industry and smart trolley	1	1	2	1
11.	Location, finish task, efficiency, scrap ratio and attendance rate were the multisource manufacturing information about (A) Machine (B) Object (C) Environment (D) Worker	1	1	3	2
12.	IoT tends to support a number of different applications, covering a wide array of disciplines that are not part of the ICT domain, which was overcome by (A) IoT subscription (B) IoT substitution (C) IoT standardization (D) IoT domination	1	1	3	1
13.	Data preprocessing is used to aggregate the discrete data into (A) Resource level event (B) Single level event (C) Multilevel event (D) Cluster level event	1	1	3	2
14.	The target towards optimizing existing processes by decreasing the gap between the real world and the virtual world were defined in (A) Green field technology (B) Blue field technology (C) Brown field technology (D) black field technology	1	1	3	1
15.	Which of the following parameters are registered before the deployment of new sensors? (A) Sensor type (B) Frequency and interface (C) Connection port and production information (D) Sensor type, frequency, interface, connection port and production information	1	1	3	2
16.	Wireless sensor networks are hindered by (A) Small investments and low local value (B) Small investments and high local value (C) Huge investments and low local value (D) Small investments and high local value	1	1	4	1

17.	Which of the following are the challenges for IoT industrial applications? (A) IoT device technical challenges (B) Lifetime and energy challenge (C) Demand information challenge (D) IoT device technical, energy, data and information challenge	1	1	4	2
18.	One of the approaches to connect the different information layers of a factor is to take advantage of the product itself as (A) Information carrier (B) Information gate (C) Information booth (D) Information centre	1	1	4	1
19.	The instrument used to release the humans from routine tasks concerning information retrieval and analysis is (A) Actual intelligence (B) Ambient intelligence (C) Accurate intelligence (D) Autonomous intelligence	1	1	4	1
20.	The brown field and green field technologies insist on (A) Easy integration and future plant extension (B) Easy integration and nil plant extension (C) Complex integration and future plant extension (D) Complex integration and nil plant extension	1	1	4	2
21.	The operations built up for hardware foundations of IoT manufacturing system are (A) Shop floor layout (B) Deployment of sensors (C) Configuration of machines (D) Shopfloor layout, sensors deployment and machines configuration.	1	1	5	1
22.	The expected finishing time for IoT manufacturing system operations can be obtained basically according to the (A) Manufacturing paths (B) Manufacturing routes (C) Manufacturing sheets (D) Manufacturing booth	1	1	5	2
23.	The real time and multisource information sensing system, IoT enabled smart station and real time information driven production scheduling system provides (A) Feedback to materials (B) Adequate information's (C) Ubiquitous operation (D) Guidance for operators	1	1	5	1
24.	The potential delays or other manufacturing exceptions can be identified rapidly for early preparation and early solution by (A) Smart stations (B) Smart trolleys (C) Smart controllers (D) Smart activators	1	1	5	2
25.	The rescheduling model will rearrange the production plans according to the information from (A) Production analysis (B) Planning analysis (C) Product analysis (D) Performance analysis	1	1	5	1

Marks BL CO PO