b.	Articulate levels 4, 5 and 6 in IOT level and deployment templates.	10	2	1	1,6	
27. a.i.	Examine the differences between IOT and M2M.	5	2	2	1,5	
ii.	Deduce a short note on NETCONF and its usage in IOT.	5	2	2	1,6	
	(OR)					
b.	Sketch the M2M architecture and explain its working.	10	2	2	1,5	
28. a.	Illustrate the various design methodologies of IOT in relevance to home automation.	10	2	3,6	3	
	(OR)					
b.	Categorize the various datatypes involved in python with an example for each datatype.	10	2	3,6	3	
29. a.	Sketch the working of SPI and I2C in raspberry Pi controller.	10	2	4,6	1	
	(OR)					
b.	Deduce the IoT process involved in making an LED glow using any controller.	10	2	4,6	1	
30. a.	Articulate the IoT design involved in weather monitoring process.	10	2	5,6	1	
	(OR)					
b.	Articulate the IoT design involved in home automation process.	10	2	5,6	1	

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Reg. No.														

B.Tech. DEGREE EXAMINATION, MAY 2022
Sixth Semester

18EEE331T – INTERNET OF THINGS
(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.	Find the collection of communication standard IEEE 802.11 (A) Wireless broadband(WiMax) (B) Wired Ethernet (C) Mobile communication (2G/3G/4G) (D) Wireless local area network (WLAN)	1	1	1	1,6
2.	Predict the request-Respond is a _____model and it is _____ (A) Protocol, stateless (B) Communication, stateless (C) Protocol, stateful (D) Communication, stateful	1	1	1	1,6
3.	Highlight the usage of 'SaaS' based cloud computing services (A) Ability to compute and store resources (B) Ability to develop and deploy applications (C) Local storage and API (D) Compute software applications/user interface to the application	1	1	1	1,6
4.	Identify that in which IoT communication model, the producers are not aware of consumers. (i) Request –respond (ii) Push-pull (iii) Publish-subscribe (iv) Exclusive-pair (A) (i) and (iii) (B) (ii) and (iii) (C) (i) and (ii) (D) (ii) and (iv)	1	1	1	1,6
5.	Identify which protocol is employed for constrained environment with devices having restricted processing and memory resources along with low network bandwidth (A) XMPP (B) AMQP (C) MQTT (D) DDS	1	1	1	1,6

6. Predict the use of netconf 1 1 2 1
   (A) Roll back when devices goes up (B) Network narrow transactions
   (C) Testing and rejecting a configuration (D) Transactions with down devices
7. Find the role of control plane 1 1 2 1
   (A) Carry payload data (B) Carry signal data
   (C) Carry signal and routing message (D) Carry routing data
8. Interpret the emphasis (hardware and software) of M2M 1 1 2 1
   (A) More on hardware (B) More on software
   (C) More on hardware and software (D) More on hardware design with embedded module

9. Predict the interface used for inter-SCLs communication 1 1 2 1
   (A) M2M application interface (B) M2M to device interface
   (C) Device application interface (D) Data application interface

10. Comment on the approach used in IOT architecture 1 1 2 1
   (A) Bottom up approach (B) Top down approach
   (C) Top down and bottom up approach (D) Hybrid approach
11. Find the purpose and requirement of system management in IOT design 1 1 3,6 1
   (A) Remote monitoring (B) Control function
   (C) Remote monitoring and control function (D) Management and monitoring function

12. Predict the step involved in IoT design methodology-functional view specification 1 1 3,6 1
   (A) Map IoT level to specification (B) Map IoT level to functional groups
   (C) Define functions of IoT design (D) Define specification of IoT deign

13. Highlight the sixth step in IoT design methodology 1 1 3,6 1
   (A) Purpose and requirement (B) Domain model
   (C) Process specification (D) IoT level of the system

14. Predict the string with zero character 1 1 3,6 1
   (A) String less (B) Character string
   (C) Empty string (D) String order

15. Predict the compound data type used to group together other values in python 1 1 3,6 1
   (A) Data group (B) Program data
   (C) Data compilation (D) List

16. Find the latest raspberry Pi capacity (model B, revision 2) 1 1 4,6 1
   (A) 128 MB, SDRAM (B) 256 MB, SDRAM
   (C) 512 MB, SDRAM (D) 1 GB SDRAM

17. Outline the usage of HDMI port of raspberry Pi 1 1 4,6 1
   (A) Video output only (B) Audio output only
   (C) Video and audio output (D) Audio input only

18. Highlight the usage of pins on raspberry Pi 1 1 4,6 1
   (A) MISO, MOSI, SCK (B) SOMI, SIMO, SCK
   (C) MIOS, MOIS, SCK (D) MISO, MOSI, CSK

19. Outline the specifications of beagle bone with respect to the similarity of raspberry Pi 1 1 4,6 1
   (A) 2 GHz arm cortex A8 processor (B) 1 GHz arm cortex A8 processor
   (C) 1 GHz arm cortex A7 processor (D) 2 GHz arm cortex A7 processor

20. Highlight the memory specification of pc Duino of Arduino family 1 1 4,6 1
   (A) 2 GHz arm cortex A8 processor (B) 1 GHz arm cortex A8 processor
   (C) 1 GHz arm cortex A7 processor (D) 2 GHz arm cortex A7 processor
21. Find the sensor involved for home automation (home security) 1 1 5,6 1
   (A) Soil sensor (B) Passive infra-red sensor
   (C) Water level sensor (D) Temperature sensor

22. Highlight the prime sensor involved in weather monitoring 1 1 5,6 1
   (A) Temperature sensor (B) Humidity sensor
   (C) Temperature and humidity sensor (D) Water level sensor

23. Predict the application (case) of soil sensor 1 1 5,6 1
   (A) Smart grid (B) Smart irrigation
   (C) Smart parking (D) Smart lighting
24. Predict the application (case) of wearable (glucose monitor) sensor 1 1 5,6 1
   (A) Smart healthcare (B) Smart irrigation
   (C) Smart parking (D) Smart security

25. Find the types of air quality monitors 1 1 5,6 1
   (i) Lab-grade monitor
   (ii) Commercial grade monitor
   (iii) Consumer monitor
   (iv) Radiation monitor
   (A) (i) and (ii) (B) (i), (ii) and (iii)
   (C) (ii) and (iii) (D) (i) and (iv)

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

26. a. Categorize and explain the design present in the architecture of IOT. 10 2 1 1,6

(OR)