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B.Tech DEGREE EXAMINATION, MAY 2024

Fifth Semester

18CSE379T - INTERNET OF THINGS

(For the candidates admitted during the academic year 2018-2019 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** and **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
1.	IoT Analytics helps to _____. (A) Collect data (B) Collect and store data (C) Collect, store and Process data (D) Store data	1	2	1
2.	Which is not an IoT communication model? (A) Push- producer (B) Publish –subscribe (C) Request – response (D) Exclusive pair	1	2	1
3.	Prognostics is a which type of domain-specific IoT application? (A) Energy systems (B) Retail (C) Logistics (D) Environment	1	2	1
4.	Pick the correct one from the following "Level -2 IoT systems are suitable for solutions where ____" (A) Data involved is not big, not computationally intensive. (B) Data involved is big, not computationally intensive (C) Data involved is big and the analysis requirements are computationally intensive. (D) Multiple nodes are required, the data involved is big and the analysis requirements are computationally intensive.	1	1	1
5.	Which layer supports Communication Models? (A) Application layer (B) Service layer (C) Network layer (D) Data link layer	1	1	2
6.	Data in motion is part of _____ and usually handled by _____. (A) IT and End Devices (B) OT and End Devices (C) OT and Edge devices (D) IT and Edge devices	1	2	2
7.	Which of the following are not managed by OT? (A) Event-based (B) Query-based (C) Data in Motion (D) Real-time	1	2	2
8.	In edge analytics, data are found to be at ___ (A) rest (B) restless (C) idle (D) inactive	1	1	2
9.	Which of the following is not an IoT platform? (A) Amazon web services (B) Microsoft Azure (C) Salesforce (D) Flipkart	1	2	3
10.	Calorimeter generate output according to _____ (A) Circuit parameters (B) Humidity (C) Temperature (D) Voltage	1	2	3

11.	Which is used to capture data from the physical world in IoT devices? (A) Sensors (B) Actuators (C) Microprocessors (D) Microcontrollers	1	1	3
12.	Pick the odd one out from the following (A) Arduino (B) Raspberry Pi (C) Lilypad (D) Lego Mindstroms	1	2	3
13.	Any data that does not fit neatly into a predefined data model is classified as (A) Structured data (B) Unstructured data (C) Big data (D) Formatted data	1	2	4
14.	_____ analysis aims to foretell problems (A) Descriptive (B) Prescriptive (C) Diagnostic (D) Predictive	1	1	4
15.	In _____ learning, the machine is trained with input for which there is a known correct answer (A) Supervised (B) Unsupervised (C) Semi-supervised (D) Time based analysis	1	2	4
16.	WAMP stands for (A) Web Application Messaging Protocol (B) World Application Messaging Protocol (C) Web Automated Messaging Protocol (D) Web Application Monitoring Protocol	1	1	4
17.	Which of the following is not included in the business model framework? (A) Value proposition (B) The customer (C) Financials (D) Software	1	2	5
18.	The third law of information states that (A) Information Is Perishable and It Depreciates Over Time (B) The Value of Information Increases with Accuracy (C) More Information Is Not Necessarily Better (D) Information Is Not Depletable	1	1	5
19.	W3C stands for (A) World Wide Web Consortium (B) World Web Wide Consortium (C) World Wide Web Console (D) World Web Wide Console	1	1	5
20.	_____describes the context of a sensor with regard to spatial and/or temporal observations (A) Sensor Data Ontology (B) Sensor Hierarchy Ontology (C) Web Service Modelling Ontology (D) Suggested Upper Merged Ontology	1	1	5

PART - B (5 × 4 = 20 Marks)

Answer **any 5** Questions

		Marks	BL	CO
21.	Determine the IoT level for designing wealth monitoring system?	4	3	1
22.	Write in detail about REST based communication API? What are the architectural constraints of REST?	4	4	1
23.	Differentiate cloud computing, fog computing and edge computing.	4	4	2
24.	Give the classification of things based on power, mobility and data generation? Outline each of them	4	4	2
25.	List the sensors used in smart phone and write short notes on any three.	4	4	3
26.	Justify the usage of supervised and unsupervised learning with some examples.	4	3	4
27.	Compare traditional business and business model innovation.	4	4	5

PART - C (5 × 12 = 60 Marks)

Answer **all** Questions

		Marks	BL	CO
28.	(a) With real time examples, write the significance of IoT enabling Technologies.	12	3	1
	(OR)			
	(b) Identify the IoT level for home automation and explain in detail with suitable diagram.			
29.	(a) Illustrate each sub layer in communications with required diagrams.	12	3	2
	(OR)			
	(b) Sketch the diagram of distributed compute and data management across an IoT system and explain.			
30.	(a) What are the criteria to be considered when selecting and dealing with connecting smart objects?	12	4	3
	(OR)			
	(b) List the IoT access technologies and write the significance of ZigBee IP.			
31.	(a) Give the classification of data analysis and describe their importance.	12	2	4
	(OR)			
	(b) Explain Hadoop with neat architecture diagram.			
32.	(a) Draw and explain the business model for the intelligent truck.	12	3	5
	(OR)			
	(b) Interpret the significance of revenue generation in IoT.			

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