KUMARAGURU
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B.E/B.TECH DEGREE EXAMINATIONS: NOV/DEC 2023

(Regulation 2018)

Fifth Semester

COMMON TO ALL BRANCHES

U18CSR5203: IOT Analytics

COURSE OUTCOMES

CO1: To realize the need of Data analytics, types of data generated by IOT devices and data analytics tools.

CO2: Determine the appropriate data pre-processing and analysis strategy for IoT Data analytics. Determine the appropriate data pre-processing and analysis strategy for IoT Data analytics.

CO3: Discover the benefits of IoT core services and create IoT resources.

Time: Three Hours   **Maximum Marks: 100**

Answer all the Questions:-
PART A (10 x 2 = 20 Marks)
(Answer not more than 40 words)

1.	State the reason to analyze the IOT data?	CO1	[K2]
2.	List the kinds of data generated from smart objects?	CO1	[K2]
3.	What is an outlier?	CO1	[K2]
4.	Identify the uses of following: Numpy, Pandas, Scikit, Scipy	CO2	[K2]
5.	Recall the visualization libraries used for data visualization. Write the syntax for importing these libraries	CO2	[K2]
6.	Tell about commonly used data structures used in Pandas?	CO2	[K1]
7.	With an example, brief about time series data	CO2	[K2]
8.	Write about AWS IoT	CO3	[K2]
9.	Identify the role of message broker in AWS IOT	CO3	[K2]
10.	What are AWS IoT Greengrass?	CO3	[K2]

Answer any FIVE Questions:-
PART B (5 x 16 = 80 Marks)
(Answer not more than 400 words)

11		Organize the type of Data analytics with suitable example	16	CO1	[K2]
12.	a)	Elaborate on the components of the time series data with illustration	8	CO2	[K2]
	b)	Illustrate the IoT Analytics Flow and elaborate on each stage	8	CO2	[K2]

13.	a)	Illustrate the Machine Learning Pipeline and explain	8	CO3	[K$_2$]
	b)	Choose any relevant IoT application and justify how analytics can be applied.	8	CO3	[K$_3$]
14.	a)	Discuss the major industries influenced by IoT analytics?	8	CO1	[K$_2$]
	b)	Recall standardization and normalization approaches.	8	CO2	[K$_2$]
15.	a)	Explain the challenges in IoT data analytics	8	CO2	[K$_3$]
	b)	Discuss the various cloud platforms for IoT analytics	8	CO2	[K$_2$]
16.	a)	Explain about linear with example regression	8	CO3	[K$_2$]
	b)	Describe the key features of AWS IoT core services	8	CO3	[K$_2$]

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