Code No: 155EM **R18**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech III Year I Semester Examinations, July/August - 2023
DATA ANALYTICS FOR IOT
(Computer Science and Engineering - IOT)

Time: 3 Hours **Max. Marks: 75**

Note: i) Question paper consists of Part A, Part B.
ii) Part A is compulsory, which carries 25 marks. In Part A, Answer all questions.
iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

PART – A

(25 Marks)

1.a)	Define the term 'constrained' in IoT design.	[2]
b)	How the 'data quality' of an IoT is an issue?	[3]
c)	List the different modes of NFC devices operation.	[2]
d)	Draw and label the parts of ZigBee stack.	[3]
e)	What are SQL and HiveQL?	[2]
f)	List any three Azure analysis services used for IoT.	[3]
g)	What is ETL in data processing?	[2]
h)	List the features of R Studio.	[3]
i)	What are the important characteristics of 'training set'?	[2]
j)	Give a generic example for confusion matrix.	[3]

PART – B

(50 Marks)

2. Explain the following IoT analytics challenges:
a) Problem with time
b) Problem with space. [5+5]

OR

3. Define analytics maturity model and mention about the practical concerns of business organizations in IoT implementation. [10]

4. Discuss about Constrained Application Protocol (CoAP). State its advantages and disadvantages. [10]

OR

5.a) How do you analyze data to infer protocol and device characteristics? Explain.
b) Write about Data Distribution Service (DDS). [5+5]

6. "Decoupling encapsulated analytics process with message queues has advantages" Justify the statement with appropriate case study. [10]

OR

7. Elaborate on cloud security and analytics. [10]

8.a) Give an overview on 'Tableau'.

b) What are the applications of exploring and visualizing data? [5+5]

OR

9. Explain about basic time series analysis. [10]

10. What is Deep learning? List the use cases for Deep learning with IoT data. [10]

OR

11. Write about bias-variance tradeoff of machine learning in detail. [10]

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