B **Total Pages: 2**

Reg No.:_____ Name:_____

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**

EIGHTH SEMESTER B.TECH DEGREE EXAMINATION, MAY 2020

**Course Code: IT404**

**Course Name: Data Analytics**

Max. Marks: 100 Duration: 3 Hours

**PART A**

***Answer any two full questions, each carries 15 marks.*** Marks

| | | | |
|---|---|---|---|
| 1 | a) | Explain advantages and weakness of internal and external sandbox | (10) |
| | b) | Compare Type I and Type II error | (5) |
| 2 | a) | Explain methods to make neural networks more interpretable | (10) |
| | b) | Write any five activation functions used in neural networks. | (5) |
| 3 | a) | Explain decision tree algorithm with an example. | (10) |
| | b) | Explain any technique to perform dimensionality reduction. | (5) |

**PART B**

***Answer any two full questions, each carries 15 marks.***

| | | | |
|---|---|---|---|
| 4 | a) | Explain the challenges of big data | (10) |
| | b) | Discuss any two related technologies for handling big data. | (5) |
| 5 | a) | Explain K means clustering algorithm with an example | (10) |
| | b) | Explain any two major sources of big data. | (5) |
| 6 | a) | Compare single linkage and complete linkage schemes with an example | (10) |
| | b) | Explain applications of association rules | (5) |

**PART C**

***Answer any two full questions, each carries 20 marks.***

| | | | |
|---|---|---|---|
| 7 | a) | Explain attributes and data types in R | (10) |
| | b) | Write code for following operations in R | (10) |

i. create a vector "apple" "mango" "orange"

ii. return 22nd element of vector

iii. create a vector with elements 10 11 12 13 14 15

iv. add two vectors element by element

v. find type of a vector

| | | | |
|---|---|---|---|
| 8 | a) | Namenode is the single point of failure in HDFS. How this problem is solved? | (10) |
| | b) | Explain fraud detection technique in detail | (10) |
| 9 | a) | Explain mapreduce programming with the help of a word count example | (10) |
| | b) | Explain the function in R to fit a linear line to data | (10) |

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