

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
THIRD SEMESTER M. TECH DEGREE EXAMINATION**

**Computer Science and Engineering
(Computer Science and Systems Engineering)**

04CS7411- Data Mining

Max. Marks : 60

Duration: 3 Hours

PARTA

Answer All Questions

Each question carries 3marks

1. Write a note on any two implementation issues associated with data mining.
2. Write the difference between regression and correlation.
3. How is the performance of a classification algorithm measured?
4. What are the different types of clustering algorithms?
5. How can you measure the quality of an association rule?
6. Write a note on BIRCH algorithms for clustering large databases.
7. Write the difference between support and confidence in an association rule with an example.
8. What is temporal data mining?

PARTB

Each question carries 6marks

9. Explain the difference between predictive and descriptive data mining.

OR

10. Explain any two applications of data mining.

11. Write notes on the following in a Genetic algorithm.

- (i) Chromosome
- (ii) Crossover
- (iii) Mutation
- (iv) Fitness function.

OR

12. Describe a neural network graph. What is the significance of input, hidden and output layers in a neural network?

13. Explain ID3 technique to build a decision tree.

OR

14. Explain K Nearest Neighbour algorithm for classification.

15. What are the essential features needed by a clustering algorithm to perform effectively on large data bases.

OR

16. Explain k means clustering.

17. Construct an FP-tree for the following transactions t1-t9. I1, I2, I3, I4, I5 are items and minimum support count required is 2.

t1: I1, I2, I5, **t2:** I2, I4, **t3:** I2, I3, **t4:** I1, I2, I4, **t5:** I1, I3, **t6:** I2, I3, **t7:** I1, I3, **t8:** I1, I2, I3, I5, **t9:** I1, I2, I3.

OR

18. Explain Apriori algorithm for association rule generation.

19. Explain web content mining.

OR

20. Explain web usage mining.