

(3 Hours)



[Total Marks 80]

- i. Q. 1. is Compulsory.
- ii. Attempt any three from the remaining.
- iii. Assume suitable data.

- 1(a) Define "Business Intelligence" and "decision support system" with e.g.? 05
- 1(b) Define OUTLIERS? What are the different types that occur in a database? 05
- 1(c) Clearly explain data preprocessing phase in data mining? 05
- 1(d) Define data mining? Write five e.g. for the same? 05
- Q2 (a) Explain multidimensional and multilevel association rule with e.g.? 10
- Q2 (b) Explain DBSCAN algorithm using appropriate diagrams? 10
- Q3 (a) Explain APRIORI algorithm to identify the frequent set than extract strong association rule from these sets? 10
MIN support = 30% min. confidence = 75%

TID	ITEMS
01	A,B,D,E,F
02	B,C,E
03	A,B,D,E
04	A,B,C,E
05	A,B,C,D,E,F
06	B,C,D
07	A,B,D,E

- Q3(b) Briefly explain bagging and boosting of classifiers? 10

- Q4(a) Use Hierarchical clustering algorithm to cluster the following 8 points into 3 clusters 10
A1=(2,10), A2=(2,5), A3=(8,4), A4=(5,8),
A5=(7, 5), A6=(6, 4), A7=(1, 2), A8=(4, 9).
- Q4(b) Explain the designer of BI system for credit card fraud detection? 10
- Q5(a) Explain birch algorithm? 10
- Q5(b) Define Decision support system and how it is related with data mining? Explain in detail with suitable e.g.? 10
- Q6(a) Explain business intelligence issues? 10
- Q6(b) Short note on Data mining steps in KDD? Explain its architecture 10