

- a) Draw a star scheme for the data warehouse. (6)
- b) Starting with the basic cuboid [date,spectator,location,game] ,what specific OLAP operation should be performed in order to list the total charge paid by student spectators at GM_PLACE in 2010. (3)
- 13 Summarize the various pre-processing activities involved in data mining (9)

PART C

Answer any two full questions, each carries 9 marks.

- 14 Based on the following data determine the gender of a person having height 6 ft., weight 130 lbs. and foot size 8 in. (use Naive Bayes algorithm). (9)

person	height (feet)	weight (lbs)	foot size (inches)
male	6.00	180	10
male	6.00	180	10
male	5.50	170	8
male	6.00	170	10
female	5.00	130	8
female	5.50	150	6
female	5.00	130	6
female	6.00	150	8

- 15 (9)

The “Restaurant A” sells burger with optional flavours: Pepper, Ginger and Chilly. Every day this week you have tried a burger (A to E) and kept a record of which you liked. Using Hamming distance, show how the 3NN classifier with majority voting would classify
 {pepper = false, ginger =true, chilly = true}

	Pepper	Ginger	Chilly	liked
A	true	true	true	false
B	true	false	flase	true
C	false	true	true	false
D	false	true	false	true
E	true	false	false	true

- 16 a) How C4.5 differs from ID3 algorithm? (3)
- b) How does backpropagation algorithm works? (6)

PART D

Answer any two full questions, each carries 12 marks.

- 17 Consider the transaction database given below. Set minimum support count as 2 and minimum confidence threshold as 70%

Transaction ID	List of Item_Ids
T100	I1,I2,I5
T200	I2,I4
T300	I2,I3
T400	I1,I2,I4
T500	I1,I3
T600	I2,I3
T700	I1,I3
T800	I1,I2,I3,I5
T900	I1,I2,I3

- a) Find the frequent itemset using FP Growth Algorithm. (8)
- b) Generate strong association rules. (4)
- 18 a) Explain BIRCH Clustering Method. (8)
- b) What are the advantages of BIRCH compared to other clustering method. (4)
- 19 a) Explain k-means partition algorithm. What is the drawback of K-means? (6)
- b) Term frequency matrix given in the table shows the frequency of terms per document. Calculate the TF-IDF value for the term T4 in document 3. (6)

Document/term	T1	T2	T3	T4	T5	T6
D1	5	9	4	0	5	6
D2	0	8	5	3	10	8
D3	3	5	6	6	5	0
D4	4	6	7	8	4	4
