

Indian Institute of Information Technology Sri City, Chittoor

Data Mining -- MID Examination

Calculators are allowed. Closed Book, Closed Slides, and Closed Notes Exam.

Max Marks: 20. Each question carry equal marks.

Question Paper Type B

1. For the given transactional data, let minimum support is 30%, answer the following questions. [4+4+2 = 10 Marks].
- (a) By employing Apriori Algorithm find frequent itemsets (give frequent itemsets along with their counts).
- (b) Find closed frequent itemsets (give them along with their counts).
- (c) Find maximal frequent itemsets.

Tid	Items
1	a, b, c, d
2	a, b, c, d, g
3	a, b, c, h
4	a, b, e
5	a, e, g
6	a, f
7	b, c, d, h
8	c, d, f

2. Draw FP-tree for the transactional data given in question 1 (take minimum support as 30%). You need to draw header table, node-links. Your drawing should be clear (illegible or ugly drawings may attract negative marks). [2.5 Marks]

3. Consider the data given in the table below.

Age	Height	Weight	Class
20	Tall	Low	N
42	Short	Medium	N
63	Short	Heavy	Y
50	Short	Heavy	Y
35	Tall	Heavy	Y

Find Information-gain, Gain-ratio, Gini-index (drop in the Gini) for each of the attributes. [2.5+2.5+2.5 = 7.5 Marks]