Total No. of Questions – [4]

Total No. of Printed Pages: 1

P118-133(T1)

Marking Scheme and Solution

OCTOBER 2018 / IN - SEM (T1)

F. Y. M. TECH. (Computer) (SEMESTER -I)

COURSE NAME: Machine Learning

COURSE CODE: CSPA11183

(PATTERN 2018)

Time: [1 Hour] [Max. Marks: 20]

Q.1)	a) Differentiate supervised ,unsupervised and semi supervised learning with respect to training data	[03 marks each]
	b) Justify role of Machine Learning in recent trends application	[2 marks recent trend 2 marks justify why ML]
Q.2)	What is decision tree? Consider a scenario where person may reach on time to the office or may reach late to the office.. Identify features and their type. A Person may be late if he gets up late or faced a traffic jam or road side accidents etc. Consider various parameters and draw multiple decision trees .Identify class labels and write down various rules	[5 marks decision tree, 5 marks feature and class labels]
Q.3)	What is market basket analysis.	6 marks frequent pattern generation, 4 marks for rules
Q.4)	For the above problem build FP-tree and find out frequent patterns for varing support.	[6 marks for tree building, 4 marks for frequent patterns]

Q3 solution

1-itemset : A, B, C, D, E,

2-itemset : AB, AC, AD, AE, BC, BD, BE, CD, CE, DE

3itemset :- ABC, ABD, ACD, BCD BDE, CDE

4itemset :- ABCD, BCDE.

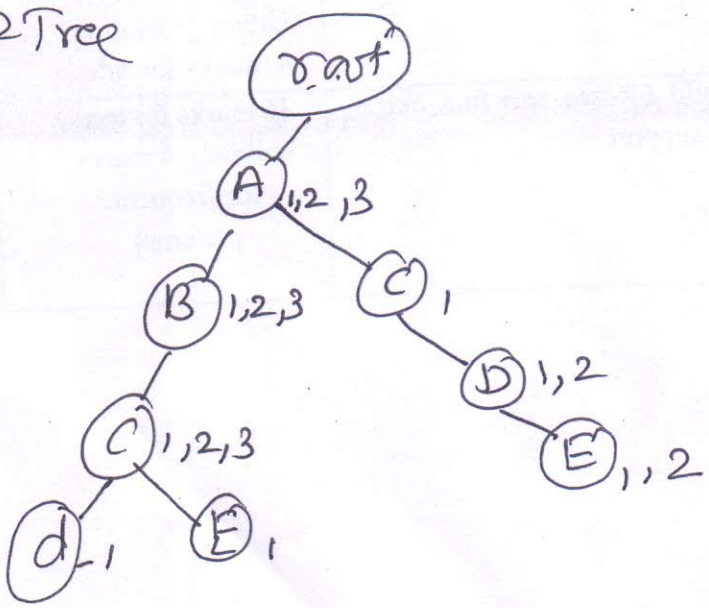
5-itemset: ABCDE

find out min support

K=1	K=2	K=3
A - 3	AB - 2	ABC = 2
B - 3	AC - 3	
C - 4	AD - 2	
D - 3	AE - 1	
E - 3	BC - 3	
All considered (min = 3)	BD - 1	
	BE - 1	
	CD - 2	
	CE - 1	
	DE - 2	
	min = 3	min = 3

~~Ques~~ So min fp is AC and BC.

Ques FP Tree



freq pattern AB, BC