

1) a) Max no. of association rules = $3^d - 2^{d+1} + 1$

$$= 3^6 - 2^7 + 1$$

$$= 729 - 128 + 1$$

$$= 602$$

$d=6$

b) 4 Ans (Max length of ~~any~~ any transaction)

c) $C_3 = \frac{6 \times 5 \times 4}{3 \times 2} = 20$ Ans

d) {Bread, Butter} Ans

e) {Beer, Cookies}, {Bread, Butter} Ans

2) a) Milk \rightarrow Butter. Such ^{obvious} rules are tend to be uninteresting.

b) Milk \rightarrow Tuna. While the sale of tuna and milk may be higher the min support, not all transactions containing milk also contains tuna.

Such low confidence rules are tend to be uninteresting

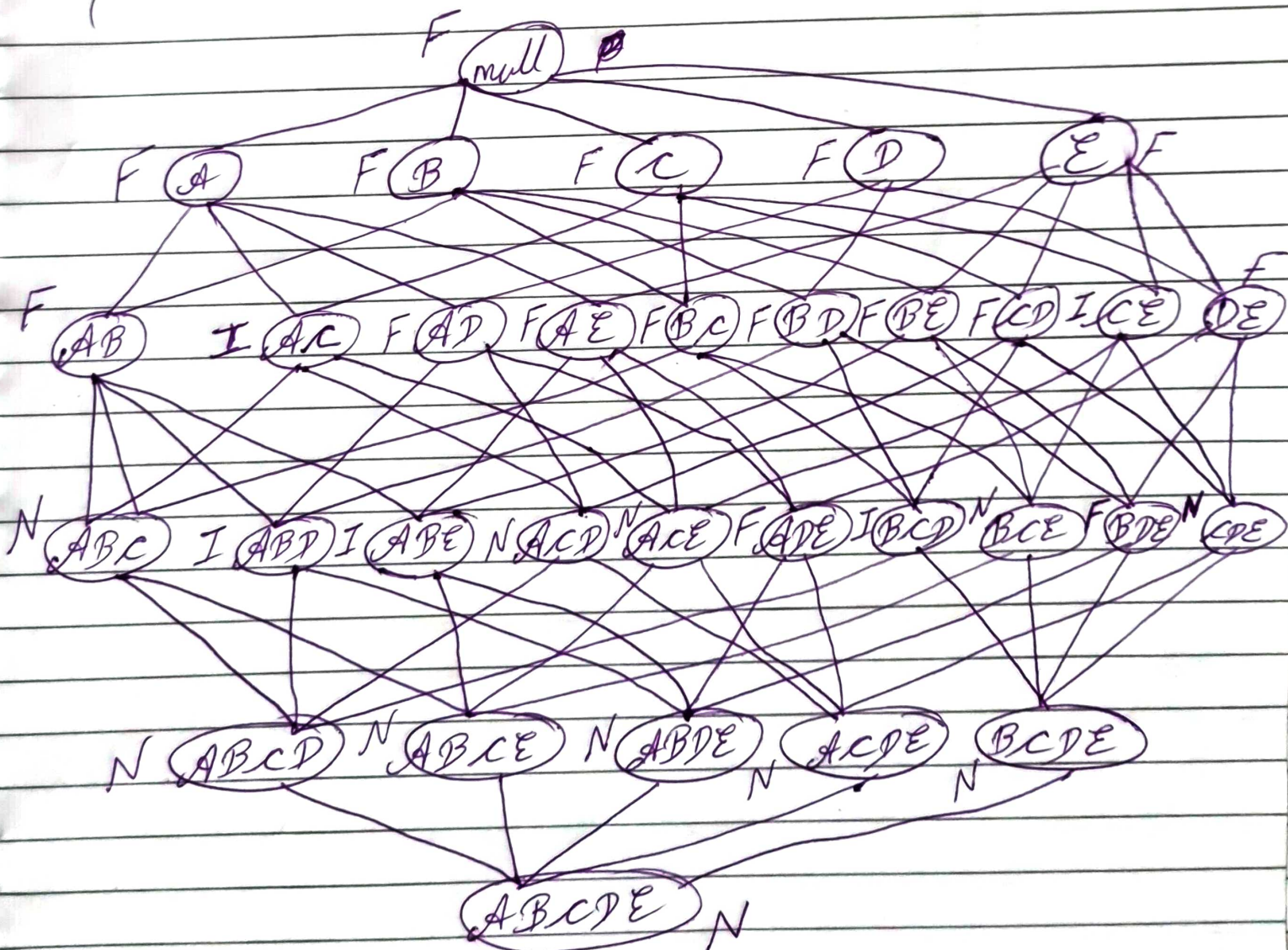
7) Cooking oil \rightarrow laundry detergent.

Such low confidence rule tends to be uninteresting.

d) Toothpaste \rightarrow Toothbrush

Such rule tends to be interesting.

3) lattice structure:-



Date _____

Page No. _____



Q5) % of frequent itemsets = $16/32 = 50\%$ Ans