

1)

TID	Items
1	ACDE
2	CDE
3	AC
4	BE
5	ABDE
6	ABCDE

min support count = 3
 min confidence = 66%

(b) {A}, {B}, {C}, {D}, {E},
 {AC}, {AD}, {AE}, {BE},
 {CD}, {CE}, {DE},
 {ADE}, {CDE}

(d) {A} → {C}
 {A} → {D}
 {A} → {E}
 {B} → {E}
 {C} → {E}

C₁

Itemset	Sup
A	4
B	3
C	4
D	4
E	5

L₁

I	S
A	4
B	3
C	4
D	4
E	5

C₃

Itemset	Sup
ACD	2
ACE	2
ADE	3
CDE	3

L₃

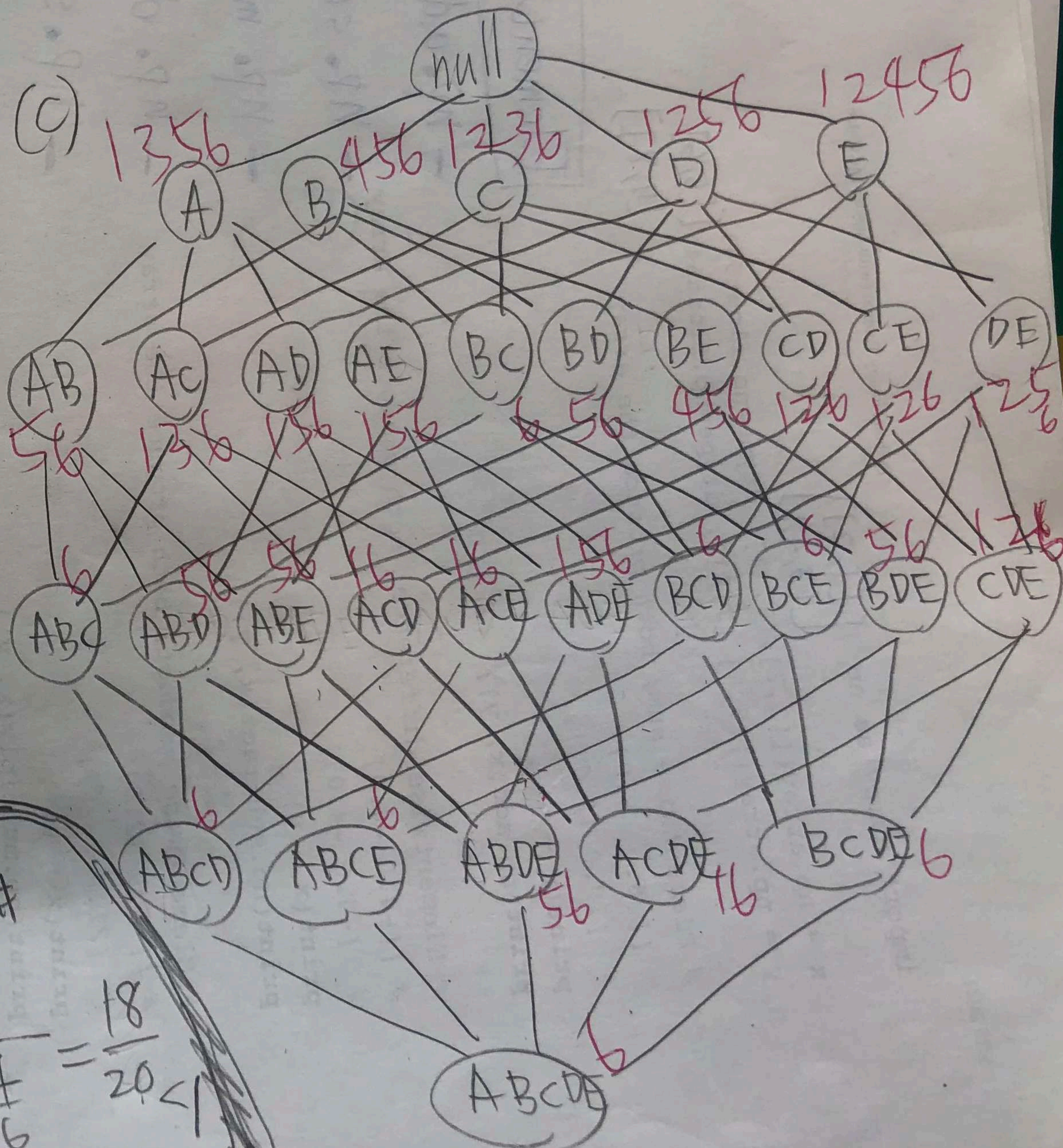
I	S
ADE	3
CDE	3

C₂

Itemset	Sup
AB	2
AC	3
AD	3
AE	3
BC	1
BD	2
BE	3
CD	3
CE	3
DE	4

L₂

I	S
AC	3
AD	3
AE	3
BE	3
CD	3
CE	3
DE	4



(e)

	E	\bar{E}
C	3	1
\bar{C}	2	0

Life = $\frac{3}{5} \times \frac{1}{4} = \frac{3}{20} < 1$

2) Freq Itemset \Rightarrow Support $\geq 20\%$

(a) T_1

(b) $T_1: 2$

$T_2: 1$

$T_3: 3 (\{A, B, C\}, \{C, D\}, \{H, I, J\})$

(c) num of closed freq itemsets

$T_1: 2$

$T_2: 2$

$T_3: 6$

Freq: $\overset{4}{A, B, C}, \overset{3}{D}, \overset{2}{H, I, J}$

$\overset{3}{A, B, C}, \overset{2}{H, I, J}$

$\overset{2}{A, B, C}, \overset{2}{H, I, J}$

3) (a) $S = \frac{6}{10} = \frac{3}{5}$

$C = \frac{6}{6} = 1$

(b) $S = \frac{2}{10} = \frac{1}{5}$

$C = \frac{2}{5} =$