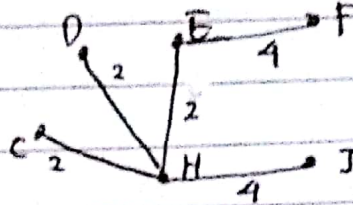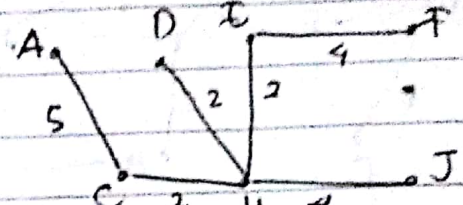# 1) a) Kruskal

(i)   (ii)   (iii)

(iv)   (v)

Minimum spannig tree = $(2 \times 3) + (4 \times 2) + 5 + 6 + 7$
$$= 6 + 8 + 18 = 32$$

b) Prim's
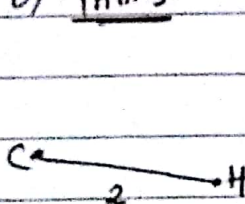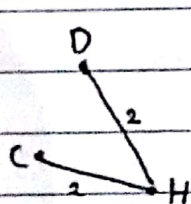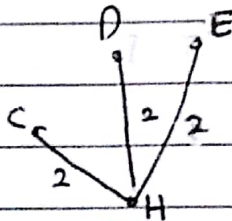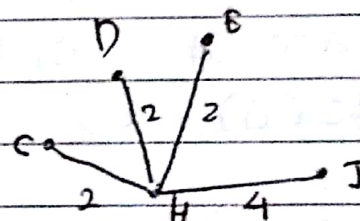
(i)   (ii)   (iii)   iv
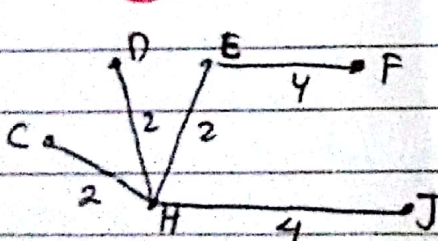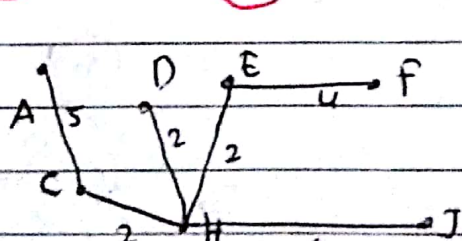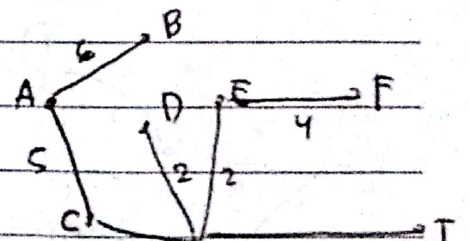
(v)   (vi)   (VII)
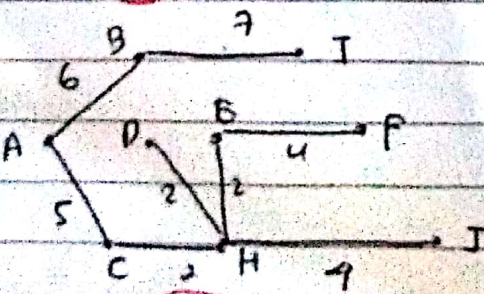
(VIII)

Minimum spanning tree = 32

c) Cut set CS = {(A,B), (D,E), (D,H), (C,H)}
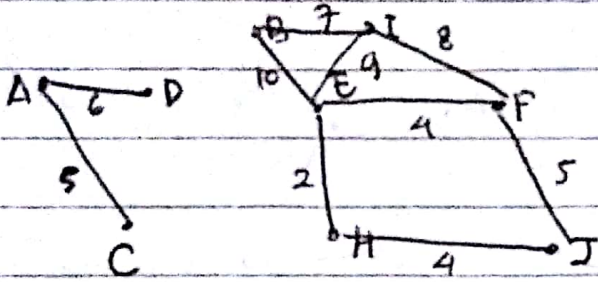
d) Hamilton karena dapat kembali ke simpul asal dan membentuk lintasan tertutup

Contoh A C H D E J F I B A

e) Bukan euler /semi euler karena tidak membentuk sirkuit euler

f)

A	B	C	D	E	F	H	I	J
3	3	2	3	6	3	4	3	3

warna I = E, A

warna II = H, F, B

warna III = C, D, J, I

$\chi(G) = 3$ //

2) a) 6 simpul   5, 6, 9, 2, 4, 8
                  A B C D E F

(i)

(ii)

b) Iya, karena memiliki jumlah sisi, simpul, dan degree yg sama
dan juga saling berkorespondensi

c) k4
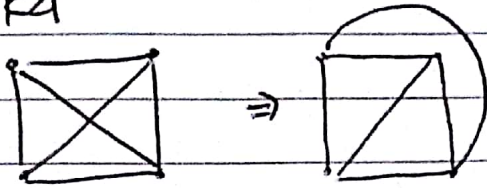
Planar = dapat digambarkan pada bidang datar dgn sisi yg
tidak saling berpotongan

k5
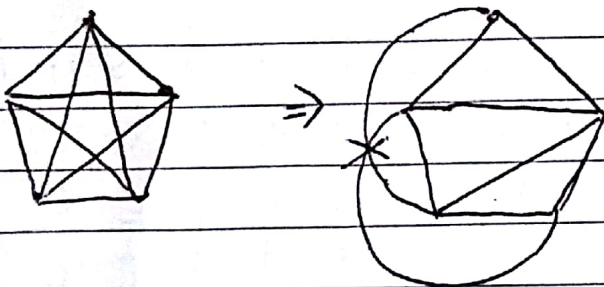
Tidak planar karena berpotongan

d) Matriks Adjacency (i)

	A	B	C	D	E	F
A	2	1	2	0	0	0
B	1	2	2	0	0	1
C	2	2	2	1	0	2
D	0	0	0	0	0	2
E	0	0	1	0	2	1
F	0	1	2	2	1	2

Matriks Incidency (i)

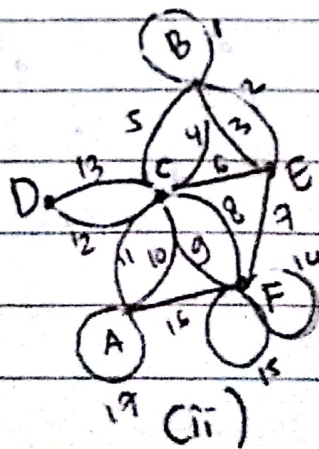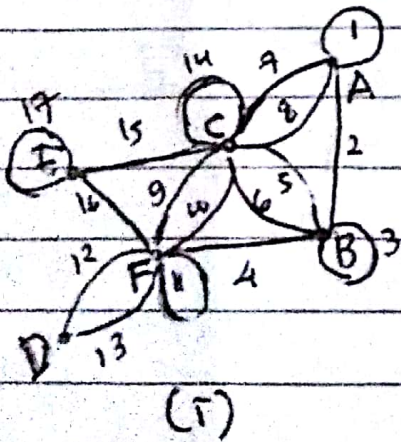|	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
A	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
B	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0
C	0	0	0	0	1	1	1	1	1	0	0	0	1	1	0	0
D	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
F	0	0	0	1	0	0	0	0	1	1	1	1	1	0	0	1

Matriks Adjacency (ii)

	A	B	C	D	E	F
A	2	0	2	0	0	1
B	0	2	2	0	2	0
C	2	2	0	2	1	2
D	0	0	2	0	0	0
E	0	2	1	1	0	0
f	1	0	2	1	0	4

Matriks incidency (ii)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
A	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1
B	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
C	0	0	0	1	1	1	0	1	1	1	1	1	1	0	0	0	0
D	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
E	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0
f	0	0	0	0	0	0	1	1	1	0	0	0	0	1	1	1	0