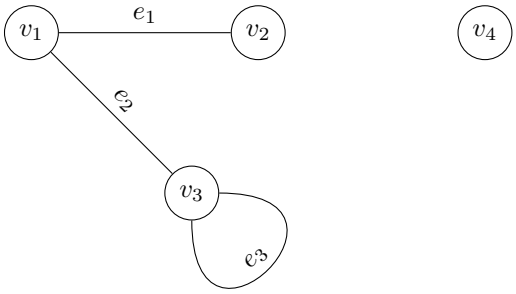
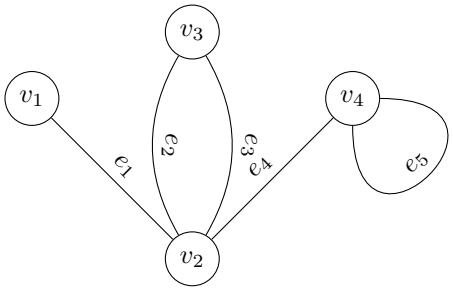
1.



$V = \{v1, v2, v3, v4\}$
$E = \{e1, e2, e3\}$

Edge	Endpoints
e_1	$\{v_1, v_2\}$
e_2	$\{v_1, v_3\}$
e_3	$\{v_3\}$

2.

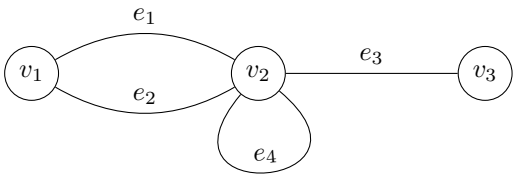


$V = \{v1, v2, v3, v4\}$
$E = \{e1, e2, e3, e4, e5\}$

Edge	Endpoints
e_1	$\{v_1, v_2\}$
e_2	$\{v_2, v_3\}$
e_3	$\{v_2, v_3\}$
e_4	$\{v_2, v_4\}$
e_5	$\{v_4\}$

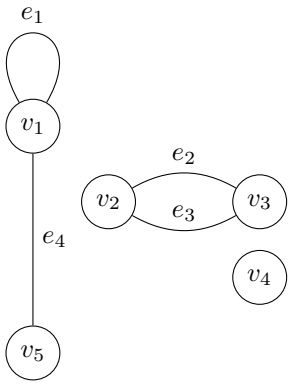
3.

Edge	Endpoints
e_1	$\{v_1, v_2\}$
e_2	$\{v_1, v_2\}$
e_3	$\{v_2, v_3\}$
e_4	$\{v_2\}$

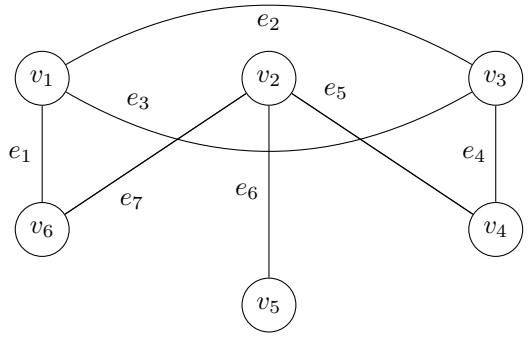


4.

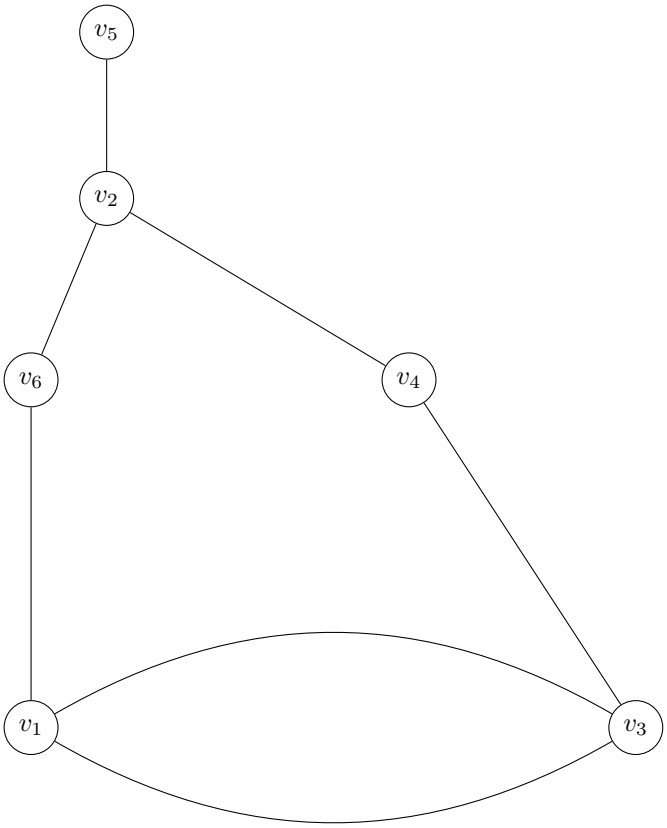
Edge	Endpoints
e_1	$\{v_1\}$
e_2	$\{v_2, v_3\}$
e_3	$\{v_2, v_3\}$
e_4	$\{v_1, v_5\}$



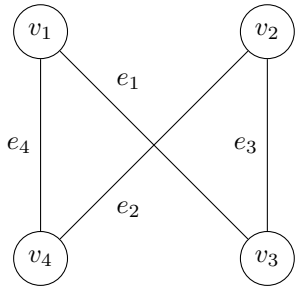
5. (a)



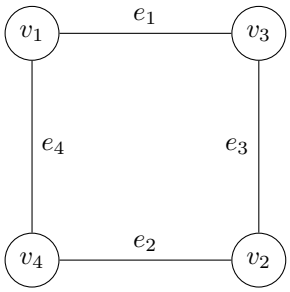
(b)



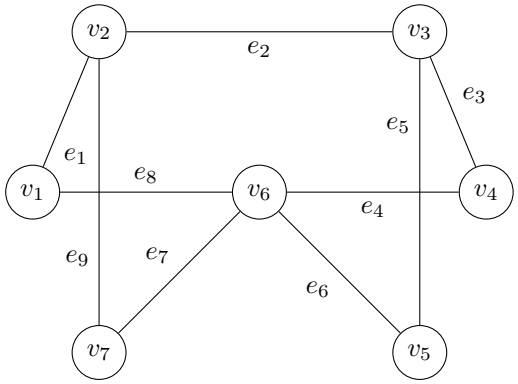
6. (a)



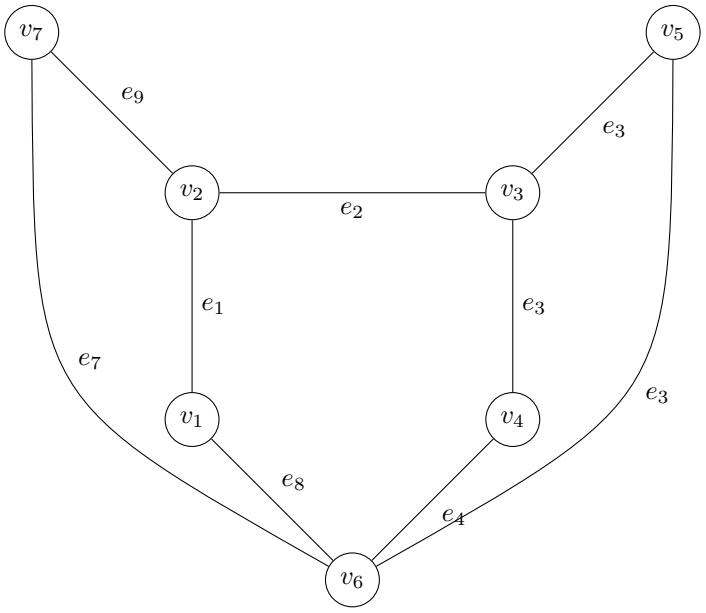
(b)


v_1
e_1
v_3
e_4
e_3
v_4
e_2
v_2

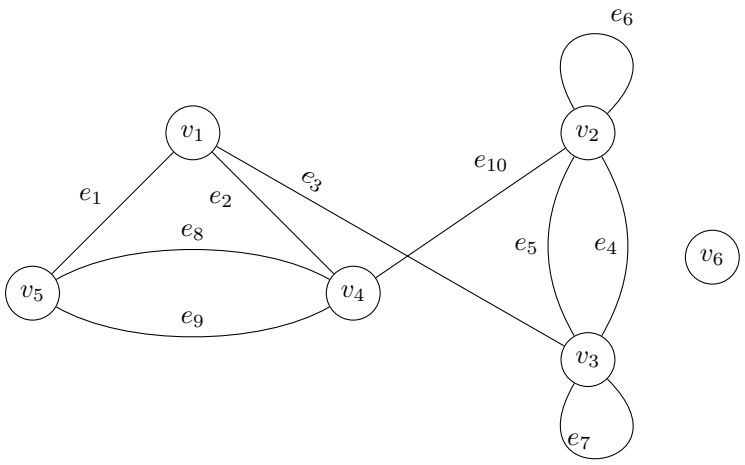
7. (a)


v_2
e_2
v_3
e_3
e_5
e_1
e_8
v_1
v_6
v_4
e_4
e_9
e_7
e_6
v_7
v_5

(b)

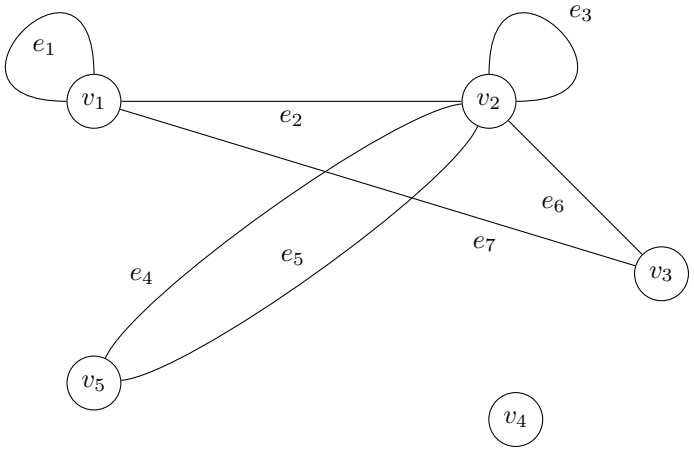

v_7
v_5
e_9
e_3
v_2
v_3
e_2
e_1
e_3
e_7
e_3
v_1
v_4
e_8
e_4
v_6

8. (a)



(b)
i. $\{e_1, e_2, e_3\}$
ii. $\{v_1, v_2, v_3\}$
iii. $\{e_2, e_3, e_8, e_9\}$
iv. $\{e_6, e_7\}$
v. $\{\{e_8, e_9\}, \{e_4, e_5\}\}$
vi. $\{v_6\}$
vii. 5

9. (a)

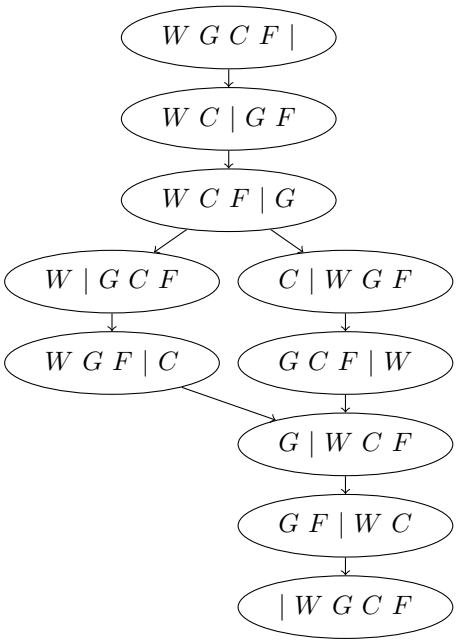


(b) i. $\{e_1, e_2, e_7\}$
ii. $\{v_1, v_2\}$
iii. $\{e_1, e_1, e_7\}$
iv. $\{e_1, e_3\}$
v. $\{e_4, e_5\}$
vi. $\{v_4\}$
vii. 2

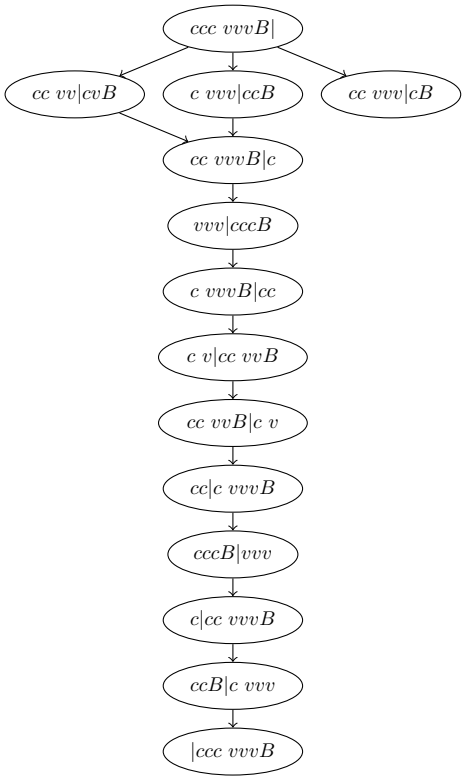
10. (a) True
(b) True

11. ????????

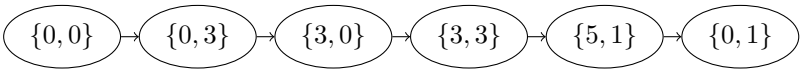
12.



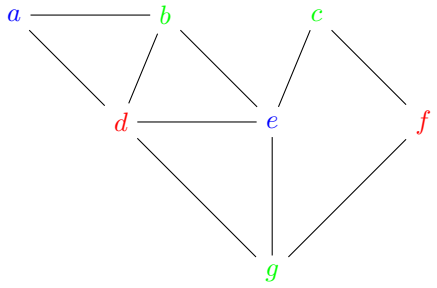
13.


ccc vvvB|
cc vv|cvB
c vvv|ccB
cc vvv|cB
cc vvvB|c
vvv|cccB
c vvvB|cc
c v|cc vvB
cc vvB|c v
cc|c vvvB
cccB|vvv
c|cc vvvB
ccB|c vvv
|ccc vvvB

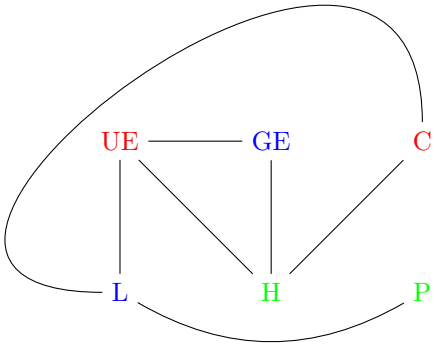
14.


{0, 0}
{0, 3}
{3, 0}
{3, 3}
{5, 1}
{0, 1}

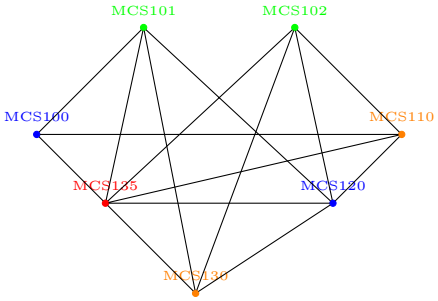
15.


a
b
c
d
e
f
g

16.


UE
GE
C
L
H
P

17.


MCS101
MCS102
MCS100
MCS110
MCS125
MCS120
MCS130

Node	Degree
MCS100	3
MCS101	4
MCS102	4
MCS110	4
MCS120	5
MCS130	4
MCS135	6