Subject: No:

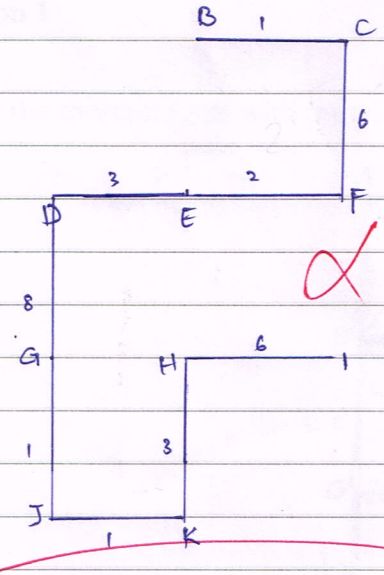
Date

TUTORIAL 3

Question 1

edges	BC	GJ	JK	AD	EF	HK	DE	GH	KL	IL	CF	HI	EH	AB	DG	FI	BE
weight	1	1	1	2	2	3	3	4	4	5	6	6	6	8	8	9	9
add	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No	No	Yes	Yes	No	No	Yes	No	No

After add:



Total minimum cost = 1+6+2+3+8+1+1+3+6 = 31

Question 2

Graph A	Graph B
Vertices = 5	Vertices = 5
Edges = 4	Edges = 4
Degree of vertices = 12	Degree of vertices = 12

Question 3

(a) not isomorphic graphs

(b) Edges

(c) Complete graph.

(d) Diagraph

Subject:

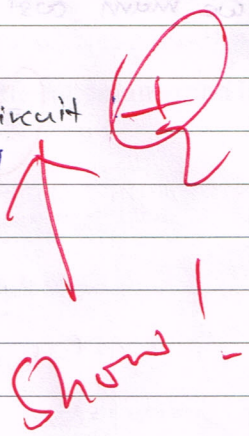
No:

Date:

Question 4

(a) The graphs is Euler Path.
Number of odd vertices : 5

(b) Hamilton circuit
Vertices = 9
edges = 9



No.: Date:

Edges	BE	FI	AB	BG	EH	HJ	CF	IL	GH	KL	DE	HK	DA	EF	BC	GJ	JK
Weight	9	9	8	8	6	6	6	5	4	4	3	3	2	2	1	1	1
Delete																	

5½

7108?

7107?

Question2

① vertices = 4
Edges = 6
Degree = 4, 3, 4, 1

② vertices = 4
Edges = 6
Degree = 1, 3, 4, 4

reason:
This graph is not isomorphic graph. Because the degree of the vertices is not same

Question 3

A) isolated vertex

B) Adjacent vertices

C) complete graph

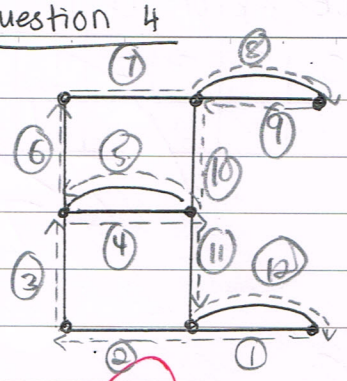
3½

D) Diagraph

No.: Date:

Question 4

(a)



Euler Path

- Because starting and ending points must be the same.
- If some ventex has odd degree, then the graph does not have an Euler circuit

(b) yes.

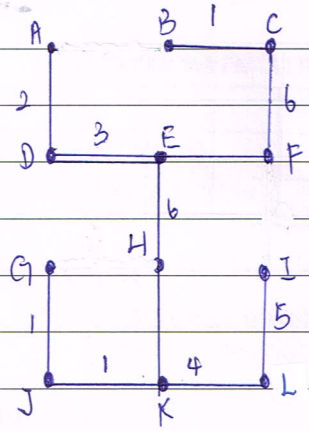
ect:.....

No:.....

Date: 25 . 02 . 19

JIA CHEE & Marinnae

Question 1



Edges	BC	KJ	GJ	AD	EF	DE	HK	GH	KL	IL	EH	CF	HI
Cost	1	1	1	2	2	3	3	4	4	5	6	6	6
Add	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No

AB	DG	BE	FI
8	8	9	9
No	No	No	No

Total cost = 34

6

Question 2

Graph 1 : vertices = 4
edges = 6

Graph 2 : vertices = 4
edges = 6

- Graph 1 and graph 2 is isomorphic because number of edges and vertices is same.

Question 3

(a) Isolated vertex
(b) Parallel edges
(c) Complete graph
(d) Digraph.

3

Question 4

(a) Euler circuit. Because all of its vertices have even degree or number.
(b) Hamilton Circuit. Because A, B, E, G, F, D, C, A is the first vertex

3

2

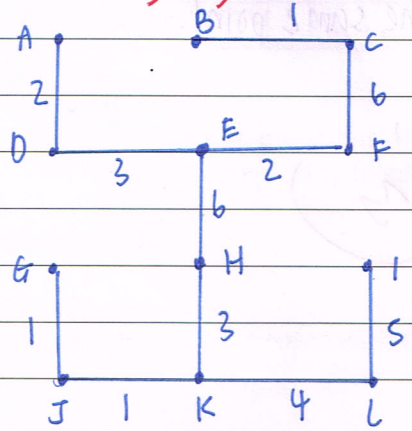
Amelda & Chai Siaw Hung

No:

Date: 25/2/2019

Question 1:

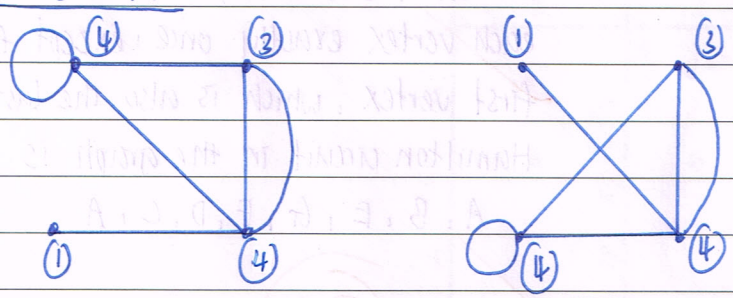
Edges	BC	GJ	JK	AD	EF	DE	HK	GH	KL	IL	CF	EH	HI	AB	DG	BE	F
cost	1	1	1	2	2	3	3	4	4	5	6	6	6	8	8	9	9
Add	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	No	No	No	N



minimum cost: 1+1+1+2+2+3+3+4+5+6+6

= 34

Question 2:



Ans: The graph shown above is not isomorphic graph because the degree of vertices is not same.

Question 3:

(a) Isolated vertex

(b) Undirected graph

(c) ~~Parallel graph~~ complete graphs

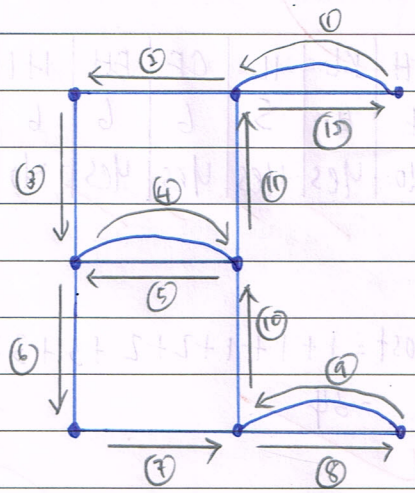
(d) Simple graph

Subject:..... No:.....

Date: . .

Question 4:

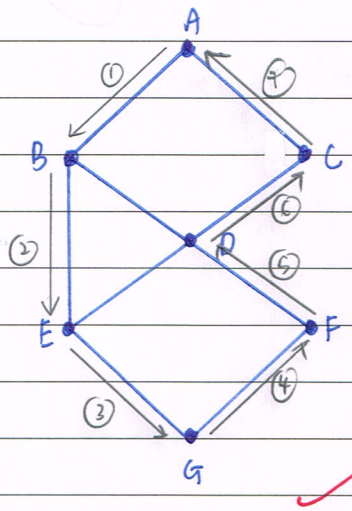
(a)



Ans: Euler ~~circuit~~. The graph connected and every vertex has even degree. The graph starting and ending at the same point.

✓ (3)

(b)



Ans: The graph ~~is neither Hamilton path or~~ shown is Hamilton circuit. Because it is contain each vertex exactly once except for the ~~first~~ vertex, which is also the last. Hamilton circuit in the graph is

A, B, E, G, F, D, C, A

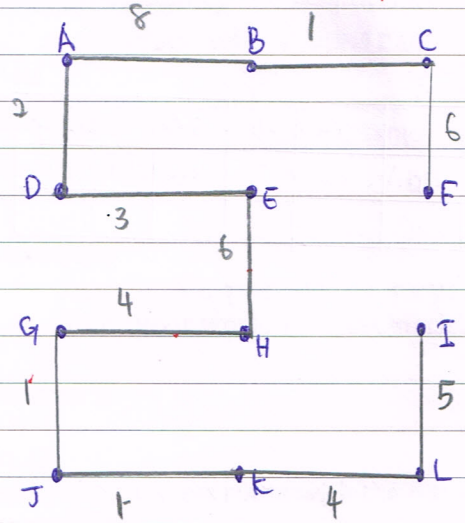
✓ ✓ (2)

So?

No. :

Date :

Question 1.



edges	IL	CK	KJ	JG	GH	HE	ED	DA	AB	BC	EF
cost	5	4	1	1	4	6	3	2	8	1	6
~~edge~~											

cost = 41

Question 2

G1 = 4, 3, 1, 4

G2 = 1, 3, 4, 4

= This is isomorphic graphs because it have same number of vertices, same number of edges and the degress of the vertices must be the same under

Question 3

a) isolated vertex

b) undirected graph

c) parallel edges

d) simple directed graph

Question 4

a) = This is Euler Circuit because it is connected and every vertex has even degree.

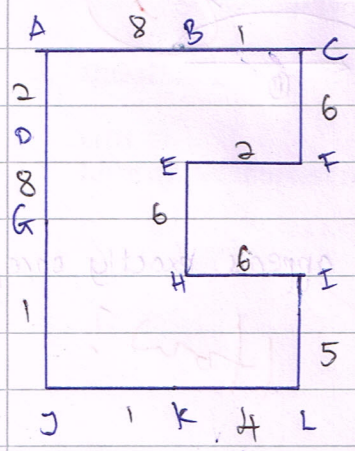
b) The path of {A, B, C, D, E, F, G} is a hamilton circuit (A, B, E, G, F, D, C, A) The first vertex is also the last vertex.

#1003
#1012

9

Question 1.

BE	FI	AB	DG	EH	HI	FC	IL	GH	DE	AK	AD	EF	BC	GJ	JK
9	9	8	8	6	6	6	5	4	3	3	2	2	1	1	1
Yes	Yes	No	No	No	No	No	No	Yes	Yes	Yes	No	No	No	No	No



Weights = 50

1

Question 2.

It is not isomorphic because it has same number of vertices, same number of edges but the degrees of vertices are not same

2

Question 3.

(a) Isolated vertex
(b) Adjacent vertices
(c) Complete graph
(d) Digraph

4

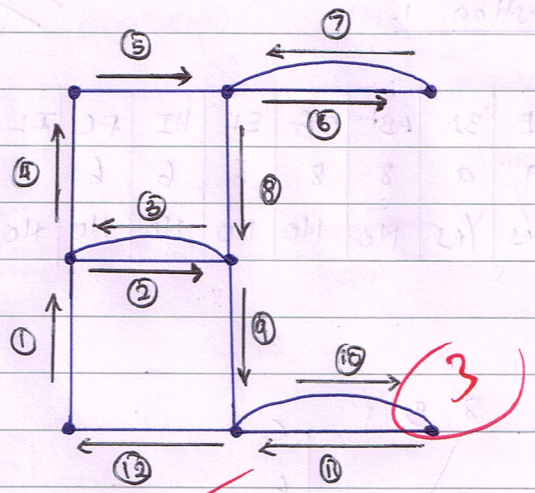
No.

Date :

Question 4.

(a) Euler circuit

- Starting and ending at the points
- Containing every edge
- Connected to every vertex has even degree



(b) It is exist and it is Hamilton Circuit. Every vertex appears exactly once, except for the first and last, which are the same.

How?

1

#1078
#1076

NO. DATE:

10 1/2

Question 1

~~2+3+6+4+1+1+4+5+9+6+1=42~~ *

Path	Length
A, D, E, H, G, J, K, L, I, F, C, B	42

(1)

The minimum - length path is ~~Euler~~ A, D, E, H, G, J, K, L, I, F, C, B.

Question 2

Yes, this graph is ~~isomorphic~~. It is because it have the same number of vertices, same number of edges and the degrees of ~~the~~ order the vertices are same.

(3)

Question 3.

a.) isolated vertex

b.) ~~multigraph~~ Multigraphs

c.) a complete graph

d.) ~~pseudograph~~ simple directed graph.

(3)

Question 4

a.) it is a Euler circuit. Because it start and end at the same point.

(3)

b.) it is a hamilton circuit. Because the first ~~vertex~~ vertex is also the last vertex.

(1/2) How?