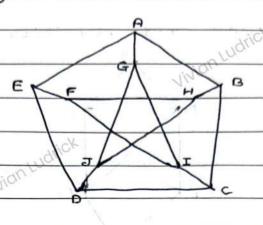
DSGT	Ass	ignment	3

Q.1.



i- The number of vertices in fig 1; V (1,2,3,4,5,6,7, 8, 9,10) is equal to number of vertices in fig 2; VIA, B, C, D, E, F, G, H, I, J.

## ii Degrees:

vivion 4

Vivian !

Vivian Vidrich

•	N. T.
$1 \rightarrow (3)$	Dick-D(2)
	(3)

$$2 \rightarrow (3)$$
  $\sqrt{N}$   $B \rightarrow (3)$ 

$$3 - 3(3)$$
  $c - 3(3)$ 

$$4 \rightarrow (3) \qquad \qquad D \rightarrow (3)$$

$$\begin{array}{cccc}
5 & \rightarrow (3) & & & & & & & \\
6 & \rightarrow (3) & & & & & & & \\
7 & \rightarrow (3) & & & & & & & \\
\end{array}$$

$$\begin{array}{cccc}
F & \rightarrow (3) & & & & & \\
\hline
\end{array}$$

$$7 - 3$$
 G - 3

$$9 \rightarrow (3)$$
  $mid^{T} \rightarrow (3)$ 

$$\sigma \rightarrow (3)$$

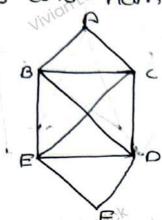
.: From this we can infer that the degree sysequence of both graphs is same.

iii Adjacency The adjacent vertices share the same degree in both graphs GI and G2

The number of edges in GI and G2 is same i.e

if the grouph GI and G2, was isomorphic graph,

4-2 A) Eules and which Hamiltonian both:



Vivian Ludrick

Vivian Ludrick

As all the edges are visited only once as AB-BD-DF-FE-EC-CB-BE-ED-DC-CA; This is an Eulerian path As all the vertices are visited only once as A-B-E-F-D-C-A

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.. This is a Hamiltonian tirait.

## B Hamilonian but not Euler:

As vertices are visited only once as A - B - C - D

But as the edges will be repeated as AB-BC-CD-DB-BA

.: It is not Eulesian path.

wivian Ludrick

		110.		iviv	
	9-3-a] Eules path: A	F-FB- BC- CC	G-GD-DC-CE-	EB	
	- injon Luc	BA-ED	in Ludrick		
	Eules cusciscui	t: AF-FB-BC	C-CG-GD-DO-C	CE	
	-EB-BR-ED				
livian L	b] Hamiltonian path:			)	
1/1/10	b] Hamiltonian path: cistuit Hamiltonian path	- AF-FB-BE	E-EC-CG-GD-	DA	
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