Name	Matric No De	patenty of majoried in branch . Idealad
1. Gwee Zi Ni	A24 CS 0078	0.0 = [91]8) =
2- Lee Jia Yee	A24 CS 0260	and all alloy board or processed in the processed
3. Evelyn Ang	124 CS 0068	12 c = (1/8 14 , 10/10/10) 2014 bod ser,
4- being Jia Ling	A24 CS 01 0 4	and same same sing for the photosof

Question 1

(a) E: set of private universities s: Out of all possible events

$$P(E) = \frac{|E|}{|S|}$$

$$= \frac{175}{500}$$

$$= \frac{7}{20}$$

$$= 0.35 \times$$

.: Probability that a randomly selected student from the sample chose to study in a private university is 0.35 blad blad anima on bangon to the 19

IC ICC - It will

batable of majoried in branch to ethiolog - (6)

F.o: (813)4 : 2010il

(1) P(B) = (1) (1)

-d.e

PIBAE1 - 13 18 19

(1611) + (1611) + =

= P(B|E)P(E) + P(B|L)P(L)

= (0.6)(0-35)+ (0 4)0-65)

L: Set of local universities s = Set of all possible events

$$P(L) = \frac{121}{151}$$

$$b_{5} + \frac{325}{500} = \frac{325}{500} = \frac{3}{20}$$

$$= \frac{13}{20}$$

$$= 0.65 \times \frac{325}{500} = \frac{3}{20} = \frac{3$$

- Tion sample chose to study selected student local public university is 0-65.
- (c) A student can only choose one private university or one local public university at a time. It is impossible for a student studies both private university and local public university in a time. Hence, the events " a student choose to study in private university" and " a student choose to study in local public university" are mutually exclusive because they cannot happent at the same time. thatter district

11.6101 and chose a large bright contracted - 0.36.6

- (d) Probability of majoring in business-related field given that the students choose private universities, P(B|E) = 0.6
 - Probability of majoring in business-related field given that the students who chose local public universities, P(B|L) = 0.4
 - Phobabity of choosing private universities given that majored in business-related fields, P(E|B) =0-7

1 Fitz parate storing to the B (A)

P(E) = (3)9

The of all parties it is

19145 18 10x1 10x1 10 to to 1 (d)

And I real public branching both

Milding forced to plants

131 = 1119

S the is all bossible events

(i)
$$P(B|E) = P(B \cap E)$$

$$P(E)$$

P(BnE)=0-21 & ... Probability that a student chosen at random majored in a business-related field and choose a private university is 0-21.

(ii) By using haw of Total Probability,

Probability of majored in a business-holated field, P(B)

- = P(BnE.) + P(BnL)
- = P(B| E) P(E) + P(B| L) P(L)
- = (0-6)(0-35) + (0-4)(0-65)
- = 0.47\$

.: Probability that a student chosen at random majored in a business-helated field is 0.47.

Probability Heat a 19 domin in perfect tradest than

golfsto tea ob Hangring Andedag lead has saturation

It seemed

51-0 SI hystonam which is in an

$$P(BnL) = \frac{P(BnL)}{0-65}$$

$$P(BnL) = 0.4 \times 0.65$$

P(BnL) = 0-4 x 0-65

PLB~나= 등

P(Bn4) = 0.26 x

: Probability that a student chosen at random majored in a business-related field but chosen a local public university is 0-26

a time The student of which

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- Both graph have 6 vertices
- Both graph have 6 edges
- Both graph contain I vertex has 4 degrees, I vertex has 2 degrees, I vertex has 3 degrees and 3 vertices has 1 degree.
- Both graph are connected graph
- Both graph do not have parallel edges and loops

FROOTS

f(PEP) = PEP

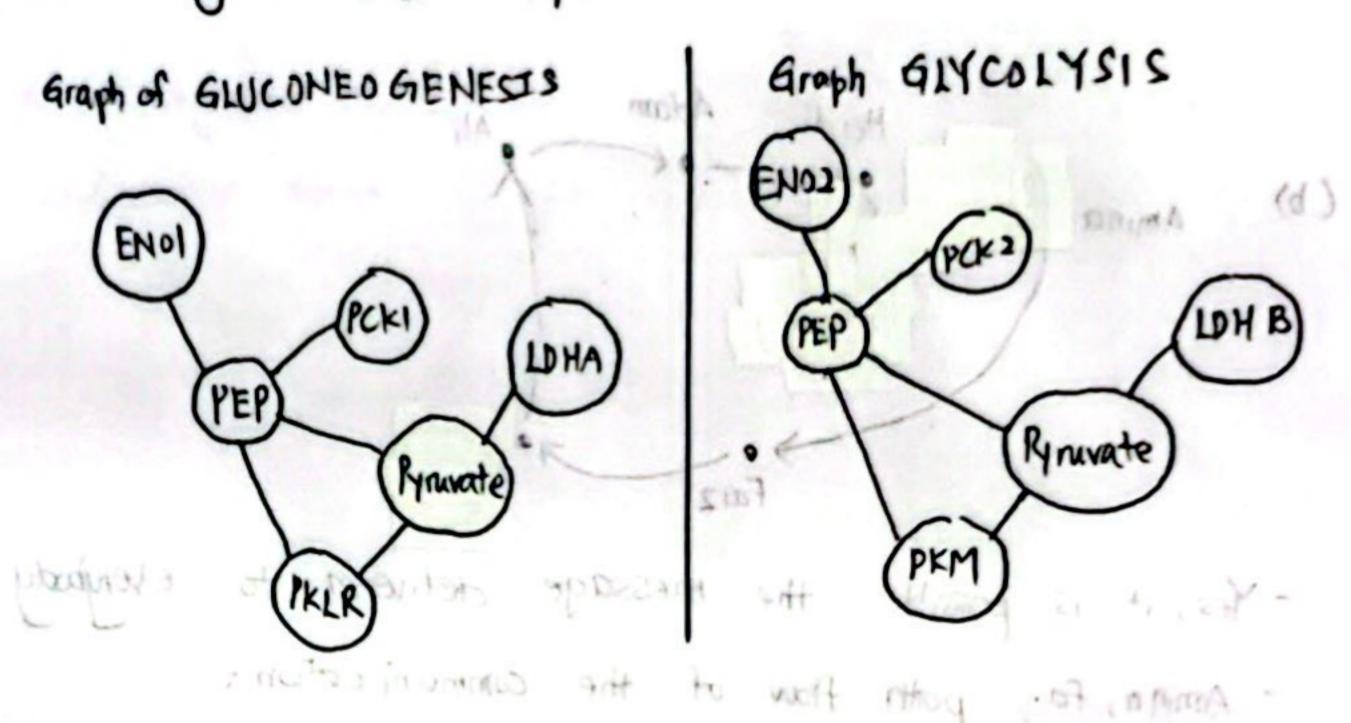
f(PKLR) = PKM

f(Pynivate) = Pynivate

f(LDHA) = LDHB

f(ENOI) = ENO2

f(PCKI) = PCK2



Adjacency matrix of graph GLUCONEOGENESIS: 500 1000 11 0003 2003 2007 DAMA

ricitos	PEP	PKLR	Pyruvate	AHOL	ENd	PCKI	
PEP &T	0	son triber	2017 1Hay	on on	Xation	euple lact o	q ro ebanent
PKIR	inch month	20 NZi V	at Min	that with	d of the	- xortov 30	act as the
Pynivate	1	1	O SUMING	I Fri	. 000	51 dupo p	and weeke
LPHA	d office	01-1	d) milmold	old 970	ct Osta	into impleine	of me mile
ENOI	1	0	0	0	0	0	
pck, L	1	O	0	0	0	90	

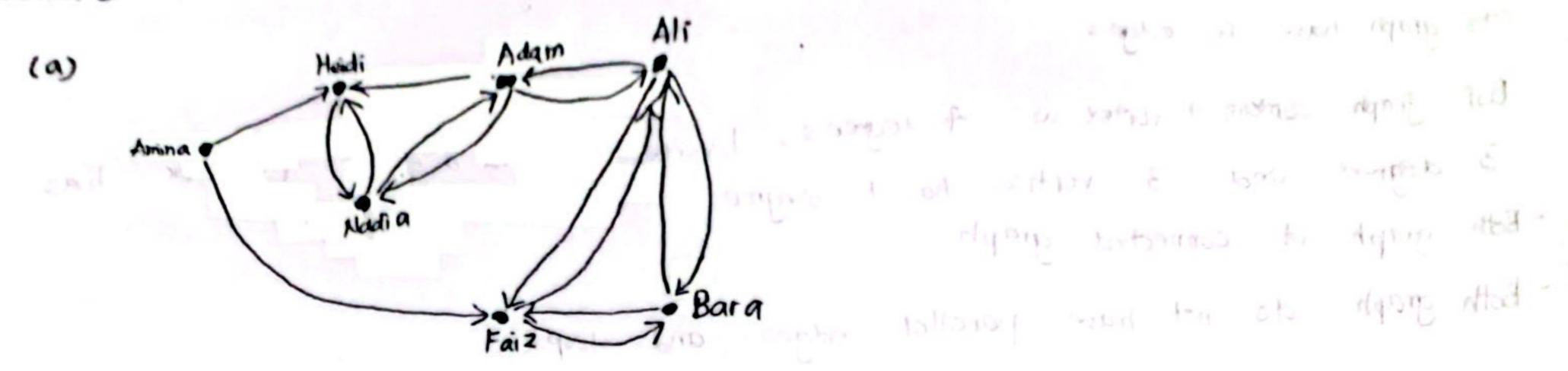
Adjacency matrix of graph GLYCOLYSIS:

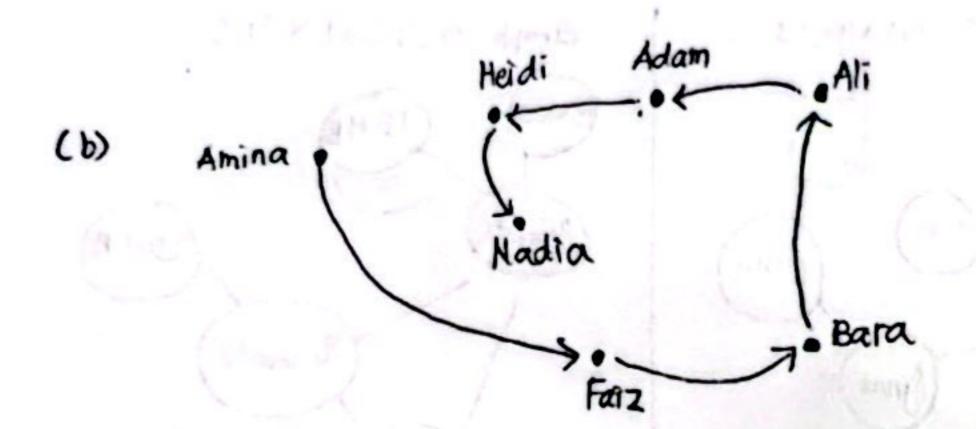
					014	1130	. 2 2	The second second
	PEP	PKM	Pynivate	LDHB	ENO2	* pck2	280	ere A
PEP	5		1	0	000	100		000
PKM.	1	0	1	0	0	0		
Pyruvate	1	1	0	41=1	Odence	0	£	(A) lets (ii)
LHDB	0	0	1	0	0	0	44	deg (B) =
EN02	1	0	O	0	0	0		
PCK 2	1	0	0	0 -	00	0		Less Bey
	- V. C.				P			

Graph GLUCONEOGENESIS and graph GLYCOLYSIS are isomorphic. Both has same adjacency matrix.

(i)(b)

E MORTER IS



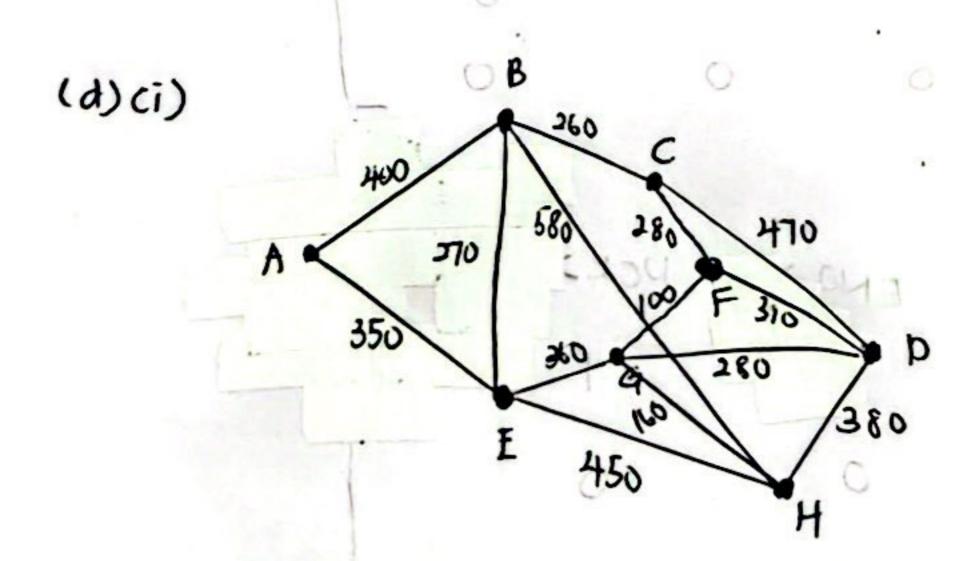


- once delivared the message - Yes, it is possible
- the communication: - Execution of poth flow of

Amina, Faiz, Bara, Ali, Adam, Heidi, Nadia

- the communication friends or people act as Vertices while the path flow of act as the vertex. It is possible the message delivered evenpody exactly once indicates that all vertex is used once, and selected edge is used only. This is characteristic of Hamilton
 - .. The theorem implemented to solve problem in (b) is Hamilton path.

F D H B



0

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a complete of the contract of

F(PEP) = 1 = 1

*119 = (9:19)

FILLDRAY - INDB

FON 7 = (1012) +

panalia de la conedia

PEP

oformal (stored):

Myour Entroperace to Agree Hold

- cd)ciii)- It is possible to plan a trip that travels all sections of the railway line without traveling on any section of the line more than once.
 - The railway line without travelling on any seation of the line more than once and the towns can be visited more than once. This indicates that edge cannot be repeated and vertex can be repeated which is the characteristic of Euler.
 - Since all the vertex has even degrees and only vertex C and vertex F have odd degrees, this indicates that vertex C and vertex F are the starting vertex and ending vertex.
 - Execution = (C, 260, B, 400, A, 350, E, 450, H, 380, b, 310, F)
 - (iv) Close line from B to E can be closed because B and E are still connected indirectly through other voutes.

S	N	L(A)	L(B)	L(c)	L(p)	L(E)	LCF)	L(4)	F(H)
3 3	{A,B,C,D,E,F,G,H}	0	ы	M	w	M	Ø	8	S
2 A3	SB,C,D,E,F,G,H3		400	60	ь	350	ھ	60	8
§A,E3	EB, c, b, F, G, H3		400	60	8		00	710	800
§ A, E, B3	¿c, b, F, G, H3			660	60		60	710	800
¿ A, E, B, C3	₹b, F, G, H3				1130		940	710	800
€A, E, B, C, G3	2 b, F, H3				990		810		808
§ A, E, B, C, G, H3	§ b, F3				990		810		
§ A, E, B, C, G, H, F3	9 p 3				990				7.6
{A,E,B,C,G,H,F,D}	23								

: Shatest toute: A > E -> P

Minimum total length of track to travel from Ash to paisy

- = 350 + 360 + 280
- = 990