

 KEMENTERIA PENDIDIKAN MALAYSIA		 POLITEKNIK MALAYSIA		COURSE CODE/ COURSE NAME		DBM2033 DISCRETE MATHEMATICS	
				COURSEWORK ASSESSMENT		QUIZ 2	
				SESSION		DECEMBER 2018	
				JABATAN MATEMATIK, SAINS DAN KOMPUTER		CLO1	
NAME	BECKHAM GILBERT			DURATION	15 MINS	CLO2	10 MARKS
REGISTRATION NO.	OSDD18 F1081					CLO3	
PROGRAMME/ SECTION	DDT2B					10 MARKS	
				TOTAL MARKS			

Instructions

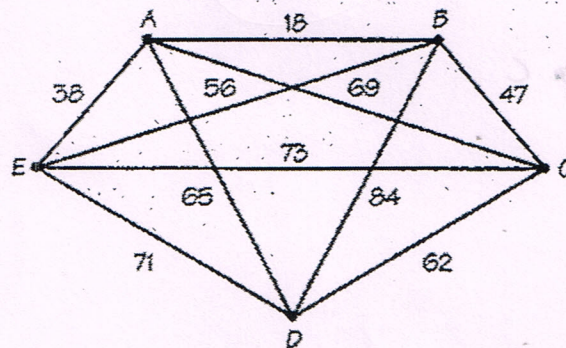
- Answer ALL questions. Write your answers in the spaces provided.
- Show your working to get marks. You may use a non-programmable scientific calculator.

Question 1

CLO2, C3

[5 marks]

Use Kruskal's algorithm to solve the minimum cost spanning tree on the following graph:

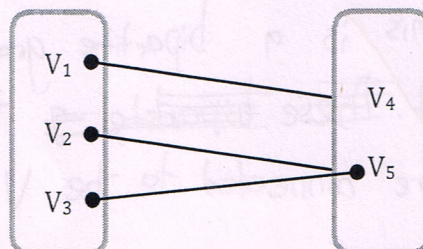


Question 2

CLO2, C3

[5 marks]

Is this bipartite graph? Explain your answer.

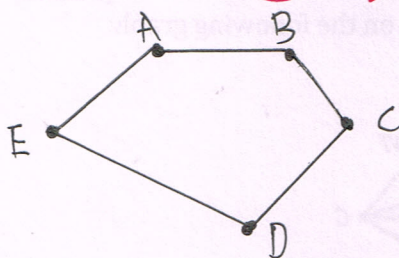


Answer. Question 1.

Kruskal's

Edges	AB	AE	BC	EB	DC	DA	AC	ED	EC	DB
Weight	18	38	47	56	62	65	69	71	73	84
Add	Yes	Yes	Yes	No	Yes	No	No	Yes	No	No

Total Weight: 309



Answer Question 2.

This is a bipartite graph. This is a bipartite graph because there are no common element inside it. ~~These bipartite~~ This graph also bipartite graph because V_2 and V_3 are connected to the V_5 . And the V_1 is only connected to V_4 .

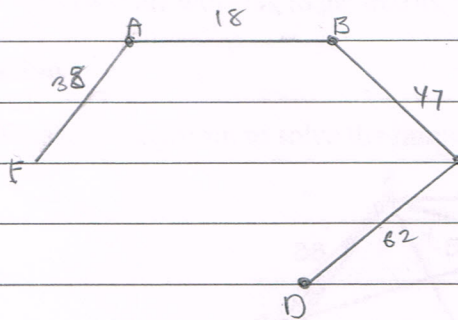
₹1040

tw

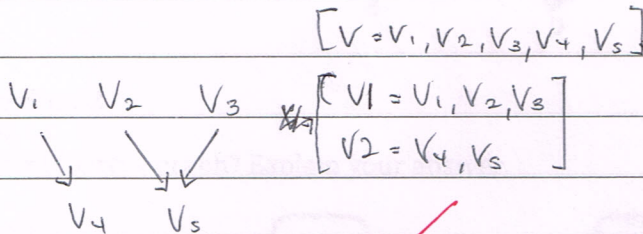
Question 1

Edge	AB	AF	BC	BE	CD	AD	AC	DE	CE	BD
weight	18	38	47	56	62	65	69	71	73	84
Add	Yes	Yes	Yes	no	Yes					

total weight = 165



Question 2



This graph is bipartite because $V_1 \cup V_2 = V$ and $V_1 \cap V_2 = \emptyset$,
~~and~~ and this graph don't ~~have~~ have ^{any} odd cycle.

F1011

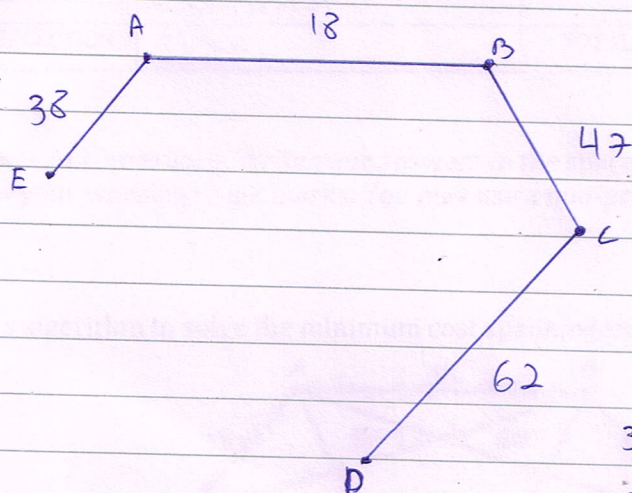
No. _____

Date: _____

Question 1

7.	AB	AE	BC	EB	DC	AD	AC	ED	EC	BD
7.	18	38	47	56	62	65	69	71	73	84
7.	yes	yes	yes	No	yes	No	No	No	No	No

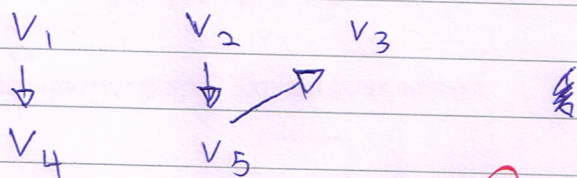
42



~~5~~

$$38 + 18 + 47 + 62 = 165$$

Question 2

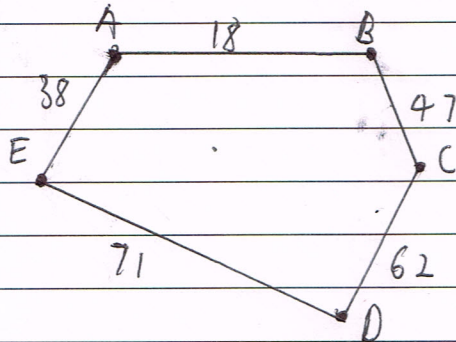


graph G is ~~not~~ bipartite graph because no odds.

(1)

1. ~~AB AE AC BE CD CE BE~~

AB	AE	AC	BE	CD	AD	AC	DE	BE	BD
18	38	47	56	62	65	69	71	73	84
True	True	True	False	True	False	False	True	False	False



total:

$$38 + 18 + 47 + 62 + 71$$

$$= 56 + 47 + 62 + 71$$

$$= 103 + 62 + 71$$

$$= 165 + 71$$

$$= 236$$

2. No. It is not a bipartite graph.

It is not one-to-one.

~~More than one~~Range is more than one ~~arrow~~ pointing arrow.It should ^{be} only one pointing to ~~unique character~~ only a unique ~~number~~ ^{element}.

$$V_2 = V_5 = V_3$$

MOHD. SYAFI AFFWAN

05DDT118F1012

DDT2B

Question 1

Edges	AB	AC	AD	AE	BC	BD	BE	CD	CE	DE
Weight	18	69	65	38	47	84	56	62	65	71
Add	YES	NO	NO	NO	YES	NO	NO	YES	NO	YES

Total weight: 198

Question 2

$$V_1 = \{v_1, v_2, v_3\}$$

$$V_2 = \{v_4, v_5\}$$

This is bipartite because it has no edges connected with ~~the same~~ itself.

T101-2

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				COURSEWORK ASSESSMENT		QUIZ 2	
				SESSION		DECEMBER 2018	
				DURATION	15 MINS	CLO1	
CLO2	10 MARKS						
CLO3							
NAME		MOHD. SYAAFI AFFAN		TOTAL MARKS		10 MARKS	
REGISTRATION NO.		05DDT18F1012					
PROGRAMME/ SECTION		DDT2B					

Instructions

- Answer ALL questions. Write your answers in the spaces provided.
- Show your working to get marks. You may use a non-programmable scientific calculator.

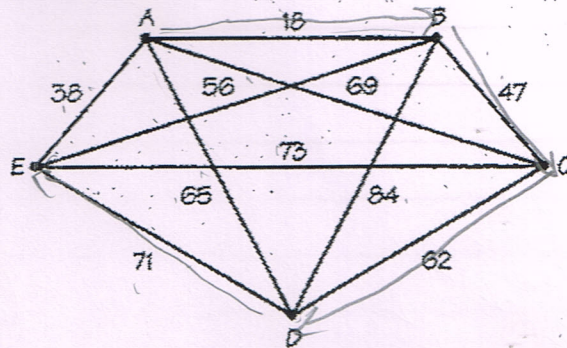
Question 1

CLO2, C3

[5 marks]

Use Kruskal's algorithm to solve the minimum cost spanning tree on the following graph:

AB	18
AC	69
AD	65
AE	38
BC	47
BD	84
BE	56
CD	62
CE	65
DE	71



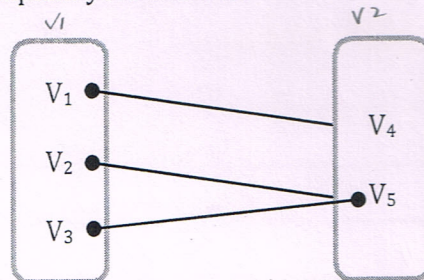
edges
weight
A11

Question 2

CLO2, C3

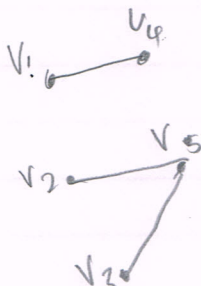
[5 marks]

Is this bipartite graph? Explain your answer.



$$V_1 = \{V_1, V_2, V_3\}$$

$$V_2 = \{V_4, V_5\}$$



Answer

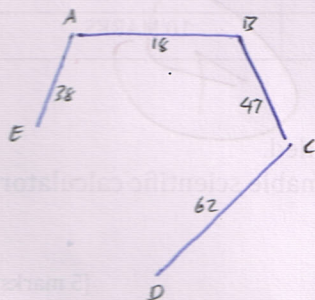
Question 1:

#1091

6

Edges	AB	AE	BC	BE	CD	AD	AC	DE	CE	
Weight	18	38	47	56	62	65	69	71	73	
add	YES	YES	YES	NO	YES					

only 9



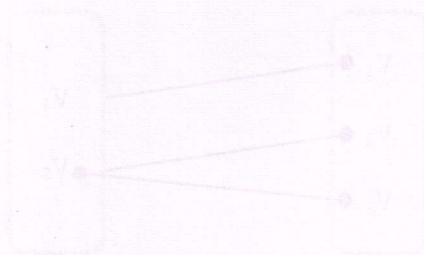
Vertices $(5-1) = 4$ edges
= weight 165

4

Question 2:

= YES. This is bipartite graph because there is no common element inside it.

2



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		COURSEWORK ASSESSMENT		QUIZ 2	
		SESSION		DECEMBER 2018	
		DURATION	15 MINS	CLO1	10 MARKS
CLO2					
CLO3					
NAME		Harwani Bt Alijan			
REGISTRATION NO.		05DDT18F1079			
PROGRAMME/ SECTION				TOTAL MARKS	
				10 MARKS	

Instructions

- Answer ALL questions. Write your answers in the spaces provided.
- Show your working to get marks. You may use a non-programmable scientific calculator.

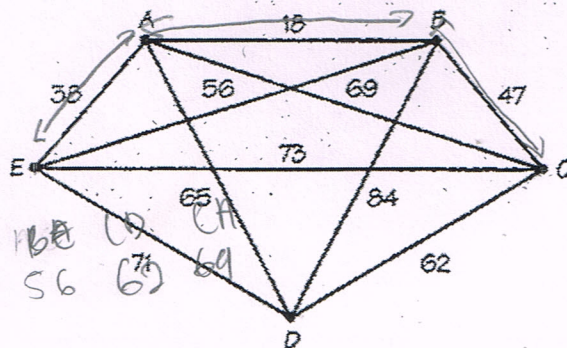
Question 1

CLO2, C3

[5 marks]

Use Kruskal's algorithm to solve the minimum cost spanning tree on the following graph:

Vertices = 5
edge =



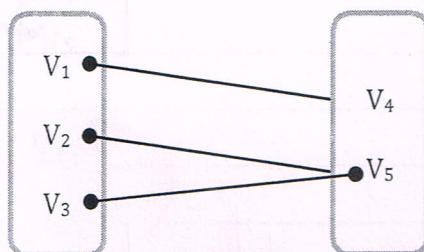
AB 18, AC 38, AD 56, AE 65, BC 47, BD 69, BE 73, CD 62, DE 84

Question 2

CLO2, C3

[5 marks]

Is this bipartite graph? Explain your answer.



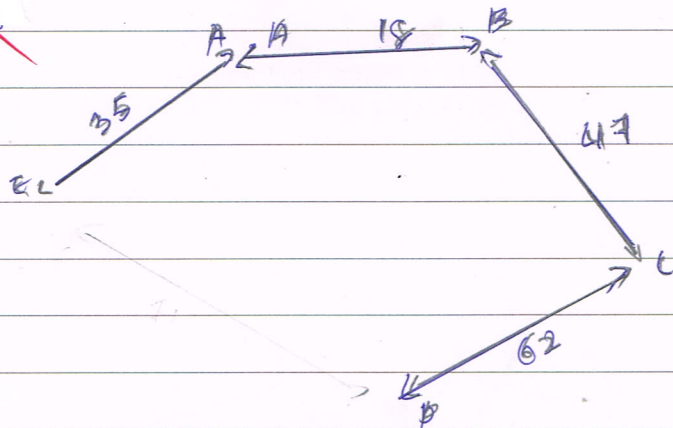
71079

Question 1

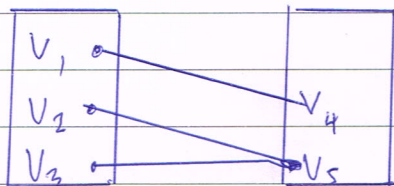
edges	AB	AE	BC	BE	CD	CE	DE	EC	DB
weight	18	38	47	56	62	65	71	73	84
add	Yes	Yes	Yes	NO	Yes	NO	Yes		

only 9?

± 162



Question 2.



$$V_1 = \{V_1, V_2, V_3\}$$

$$V_2 = \{V_4, V_5\}$$

= this graph is bipartite because V_1 and V_2 loop to V_5