

Question 1

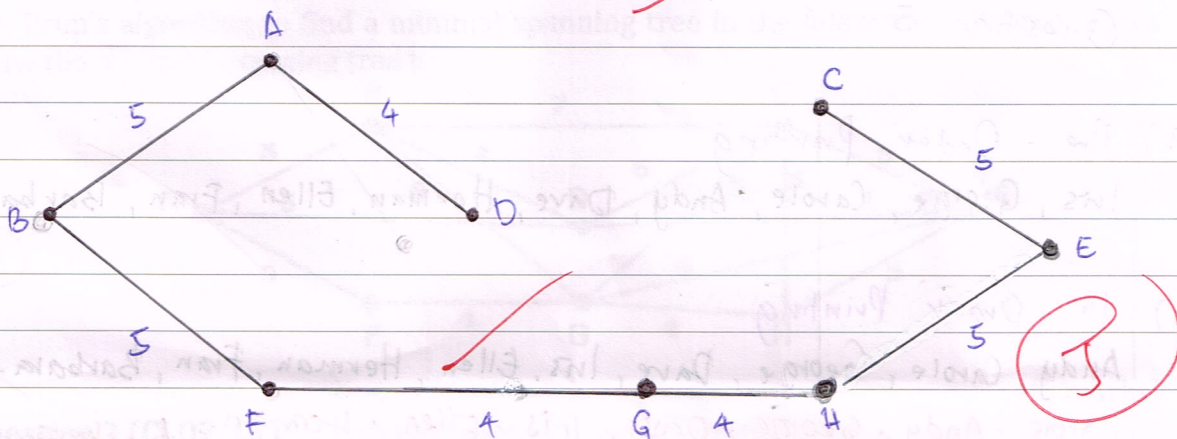
Total 4

15/20

Edges	BC	DE	AD	BG	DC	GE	AF	AB	GC	CH	CE	EH	BD	FG	GH
Weight	7	7	6	6	6	6	5	5	5	5	5	5	4	4	4
Delete	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	No	No	No	No

8 vertices at all. $n-1$ ($8-1=7$) edges to remain.

Thus, the minimal tree of the graph which is obtained containing the edges $AF, AB, CE, EH, BD, FG, GH$. The spanning tree has weight 32.



The minimal weight: $5 + 5 + 5 + 5 + 4 + 4 + 4 = 32$

Question 2

a) List all the level 1-vertices.

~~V_1, V_2~~ , V_1, V_2 and V_3

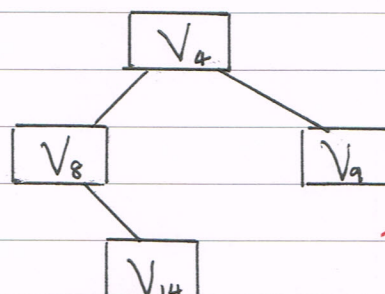
b) List all the leaves.

$V_{14}, V_5, V_{10}, V_{12}, V_{13}, V_9, V_{15}$

c) Who are the siblings of V_{10} ?

V_{11} and V_{12}

d) Compute the tree $T(V_4)$.



e) What is the height of tree (T, V_0)

1 4

f) All are the ancestors of V_4

- V_5
- and
- V_6

- The degree of V_6 is 3

- $$V_7$$

- The depth of V_{15} is 4

a) Pre - Order Printing

Mrs. George, Carole, Andy, Dave, Herman, Ellen, Fran, Barbara.

- b) In - Order Printing

Andy, Carol, George, Dave, Iris, Ellen, Herman, Fran, Barbara.

Carole, Andy, George, Dave, Iris, Ellen, Herman, Barbara, Fran

- c) Post - Order printing

Andy, Carol, Dave, George, Ellen, Barbara, Fran, Herman, Inez.

