## **Course: Algorithm CS 435**

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## **Assignment: W3D3**

**Question 1.** *Induced Graphs.* Answer questions about the graph G = (V,E) displayed below.



1. Let U = {A, B}. Draw G[U].

3 A B

1. Let W = {A, C, G, F}. Draw G[W].

3 A A

C C F

3 C. C B

G F

1. Let Y = {A, B, D, E}. Draw G[Y].

A B D E

1. Consider the following subgraph H of G:

A drawing of a cartoon character

Description automatically generated

Is there a subset X of the vertex set V so that H = G[X]? Explain

Answer: No because

1. Find a way to partition the vertex set V into two subsets V1, V2 so that each of the induced graphs G[V1] and G[V2] is connected and G = G[V1] U G[V2].

**Question 2.** The following graph has a Hamiltonian cycle. Find it.

A close up of a map

Description automatically generated

I am sensationally empower to decree an employment letter for Eng. Keletazghi Tesfamariam who has been active member of our company Liya Enterprise currently working as junior Java developer, Asmara Eritrea. He is a valuable asset to our company Keletazhgi Tesfazghi is a hard, courteous goal oriented individual who can up hard the reputation of our company and give it a promising future. His overall responsibility was to enable smooth and efficient operation and I am pleased to say that he performed this task with the utmost competence.

Finaly I wish him success in his studies. I f you need any further information regarding Eng. Keletazghi please feel free to contact me.