## W3D3 Assignment

**Question 1**

1. U = {A, B}

G[U] =

1. W = {A, C, G, F}

G[W] =

1. Y = {A, B, D, E}

G[Y] =

1. No, because for H = G[X] to be true, the subset must contain the vertices A, B, and F and all the edges corresponding to these vertices, which is not equal to H.

i.e take

While

Since , there is no subset of so that

1. V1 = {A, B, C, F, G, H} V2 = {D, E, I}

G[V1] = G[V2] =

Here, it can be shown that are connected graphs and