**Problem 1:**

1. No, it is not it is not connected

There are two connected components, one that contains the vertices A, B, C, F, G, H and the second is the component that contains D, E, I.

1. Spanning tree / forests {AB, AC, BF, CG, FH, GH} , { DE, DI }
2. Not Hamiltonian Graph, because not Hamiltonian cycle in the graph because the graph is not connected.
3. Yes, C = {F, A, G, I, E}

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**Problem 2: Hamiltonian Graphs.**

**Chart, radar chart

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**Problem 3:** Smallest Vertex cover size

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**Problem 4:**

1. Given two vertices, is there a path that joins them?

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1. Is the graph connected, if not connected how many connected components does it have ?

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