GRAPH THEORY: CLASS 9

1) Give an example of a graph that

a) contains more bridges than cut-vertices.
b) contains more cut-vertices than bridges.

2) Prove or disprove:

a) If a vertex v of a graph G lies on a cycle of G, then v is not a cut-vertex.
b)A tree of order 3 or more has more cut-vertices than bridges.
c)A tree of order 3 or more has more bridge than cut-vertices.

3) Determine the cut-vertices, bridges and blocks of the graph below.

4) Let G b a graph of order $n \geq 3$ such that deg $v \geq n/2$ for every vertices v in G. Show that G is nonseparable.

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