

Questions for the Concept Test of MCS 423

1. What is a graph?
2. What is the difference between a walk and a path?
3. What is the meaning that two graphs G and H are isomorphic?
4. How many trees are there on n labelled vertices?
5. Whitney's theorem says that a graph G is 2-connected if and only if what?
6. What is $\kappa(G)$, what is $\kappa_e(G)$?
7. What is a planar path?
8. What is Euler's formula on planar graphs?
9. What is $\chi(G)$, what is $\chi'(G)$?
10. Is it true that Brooks' theorem claims that $\chi(G) \leq \Delta(G)$ for any graphs G ?
11. What is Four Color Theorem?
12. Given a graph G , what are the best lower and upper bound for $\chi'(G)$?
13. State Max-flow Min-cut Theorem.
14. State Hall's theorem.