Credit tests questions

1. Distances in a graph: vertex-vertex, vertex-edge, point-vertex, point-edge.
2. Searching for centers.
3. Searching for medians.
4. Searching for p-centers.
5. Searching for p-medians.
6. Flows in networks. The theorem about the maximal flow and the minimal cut.
7. Searching for the maximal flow. Variants of the maximal flow problem.
8. Searching for a minimal cost flow: solution of the dual linear programming problem.
9. Searching for a minimal cost flow using cycles of a negative weight.
10. Searching for a minimal cost flow using minimal paths.
11. Independent and covering sets.
12. Maximal independent sets and their search.
13. Vertex covers and their search.
14. Maximal independent sets and their search.
15. Matching and edge covers.
16. Alternating chains and trees. A theorem about a matching with the maximum cardinal number.
17. Flowers. A theorem about a flower.
18. Hungarian tree.. A theorem about a Hungarian tree.
19.. Searching for a maximal matching.
20. Searching for a maximal weight matching.
21. Full matching in a bipartite graph. The Holl theorem.
22. The assignment problem.
23. The transport problem and its variants.
24. Eulerian graphs. Necessary and sufficient conditions of an Eulerian graph. Searching for an Eulerian cycle.
25. The Chinese postman problem for undirected graphs.
26. The Chinese postman problem for directed graphs.
27. The Chinese postman problem for mixed graphs.
28. Hamiltonian graphs. Sufficient conditions for a Hamiltonian graph. Finding a Hamiltonian cycle.
29. The traveling salesman problem. Method of branches and bounds.
30. The traveling salesman problem. Heuristic methods.