**3 group task in discrete math:**

Edited at 3am 23.5.2017.

**Greedy:**

1. What is a Greedy Algorithm?

https://en.wikipedia.org/wiki/Greedy\_algorithm

How do you use Greedy Algorithms in Zimmermann Problems?

**Graph theory:**

2. Explain the Graph Theory.

https://en.wikipedia.org/wiki/Graph\_theory

3. Explain the **Bipartite** graph.

https://en.wikipedia.org/wiki/Bipartite\_graph

4. Explain the **complete** K4, K3,3, etc. graphs.

https://en.wikipedia.org/wiki/Complete\_graph

5. How many edges are there in K97, K89,97?

6. What is a **Planar** Graph?

https://en.wikipedia.org/wiki/Planar\_graph

7. Are these graphs **planar**, why?

http://discrete4math.weebly.com/uploads/2/5/3/9/25393482/graph\_to\_analyze\_for\_planarity.ppt

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8. Give the **Kuratowski** Theorem.

https://en.wikipedia.org/wiki/Kuratowski's\_theorem

9. Explain **Hamiltonian** Cycle.

https://en.wikipedia.org/wiki/Hamiltonian\_path

10. What is **Euler** Cycle?

https://en.wikipedia.org/wiki/Eulerian\_path

11. Solve the **Konigsberg** Bridges Problem.

https://en.wikipedia.org/wiki/Seven\_Bridges\_of\_K%C3%B6nigsberg

12. Explain the **Travelling Salesman Problem**.

https://en.wikipedia.org/wiki/Travelling\_salesman\_problem

13. What is **Djikstras** Algorithm?

https://en.wikipedia.org/wiki/Dijkstra's\_algorithm

14. Explain the **Graceful** Graph.

http://mathworld.wolfram.com/GracefulGraph.html

**Boolean Algebra:**

15. Explain **Boolean Algebra**.

https://en.wikipedia.org/wiki/Boolean\_algebra

16. Explain **simplifying** Boolean expressions.

17. Explain **Karnaugh** Map.

https://en.wikipedia.org/wiki/Karnaugh\_map

Hash function:

18. Explain **Hash** Function.

https://en.wikipedia.org/wiki/Hash\_function

Cryptography:

19. Explain **cryptography**.

https://en.wikipedia.org/wiki/Cryptography

**Deadline: 31.5.2017.**