

WRITTEN EXAMINATION

SGO1910 – Geographical Information Systems

27 November 2017

(3 hours)

No support materials, except for dictionaries that have been submitted to the Faculty of Social Sciences for control, are permitted.

Results will be available in Studentweb on 18 December 2017. The results are considered official upon publication in Studentweb and students are responsible for checking their result at this time. If you want an explanation for your grade, you must apply within one week after the result is published. The deadline for appealing your grade is three weeks after the announcement of examination results, or three weeks after an explanation of the grade has been given. Information on procedures for requesting explanations and appeals is available on the course page.

The exam consists of three parts.

Part 1. Five questions (25% of grade)

Part 2. One task (15% of grade)

Part 3. Two out of three essays (60% of grade)

Please read the questions carefully.

You may write your answers in Norwegian, Swedish, Danish or English.

Good luck!

Part 1

Five questions (25% of grade) Answer ALL of the following questions.

Q1.1 Describe the Modifiable Area Unit Problem (MAUP)? (max 150 words)

Q1.2 What is a network and a network analysis? Give some examples of specific network analyses? (max 150 words)

Q1.3 Describe what is meant with vector and raster data? (max 150 words)

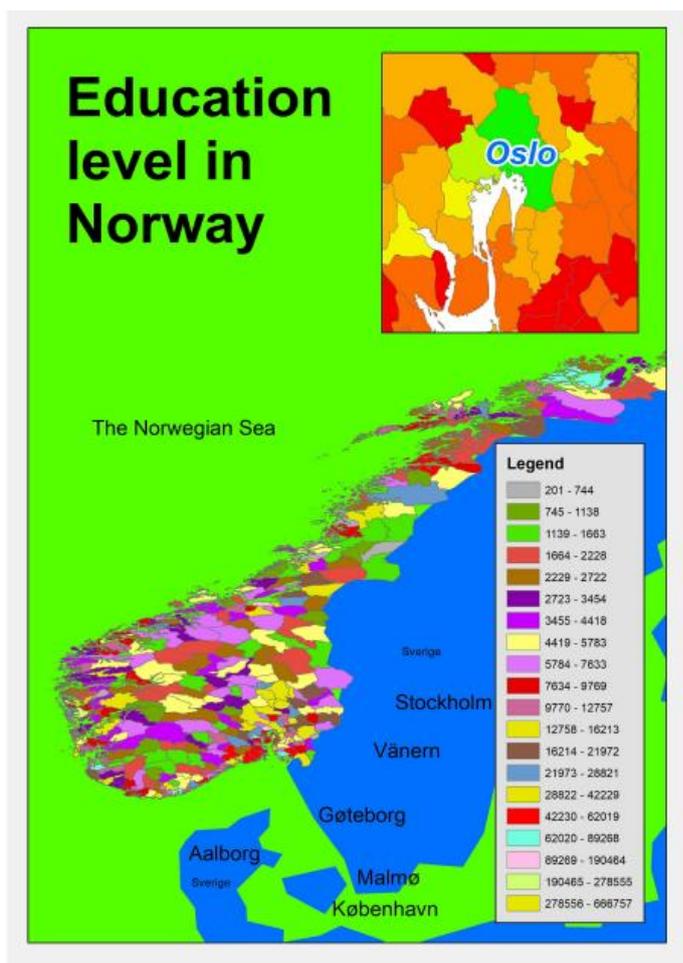
Q1.4 Describe what is meant with in-situ data collection and remote sensing? Give an example of each? (max 150 words)

Q1.5 List and describe three types of research design for spatial analysis? (max 150 words)

Part 2

Task (15% of grade)

Q2



The creator of this map of education level in Norway made many mistakes. Identify at least ten cartographic errors. (max 250 words)

Part 3.

Essays (60% of grade, each answer is worth 30%) Please write an essay on TWO of the following three questions of your choosing (max 400 words each). Leave the answer box of the other of the three questions blank. If you wish you may use references to the course literature articles (this is not necessary when it is a reference to the text book or the lectures).

Q3.1 There have been heated debates about how geographers should relate to Tobler's first law of geography, notably during the 2003 AAG annual meeting. Describe and discuss Tobler's first law of geography, and how can it be used in analyses of spatial patterns? (max 400 words)

Q3.2 Give a detailed description of what a map projection is? Describe some of the challenges of map projections? Discuss how the choice of map projection can be strategic or political? (max 400 words)

Q3.3 What were some of the main critiques of Geographic Information Systems (GIS) in the 1990s, and what are some of the challenges GIS faces today? Discuss how GIS can be both empowering or disempowering marginalised groups? (max 400 words)