WRITTEN EXAMINATION

SGO1910 – Geographical Information Systems

9 December 2016

(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 5 January 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.

This examination paper consists of **2 pages**, including this page.

The candidate must submit both the original and the copy of their examination answers.

NB! Make sure the copy is legible. **No draft is permitted!**

Remember to write down your candidate number for later use.

Good luck!

The exam consists of two parts. Part 1 is worth 25% and Part 2 is worth 75% of the grade.

Please read the questions carefully.

You may write your answers in English or Norwegian. Please just make sure that your handwriting is legible.

Part 1. Short answers (25% of grade)

Describe **ALL** of the following concepts briefly in a paragraph or less. You may include illustrations if appropriate.

1. Spatial autocorrelation
2. Network analysis
3. Qualitative Geographic Information Systems
4. Map projection
5. Vector data

Part 2. Essays (75% of grade, each answer is worth 25%)

Please answer **THREE** of the following questions. You may include illustrations if appropriate.

1. What is spatial analysis? What makes spatial analysis possible? Give examples of different types of spatial analysis and their applications.

2. Explain the Modifiable Area Unit Problem (MAUP) and Ecological Fallacy, how they arise, and their consequences. What are other sources of error that can arise in the use of Geographic Information Systems?

3. What is a map? Explain the basic components of a map and explain what makes a good map. Give examples of different types of maps and their uses.

4. What were some the main critiques of Geographic Information Systems in the 1990s? What developments did they lead to? What are some of the current and future challenges for Geographic Information Systems?