

## Assignment 01

### Instructions:

- The due date for Assignment 01 is 2018/08/17. If you submit your assignment after the submission date it will not be marked.
- Assignment 01 contributes 35% to your year mark and its unique number is **817691**
- Assignment 01 needs to be submitted online via the assignments tool on myUnisa — no blog or discussion forum submissions will be marked.
- Submit your documents in **PDF file format**. Please note, NO hardcopy assignment submission will be accepted, if you submit in hard copy via the postal system, you will be given a mark of **ZERO**. **PLEASE *do not*** submit your assignment as a PDF/A, PDF/X or PDF/E document.
- Any assignment containing plagiarism will automatically be given a mark of zero, if you are unsure what constitutes plagiarism please refer to [Unisa's plagiarism policy](#).

The marking guidelines for Assignment 01 will be made available as file *Assignment 01 marking guidelines – S2 2018* under *Additional Resources* in the folder entitled, *Marking guidelines for assignments*.

## Question 1

Please determine whether the following statements are true or false:

- 1.1 Small scale maps have lots of detail since it covers a small area. **False**
- 1.2 Maps are the only source of spatial data. **False**
- 1.3 Coordinates are examples of quantitative data. **True**
- 1.4 Scales are an essential map element. **True**
- 1.5 A scale of 1:50 000 translates into 1cm equals 5000m on the ground. **False**
- 1.6 One dimensional symbols are point symbols depicting points of interest. **False**
- 1.7 Satellite images have a scale. **True**
- 1.8 North on a map is general at the top of the map. **True**
- 1.9 Latitudes and longitudes are part of projected coordinate systems. **False**
- 1.10 Mental maps are maps on how we perceive our environment. **True**

## Question 2

By referring to the simulated cholera example in Vulindlela near Richards Bay (Figure 1), provide a brief outline of what you understand to be the purpose of this map (4). After explaining the purpose of the map refer to how this map can be used to address geographical questions such as “Where?”, “What?” and “Why?” Please provide examples from this map (6).

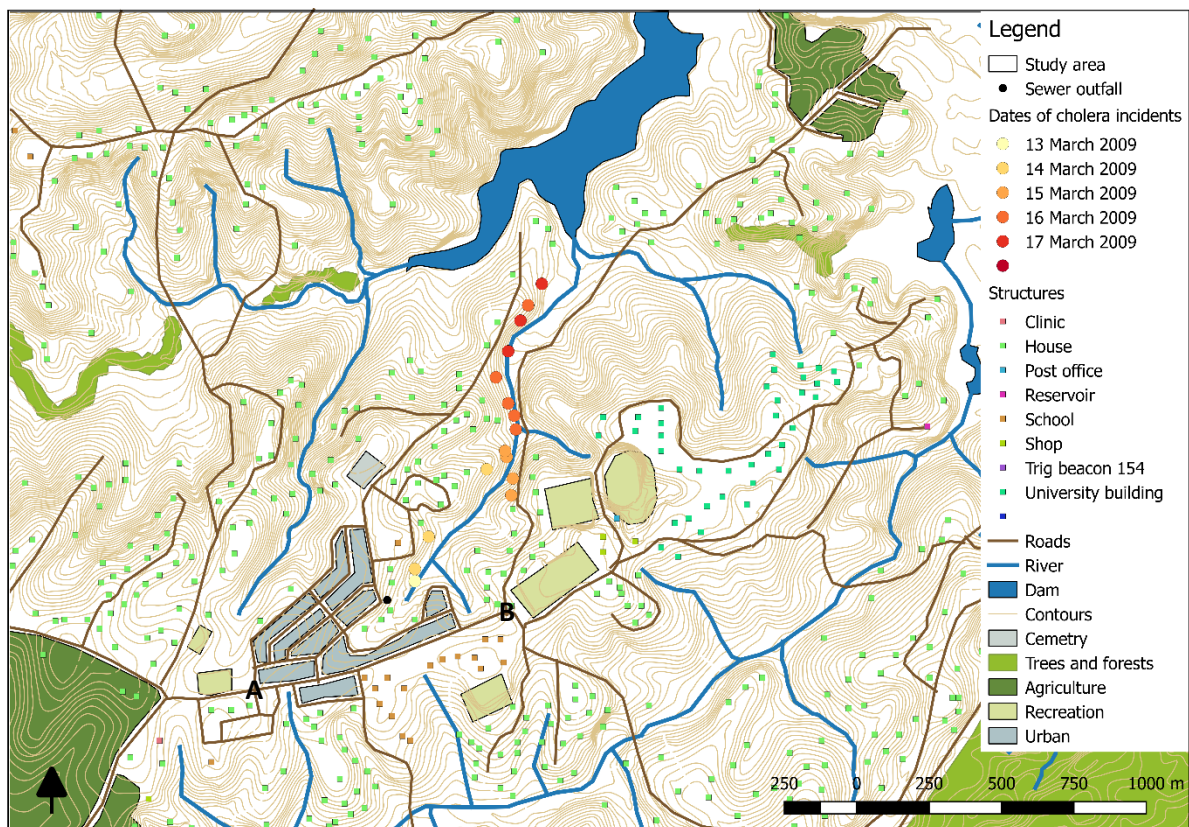


Figure 1: Simulated cholera incidents in Vulindlela, Richards Bay (KZN).

**Answer**

Purpose - Reduced representation of actual area. Landscape using contours. Features such as roads, rivers, etc. Specific purpose: Indicate cholera incidents. Other features.

Where – Spatial data is linked to a specific place on the earth's surface, maps can be used to determine where that place is, for example, if I wanted to know more about the Victoria Falls, I would be able to consult a map to determine exactly where this waterfall is. Cholera incident locations, Where the sewer outfall is (2).

What – an example of a “what” question can be “what is the name of the river that forms the boundary between Gauteng and the Free State?” What caused the cholera incidents – sewer outfall What land use is there? Houses next to the river (2).

Why – this question is provided by the presence of other mapped phenomena, for example when considering the outbreak of cholera, from the map it is possible to determine the source of the outbreak. By reviewing spatial data, we can answer "why" questions by determining why these phenomena relate to one another. River was used as source of water (2).

### Question 3

Use the map from Figure 1 and the background of the London cholera outbreak to answer the following:

3.1 List the number of cholera incidents in Vulindlela (2).

3.2 Identify the source of water for affected households in Vulindlela (2).

3.3 Indicate the general direction of the spread of cholera. North, South, East, West, Northwest, Southeast, Southwest, Northeast? (2)

3.4 Identify the possible source of the cholera epidemic (2).

3.5 Motivate why you chose that particular source (2).

### Answer

3.1 16 incidents

3.2 The river next to the households

3.3 Northeast

3.4 Sewer outfall

3.5 Cholera can be linked to polluted water sources. Causes of cholera such as faecal pollution. It is a waterborne disease.

### Question 4

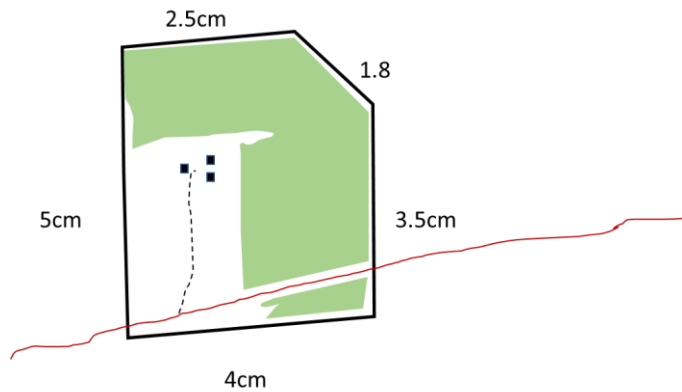
4.1 Calculate the real-world distance using a 1:10 000 scale orthophoto when the distance on the orthophoto is 2.3 cm. (2)

$2.3 \times 100 \text{ m} = 230 \text{ m} / 0.23 \text{ km}$

4.2 The road distance between Johannesburg and Pretoria is 56km. What would the road distance in cm (centimetre) be on a 1:250 000 map? (3)

$1 \text{ cm} = 2.5 \text{ km on the ground. Thus } 56 / 2.5 = 22.4 \text{ cm on the map.}$

4.3 Calculate the boundary of the farm in kilometres as indicated in Figure 2 (farm's map scale is 1:50 000).



$$5 + 4 + 3.5 + 2.5 + 1.8 = 16.8$$

$$16.8 \times 0.5 = 8.4\text{km}$$

4.4 Using the map in Figure 1 use the scale bar to determine the distance between A and B on the map. (2)

Roughly a 1000m

### Question 5

#### 5.1

From the simulated cholera incident map in Figure 1 choose:

5.1.1 Two one-dimensional map features (2) roads and rivers

5.1.2 Two zero-dimensional features (2) Clinic, Post Office, Cholera incidents, etc.

5.1.3 Two two-dimensional features (2) Dam, Cemetery, Urban, etc.

#### 5.2

5.2.1 From the simulated cholera incident map in Figure 1, based on Learning Unit 3's map elements, please indicate the missing map element in the map in Figure 1 (2) Map title

5.2.2 Based on Learning Unit 3's mapping exercise briefly evaluate the map in Figure 2. (2)

Missing map elements such as scale bar, north arrow, title, etc.

**Total for Assignment 1 = 50 marks.**