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Geography

Rural and urban settlements - skills and techniques

This support pack for the **Rural and urban settlements - skills and techniques** topic in the **Geography Grade 12 CAPS curriculum** provides valuable practical activities. All activities have the answers provided. Learners can work through these individually at home or these could form the basis of a catch-up class or online lesson. You have permission to print or photocopy this document or distribute it electronically via email or WhatsApp.

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Rural and urban settlements – skills and techniques

QUESTION 1

Choose the correct underlined word or phrase for each statement. Write down only the question number and the underlined word or phrase.

1. GIS stands for Geological Information System/Geometric Information System/ Geographical Information System/ Geophysical Information System.
2. GIS maps are produced to a scale of 1: 10 000/1: 50 000/1: 1 000 000/any suitable scale.
3. With a high-angle oblique aerial photo, the horizon cannot be seen/the horizon can be seen/the angle between the camera lens and the ground directly below it is 90°/none of the previous answers is correct.
4. In a GIS, shapefiles spatially describe geometries/points/polylines and polygons/ all of the previous answers.
5. Spatial data implies geographical space/ outer space/inner space/no space at all. (5×2)

[10]

QUESTION 2

Choose whether the statement is True or False. Write down only the question number and 'T' or 'F'.

1. Buffering refers to the creation of a zone of a specified width around a point or a line or a polygon on a GIS map.
2. Resolution refers to the quality of the data in a GIS or in an image.
3. Vector data represent the landscape as a rectangular matrix of square cells.
4. 1: 20 000 is an example of a word scale (statement of scale).
5. A map without a scale is like a boat without a sail. (5×2)

[10]

QUESTION 3

Explain what is meant by overlays in a GIS, and how overlays assist us to solve a geographical-spatial problem. **[10]**

QUESTION 4

Refer to the topographical map extract in Figure 6.13 on next page and Figure 9.12 on page 3, and then answer the questions.

1. Provide the map with its likely title, but explain why its full title (in terms of the South African topographical series) cannot be given. (2)
2. Provide a short (four-line) description as to what you observe in terms of this landscape.(4)
3. Some buildings are shown in solid black. What might these be? (2)
4. Is this a rocky, or a sandy coastline? Explain. (2)
5. Do there appear to be any green belts on the map? What might the purpose of green belts be? (2)
6. Identify four possible forms of recreation from the map. (4)
7. In general, do the main roads and railways run north–south, or east–west? Explain. (2)
8. Given the information on the map, what is lacking which would assist you in giving exact coordinates for Salisbury Island, or any other point for that matter? (2)

[20]

[Total: 50 marks]

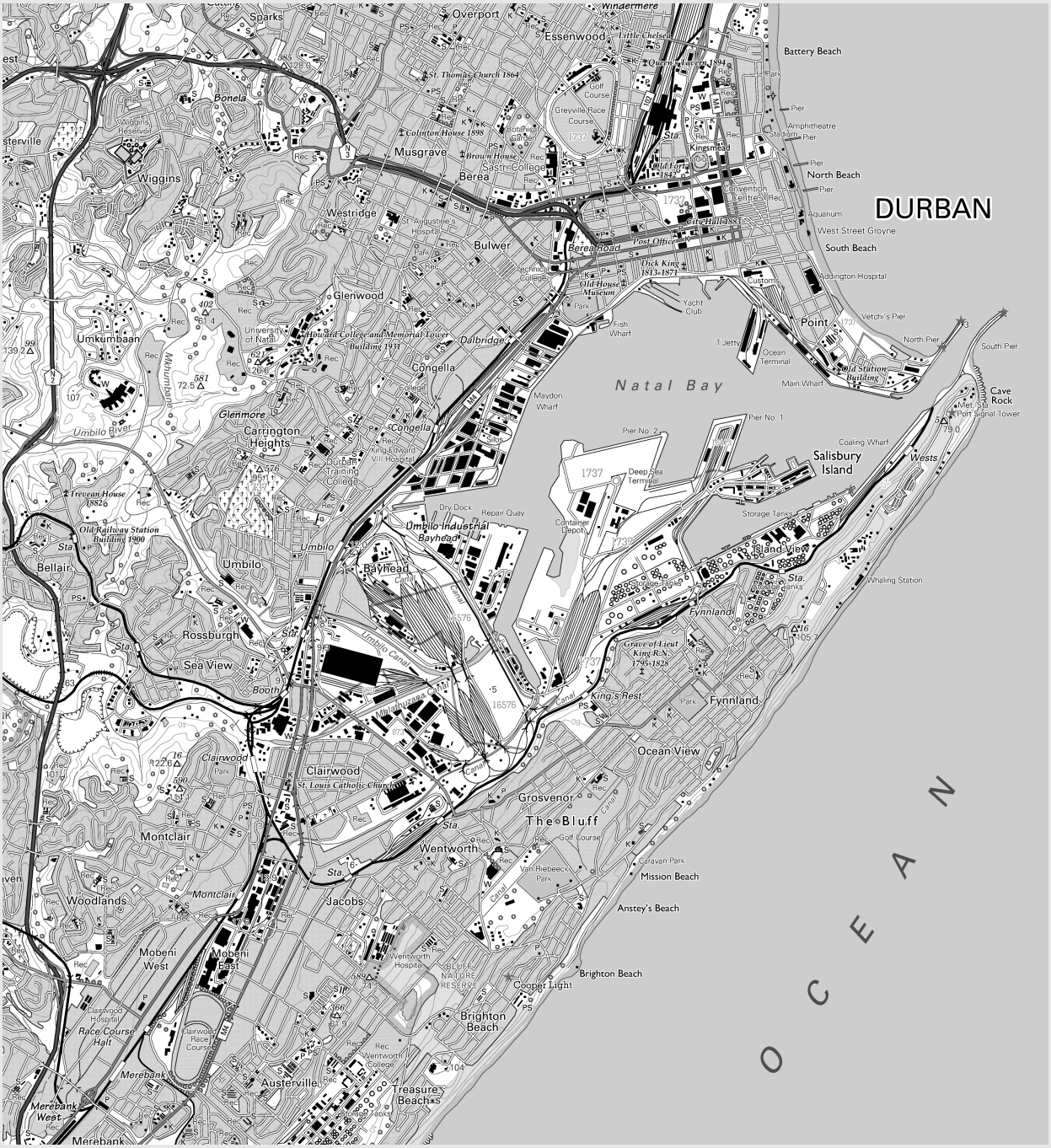

Figure 6.13 An unnamed topographical map extract (*Refer to Figure 9.12 on next page.*)

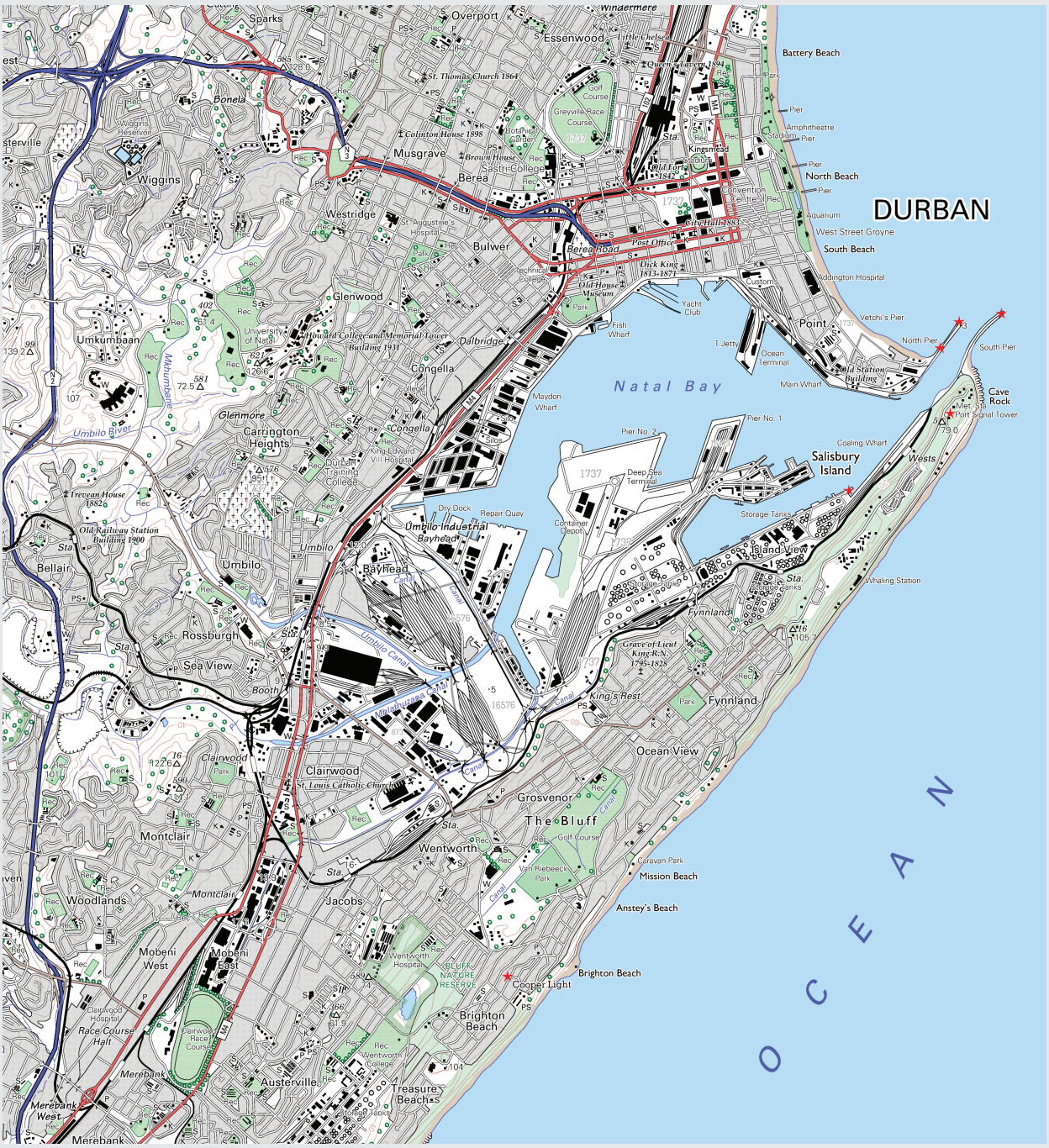

Figure 9.12 An unnamed topographical map extract (*Refer back to Figure 6.13 on the previous page.*)

Answers

QUESTION 1

1. Geographical Information System ✓✓
2. any suitable scale ✓✓
3. the horizon can be seen ✓✓
4. all of the previous answers ✓✓
5. geographical space ✓✓ (5×2)

[10]

QUESTION 2

1. T ✓✓
2. T ✓✓
3. F (raster data represents the landscape as a rectangular matrix of square cells) ✓✓
4. F (it is an example of a ratio scale) ✓✓
5. T ✓✓ (5×2)

[10]

QUESTION 3

A GIS is made up of a series of overlays, or layers, each containing a specific set of data or information ✓✓. The GIS software is capable of understanding and interpreting the data associated with each layer, so as to produce meaningful and useful answers ✓✓. Here is an example. The Independent Electoral Commission (IEC) wants to know where to situate polling stations in an urban area for an election ✓✓.

Their main criteria are that no person should be more than 2 km from a polling station, that no polling station should have to serve more than 5 000 voters, and that no polling station should be situated within 1 km of a shebeen or a dangerous road intersection ✓✓. Given accurate information regarding the above criteria, a GIS will be able to identify, accurately and usefully, suitable sites for polling stations within the defined area ✓✓.

[10]

QUESTION 4

1. Durban ✓. However, the latitude and longitude coordinates are absent, so the map's full title (2930DD & 2931CC Durban) cannot be given ✓. (2)
2. This is an urban landscape ✓ that is part of the city of Durban ✓. It shows a variety of urban land use and infrastructure (e.g. factories, Durban harbour), national and main roads, the CBD, and residential areas ✓. There is some, but not much, open or undeveloped land ✓. (4)
3. These are large industrial buildings ✓, including factories, warehouses, and harbour and transport facilities ✓. (2)
4. This is a sandy coastline ✓. There are a number of beaches shown on the map ✓. (2)
5. Yes, there are green belts, for example on the Bluff, and in the interior ✓. These serve as the city's 'lungs' (vegetation), and also provide the city with a more attractive 'open' appearance ✓. (2)
6. Any four: horse racing ✓; golfing ✓; swimming (beaches) ✓; cricket and other sports (Kingsmead stadium and other sport and recreation fields) ✓; botanical gardens ✓; parks ✓ (4)
7. Generally north–south, because the coast forms a barrier to the east ✓. However, within the city, and heading off the map to the west, there are main routes (Durban–Johannesburg is a major road, rail and pipeline route) ✓. (2)
8. Without any sort of grid or accurate latitude and longitude representation ✓, it is impossible to provide accurate coordinates for Salisbury Island, or for any other feature on the map ✓. (2)

[20]

[Total: 50 marks]