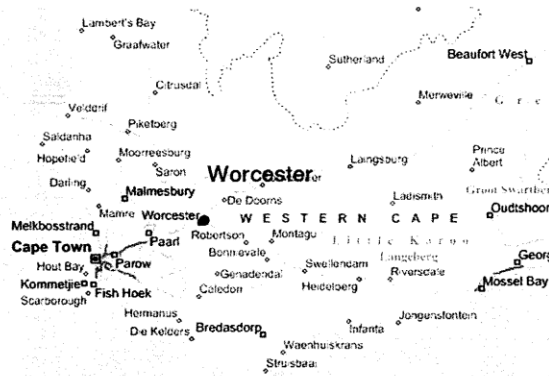


Examiner: C R Madeley

- Refer to the topographical map and orthophoto of Worcester.
- Answer all questions on the question paper.
- Show all working for calculations
- Write neatly and clearly



**Question One**

1.1 Name the land uses indicated by the following letters on the orthophoto.

S- \_\_\_\_\_

T- \_\_\_\_\_

M- \_\_\_\_\_

N- \_\_\_\_\_

K- \_\_\_\_\_ (5)

1.2.1 Indicate the number of times the orthophoto scale is larger than the topographical Map. (2)

1.2.2 Explain why the contour interval is smaller on the orthophoto than the topographical map. (3)

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1.3 The land feature **R** on the topographical map is:

- A. a concave slope
  - B. a mesa
  - C. a saddle
  - D. a homclinal ridge
- (2)

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1.4 Which residential area, **S** or **U** is likely to be a higher income area? Refer to evidence on the orthophoto and map to justify your answer. (5)

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1.5 Identify the street pattern at van Riebeeck Park on the orthophoto. State one disadvantage of this pattern (3)

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1.6 Explain why feature Q on the topographical map is important for the health of the Bree river system. (4)

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1.7 Name the river feature at P on the map. Indicate what this suggests river processes in this area. (4)

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1.8 Name the river channel pattern in grid H 11. (2)

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[30]

**Question Two      Map calculations and techniques**

2.1 Calculate the gradient of the slope between the trig beacon 205 in grid **A8** and the reservoir in **B9**.

**Gradient= VI/HE**

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Answer: \_\_\_\_\_ (4)

2.2 A cross- section drawn between the two points you used above has a vertical scale of **2mm =20 metres**.

Calculate the vertical exaggeration this cross section would have. (4)

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Answer: \_\_\_\_\_.

2.3 State whether the magnetic declination of the map for 2017 would be greater or smaller than that for 1997. Explain why. (4)

Reasons:

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2.4 Calculate the area covered by the orthophoto in square kilometres. (3)

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Answer: \_\_\_\_\_.

[15]

**Question Three                      Application and interpretation settlement in grid A1**

3.1 Refer to the settlements in grid A1.

3.1.1 State the main pattern of the settlements. (2)

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3.1.2 Indicate TWO reasons for the siting of this settlement. (2)

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3.1.3 State ONE piece of evidence that this is a commercial farming settlement. (2)

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3.2 Refer to the course of the Bree River between grids C4 and F8.

3.2.1 In which direction is the river flowing between these points? (2)

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3.2.2 Is the river in its upper or middle course? Give one piece of evidence to support your answer. (3)

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3.2.3 Give a reason for the construction of weirs in grid G10. (2)

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3.3 Name two examples of land use from the Worcester area that occur in the RURAL URBAN FRINGE. (2)

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3.4 State which place, Rawsonville to the South West of Worcester or Worcester, would have a larger sphere of influence. (1)

Explain your answer: (3)

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**Question Four**                      **GIS**

4.1 Refer to grid H 11 on the topographic map that displays different data layers.

4.1.1 Name an example of:

A. line data

B. point data

(2)

A \_\_\_\_\_

B \_\_\_\_\_

4.1.2 Explain how data layering is used in a GIS.

(2)

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4.1.3 Explain how **buffering** could be used to help identify areas on farms which are prone to flooding.

(4)

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4.2. Why would the orthophoto be useful as a source of data for someone studying settlement patterns and density in the area of Worcester?

(3)

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