



## ATAR course examination, 2017

### Question/Answer booklet

# GEOGRAPHY

Please place your student identification label in this box

Student number: In figures

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In words

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### Time allowed for this paper

Reading time before commencing work: ten minutes

Working time: three hours

### Materials required/recommended for this paper

#### *To be provided by the supervisor*

This Question/Answer booklet

Broadsheet

Multiple-choice answer sheet

Number of additional  
answer booklets used  
(if applicable):

#### *To be provided by the candidate*

Standard items: pens (blue/black preferred), pencils (including coloured), sharpener, correction fluid/tape, eraser, ruler, highlighters

Special items: approved drawing and measuring instruments (i.e. dividers, drawing compass, string, protractor, mathomat), non-programmable calculators approved for use in this examination

### Important note to candidates

No other items may be taken into the examination room. It is **your** responsibility to ensure that you do not have any unauthorised material. If you have any unauthorised material with you, hand it to the supervisor **before** reading any further.

## Structure of this paper

Section	Number of questions available	Number of questions to be answered	Suggested working time (minutes)	Marks available	Percentage of examination
Section One Multiple-choice	20	20	30	20	20
Section Two Short response	11	11	70	40	40
Section Three Extended response Part A: Unit 3	2	1	40	20	20
Part B: Unit 4	2	1	40	20	20
<b>Total</b>					100

## Instructions to candidates

- The rules for the conduct of the Western Australian external examinations are detailed in the *Year 12 Information Handbook 2017*. Sitting this examination implies that you agree to abide by these rules.
- Answer the questions according to the following instructions.
 

Section One: Answer all questions on the separate Multiple-choice answer sheet provided. For each question, shade the box to indicate your answer. Use only a blue or black pen to shade the boxes. If you make a mistake, place a cross through that square, then shade your new answer. Do not erase or use correction fluid/tape. Marks will not be deducted for incorrect answers. No marks will be given if more than one answer is completed for any question.

Section Two: Answer all questions. Write your answers in this Question/Answer Booklet.

Section Three: Part A: Answer one question from a choice of two. Part B: Answer one question from a choice of two. Answer all questions in this Question/Answer Booklet.
- Wherever possible, you are encouraged to use relevant, fully labelled sketch maps, diagrams and actual examples to illustrate and support your answers.
- You must be careful to confine your answers to the specific questions asked and to follow any instructions that are specific to a particular question.
- Supplementary pages for the use of planning/continuing your answer to a question have been provided at the end of this Question/Answer booklet. If you use these pages to continue an answer, indicate at the original answer where the answer is continued, i.e. give the page number.
- You are encouraged to refer to the sources on the Broadsheet to support your answer for any question. The Broadsheet is not to be handed in with your Question/Answer booklet.

**See next page**

**Section One: Multiple-choice****20% (20 Marks)**

This section has **20** questions. Answer **all** questions on the separate Multiple-choice answer sheet provided. For each question, shade the box to indicate your answer. Use only a blue or black pen to shade the boxes. If you make a mistake, place a cross through that square, then shade your new answer. Do not erase or use correction fluid/tape. Marks will not be deducted for incorrect answers. No marks will be given if more than one answer is completed for any question.

Suggested working time: 30 minutes.

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Refer to **Source 1**: Quinns Rocks topographic map 1986 to answer Questions 1 to 9.

1. Which natural feature is located at GR 808958?
  - (a) channel definite
  - (b) Neerabup Lake
  - (c) Lake Rd
  - (d) building
  
2. Which of the following **best** represents the height above sea level of the building located at GR 792938?
  - (a) 5 metres
  - (b) 10 metres
  - (c) 15 metres
  - (d) 20 metres
  
3. Which of the following latitude and longitude coordinates is closest to the location of One Tree Hill (GR 799972)?
  - (a) 31°39'S 115° 44'W
  - (b) 31°42'S 115° 47'W
  - (c) 31°39'S 115° 44'E
  - (d) 31°42'S 115° 47'E
  
4. In which of the following Area References (AR) is **most** of Nowergup Lake located?
  - (a) AR 7999
  - (b) AR 8099
  - (c) AR 7998
  - (d) AR 8098
  
5. The area of Nowergup Lake (GR 795995) is closest to
  - (a) 3 hectares.
  - (b) 30 hectares.
  - (c) 300 hectares.
  - (d) 500 hectares.

Note: One hectare is 10 000 m<sup>2</sup>

**See next page**

6. Which of the following **best** represents the average gradient from the spot height at Eglinton Hill (northing 98) to the coast at GR 750975?
- (a) 1:114
  - (b) 1:57
  - (c) 1:35
  - (d) 1:17
7. A person walking along Ocean Drive from GR 757959 to GR 762943 at an average speed of 4 km/hr would complete this journey in approximately
- (a) 10½ minutes.
  - (b) 26 minutes.
  - (c) 52 minutes.
  - (d) 88 minutes.
8. Which of the following terms **best** describes the nature of the slope along the fence line from the eastern side of Nowergup Lake (GR 799993) to the dam (GR 808994)?
- (a) uniform
  - (b) undulating
  - (c) convex
  - (d) concave
9. What land use dominates the area to the east of Gibbs Road (from GR 793000 to GR 805964)?
- (a) agriculture
  - (b) light industry
  - (c) national park
  - (d) mining

Refer to **Source 1**: Quinns Rocks topographic map 1986 and **Source 2**: Quinns Rocks aerial photo 2016 to answer Questions 10 to 12.

10. Which of the following **best** describes the former land use of the area designated 'A' on **Source 2**?
- (a) vegetation scattered
  - (b) fauna sanctuary
  - (c) national park
  - (d) quarry

11. Which urban process **best** accounts for the land cover change that took place between the coastline and the western boundary of the Neerabup National Park from 1986 to 2016?
- (a) urban sprawl
  - (b) inertia
  - (c) land use competition
  - (d) agglomeration
12. Which of the following grid references **best** describes the current location of Mindarie Marina?
- (a) GR 772913
  - (b) GR 775925
  - (c) GR 760930
  - (d) GR 767929

Refer to **Source 1**: Quinns Rocks topographic map 1986 and **Source 3**: Intersection of Gibbs and Wesco Roads 2016 to answer Question 13.

13. Which of the following grid references **best** describes the location at which the **Source 3** photograph was taken?
- (a) GR 800998
  - (b) GR 804984
  - (c) GR 809948
  - (d) GR 812982

Refer to **Source 4**: Australia's changing rainfall zones to answer Questions 14 and 15.

14. Which rainfall zone covered the largest area of Australia between 1900 and 1999?
- (a) summer dominant
  - (b) summer
  - (c) winter
  - (d) winter dominant
15. Which of the following **best** describes the changing pattern of Australia's rainfall zones between 1900 and 2015?
- (a) The winter dominant zone has moved south and closer to the eastern coast.
  - (b) The summer dominant and summer zones have moved further south.
  - (c) The uniform rainfall zone has expanded.
  - (d) The winter dominant and winter zones have expanded further north.

16. An ecosystem is **best** described as
- (a) the sum of all living (biotic) and non-living (abiotic) factors that affect the survival, development and evolution of a population of organisms.
  - (b) a large, complex biotic community of plant and animal species that demonstrate similar adaptations to specific climatic conditions in a particular region.
  - (c) the physical environment in which an organism is located and in which it can find food, shelter, protection and mates for reproduction.
  - (d) a community made up of biotic and abiotic components that interact with each other through the energy and nutrient cycles.

Refer to **Source 5**: Australia's anthropogenic biomes 1900 and 2000 to answer Question 17.

17. Which of the following **best** describes the greatest change to Australia's anthropogenic biomes between 1900 and 2000?
- (a) Croplands populated and remote have replaced rangelands populated and remote.
  - (b) Croplands populated and remote have replaced wild woodlands and treeless lands.
  - (c) Rangelands populated and remote have replaced urban settlements.
  - (d) Rangelands populated and remote have replaced wild woodlands and treeless lands.

Refer to **Source 6**: Demographic characteristics of Quinns Rocks and Perth Metropolitan Area to answer Question 18.

18. Which of the following statements **best** describes a demographic characteristic of the Perth Metropolitan area?
- (a) Approximately 20% of Perth's total population is aged between 0–14 years.
  - (b) Approximately 27% of Perth's total population is aged between 0–14 years.
  - (c) Approximately 36% of Perth's total population is aged between 0–19 years.
  - (d) Approximately 47% of Perth's total population is aged between 0–19 years.

Refer to **Source 7**: World urban and rural population 1950–2050 to answer Questions 19 and 20.

19. Which of the following **best** describes the year in which the urban proportion of the world's population first exceeded that of the rural proportion?
- (a) 1990
  - (b) 2005
  - (c) 2010
  - (d) 2045
20. By the year 2045, approximately what percentage will **best** describe the proportion of the world's population living in urban areas?
- (a) 33%
  - (b) 50%
  - (c) 66%
  - (d) 75%

**Section Two: Short response****40% (40 Marks)**

This section has **11** questions. Answer **all** questions. Write your answers in the spaces provided.

Supplementary pages for the use of planning/continuing your answer to a question have been provided at the end of this Question/Answer booklet. If you use these pages to continue an answer, indicate at the original answer where the answer is continued, i.e. give the page number.

Suggested working time: 70 minutes.

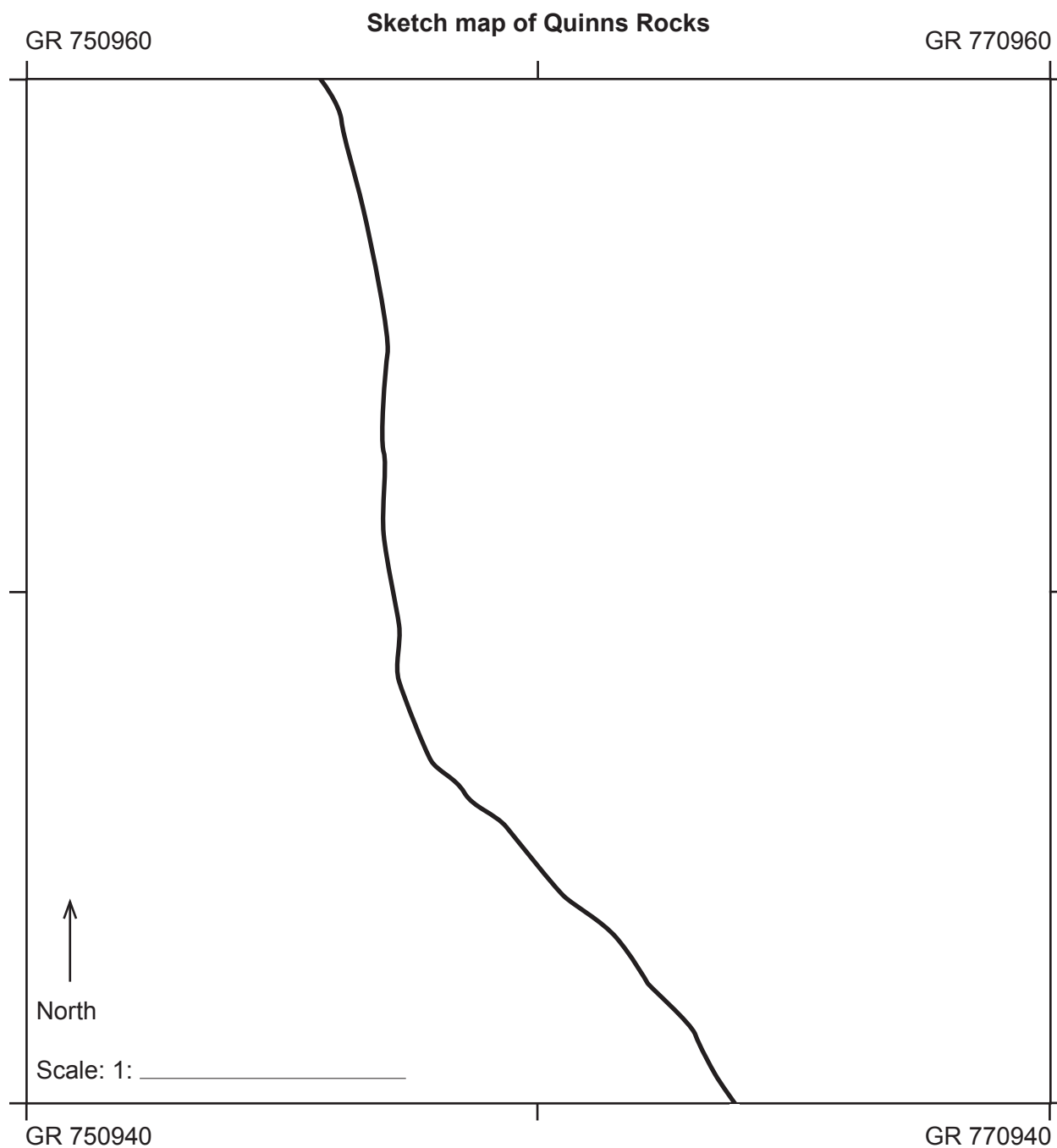
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Refer to **Source 1**: Quinns Rocks topographic map 1986 to answer Questions 21 and 22.

**Question 21**

**(5 marks)**

- (a) Draw and annotate the following features on the sketch map below: (4 marks)
- Built-up area of Quinns Rocks
  - Tapping Way
  - Caravan Park
  - Post Office.
- (b) In the space provided, write the scale of the sketch map expressed as a ratio. (1 mark)





**Question 22**

**(2 marks)**

(a) Describe **one** site feature of the settlement at Quinns Rocks.

(1 mark)

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(b) State **one** situation feature of the settlement at Quinns Rocks.

(1 mark)

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Refer to **Source 1**: Quinns Rocks topographic map 1986 and **Source 2**: Quinns Rocks aerial photo 2016 to answer Question 23.

**Question 23**

**(2 marks)**

Describe the land cover change that occurred between 1986 and 2016 to the area located between the coastline and the western boundary of Neerabup National Park.

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**Question 24**

**(2 marks)**

Define the term 'anthropogenic biomes'.

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**Question 25**

**(3 marks)**

Explain the concept of sustainability.

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**Question 26****(3 marks)**

Identify **one** land management practice followed by Indigenous peoples and outline its impact on land cover change over time.

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**Question 27****(3 marks)**

Select **one** of the following factors and explain how it has led to differences in the process of land cover change between any **two** countries.

- government policy
- institutional arrangements
- land ownership
- type of economy
- ideology and culture

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Refer to **Source 5**: Australia’s anthropogenic biomes 1900 and 2000 to answer Question 28.

**Question 28**

**(3 marks)**

Explain how **one** of the following processes of land cover change was responsible for changes to Australia’s anthropogenic biomes between 1900 and 2000. Include evidence from **Source 5** to support your answer.

- deforestation
- expansion and intensification of agriculture
- rangeland modification
- growth of urban settlement

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Refer to **Source 6**: Demographic characteristics of Quinns Rocks and Perth Metropolitan Area to answer Question 29.

**Question 29**

**(6 marks)**

Describe the difference in the populations of Quinns Rocks and the Perth Metropolitan Area in the following age ranges. Include data from **Source 6** to support your answer.

0–19 years: \_\_\_\_\_

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20–54 years: \_\_\_\_\_

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55–85 years and over: \_\_\_\_\_

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Refer to **Source 7**: World urban and rural population 1950–2050 to answer Question 30.

**Question 30**

**(5 marks)**

(a) Explain the concept of urbanisation.

**(2 marks)**

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(b) Use data from **Source 7** to describe how the process of urbanisation is occurring.

**(3 marks)**

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**Section Three: Extended response****40% (40 Marks)**

This section contains **four (4)** questions. You must answer **two (2)** questions: **one (1)** from **Part A** and **one (1)** from **Part B**. Write your answers on the pages provided following Question 35.

Supplementary pages for the use of planning/continuing your answer to a question have been provided at the end of this Question/Answer booklet. If you use these pages to continue an answer, indicate at the original answer where the answer is continued, i.e. give the page number.

Suggested working time: 80 minutes.

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**Part A: Answer either Question 32 or Question 33.**

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**Question 32****(20 marks)**

- (a) Describe the effects of either climate change **or** biodiversity loss on natural and anthropogenic biomes. (12 marks)
- (b) Discuss **one** approach to land cover restoration and rehabilitation and explain how it mitigates future land cover changes. (8 marks)

**OR****Question 33****(20 marks)**

- (a) Describe the key elements of ecosystem structure and dynamics.

**or**

Describe any **two** of the following natural systems:

- heat budget
- hydrological cycle
- carbon cycle
- atmospheric circulation. (12 marks)

- (b) Identify and discuss a program designed to address the impacts of land cover change on local and regional environments. (8 marks)

**See next page**



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**Part B: Answer either Question 34 or Question 35.**

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**Question 34****(20 marks)**

- (a) Describe the site and internal morphology of a megacity. (8 marks)
- (b) Describe **two** significant challenges and explain the implications of each for metropolitan Perth or a regional centre in Western Australia. (12 marks)

**OR****Question 35****(20 marks)**

- (a) Describe the nature, scope and causes of any **two** significant challenges confronting a megacity. (8 marks)

To answer question 35(b),

- select **one** planning strategy adopted in metropolitan Perth or a regional centre in Western Australia

**or**

- **one** planning strategy adopted in a megacity.

- (b) Describe the selected planning strategy and explain the extent to which it has been or could be informed by the concept of sustainability. (12 marks)

**End of questions**























Question number: \_\_\_\_\_

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