



Western Australian Certificate of Education ATAR course examination, 2016

Question/Answer booklet

GEOGRAPHY

Please place your student identification label in this box

Student number: In figures

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In words

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	10	10	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
Total					100

Instructions to candidates

- The rules for the conduct of the Western Australian Certificate of Education ATAR course examinations are detailed in the *Year 12 Information Handbook 2016*. Sitting this examination implies that you agree to abide by these rules.
- Write your answers in this Question/Answer Booklet.
- 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.
 Section Three: Part A: Answer one question from a choice of two.
 Part B: Answer one question from a choice of two.
- 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.
- Additional working space pages at the end of this Question/Answer booklet are for planning or continuing an answer. If you use these pages, indicate at the original answer, the page number it is planned/continued on and write the question number being planned/continued on the additional working space page.
- You are encouraged to refer to the sources on the Broadsheet to support your answer for any question. The Broadsheet and the perforated page are 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.

Refer to **Source 1** Byford topographic map 2011 to answer Questions 1–8.

1. Which of the following statements **best** represents the scale of the Byford topographic map?
 - (a) One centimetre on the map equals 25 000 centimetres.
 - (b) One unit on the map represents 20 000 units.
 - (c) One centimetre on the map equals 200 metres.
 - (d) One centimetre on the map represents 250 metres.

2. Which of the following latitude and longitude coordinates is closest to the location of the primary school at GR 463346?
 - (a) 32°7'S 116°0'W
 - (b) 32°13'S 116°0'E
 - (c) 116°0'E 32°13'S
 - (d) 32°7'S 116°0'E

3. What feature is located at GR 511325?
 - (a) reforestation area
 - (b) land subject to inundation
 - (c) building
 - (d) walk trail

4. Which landform is located above the Wungong Tunnel within AR 4937?
 - (a) saddle
 - (b) watercourse – perennial
 - (c) forest
 - (d) spur

5. Which of the following **best** describes the direction and compass bearing of the Wungong Tunnel from GR 500369 to GR 480377?
 - (a) ESE 110°
 - (b) WNW 70°
 - (c) WNW 290°
 - (d) ESE 290°

See next page

6. The area of Byford encircled by the roads North Cr, Helen Cr and South Cr (GR 470341) is closest to
- (a) 2.5 hectares.
 - (b) 16 hectares.
 - (c) 56 hectares.
 - (d) 254 hectares.
- 1 hectare is 10 000 m²
7. The average gradient for a person taking the walk trail from Point A (GR 495393) to Point B (GR 498382) is closest to
- (a) 1:363.
 - (b) 1:250.
 - (c) 1:36.
 - (d) 1:25.
8. A train travelling from Armadale Railway Station to the disused station in AR 4633 at an average speed of 60 km/hr would complete the journey in approximately
- (a) 6 minutes.
 - (b) 8 minutes.
 - (c) 16 minutes.
 - (d) 32 minutes.

Refer to **Source 1** Byford topographic map 2011 and **Source 2** Byford aerial photograph 1985 to answer Questions 9 and 10.

9. Which of the following statements is correct?
- (a) The scale of the aerial photograph is larger than that of the topographic map.
 - (b) The scale of the topographic map is larger than that of the aerial photograph.
 - (c) The scales of the aerial photograph and the topographic map are the same.
 - (d) The scale of the topographic map is twice as large as that of the aerial photograph.
10. Which of the following **best** describes the land use occurring at Point C on the Byford aerial photograph 1985?
- (a) logging
 - (b) water catchment
 - (c) agriculture
 - (d) mining

Refer to **Source 1** Byford topographic map 2011 and **Source 3** Photograph at GR 467334 to answer Question 11.

11. Which process is best illustrated by **Source 3**?
- (a) urban sprawl
 - (b) renewal
 - (c) agglomeration
 - (d) inertia

Refer to **Source 1** Byford topographic map 2011 and **Source 4** Photograph at GR 506332 to answer Question 12.

12. Which impact of land cover change is **most** evident on the local environment depicted in **Source 4**?

- (a) changes to the regional climate
- (b) land drainage and reclamation
- (c) loss of habitat and biodiversity
- (d) changes to the water cycle

13. Biodiversity is **best** described as

- (a) the variability among living organisms from all sources.
- (b) the geographical unit that effectively supports the survival and reproduction of a given species.
- (c) the level of biological organisation in which organisms interact simultaneously with each other and their environment.
- (d) any biological individual capable of self-sustained independent living.

14. Which of the following combinations is **not** a process of land cover change?

- (a) deforestation and industrial growth
- (b) urban settlement and natural habitat conservation
- (c) rangeland modification and soil degradation
- (d) irrigation and intensification of agriculture

Refer to **Source 5** Human influence index to answer Question 15.

15. On average, which continent has the highest Human influence index levels?

- (a) Europe
- (b) Australia
- (c) Asia
- (d) Africa

Refer to **Source 5** Human influence index and **Source 6** Anthropogenic biomes of the world to answer Question 16.

16. Which pair of anthropogenic biomes experiences the lowest human influence indices?
- (a) rice villages and remote cropland
 - (b) rainfed villages and remote rangelands
 - (c) populated croplands and wild treeless and barren lands
 - (d) remote rangelands and wild treeless and barren lands

Refer to **Source 7** World urbanisation for different areas from 1950–2050 to answer Question 17.

17. Between 1950 and 2050, the level of urbanisation in China overtook those of
- (a) Asia, Oceania and Africa.
 - (b) Europe, Oceania and Africa.
 - (c) Oceania, North America and South America.
 - (d) North America, South America and Europe.
18. The implications of the process of urbanisation on human wellbeing are **positive**
- (a) in rural regions and negative in urban regions.
 - (b) in urban regions and negative in rural regions.
 - (c) and negative in both urban and rural regions.
 - (d) in both urban and rural regions.
19. Agglomeration contributes to the characteristics and functions of urban and rural places in Australia by
- (a) enabling settlements to become increasingly independent.
 - (b) making settlements less specialised.
 - (c) enabling settlements to spread over larger areas.
 - (d) concentrating population and functions in larger settlements.
20. Which of the following **best** describes the urban process where a land use function remains at its original location after the initial site advantages have declined or disappeared?
- (a) land use competition
 - (b) inertia
 - (c) renewal
 - (d) invasion and succession

End of Section One

See next page

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

This section has **10** questions. Answer **all** questions. Write your answers in the spaces provided.

Additional working space pages at the end of this Question/Answer booklet are for planning or continuing an answer. If you use these pages, indicate at the original answer, the page number it is planned/continued on and write the question number being planned/continued on the additional working space page.

Suggested working time: 70 minutes.

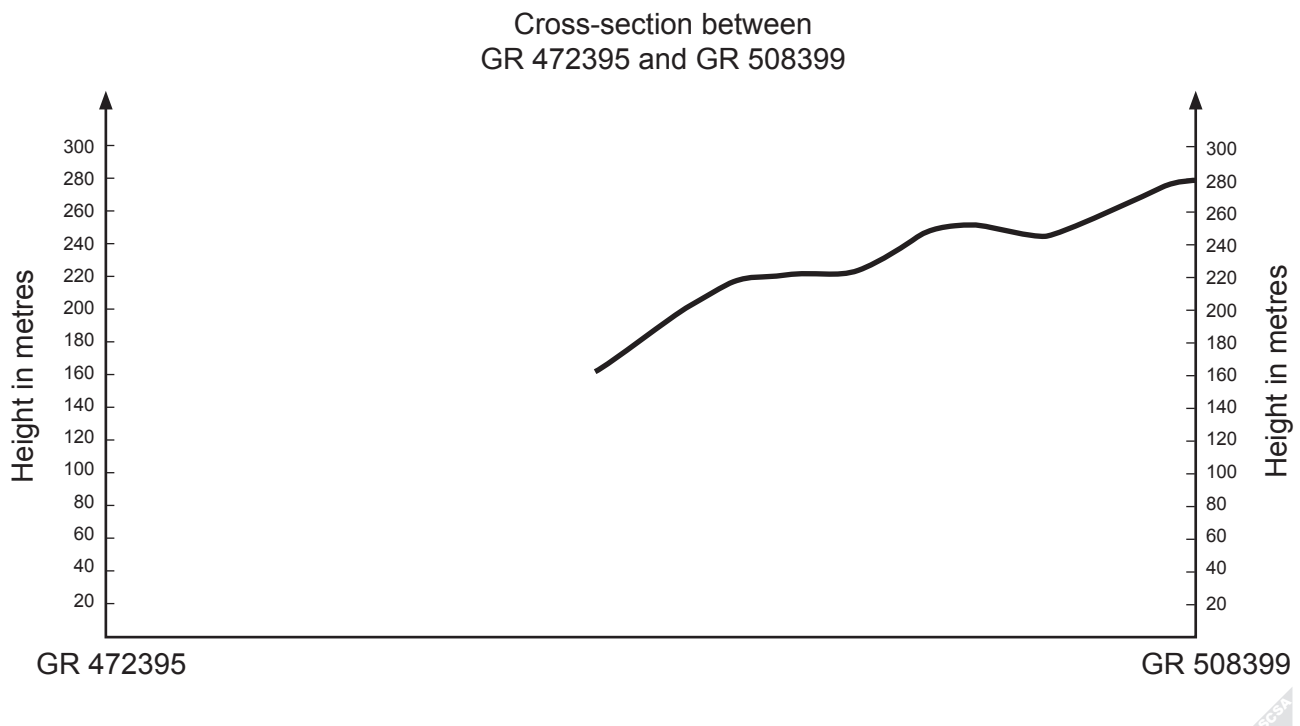
Refer to **Source 1** Byford topographic map 2011 to answer Question 21.

Question 21**(4 marks)**

- (a) Complete the cross-section extending from GR 472395 to GR 508399.

(2 marks)

Note: To assist you to transcribe contour locations, you may remove page 29/30 of this Question/Answer booklet by tearing along the perforations.



- (b) Annotate the following features on the cross-section above:

- Albany Highway
- one orchard.

(2 marks)

See next page

Refer to **Source 1** Byford topographic map 2011 and **Source 2** Byford aerial photograph 1985 to answer Questions 22 and 23.

Question 22

(3 marks)

- (a) With specific reference to **Sources 1** and **2**, describe the location and nature of the land use change that has occurred west of easting 48 and south of northing 36. (2 marks)

- (b) Identify **one** urban process that has contributed to the land use change given in part (a). (1 mark)

Question 23

(3 marks)

Describe the sequence of land cover changes that occurred in the area east of easting 49 and south of northing 35 between 1985 and 2011.

Question 24

(2 marks)

What is a natural biome?

Question 25

(3 marks)

Explain the concept of climate change.

Question 26

(4 marks)

Identify **one** process responsible for land cover change and outline its impact on local **or** regional environments.

Process: _____

Impact: _____

Refer to metropolitan Perth **or** a regional urban centre in Western Australia to answer Question 28.

Question 28

(6 marks)

Identify **two** significant challenges facing your chosen location and describe the views and attitudes of a major stakeholder group for each challenge.

Challenge one: _____

Major stakeholder group: _____

Views and attitudes: _____

Challenge two: _____

Major stakeholder group: _____

Views and attitudes: _____

Refer to **Source 7** World urbanisation for different areas from 1950–2050 to answer Question 29.

Question 29

(4 marks)

- (a) Identify **two** world areas in which the process of urbanisation has reversed temporarily. (2 marks)

One: _____

Two: _____

- (b) Identify the world area in which urbanisation rates will increase **most** between 1950 and 2050. (1 mark)

- (c) Identify the approximate year in which China is predicted to attain the Oceanian rate of urbanisation. (1 mark)

Refer to **Source 8** World urban and rural populations from 1950–2050 to answer Question 30.

Question 30

(5 marks)

With specific reference to **Source 8**, describe the implications for world population growth resulting from the process of urbanisation.

End of Section Two

See next page

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 34.

Additional working space pages at the end of this Question/Answer booklet are for planning or continuing an answer. If you use these pages, indicate at the original answer, the page number it is planned/continued on and write the question number being planned/continued on the additional working space page.

Suggested working time: 80 minutes.

Part A: Answer either Question 31 or 32.

Question 31**(20 marks)**

- (a) Explain the natural and anthropogenic causes of global climate change **or** biodiversity loss. (10 marks)
- (b) Describe **two** examples of human activity and explain how each has adapted to or may be required to adapt to global climate change **or** biodiversity loss. (10 marks)

or

Question 32**(20 marks)**

- (a) With reference to specific examples, explain the interrelationships between land cover change and either climate **or** biodiversity loss. (10 marks)
- (b) Describe **two** current or proposed environmental strategies and explain how each aims to mitigate the adverse effects of global climate change **or** biodiversity loss. (10 marks)

Part B: Answer either Question 33 or 34.

Question 33**(20 marks)**

- (a) Describe the site and internal morphology of metropolitan Perth **or** a regional urban centre in Western Australia. (8 marks)

To answer Question 33(b), refer to **one** planning strategy adopted in metropolitan Perth **or** a regional urban centre in Western Australia and **one** planning strategy adopted in a megacity.

- (b) Explain how these planning strategies aim to enhance/have enhanced the sustainability and liveability of **each** of the two locations. (12 marks)

or

Question 34**(20 marks)**

- (a) Describe the nature, scope and causes of any **two** significant challenges confronting metropolitan Perth **or** a regional urban centre in Western Australia. (8 marks)

To answer Question 34(b), refer to **one** challenge facing metropolitan Perth **or** a regional urban centre in Western Australia and **one** different challenge in a megacity.

- (b) Explain how a planning strategy has addressed/is addressing these challenges in **each** of the two locations. (12 marks)

End of questions

You may tear along the perforations to use this page to transcribe contour locations for Question 21.

This page is to be used for transcribing contours only

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