Government of Western Australia School Curriculum and Standards Authority

## 2022 ATAR course examination report: Geography

| Year | Number who sat | Number of absentees |
| :---: | :---: | :---: |
| 2022 | 1269 | 29 |
| 2021 | 1496 | 36 |
| 2020 | 1531 | 29 |
| 2019 | 1563 | 25 |

The number of candidates sitting and the number attempting each section of the examination can differ as a result of non-attempts across sections of the examination.

## Examination score distribution-Written



## Summary

Attempted by 1269 candidates
Section means were:
Section One: Multiple-choice
Attempted by 1269 candidates
Section Two: Short response
Attempted by 1260 candidates
Section Three: Extended response:
Part A: Unit 3
Attempted by 1249 candidates
Section Three: Extended response:
Part B: Unit 4
Attempted by 1236 candidates

Mean 59.06\%

Mean 75.39\%
Mean 15.08(/20) Max $20.00 \quad$ Min 0.00
Mean 61.14\%
Mean 24.46(/40) Max $40.00 \quad$ Min 0.00
Mean 53.30\%
Mean 10.66(/20) Max $20.00 \quad$ Min 0.00
Mean 44.35\%
Mean 8.87(/20) Max $19.50 \quad$ Min 0.00

## General comments

The examination had an overall mean of $59.06 \%$, which was a $3.35 \%$ increase on 2021. Each section saw an increase in the mean except for the Extended response: Part B: Unit 4, these questions included reference to demographics, which candidates demonstrated a limited knowledge of. The examination functioned well as a whole entity, with a wide range of geographical skills assessed across the paper. Questions in all sections of the paper were clear and aligned to the syllabus.

The examination used a location outside of Western Australia for the topographic map, utilising a section of the Derwent River Valley north of Hobart, Tasmania. The map had a
scale of 1:25 000 and was produced in 1986, which meant that the aerial photograph was more recent than the map. The broadsheet contained information and data presented in a variety of formats including; an oblique aerial photograph, an aerial photograph, a climate graph, a horizontal bar graph, a table displaying change over time, demographic data in a table and a vertical bar graph and three world maps showing data from 1950, 2000 and 2050. The Broadsheet data was relevant, clear, and informative, allowing candidates to access and interpret it.

## Advice for candidates

- Mastery of basic mathematical/arithmetical skills such as speed/distance/time calculations, average gradient and area is required. Understanding and practise of these skills, including presenting the answer as specified in the question, is essential. For example, in a time calculation you may be asked to convert the calculation into minutes and seconds rather than as a fraction of a minute.
- Identification of different relief features and landforms as identified in the syllabus is a basic mapping skill requiring proficiency.
- Practise the accurate use of direction, both between points on a topographic map and to determine direction on remote sensing products.
- Learn definitions for both site and situation. This will assist in eliminating distractors in multiple-choice questions and in identifying and describing each in short answer questions.
- Carefully read the question, this will enable you to identify the skill being assessed. This is particularly important when the question asks you to construct something such a as a sketch with annotations, a sketch map or a cross-section. Examiners can ask you to construct and label these in different ways. The question will indicate what is expected.
- Learn the key terminology that is identified in the syllabus. The examiners use the syllabus as the basis for marking keys and multiple-choice responses, and a clear understanding of these key terms will boost your understanding of the subject matter, selecting the correct answer in multiple-choice answers and help you to formulate written responses.
- Familiarisation with key directional verbs (such as, describe, explain, assess), is essential. Learn the meaning of the terms found in the Glossary of key words used in the formulation of questions (located under Support materials on the Geography course page) so you can address the questions more accurately.
- In written responses, address the requirements of the question and avoid extensive introductions, which go beyond providing the essential information and context for the response.
- Avoid generalisations for any question or response.


## Advice for teachers

- Teach students how to deconstruct skills questions, to ensure they are answering the question correctly, particularly basic mapping skills and definitions.
- Present students with a variety of topographic maps that use a variety of legend symbols to ensure that they can easily identify features on any topographic map.
- Ensure that students know how to calculate a given area and then convert this into hectares.
- Provide students with opportunities to practise the calculation of average gradient.
- Ensure that students can accurately read and interpret contour lines and their application in determining site and recognising the eight landform features listed in the syllabus.
- Revise the use of the vertical and horizontal lines on topographic maps, known as eastings and northings and their significance when determining grid references and four figure area references.
- Ensure students know how to identify land use and avoid terms such as 'unused', 'nothing there', 'bare land' and so forth. Ensure students are aware that change refers to 'what was' and 'what is' and answers need to be clear in this aspect.
- Ensure that students are familiar with all types of sketches including oblique and vertical views, from sections of the topographic map, aerial photographs, oblique photographs and fieldwork. Teachers should provide practise to ensure that candidates are able to produce all sketches to a high level of accuracy.
- Interpret 'advances in technology', in relation to land cover change more broadly and inform students that land cover change has been occurring rapidly since the Industrial Revolution.
- In relation to the impacts of 'land management practices on land cover over time', ensure that students understand that 'over time' refers to events that occurred before the creation of records. Ensure that the focus of student learning is on the temporal dimension and the adaptions to land cover that have occurred due to the practices identified.
- Ensure that students are familiar with the details of the required number of strategies or programs as stipulated in the syllabus.
- Encourage students to clearly structure the themes in their written answers. Where two or more causes, impacts, strategies or programs are to be addressed, structured paragraphs are needed for each key point.
- Present up-to-date planning strategies and approaches for case studies. Encourage students to ensure their responses reflect the intent of the strategy rather than smaller/minor issues that are not as critical.
- Ensure all syllabus content points have been covered in the teaching and learning program so there are no gaps in students' knowledge. Do not make assumptions regarding examination content.
- Refer students to the Glossary of terms in the syllabus to ensure they are familiar with the key terms and definitions of the course.
- Teach the meaning of the cognitive verbs/key directional terms used in the Glossary of key words used in the formulation of questions and how they function to determine mark allocations. Once these are understood, students will be able to make an informed judgement on the level of detail required for each question.
- Teach students how to use a wide range of appropriate supporting evidence and examples specific to their response rather than examples that are vague, generalised statements.
- Ensure students are taught time management and practise timed responses that reflect the mark allocation for the question.


## Comments on specific sections and questions

## Section One: Multiple-choice (20 Marks)

The mean score for Section One decreased from $77.98 \%$ in 2021 to $75.39 \%$ in 2022. Questions 1 to 13 were based on topographical mapping skills. Calculating area and identifying site features proved problematic for many candidates. Identifying a hydrological feature using the legend also appeared difficult for half the candidates. Question 14 to 20 were a mix of Unit 3 and Unit 4 definitions, and source analysis questions. Candidates performed well in questions that utilised ABS data.

| Question 1 attempted by 1269 candidates | Mean 0.95(/1) | Max 1 | Min 0 |
| :--- | :--- | :--- | :--- |
| Question 2 attempted by 1269 candidates | Mean $0.80(/ 1)$ | Max 1 | Min 0 |
| Question 3 attempted by 1269 candidates | Mean $0.89(11)$ | Max 1 | Min 0 |

$\begin{array}{llll}\text { Question } 4 \text { attempted by } 1269 \text { candidates } & \text { Mean 0.94(/1) } & \text { Max } 1 & \text { Min } 0 \\ \text { Question } 5 \text { attempted by } 1269 \text { candidates } & \text { Mean } 0.95(/ 1) & \text { Max } 1 & \text { Min } 0 \\ \text { Question } 6 \text { attempted by } 1269 \text { candidates } & \text { Mean } 0.61(11) & \text { Max } 1 & \text { Min } 0\end{array}$ Many candidates were unable to identify the landform (saddle). The candidates needed to read the question carefully, as on the map hills were evident at each grid reference location, however the question asked candidates to look in the area between the two grid references.

| Question 7 attempted by 1269 candidates | Mean $0.88(/ 1)$ | Max 1 | Min 0 |
| :--- | :--- | :--- | :--- |
| Question 8 attempted by 1269 candidates | Mean $0.82(/ 1)$ | Max 1 | Min 0 |
| Question 9 attempted by 1269 candidates | Mean $0.26(/ 1)$ | Max 1 | Min 0 | Most candidates answered this question incorrectly. Calculating area appeared to be difficult for candidates to complete accurately and most found converting $\mathrm{km}^{2}$ to hectares a challenge.

Question 10 attempted by 1269 candidates Mean 0.65(/1) Max 1 Min 0 Calculating average gradient proved to be a challenge for some candidates.

Question 11 attempted by 1269 candidates Mean 0.50(/1) Max $1 \quad$ Min 0 This question required candidates to use the legend to determine the hydrological feature at a given location, however only half of the candidates answered this question correctly.

Question 12 attempted by 1269 candidates Mean 0.26(/1) Max $1 \quad$ Min 0 Most candidates answered this site question incorrectly, despite there being only two alternatives containing information relating to site features.

Question 13 attempted by 1269 candidates Mean 0.63(/1) Max 1 Min 0 Identifying the direction that a photograph had been taken proved difficult for some candidates.

| Question 14 attempted by 1269 candidates | Mean 0.84(/1) | Max 1 | Min 0 |
| :--- | :--- | :--- | :--- |
| Question 15 attempted by 1269 candidates | Mean $0.88(/ 1)$ | Max 1 | Min 0 |
| Question 16 attempted by 1269 candidates | Mean $0.59(/ 1)$ | Max 1 | Min 0 | Many candidates were not able to recognise the process of land cover change identified in the syllabus.


| Question 17 attempted by 1269 candidates | Mean 0.91(/1) | Max 1 | Min 0 |
| :--- | :--- | :--- | :--- |
| Question 18 attempted by 1269 candidates | Mean 0.93(/1) | Max 1 | Min 0 |
| Question 19 attempted by 1269 candidates | Mean $0.88(/ 1)$ | Max 1 | Min 0 |
| Question 20 attempted by 1269 candidates | Mean $0.89(/ 1)$ | Max 1 | Min 0 |

## Section Two: Short response (40 Marks)

The mean score for this section was $61.14 \%$, an increase of $7.05 \%$ on 2021. Questions 21 to 24 were skills-based questions, Questions 25 to 28 examined Unit 3 content while Questions 29 to 31 examined Unit 4 content. There was one source for each of Unit 3 and Unit 4. Candidates performed poorly on the skills-based questions and when required to demonstrate their understanding of fundamental geographical definitions and concepts. Some candidates found the questions inaccessible and could not present a concise and well-written response.

Question 21 attempted by 1217 candidates Mean 1.45(/2) Max 2 Min 0 Some candidates found this quantitative question challenging, demonstrating little understanding of how to calculate time, while many failed to complete the question by not converting the answer to minutes and seconds.

Question 22 attempted by 1249 candidates Mean 1.37(/2) Max 2 Min 0 Many candidates failed to correctly recognise the topography of the area and misinterpreted the contour lines, giving a value outside the acceptable range e.g. 80 to 100 m .

Question 23 attempted by 1234 candidates Mean 2.04(/3) Max 3 Min 0
Some candidates failed to accurately provide a grid reference, with some providing a four-figure area reference and others providing a grid reference outside the parameters given in the question.

Question 24 attempted by 1222 candidates Mean 2.76(/5) Max $5 \quad$ Min 0 Some candidates incorrectly provided a sketch map of the area represented in the oblique photograph rather than providing an 'annotated sketch of the oblique photograph'. Those candidates that did read and understand the question completed the sketch with reasonable accuracy.

Question 25 attempted by 1253 candidates Mean 0.68(/2) Max 2 Min 0 This question requiring a definition of the term anthropogenic biome was answered poorly. Many candidates demonstrated a very limited understanding of the concept and wrote in very general terms.

Question 26 attempted by 1253 candidates Mean 2.37(/3) Max 3 Min 0 Many candidates did not explain how land cover change contributes to biodiversity loss, and instead focused on the impacts of biodiversity loss.

Question 27 attempted by 1254 candidates Mean 2.78(/4) Max 4 Min 0 This two-part question examined aspects of the same syllabus content point. Candidates were able to draw on the source from the previous question, which resulted in a higher mean for part (a). In part (b), many candidates narrowly interpreted the meaning of 'advances in technology' as recent developments in digital technology and attempted to relate the production of mobile devices to land cover change. Other more relevant aspects of advances in technology were largely overlooked.

Question 28 attempted by 1239 candidates Mean 1.88(/3) Max 3 Min 0 Many candidates described an Indigenous peoples' land management practice rather than explaining its impact on land cover over time. In addition, many candidates referred to contemporary land management practices, ignoring the term 'over time'.

Question 29 attempted by 1246 candidates Mean 2.95(/4) Max 4 Min 0 This source analysis question was answered relatively well.

Question 30 attempted by 1201 candidates Mean 2.75(/6) Max 6 Min 0 This question had the highest number of non-attempts and the lowest mean in the Short response section. The concept of interdependence of urban and rural places was not well understood and poorly articulated by candidates. In many cases, candidates viewed interdependence as a one-way relationship. Candidates addressed economic interdependence significantly better than environmental interdependence. Many misunderstandings were evident, with a number of candidates referring to farming/agriculture and mining in their responses, which are economic and not environmental.

Question 31 attempted by 1237 candidates Mean 3.43(/6) Max $6 \quad$ Min 0 Many candidates failed to explain the challenges affecting Australian metropolitan or regional centres adequately, and only described the affects. Many wrote good responses for one challenge but weak responses for the second challenge.

## Section Three: Extended response: Part A: Unit 3 (20 Marks)

The mean marks for Section Three, Part A was 53.4\%, 7.11\% higher than the 2021 mean of 46.29\%. The questions were balanced in terms of complexity, $47 \%$ of candidates chose Question 32 and $53 \%$ chose Question 33. Part (a) for both questions was answered equally well, while candidates achieved lower marks for Question 33 part (b) than Question 32 part (b). Overall Question 33 was answered slightly better than Question 32.

Question 32 attempted by 591 candidates Mean 10.01(/20) Max $20 \quad$ Min 0 Part (a) was answered relatively well. Most candidates wrote sound descriptions of the causes of climate change or biodiversity loss, but fewer could articulate how the causes brought about the changes. Stronger responses used specific examples and data, however the majority of candidates responded in general terms, which prevented them from achieving full marks. Climate change accounted for the larger proportion of responses.

Part (b) had the lowest mean and the lowest number of responses for Unit 3. Some candidates wrote about adaption rather than mitigation, which had a significant impact on their marks. The assessment of the strategies was completed relatively poorly, with many candidates responding in very general and simplistic terms, often only describing or explaining a strategy. Most candidates demonstrated an inadequate understanding about how to assess a strategy.

Question 33 attempted by 658 candidates Mean 11.26(/20) Max $20 \quad$ Min 0 Part (a) was answered relatively well. Most candidates wrote sound descriptions of the evidence for climate change or biodiversity loss, but fewer could articulate how the evidence provided knowledge of the changes.

In part (b), most candidates provided a structured response using two of the three pillars of sustainability. Most candidates demonstrated a good understanding of the concept of sustainability. The assessment of a program overall was adequate but many were simplistic and written in general terms, often focussing on minor aspects of the chosen program. Some candidates only described a program. Many candidates demonstrated an inadequate understanding about how to assess a program.

## Section Three: Extended response: Part B: Unit 4 (20 Marks)

The mean for Section Three Part B was 44.63\%, which was $1.48 \%$ lower than the 2021 mean. The questions provided candidates with a choice that required them to respond to both their local case study and their mega city case study. Both options required candidates to describe demographic characteristics of these places. The majority of candidates chose Question 34, where part (a) required candidates to describe demographic characteristics for metropolitan Perth or a regional urban centre in Western Australia, rather than the demographic characteristics for their mega city, as was required in Question 35 part (a). However those candidates that chose Questions 35 achieved slightly higher marks for part (a) than those who chose Question 34.

Question 34 attempted by 898 candidates Mean 8.80(/20) Max 19.5 Min 0 Part (a) was answered poorly as many candidates simply compared two or three suburbs and made generalisations about how this demonstrated a pattern. A simple comparison of this nature did not demonstrate the patterns within a city, it simply highlighted the differences between two suburbs. Many candidates attempted to account for the variations (i.e. why the pattern exists) rather than describing the patterns, as requested. Much of the supporting evidence was incorrect and prevented candidates from achieving higher marks. Candidates that were awarded higher marks were able to accurately describe demographic patterns and variations and used a wide range of very accurate data.

Part (b) was also answered poorly. Many candidates were able to respond adequately to how one planning strategy addressed a challenge in Perth or a regional urban centre, but could not show the same level of depth when discussing their second strategy. Many candidates spent unnecessary time and writing space describing the challenge itself, or its causes/impacts, rather than addressing the question at hand and discussing how the strategy addressed the challenge. Stronger responses were able to use specific examples and data relevant to their strategy and locations, however many candidates used generalised statements that could apply to many contexts.

Question 35 attempted by 338 candidates Mean 9.05(/20) Max 19.5 Min 0 Part (a) was answered poorly. Data and generalised statements were offered that did not describe the demographic characteristics within their chosen megacity, with little reference to suburbs, locations or precincts. Many candidates simply described where groups of people lived. In the case of New York, many candidates referred to large precincts, such as the Bronx, and described the demography of the area as one homogenous group. A number of candidates who wrote on Tokyo failed to relate the demographics to spatial locations and specific examples, suburbs or areas, instead describing general trends such as the 'aging population of Tokyo'. Candidates that were awarded high marks were able to accurately describe demographic patterns and variations and used a wide range of very accurate data.

Part (b) was also answered poorly. Many candidates were able to respond adequately to how one planning strategy addressed a challenge in a megacity, but could not show the same level of depth when discussing their second strategy. Many candidates spent unnecessary time and writing space describing the challenge itself, or its causes/impacts, rather than addressing the question at hand and discussing how the strategy addressed the challenge. Good answers were able to use specific examples and data relevant to their strategy and locations, however many candidates used generalised statements that could apply to many contexts.

