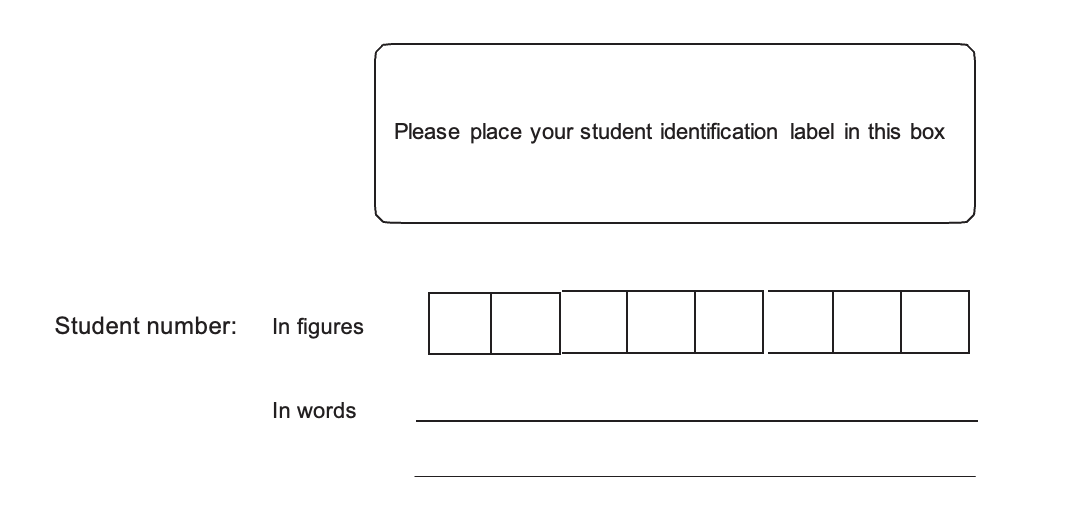
**Semester One Examination, 2022**

**Year 11 Unit 1**

**GEOGRAPHY**

**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 your teacher/supervisor***

This Question/Answer Booklet

Broadsheet

Multiple-choice answer sheet

Examination writing booklet/writing paper, if supplied by your teacher/supervisor.

***To be provided by 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, protractor and string), up to three calculators, which do not have the capacity to create or store programmes or text, are permitted in the ATAR course 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 your teacher/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** |
| Section One  Multiple-choice | 20 | 20 | 30 | 20 |
| Section Two  Short response | 12 | 12 | 70 | 40 |
| Section Three  Extended response  Part A: Natural Hazards | 2 | 1 | 40 | 20 |
| Section Three  Extended response  Part B: Ecological Hazards | 2 | 1 | 40 | 20 |
| **Total marks 100** | | | | |

**Instructions to candidates**

1. The rules for the conduct of this examination are as detailed by your teacher/supervisor. Sitting this examination implies that you agree to abide by these rules.

2. Write your answers in this Question/Answer Booklet or on the lined paper provided by your teacher/supervisor, preferably using a blue/black pen. Do not use erasable or gel pens.

3. 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. Do not use erasable or gel pens. If you make a mistake, place a cross through the 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: Consists of two parts, each with two questions. You must answer one question from each part. Tick the box next to each question you are answering. Write your answers in this Question/Answer Booklet or on the lined paper provided by your teacher/supervisor.

4. Wherever possible, you are encouraged to use relevant, fully labelled sketch maps, diagrams and actual examples to illustrate and support your answers.

1. 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.

6. Supplementary pages for planning/continuing your answers to a questions are provided at the end of this Question/Answer Booklet or the lined paper provided by your teacher/supervisor. 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.

7. You are encouraged to refer to the sources on the Broadsheet to support your answer for any question.

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**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. Do not use erasable or gel pens. If you make a mistake, place a cross through the 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**: Lakes Entrance topographic map 2019 to answer Questions 1 to 10.

1. The scale of the Lakes Entrance topographic map, as a statement in words is
2. one centimetre represents 25 metres
3. one centimetre represents 250 metres
4. one centimetre represents 2.5 kilometres
5. one centimetre equals 250 kilometres
6. The contour interval of the topographic map is
7. 5 metres
8. 10 metres
9. 20 metres
10. 40 metres
11. If you were travelling in a straight line from the road junction at GR 856134 to the dam at GR 829113 the bearing is closest to
12. 45o
13. 180o
14. 230o
15. 260o
16. The landform feature most prominent between GR 841119 and GR 844121 is a
17. cliff
18. saddle
19. spur
20. valley
21. If you were walking from the 58-metre spot height at GR 842111 to the creek at GR 848111, the slope is best described as
22. concave
23. convex
24. uniform
25. flat

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1. The length of the underground pipeline between the western margin of the map at GR 810106 to the road junction at GR 836094 is closest to
2. 3,000 cm
3. 3 km
4. 5 km
5. 11 km
6. The latitude and longitude of Lake Caravilla Caravan Park (GR 841082) is closest to
7. 37o 52’ S 147o 57’ E
8. 37o 52’ S 147o 56’ E
9. 37o 57’ S 147o 33’ E
10. 38o 52’ S 147o 57’ E
11. What is the approximate area of the entire built-up area shown on the topographic map?
12. 3.4 hectares
13. 30 hectares
14. 290 hectares
15. 4,000 hectares

1 hectare = 10,000m2

1. What is the elevation above sea level at the centre of the quarry at GR 847133?
2. 7 metres
3. 30 metres
4. 70 metres
5. 90 metres
6. The time taken for a drone to fly in a straight line from the end of the peninsula at GR 862089 to the intersection of the runways at Great Lakes Airport (GR 880112) and then onto the Lakes Entrance Airfield runway at (GR 841101) at a speed of 45 km/hr is closest to
7. 2 minutes
8. 7 minutes
9. 9 minutes
10. 18 minutes

Refer to **Source 1:** Lakes Entrance topographic map 2019 and **Source 2:** Lakes Entrance satellite image 2005 to answer Questions 11 to 12.

1. Identify the cultural feature labelled A on Source 2: Lakes Entrance satellite image 2005.
2. airfield
3. Hunters Lane (road)
4. power line
5. quarry

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1. Identify the natural feature labelled B on Source 2: Lakes Entrance satellite image 2005.
2. creek
3. Colquhoun Road
4. lake
5. rocky outcrop
6. What cultural feature is located at GR 848131 in **Source 1**?
7. Landmark area
8. Quarry
9. Silo
10. Gas/Water Pipe

Refer to **Source 3:** Lakes Entrance climate graph to answer Question 14.

1. Which one of the three-month periods listed below has the highest cumulative average rainfall?
2. Apr – Jun
3. Aug – Oct
4. Feb – Apr
5. Oct – Dec

Refer to **Source 4:** COVID-19 cases July 2020 and **Source 5:** COVID-19 cases January 2022 to answer Question 15 and Question 16.

1. Which country/region/continent below experienced the highest increase in COVID-19 cases between July 2020 and January 2022?
2. Europe
3. India
4. Indonesia
5. Sub-Saharan Africa
6. Which one of the following statements best describes the change observed in worldwide COVID-19 cases between July 2020 and January 2022?
7. All regions of the world experienced an increase in cases with the concentration of largest increases occurring predominantly in South East Asia and South America.
8. The number of cases worldwide rose significantly in this period with the exception of some places such as China and the Middle East.
9. The number of cases worldwide increased in some regions and decreased in others, with no general global pattern due to limited data being available for most countries.
10. The Northern hemisphere experienced the highest increase in cases, whilst the Southern hemisphere experienced very little increase in cases with the exception of Australia.

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Refer to **Source 6**: Decadal average of world deaths from natural disasters to answer Question 17 and Question 18.

1. What is the cumulative total of average world deaths from drought between 1900 to 2010?
2. 40,000
3. 400,000
4. 700,000
5. 1,200,000
6. Which one of the following statements best describes the trends seen in Source 6?
7. Whilst the decadal average of world deaths from natural disasters has reduced over the past 100 years, deaths from floods, droughts and wildfires continue to rise significantly
8. Whilst the decadal average of world deaths from natural disasters has reduced over the past 100 years, extreme temperature and earthquakes have continued to contribute significant proportions of all deaths in more recent decades.
9. Even though the decadal average of world deaths from natural disasters has reduced over the past 100 years, this is probably inaccurate due to poor data collection and other diseases causing more deaths.
10. The most re-occurring natural disaster to cause deaths over the last century has been earthquakes, however, death from flood, drought and landslides have also increased over this time.
11. In relation to hazard and risk management, the term vulnerability refers to
12. the susceptibility to prepare and adjust prior to a hazard occurring.
13. the ability of a community to alter or modify their available resources in response to a risk.
14. the susceptibility to harm or change.
15. the ability to recover or adjust in response to a changed situation.
16. In relation to risk management of the COVID-19 pandemic, what is the risk management term that best describes the strategy of the Western Australian government pre-ordering thousands of face masks to be used in schools?
17. frequency
18. preparedness
19. vulnerability
20. spatial distribution

**END OF SECTION ONE**

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**Section Two: Short response (40 marks)**

This section has **12** questions. Answer **all** questions. Write your answers in the spaces provided.

Supplementary pages for planning/continuing your answers to questions are provided at the end of this Question/Answer Booklet or the lined paper provided by your teacher/supervisor. 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:** Lakes Entrance topographic map 2019 to answer Questions 21 - 23.

**Question 21 (2 marks)**

With reference to **Source 1,** describe the spatial relationship between the topography and Lakes Entrance Airfield (GR 838102).

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**Question 22 (2 marks)**

A farmer walks from spot height 45 (GR 847109) down to GR 849106. Calculate the average gradient of their walk. Provide your answer as a ratio to the nearest whole number.

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**Question 23 (2 marks)**

Consider a scenario where a bushfire starts in the vicinity of AR 8213 in the Colquhoun / Boyanga Gidi State Forest and moves in a South Easterly direction towards Lakes Entrance. Using evidence from Source 1, identify and provide the location of a natural or cultural feature that may assist in reducing the risk to the built-up area of Lakes Entrance.

**Feature:**

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**Location:**

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Refer to **Source 1:** Lakes Entrance topographic map 2019 and **Source 2**: Lakes Entrance satellite image 2005 to answer Question 24.

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**Question 24 (2 marks)**

With reference to map evidence, identify the location and describe one change that has occurred between 2005 and 2019 in the area contained in Source 2.

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Refer to **Source 6**: Decadal average of world deaths from natural disasters to answer Question 25 and Question 26.



**Question 25 (4 marks)**

Outline the trends in the temporal distribution of world deaths from drought and storms between 1900 and 2010.

Drought:

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Storms:

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**Question 26 (3 marks)**

Account for the change in world deaths from natural disasters between 1920 – 2010. You may wish to consider using examples of preparedness and/or mitigation.

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**Question 27 (3 marks)**

Define the term spatial technologies and outline one way in which they are used in the study of natural or ecological hazards.

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**Question 28 (4 marks)**

With reference to both a natural and ecological hazard event and/or place that you have studied, outline the concept of probability.

**Natural Hazard:**

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**Ecological Hazard**

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**Question 29 (2 marks)**

Using an example, define hydrological hazards.

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Refer to **Source 7**: Vulnerability versus mitigation actions – hazard risk matrix to answer Question 32.

**Question 30 (6 marks)**

1. Referring to **Source 7,** outline how vulnerability and mitigation actions combine to determine risk.

(2 marks)

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1. Explain how human factors contribute to less developed countries being more vulnerable to a natural hazard than more developed countries.

(4 marks)

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**END OF SECTION TWO**

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

Section Three consists of **two** parts, Part A: Unit 1 Depth Study 1 (Natural Hazards) and Part B: Unit 1 Depth Study 2 (Ecological Hazards).

Part A: Unit 1 Depth Study 1 consists of Questions 33 and 34 and Part B: Unit 1 Depth Study 2 consists of Questions 35 and 36.

Answer **one** question from Part A and **one** question from Part B.

Supplementary pages for planning/continuing your answers to questions are provided at the end of this Question/Answer Booklet or the lined paper provided by your teacher/supervisor. 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: Unit 1 - Natural Hazards** Choose **either** Question 33 or Question 34

Indicate the question you will answer by ticking the box next to the question. Write your answer on pages 17-21 (or on the lined paper provided by your teacher/supervisor). When you have completed Part A: Unit 1 Natural Hazards, turn to page 22.

Suggested working time: 40 minutes.

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**Question 33 (20 marks)**

1. Explain **two** (2) ways in which the activities of people intensified the impacts of a natural hazard event and/or place you have studied.

(8 marks)

1. Discuss the environmental, economic and social impacts of a natural hazard event and/or place you have studied.

(12 marks)

**OR**

**Question 34 (20 marks)**

1. Describe the spatial and temporal distribution of a natural hazard you have studied.

(8 marks)

1. Evaluate **two** (2) hazard risk management strategies that were implemented to reduce the impacts of a natural hazard event and/or place you have studied.

(12 marks)

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**PART B: Unit 1 - Ecological Hazards** Choose **either** Question 35 or Question 36

Indicate the question you will answer by ticking the box next to the question. Write your answer on the following pages 23-27 (or on the lined paper provided by your teacher/supervisor).

Suggested working time: 40 minutes.

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**Question 35 (20 marks)**

1. Explain how physical and/or human processes impact the spatial and/or temporal distribution of an ecological hazard you have studied.

(8 marks)

1. Describe the cause/s of an ecological hazard event and/or place you have studied and evaluate the effectiveness of **one** (1) hazard risk management strategy implemented to reduce the impacts of the hazard event and/or place.

(12 marks)

**OR**

**Question 36 (20 marks)**

1. Describe the magnitude, duration, and scale of spatial impact of an ecological hazard event and/or place you have studied.

(8 marks)

(b) For an ecological hazard you have studied, explain how physical and human factors account for higher vulnerability in less developed countries when compared to more developed countries.

(12 marks)

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