



NSW Education Standards Authority

2022 HIGHER SCHOOL CERTIFICATE EXAMINATION

Geography

**General
Instructions**

- Reading time – 5 minutes
- Working time – 3 hours
- Write using black pen
- Calculators approved by NESA may be used
- A Stimulus Booklet is provided with this paper

**Total marks:
100**

Section I – 20 marks (pages 2–7)

- Attempt Questions 1–20
- Allow about 35 minutes for this section

Section II – 40 marks (pages 9–16)

- Attempt Questions 21–26
- Allow about 1 hour and 10 minutes for this section

Section III – 40 marks (page 17)

- Attempt TWO questions from Questions 27–29
- Allow about 1 hour and 15 minutes for this section

Section I

20 marks

Attempt Questions 1–20

Allow about 35 minutes for this section

Refer to the Stimulus Booklet

Use the multiple-choice answer sheet for Questions 1–20.

Refer to Sources *A* and *B* on page 1 of the Stimulus Booklet to answer Question 1.

1 Which aspect of Geography do Sources *A* and *B* best show?

- A. Climate
- B. Ecosystems at risk
- C. Natural environments
- D. The built environment

Refer to Sources *C* and *D* on page 1 of the Stimulus Booklet to answer Question 2.

2 Which row of the table identifies the types of graphs in Sources *C* and *D*?

	<i>Source C</i>	<i>Source D</i>
A.	Population pyramid	Ternary graph
B.	Population pyramid	Divided column graph
C.	Population diagram	Ternary graph
D.	Population diagram	Divided column graph

3 The term *geographical processes* can be defined as

- A. human forces that form and transform our world.
- B. physical processes that form and transform our world.
- C. a combination of physical and human forces that form and transform our world.
- D. a combination of physical and human forces that form and transform biophysical environments.

Refer to Source *E* on page 1 of the Stimulus Booklet to answer Question 4.

- 4 How many cities in Africa have a population of 10 million or more?
- A. 3
 - B. 6
 - C. 50
 - D. 70

Refer to Source *F* on page 2 of the Stimulus Booklet to answer Questions 5–8.

- 5 What is the contour interval of the map?

- A. 1 m
- B. 5 m
- C. 10 m
- D. 25 m

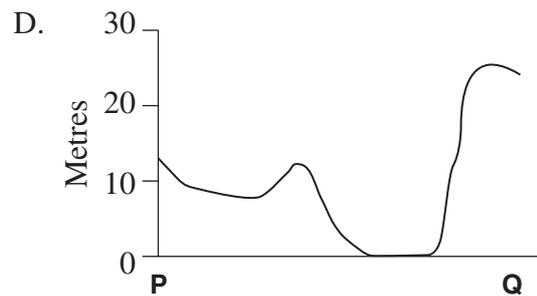
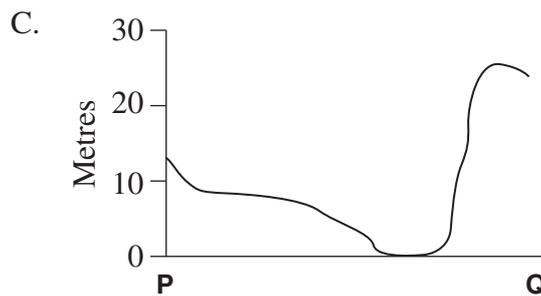
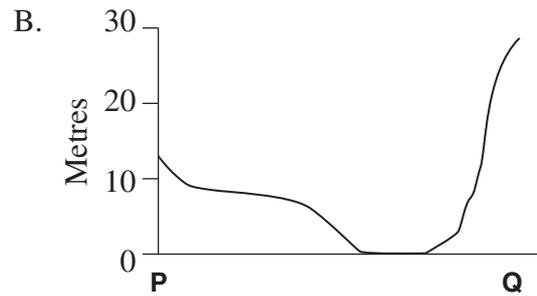
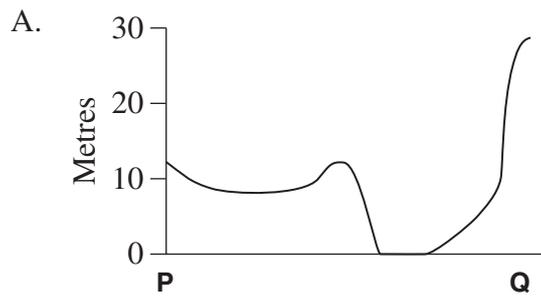
- 6 What is the grid reference of point *P* and its direction to point *Q*?

	<i>Grid reference</i>	<i>Direction to point Q</i>
A.	425296	South
B.	296425	South
C.	425296	North
D.	296425	North

- 7 What is the aspect of the slope at point *Q*?

- A. East
- B. North
- C. South
- D. West

8 Which cross-section best matches the transect between points *P* and *Q*?



Refer to Source *G* on page 3 of the Stimulus Booklet to answer Questions 9–10.

9 What type of map is Source *G*?

- A. Cadastral
- B. Physical
- C. Précis
- D. Topographic

10 What is the distance from the city centre to the furthest point in Royal National City Park?

- A. 6.4 km
- B. 6.7 km
- C. 64 km
- D. 67 km

Refer to Source *H* on page 3 of the Stimulus Booklet to answer Question 11.

11 Which geographic ‘dimension’ does Source *H* best show?

- A. Ecological
- B. Economic
- C. Political
- D. Spatial

Refer to Sources *F*, *G*, *I* and *K* on pages 2 and 3 of the Stimulus Booklet to answer Question 12.

12 Which source has the largest scale?

- A. Source *F*
- B. Source *G*
- C. Source *I*
- D. Source *K*

Refer to Source *L* on page 4 of the Stimulus Booklet to answer Questions 13–14.

13 Approximately how much installed solar capacity does Thailand have?

- A. 2500 MW
- B. 3500 MW
- C. 4000 MW
- D. 5000 MW

14 Why is China the largest square in the cartogram?

- A. Largest population
- B. Largest installed solar capacity
- C. Largest potential watts per capita available
- D. Most politically powerful nation in the region

Refer to Sources *M* and *N* on page 4 of the Stimulus Booklet to answer Question 15.

- 15** The operators of the Darling Downs solar power plant believe it is a good location compared to other locations in Queensland because it is further south and inland.

Why would this be beneficial for the enterprise?

- A. Less evaporation
- B. Fewer cloudy days
- C. More daylight hours
- D. Warmer temperatures

Refer to Source *O* on page 4 of the Stimulus Booklet to answer Questions 16–17.

- 16** What is the mean annual rainfall for the Darling Downs?

- A. 50 mm
- B. 194 mm
- C. 575 mm
- D. 642 mm

- 17** What is the lowest maximum temperature on record for April?

- A. 0°C
- B. 11°C
- C. 17°C
- D. 23°C

Refer to Source *C* on page 1 of the Stimulus Booklet to answer Question 18.

- 18** The world population in 2021 was 7.875 billion.

What is the percentage of people in 2021 who were older than someone born in 1936?

- A. 0.3%
- B. 0.9%
- C. 7%
- D. 13%

Refer to Source *D* on page 1 of the Stimulus Booklet to answer Question 19.

- 19** For data shown for South American cities, what was the relative increase in the population from 1950 to 2000?
- A. 30%
 - B. 40%
 - C. 300%
 - D. 400%

Refer to Source *F* on page 2 and Source *I* on page 3 of the Stimulus Booklet to answer Question 20.

- 20** The landscape seen in Source *I* can be found in Source *F*.

At what time of day was the photograph in Source *I* taken?

- A. 7:30 am
- B. 10:30 am
- C. 12:30 pm
- D. 3:30 pm

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Centre Number

Geography

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Student Number

Section II Answer Booklet

40 marks

Attempt Questions 21–26

Allow about 1 hour and 10 minutes for this section

Instructions

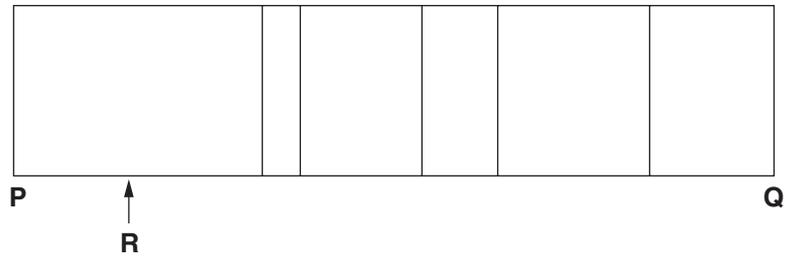
- Write your Centre Number and Student Number at the top of this page.
- Use the Stimulus Booklet and your knowledge of geography to answer Questions 21–26 in the spaces provided. These spaces provide guidance for the expected length of response.
- Show all relevant working in questions involving calculations.
- Extra writing space is provided at the back of this booklet. If you use this space, clearly indicate which question you are answering.

Please turn over

Question 21 (4 marks)

Refer to Source *F* on page 2 of the Stimulus Booklet to answer parts (a)–(c).

- (a) Use the key provided to complete the transect between points *P* and *Q*. 2



 Open space	 Water body
 Public building	 Coniferous forest

- (b) Name the human feature at point *R* on the transect. 1

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- (c) What percentage of the transect between points *P* and *Q* is taken up by open space? 1

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Do NOT write in this area.

Question 22 (8 marks)

Refer to Source A on page 1 of the Stimulus Booklet to answer part (a).

- (a) Name ONE urban dynamic present in Source A and justify your choice. **2**

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Refer to Source B on page 1 of the Stimulus Booklet to answer part (b).

- (b) Compare ONE urban dynamic present in Source B with ONE urban dynamic operating in a country town or suburb. **3**

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- (c) Why are some small towns in decline? **3**

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Question 23 (8 marks)

Refer to page 2 and page 3 of the Stimulus Booklet to answer part (a).

- (a) The Royal National City Park rangers are planning to evaluate their ecosystem management strategies. **2**

Justify ONE criteria they could base their evaluation on.

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Answer part (b) with reference to an ecosystem you have studied.

Ecosystem:

- (b) Explain how the rate of change affecting this ecosystem influences its ability to adjust. **6**

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Question 24 (8 marks)

Answer part (a) with reference to an economic enterprise you have studied.

Economic enterprise:

- (a) Describe how an understanding of geography is relevant to ONE career associated with the economic enterprise. **3**

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Answer part (b) with reference to an economic activity you have studied.

Economic activity:

- (b) Explain how changes in consumer demand can affect the economic activity. **5**

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Question 25 (8 marks)

Refer to the following to answer part (a).

COP26 – 2021 United Nations Climate Change Conference

For nearly three decades the UN has been bringing together nations and organisations for global climate summits – called COPs.

In 2021 the 26th annual summit was held in Glasgow, Scotland.

The event aimed for nations and organisations to work together to reach agreement on how to address climate change.

- (a) In what ways can international environmental efforts, such as COP26, affect ONE global economic activity you have studied? **4**

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- (b) How does ONE economic activity use global networks? **4**

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Question 26 (4 marks)

Refer to Source *H* on page 3 of the Stimulus Booklet to answer Question 26.

Stockholm claims to have created the world's first national urban park.

How does this claim demonstrate the character of world cities?

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Geography

Section III

40 marks

Attempt TWO questions from Questions 27–29

Allow about 1 hour and 15 minutes for this section

Answer both questions in the Section III Writing Booklet. Extra writing booklets are available.

Your answers will be assessed on how well you:

- demonstrate geographical knowledge and understanding relevant to the question
 - communicate ideas and information using geographical terms and concepts appropriately
 - refer to case studies, illustrative examples and the Stimulus Booklet where appropriate
 - present a sustained, logical and cohesive response
-

Question 27 (20 marks)

Assess how a local economic enterprise affects and is affected by its environment.

Question 28 (20 marks)

‘Utility value is the most important reason for managing and protecting ecosystems.’

Discuss this statement.

Question 29 (20 marks)

Account for the challenges of living in mega cities of the developing world.

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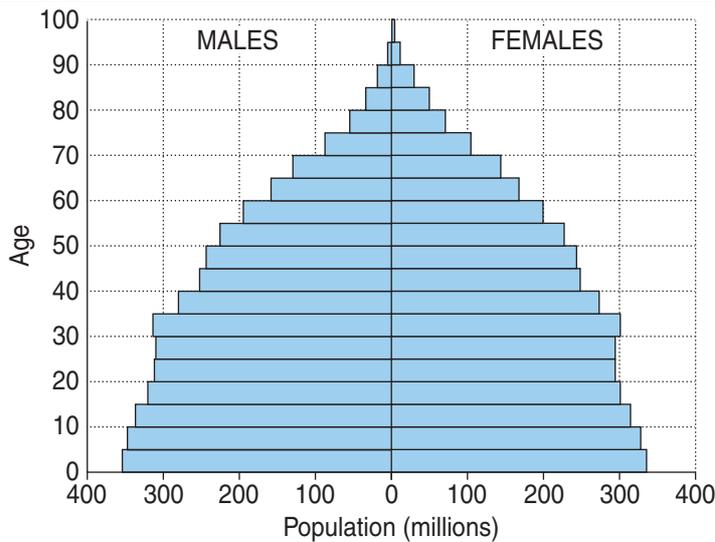
Source A – A street in a major city of the developed world



Source B – A scene of a city in the developed world

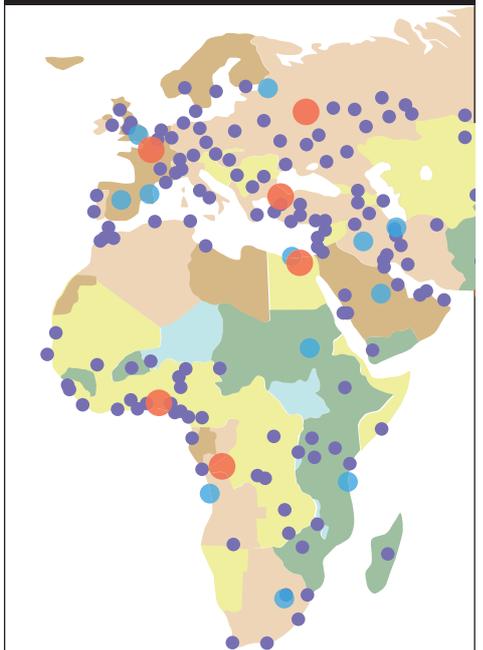


Source C – World population by age and gender, 2021



Adapted from the World Population Prospects. © 2019 United Nations. Reproduced with permission.

Source E – National urbanisation and major cities



Percentage urban

80–100%

60–80%

40–60%

20–40%

0–20%

City population

10 million or more

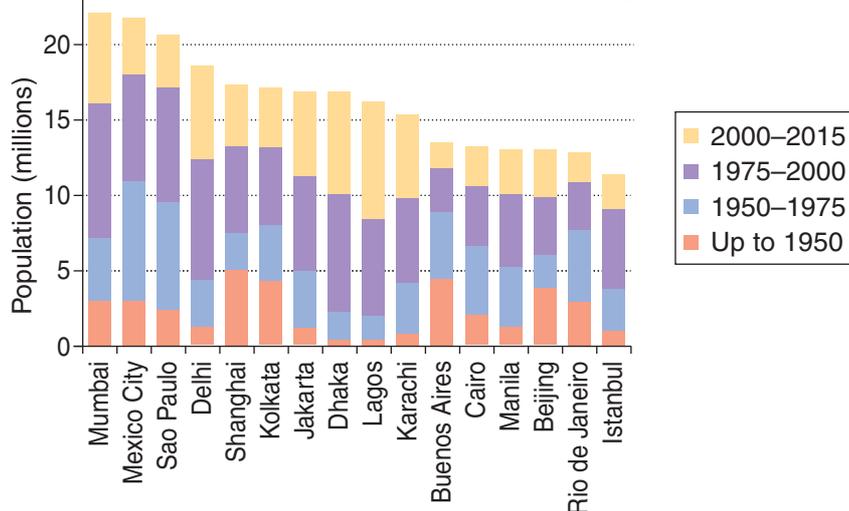
5 million to 10 million

1 million to 5 million

Adapted from the World Urbanization Prospects. © 2018 United Nations. Reproduced with permission.

Source D – Population growth in selected cities

The World Megacities, © United Nations, 2009



Source F – Topographic map extract of central Stockholm



KEY

High-rise buildings, low-rise buildings	Sports ground	Ferry route
Commercial building, public building	Foot path; cycle path	Jetty
Other buildings	Main street	Water body
Industrial area	Local street	Marina
Open space	Private road	Ancient monument
Coniferous forest	Tramway, tram stop	Monument, historic building

Source G – Inner Stockholm and surrounds



© 1850-2000, The European city and green space; London, Stockholm, Helsinki and St Peterburg. Reproduced by permission of Taylor and Francis Group, LLC, a division of Informa plc.

Source H – About Royal National City Park

In 1995, Stockholm created Royal National City Park, claiming it as ‘the world’s first national urban park’.

Their aim is to preserve urban nature and the built cultural environment.

The park connects deciduous and coniferous forests around the city, along with meadows, lakes, streams, bays and marshes.

This ensures an exceptional wealth of species such as foxes, moose, rare birds and butterflies, as well as oak, elm, linden and maple trees.

Cultural features include museums, theme parks, zoos, ancient monuments and historic buildings. Cows, horses and sheep graze on the meadows.

Source I – A Stockholm landscape

This material cannot be displayed due to copyright issues.

https://marinas.com/view/marina/d9cm2x_Biskopsudden_Road_Marina_Djurgarden_Sweden#&gid=1&pid=3

Source J – Looking across South Djurgården to the Stockholm city centre

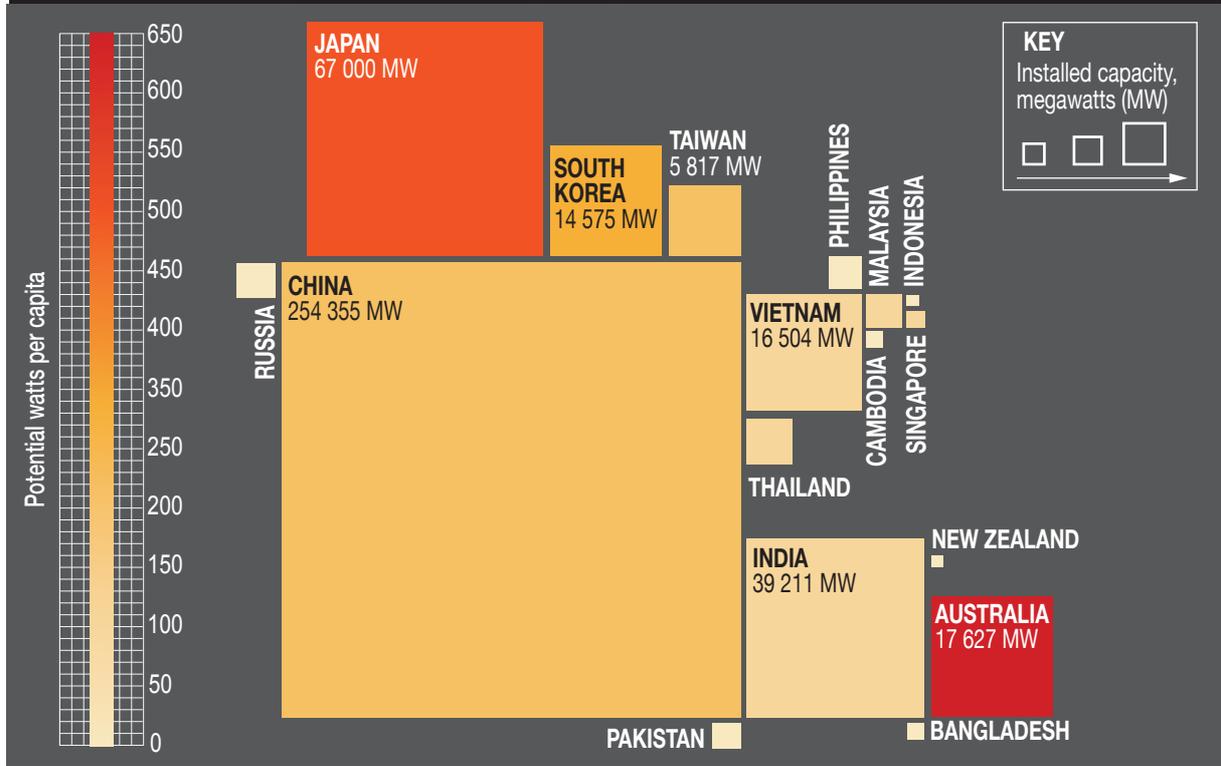
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Source K – Some natural features of Royal National City Park



Source L – Cartogram of solar capacity and potential

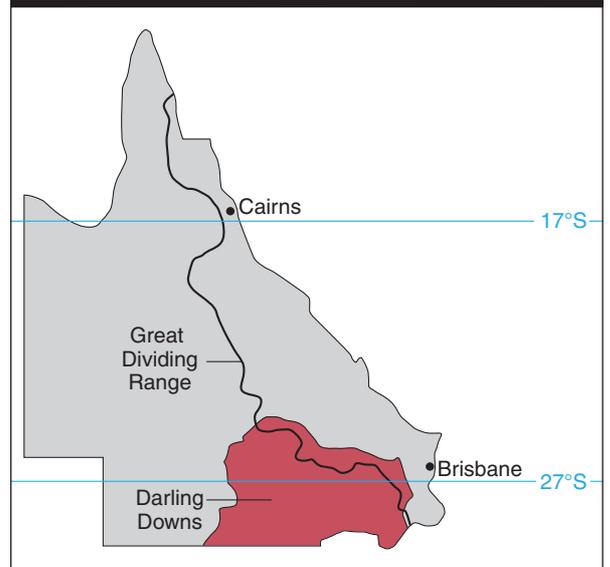


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Source M – A solar power plant in the Darling Downs, Queensland



Source N – Some features of Queensland



Source O – Climate graph for the Darling Downs

