

# SMARTWIZ

## GRADE 12 GEOGRAPHY EXAM

MARKS: 300

TIME: 3 HOURS

SCHOOL \_\_\_\_\_

CLASS (eg. 4A) \_\_\_\_\_

SURNAME \_\_\_\_\_

NAME \_\_\_\_\_

MARKS	
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### Instructions for Learners:

- Read all instructions carefully before you begin the exam.
- Write your full name and student number clearly on the answer sheet/book.
- Answer all questions unless otherwise instructed.
- Show all your work/calculations where necessary.
- Write neatly and clearly.
- Use only a blue or black pen. Do not use correction fluid or tape.
- Electronic devices (calculators, cell phones, etc.) are not allowed unless explicitly permitted.
- Raise your hand if you have any questions.
- Do not talk to other learners during the exam.
- Any form of dishonesty will result in immediate disqualification from the exam.

**This exam consists of Five pages, including the cover page.**

## SECTION A: MULTIPLE CHOICE QUESTIONS (30 × 1 = 30 MARKS)

Choose the correct answer and write only the letter (A–D) on the line.

1. What is the main cause of the Coriolis effect on wind patterns?

A. Earth's rotation  
B. Solar radiation  
C. Atmospheric pressure  
D. Ocean currents

**Answer:** \_\_\_\_\_

2. Which soil type is typically found in tropical rainforests?

A. Chernozem  
B. Laterite  
C. Podzol  
D. Loess

**Answer:** \_\_\_\_\_

3. The term 'urban sprawl' refers to:

A. The increase in city population density  
B. The uncontrolled expansion of urban areas  
C. The creation of green spaces in cities  
D. The development of skyscrapers

**Answer:** \_\_\_\_\_

4. Which of the following is an example of a fossil fuel?

A. Natural gas  
B. Solar energy  
C. Wind power  
D. Geothermal energy

**Answer:** \_\_\_\_\_

5. Which process causes the formation of karst landscapes?

A. Glacial erosion  
B. Chemical weathering of limestone  
C. Volcanic activity  
D. Wind abrasion

**Answer:** \_\_\_\_\_

6. The term 'gentrification' describes:

A. The decline of rural areas  
B. The renewal of urban areas by wealthier people  
C. The migration from urban to rural areas  
D. The building of informal settlements

**Answer:** \_\_\_\_\_

7. Which biome is characterized by permafrost?

A. Desert  
B. Tundra  
C. Savannah  
D. Temperate forest

**Answer:** \_\_\_\_\_

8. Which type of volcano is generally the largest and has gentle slopes?

A. Stratovolcano  
B. Cinder cone

C. Shield volcano

D. Lava dome

**Answer:** \_\_\_\_\_

9. Acid rain is primarily caused by emissions of:

A. Carbon dioxide and methane

B. Sulfur dioxide and nitrogen oxides

C. Ozone and chlorofluorocarbons

D. Particulate matter and carbon monoxide

**Answer:** \_\_\_\_\_

10. The Human Development Index (HDI) combines indicators of:

A. Education, income, and life expectancy

B. Population growth, migration, and birth rates

C. Energy consumption, urbanization, and GDP

D. Industrial output, literacy, and birth rates

**Answer:** \_\_\_\_\_

11. Which of the following is an example of a site factor for settlement location?

A. Proximity to market

B. Availability of fresh water

C. Transport networks

D. Government policy

**Answer:** \_\_\_\_\_

12. The process of 'desertification' can be caused by:

A. Over-irrigation and deforestation

B. Earthquakes and volcanic eruptions

C. Urbanization and industrialization

D. Increased rainfall and flooding

**Answer:** \_\_\_\_\_

13. Which ocean current is warm and influences the climate of Western Europe?

A. Benguela Current

B. California Current

C. Gulf Stream

D. Peru Current

**Answer:** \_\_\_\_\_

14. Which of the following is NOT a characteristic of a developing country?

A. High infant mortality rate

B. Low levels of industrialization

C. High literacy rates

D. Rapid population growth

**Answer:** \_\_\_\_\_

15. What term describes the boundary where two tectonic plates slide past each other?

A. Divergent boundary

B. Convergent boundary

C. Transform fault

D. Subduction zone

**Answer:** \_\_\_\_\_

16. The 'Green Revolution' refers to:

A. The growth of urban green spaces

B. The spread of renewable energy

C. Advances in agricultural technology increasing crop yields

D. The global movement to reduce pollution

**Answer:** \_\_\_\_\_

17. Which natural hazard is most associated with the Pacific 'Ring of Fire'?

- A. Tornadoes
- B. Earthquakes and volcanoes
- C. Hurricanes
- D. Tsunamis caused by cyclones

**Answer:** \_\_\_\_\_

18. Which of the following factors most influences the formation of ocean tides?

- A. Wind speed
- B. Lunar gravity
- C. Water temperature
- D. Earth's magnetic field

**Answer:** \_\_\_\_\_

19. What is an example of an informal settlement?

- A. A gated community
- B. A shanty town
- C. A planned suburb
- D. An industrial park

**Answer:** \_\_\_\_\_

20. Which country is the largest producer of hydroelectric power?

- A. Brazil
- B. China
- C. Canada
- D. Norway

**Answer:** \_\_\_\_\_

21. What is the main source of energy in geothermal power?

- A. Solar radiation
- B. Earth's internal heat
- C. Biomass decomposition
- D. Wind

**Answer:** \_\_\_\_\_

22. Which term best describes population movement within a country?

- A. Immigration
- B. Emigration
- C. Internal migration
- D. Refugee movement

**Answer:** \_\_\_\_\_

23. What kind of rainfall is caused by air being forced over a mountain range?

- A. Frontal rainfall
- B. Orographic rainfall
- C. Convectional rainfall
- D. Cyclonic rainfall

**Answer:** \_\_\_\_\_

24. Which of the following is a primary effect of a volcanic eruption?

- A. Loss of vegetation
- B. Economic recession
- C. Migration of people

D. Implementation of disaster policies

**Answer:** \_\_\_\_\_

25. Which method is commonly used to prevent coastal erosion?

- A. Afforestation
- B. Building groynes and seawalls
- C. Dams
- D. Crop rotation

**Answer:** \_\_\_\_\_

26. What does the term 'sustainable tourism' mean?

- A. Tourism that promotes maximum visitor numbers
- B. Tourism that preserves the environment and benefits local people
- C. Tourism based on luxury resorts
- D. Tourism focusing on mass entertainment

**Answer:** \_\_\_\_\_

27. Which crop is most suitable for cultivation in Mediterranean climates?

- A. Rice
- B. Wheat
- C. Citrus fruits
- D. Maize

**Answer:** \_\_\_\_\_

28. What type of weathering is caused by freezing and thawing of water?

- A. Chemical weathering
- B. Biological weathering
- C. Physical weathering (frost action)
- D. Erosion

**Answer:** \_\_\_\_\_

29. Which country is a major producer of diamonds, influencing its economic development?

- A. Botswana
- B. Egypt
- C. Kenya
- D. Ghana

**Answer:** \_\_\_\_\_

30. Which of the following factors most influences global climate zones?

- A. Latitude
- B. Altitude
- C. Distance from the ocean
- D. Population density

**Answer:** \_\_\_\_\_

## SECTION B: STRUCTURED SHORT ANSWERS (10 × 10 = 100 MARKS)

*Answer ALL TEN questions. Each question carries 10 marks.*

31. Explain how ocean currents influence climate in coastal regions. Provide two examples.

**Answer:**

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32. Describe the characteristics and formation process of a delta.

**Answer:**

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33. Discuss the impact of rural-urban migration on urban infrastructure in developing countries.

**Answer:**

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34. Explain how volcanic eruptions can affect climate both locally and globally.

**Answer:**

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35. Describe the causes and effects of soil erosion in agricultural regions. Suggest two methods to reduce it.

**Answer:**

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36. Compare the characteristics of a developed country with a developing country using at least four indicators.

**Answer:**

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37. Describe the main features of the tropical rainforest biome and explain its importance to the global environment.

**Answer:**

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38. Explain how government policies can encourage sustainable urban development.

**Answer:**

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39. Describe how plate tectonics lead to the formation of fold mountains, giving an example.

**Answer:**

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40. Discuss the advantages and disadvantages of hydropower as a renewable energy source.

**Answer:**

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### SECTION C: MAP AND DATA INTERPRETATION (5 × 14 = 70 MARKS)

41. Describe the relief and drainage pattern shown on the map in the southwestern quadrant.

**Answer:**

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42. Calculate the distance between two given points on the map using the scale, and estimate the travel time by road.

**Answer:**

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43. Using the provided climate data, identify the type of climate and justify your answer with evidence.

**Answer:**

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44. Analyze the land use pattern shown on the map. Identify two urban and two rural land uses and explain their distribution.

**Answer:**

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45. Using the population density data provided, suggest reasons for variations in density across the region.

**Answer:**

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### SECTION D: ESSAYS (2 × 50 = 100 MARKS)

*Answer TWO essays only. Each essay is worth 50 marks.*

46. Climate Change and Its Effects:

Discuss the causes of climate change and evaluate the impact on both natural environments and human societies. Suggest strategies for mitigation and adaptation.

**Answer:**

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47. Urban Growth and Management:

Examine the challenges faced by rapidly growing cities in developing countries. Discuss solutions implemented to improve housing, transportation, and sanitation.

**Answer:**

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48. Geomorphic Processes and Landforms:

Explain the processes of weathering, erosion, and deposition and how they contribute to shaping landforms. Use examples to illustrate your answer.

**Answer:**

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49. Natural Resource Management:

Discuss the importance of managing natural resources sustainably. Use examples of water, forests, or minerals to highlight challenges and solutions.

**Answer:**

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**END OF EXAM**

**TOTAL : 300**



**MEMO****SECTION A: MULTIPLE CHOICE QUESTIONS ( $30 \times 1 = 30$  MARKS)**

1. A
2. B
3. B
4. A
5. B
6. B
7. B
8. C
9. B
10. A
11. B
12. A
13. C
14. C
15. C
16. C
17. B
18. B
19. B
20. B
21. B
22. C
23. B
24. A
25. B
26. B
27. C
28. C
29. A
30. A

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**SECTION B: STRUCTURED SHORT ANSWERS ( $10 \times 10 = 100$  MARKS)**

31. **Ocean currents affect coastal climates by transporting warm or cold water, influencing air temperature and precipitation.**
  - Example 1: Gulf Stream warms Western Europe.
  - Example 2: California Current cools the west coast of North America.
32. **A delta forms where a river deposits sediment at its mouth where it meets a body of water, creating a fan-shaped landform with distributary channels.**

33. Rural-urban migration increases pressure on urban infrastructure leading to housing shortages, traffic congestion, strain on water and sanitation, and unemployment.
34. Volcanic eruptions release ash and gases. Locally, ash can destroy vegetation and settlements. Globally, sulfur dioxide can cause temporary cooling by reflecting sunlight.
35. Soil erosion caused by water runoff and wind leads to loss of fertile topsoil. Methods to reduce: contour ploughing and planting cover crops.
36. Developed countries: high income, low infant mortality, high literacy, advanced infrastructure. Developing countries: low income, high infant mortality, lower literacy, limited infrastructure.
37. Tropical rainforest: dense, multi-layered vegetation, high biodiversity, high rainfall, nutrient-poor soils. Importance: carbon storage, oxygen production, climate regulation.
38. Government policies like zoning laws, green building incentives, and public transport investment encourage sustainable urban growth and reduce environmental impacts.
39. Fold mountains form at convergent plate boundaries where two continental plates collide, causing crust to fold and uplift (e.g., Himalayas).
40. Hydropower advantages: renewable, low emissions, reliable. Disadvantages: ecosystem disruption, displacement of people, high initial costs.

## SECTION C: MAP AND DATA INTERPRETATION (5 × 14 = 70 MARKS)

41. Relief is mountainous with steep slopes in the southwest; drainage shows a dendritic pattern indicating underlying rock types and rainfall distribution.
42. Use map scale (e.g., 1:50 000) to measure distance (e.g., 10 cm = 5 km). Estimate travel time by dividing distance by average speed (e.g., 60 km/h).
43. Climate type identified as temperate maritime based on moderate temperatures and evenly distributed rainfall throughout the year.
44. Urban land uses: residential areas and commercial zones. Rural land uses: farming fields and forested areas. Distribution influenced by accessibility and terrain.
45. Population density varies due to availability of water, fertile land, economic opportunities, and infrastructure. Higher densities near rivers and cities.

## SECTION D: ESSAYS (2 × 50 = 100 MARKS)

### 46. Climate Change and Its Effects:

- Causes: greenhouse gases from fossil fuels, deforestation, agriculture.
- Impacts: rising sea levels, extreme weather, biodiversity loss, food insecurity, health issues.
- Mitigation: renewable energy, emission cuts, reforestation.
- Adaptation: flood defenses, drought-resistant crops, disaster preparedness.

### 47. Urban Growth and Management:

- Challenges: housing shortages, traffic congestion, inadequate sanitation, unemployment.

- Solutions: affordable housing projects, public transport development, improved sanitation infrastructure, urban planning policies.

#### **48. Geomorphic Processes and Landforms:**

- Weathering: breakdown of rocks (physical, chemical, biological).
- Erosion: removal of material by water, wind, ice.
- Deposition: material laid down forming features like alluvial fans, deltas.
- Examples: Grand Canyon (erosion), Himalayas (weathering and uplift).

#### **49. Natural Resource Management:**

- Importance: sustains economies, ecosystems, and societies.
- Challenges: overuse, pollution, habitat destruction.
- Examples: water scarcity in semi-arid areas, deforestation in Amazon, sustainable mining practices.
- Solutions: conservation, recycling, legal regulations.

**TOTAL : 300**

MYST PATHWORKS