

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 (1 × 30 = 30 marks)

Choose the correct answer and write only the letter (A–D) next to the question number.

1. Which factor primarily influences the type of soil found in a region?
 - A. Latitude
 - B. Parent material
 - C. Altitude
 - D. Population density

2. What is the main cause of desertification?
 - A. Heavy rainfall
 - B. Overcultivation and deforestation
 - C. Urban development
 - D. Industrial pollution

3. Which of these is an example of a secondary economic activity?
 - A. Mining
 - B. Manufacturing
 - C. Fishing
 - D. Forestry

4. What type of climate is characterized by hot summers, cold winters, and moderate rainfall?
 - A. Tropical rainforest
 - B. Mediterranean
 - C. Continental
 - D. Tundra

5. What does the term “urban sprawl” mean?
 - A. The growth of cities in a compact manner
 - B. The spread of urban development into rural areas
 - C. The rebuilding of old city areas
 - D. The formation of suburbs only near rivers

6. Which landform is formed by the deposition of sediment where a river meets the sea?
 - A. Canyon
 - B. Delta

- C. Mesa
 - D. Plateau
-

7. Which of the following is a characteristic of a developing country?
- A. High industrial output
 - B. Low population growth
 - C. High infant mortality rate
 - D. Extensive urban infrastructure
-

8. What causes tsunamis?
- A. Volcanic eruptions on land
 - B. Earthquakes under the sea
 - C. Tornadoes over oceans
 - D. Landslides in deserts
-

9. What is the purpose of contour lines on a topographic map?
- A. Show land use types
 - B. Indicate elevation and slope
 - C. Mark political boundaries
 - D. Display population density
-

10. Which process best describes the movement of sediment downhill under gravity?
- A. Erosion
 - B. Deposition
 - C. Mass movement
 - D. Weathering
-

11. Which gas is a major contributor to the greenhouse effect?
- A. Oxygen
 - B. Nitrogen
 - C. Carbon dioxide
 - D. Hydrogen
-

12. What is a meander in river geography?
- A. A waterfall
 - B. A sharp bend in a river

- C. A river delta
 - D. A river source
-

13. Which of the following is a renewable energy source?
- A. Coal
 - B. Natural gas
 - C. Wind
 - D. Oil
-

14. What type of settlement pattern is clustered and found around resources or crossroads?
- A. Dispersed
 - B. Linear
 - C. Nucleated
 - D. Random
-

15. Which country has the highest population density?
- A. Australia
 - B. Bangladesh
 - C. Canada
 - D. Russia
-

16. What term describes the gradual increase in average global temperatures?
- A. Desertification
 - B. Global warming
 - C. Deforestation
 - D. Acid rain
-

17. Which biome is dominated by grasses with few trees and seasonal rainfall?
- A. Tundra
 - B. Savannah
 - C. Taiga
 - D. Desert
-

18. What is a likely effect of deforestation on the water cycle?
- A. Increased transpiration
 - B. Reduced evaporation

- C. Increased runoff and flooding
 - D. More groundwater recharge
-

19. What is the main driver behind rural to urban migration?
- A. Better climate in cities
 - B. Job opportunities and services
 - C. Decline in birth rates in cities
 - D. Political stability in rural areas
-

20. What is the primary use of a GIS in geography?
- A. To measure temperature
 - B. To capture, store, analyze, and display spatial data
 - C. To measure wind speed
 - D. To calculate population growth rates
-

21. Which of these is NOT an effect of rapid urbanisation?
- A. Increased unemployment
 - B. Improved infrastructure
 - C. Informal settlements
 - D. Traffic congestion
-

22. The term “carrying capacity” refers to:
- A. The ability of soil to support crops
 - B. Maximum population an environment can sustain
 - C. Capacity of a city’s infrastructure
 - D. The amount of water a river can carry
-

23. Which of the following best describes “sustainable development”?
- A. Development that meets present needs without compromising the future
 - B. Development focused only on economic growth
 - C. Urban growth without planning
 - D. Exploiting resources for maximum gain
-

24. What is the main effect of acid rain on forests?
- A. Promotes tree growth
 - B. Causes leaf damage and soil nutrient loss

- C. Increases soil fertility
 - D. Neutralizes soil pH
-

25. Which continent has the fastest rate of urban growth?
- A. Europe
 - B. Asia
 - C. Africa
 - D. South America
-

26. What is the major cause of ocean acidification?
- A. Plastic pollution
 - B. Carbon dioxide absorption from the atmosphere
 - C. Overfishing
 - D. Oil spills
-

27. What is the typical pattern of population distribution in mountainous areas?
- A. Evenly spread
 - B. Concentrated in valleys and foothills
 - C. Found only on mountain peaks
 - D. Uniform in altitude
-

28. What causes tectonic plates to move?
- A. Earth's rotation
 - B. Mantle convection currents
 - C. Ocean currents
 - D. Atmospheric pressure
-

29. Which of the following is an example of a push factor in migration?
- A. Employment opportunities
 - B. Political instability
 - C. Quality education
 - D. Family reunification
-

30. Which soil conservation method involves planting different crops in sequence on the same land?
- A. Crop rotation
 - B. Monoculture

- C. Deforestation
- D. Overgrazing

SECTION B: SHORT ANSWER QUESTIONS (10 × 10 = 100 marks)

Answer ALL questions. Write your answers on the lines provided.

31. Explain the main processes of chemical weathering and give two examples.

32. Describe the characteristics and causes of tropical cyclones and their impact on human settlements.

33. Outline the differences between formal and informal settlements, and explain why informal settlements develop.

34. Describe the factors that influence population distribution in coastal areas.

35. Discuss how climate influences agricultural activities in two different climate zones.

36. Explain the causes and environmental effects of soil erosion.

37. Identify three types of renewable energy and discuss their advantages and disadvantages.

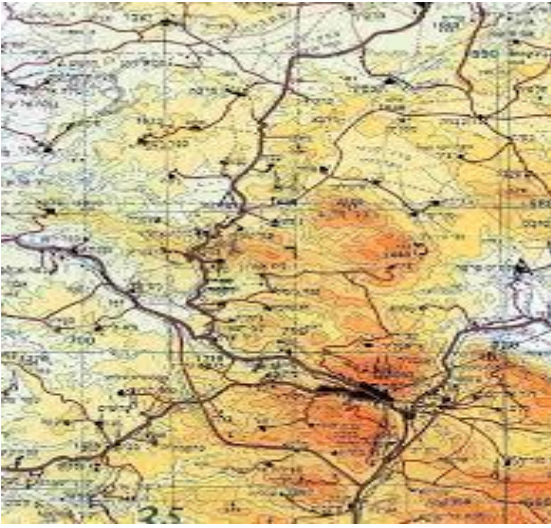
38. Discuss the impact of rapid population growth on urban infrastructure and services.

39. Explain the concept of “water scarcity” and describe two strategies used to manage it.

40. Discuss how globalization has influenced economic development in developing countries.

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

Use the topographic map and climate data provided (see addendum).



Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Temperature (°C)	26	27	29	31	33	30	28	27	29	31	28	27
Rainfall (mm)	180	160	120	80	40	15	10	15	40	90	140	180

41. Describe the main physical features shown in the south-western quadrant of the map.

42. Calculate the gradient between Point X (elevation 600m) and Point Y (elevation 200m), 4 km apart.
Show your working.

43. Using the climate graph, describe the rainfall and temperature patterns and state the likely climate type.

44. Identify three human activities visible on the orthophoto and discuss their impact on the physical environment.

45. Interpret the weather map and predict the weather changes expected over the next 24 hours.

SECTION D: ESSAYS (2 × 50 = 100 marks)

Choose TWO questions and write your essays on the lines provided. Include relevant examples and diagrams.

46. Explain the causes and effects of land degradation and discuss possible strategies for its prevention and rehabilitation.

47. Discuss the role of transport infrastructure in economic development, using examples from both developed and developing countries.

48. Evaluate the impact of climate change on one coastal city and suggest adaptation strategies to reduce vulnerability.

49. Analyze the causes and effects of international migration and discuss the challenges and opportunities it presents to both sending and receiving countries.

TOTAL MARKS: 300

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

1. B — Parent material influences soil type
2. B — Overcultivation and deforestation cause desertification
3. B — Manufacturing is a secondary economic activity
4. C — Continental climate has hot summers, cold winters, moderate rainfall
5. B — Urban sprawl is the spread of urban development into rural areas
6. B — Delta is formed by deposition where a river meets the sea
7. C — Developing countries typically have high infant mortality
8. B — Tsunamis are caused by undersea earthquakes
9. B — Contour lines indicate elevation and slope
10. C — Mass movement is downhill sediment movement by gravity
11. C — Carbon dioxide contributes to greenhouse effect
12. B — Meander is a sharp bend in a river
13. C — Wind is renewable energy
14. C — Nucleated settlement is clustered around resources or crossroads
15. B — Bangladesh has the highest population density
16. B — Global warming is gradual increase in global temperatures
17. B — Savannah biome has grasses, few trees, seasonal rainfall
18. C — Deforestation increases runoff and flooding
19. B — Job opportunities pull people to cities
20. B — GIS is for capturing, storing, analyzing spatial data
21. B — Improved infrastructure is NOT usually an effect of rapid urbanisation
22. B — Carrying capacity is maximum population an environment can sustain
23. A — Sustainable development meets present needs without harming future
24. B — Acid rain causes leaf damage and soil nutrient loss
25. C — Africa has fastest urban growth rate
26. B — Ocean acidification caused by CO₂ absorption
27. B — Population in mountains concentrated in valleys/foothills
28. B — Mantle convection currents cause tectonic plate movement
29. B — Political instability is a push factor
30. A — Crop rotation involves growing different crops sequentially

SECTION B: SHORT ANSWER QUESTIONS (10 × 10 = 100 marks)

31. Chemical weathering

- Processes: oxidation, carbonation, hydrolysis, solution
- Examples: Rusting of iron-rich rocks (oxidation), limestone dissolving (carbonation)

32. Tropical cyclones

- Characteristics: intense low pressure, strong winds, heavy rain, last days to weeks
- Causes: warm ocean water, Coriolis effect, unstable atmosphere

- Impacts: flooding, destruction of infrastructure, displacement, economic loss

33. Formal vs informal settlements

- Formal: planned, legal, access to services
- Informal: unplanned, illegal, poor services
- Informal develop due to rapid urbanisation, lack of affordable housing

34. Population distribution in coastal areas

- Factors: access to water, trade opportunities, flat land, climate, fishing resources

35. Climate influence on agriculture

- Tropical rainforest: high rainfall supports diverse crops
- Arid zones: low rainfall limits crops, livestock grazing common

36. Soil erosion causes and effects

- Causes: deforestation, overgrazing, poor farming methods
- Effects: loss of fertile topsoil, reduced crop yields, sedimentation in rivers

37. Renewable energy types

- Solar: clean, unlimited but intermittent
- Wind: clean, efficient but site-specific and noisy
- Hydroelectric: reliable but ecological disruption

38. Rapid population growth impacts

- Pressure on housing, sanitation, health, education, transport

39. Water scarcity

- Concept: demand exceeds supply or quality issues
- Strategies: water conservation, desalination, rainwater harvesting

40. Globalization and development

- Inflows of investment, technology transfer, increased trade
- Challenges: inequality, cultural change

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

41. Physical features

- Hills, rivers, valleys, forest patches, elevation differences

42. Gradient calculation

- Gradient = $(600\text{m} - 200\text{m}) / 4\text{km} = 400\text{m} / 4000\text{m} = 0.1$ or 10%

43. Climate graph

- Rainfall: wet season in summer months, dry winter
- Temperature: higher in summer, lower in winter
- Climate type: likely tropical wet and dry or Mediterranean depending on data

44. Human activities on orthophoto

- Agriculture, roads, buildings
- Impacts: habitat loss, soil compaction, pollution

45. Weather map interpretation

- Identify fronts, pressure systems
- Predict: approaching low pressure means rain, wind changes

SECTION D: ESSAYS (2 × 50 = 100 marks)

46. Land degradation

- Causes: deforestation, overgrazing, mining
- Effects: soil infertility, desertification, loss of biodiversity
- Strategies: reforestation, controlled grazing, sustainable agriculture

47. Transport infrastructure and development

- Roads, railways, ports enable trade and mobility
- Developed countries: advanced networks support industries
- Developing countries: improving infrastructure boosts economy but faces funding challenges

48. Climate change impact on coastal city

- Rising sea levels, flooding, storm damage
- Adaptation: sea walls, managed retreat, early warning systems

49. International migration

- Causes: economic, political, environmental
- Effects: brain drain in origin, cultural diversity in destination
- Challenges: integration, pressure on services

TOTAL : 300

