SPEC PRE-MOCK EXAM 2026: GEOGRAPHY MARKING SCHEME

SECTION A

Answer all questions in this section.

1. a) Give three characteristics of Katabatic wind.

- It blows down the mountain slope.
- It blows at night.
- It is a cold wind.

b) Apart from Katabatic wind, name two other local winds.

- Fohn
- Anabatic
- Land breeze
- Sea breeze

2. a) What is the international date line?

- This is an imaginary line drawn on a map following longitude 180ºcover the ocean.

b) State three effects of earth's rotation:

- It causes day and night.
- It causes high/low tides.
- It causes deflection of wind and ocean currents.
- It causes variation of atmospheric pressure on the earth's surface.
- It causes a time difference of 1 hour between longitudes 15º apart.

3. a) Name two countries in Africa which experience Mediterranean climate.

- South Africa
- Algeria
- Morocco
- Tunisia
- Libya

b) State three climate characteristics of arid areas.

- The area experiences low rainfall.
- The temperatures in the area are high.
- Humidity is low throughout the year.
- Wind velocity is very strong.

4. a) Give three characteristics of constructive waves.

- It has a low height.
- It has a long wavelength.
- The wave breaks at low frequency.
- The swash is stronger than the backwash.

b) Distinguish between a coastline and the shoreline.

- Coastline is the edge of the land along the shore while the shoreline is the line where the shore and the water meet.

5. a) Define the term soil degeneration.

- This is the decline in soil fertility due to physical, chemical, and biological causes.

b) Give three causes of soil degeneration.

- Clearing vegetation
- Application of excess agro-chemicals
- Use of heavy machinery in farm operations.
- Continuous cropping
- Irrigating dry land
- Constant ploughing.

SECTION B

Answer question 6 and any other two questions in this section.

6. Study the map of TAMBACH provided and answer the questions that follow.

(a) (i) Name two human features in grid square 7968. (2 marks)

- *Plantation*
- *Settlement/huts/houses*
- *Footpath*

(ii) Measure the distance of River Kerio between grid reference 908570 and grid reference 898620. (2 marks)

- *4.3 km (4.2-4.4 km)*

(iii) Give the longitudinal extent of the area covered by the map. (2 marks)

- *35° 30´E to 35° 45´E*

(b) (i) Calculate the area of Kaptagat forest. Give your answer in square kilometres. (2 marks)

- A=Full squares+ (half squares/2)
- A=0+9/2
- *4.5 Km² (4.0-5.0 Km²)*

ii) Citing evidence from the map, state two social services offered in the area covered by the map. (4 marks)

- *There is education services as evidenced by the presence of schools.*
- *There are health services as evidenced by health centers and dispensaries.*
- *There are administration services as evidenced by Chiefs office*
- *There are religious services due to presence of missions*
- *There are recreational services as evidenced by stadiums/ Rest houses.*

iii) Name two districts in the area covered by the map. (2 marks)

- *Elgeyo Marakwet*
- *Baringo*
- *Uasin Gishu*

c) Describe the drainage of the area covered by the map. (5 marks)

- ❖ *The area has many permanent rivers.*
- ❖ *The main river is River Kerio.*
- ❖ *Some rivers flow from Elgeyo escarpment and form parallel drainage pattern/ some tributaries of River Kerio are forming a dendritic drainage pattern*
- ❖ *There is Lake Kamnorok in the area covered by the map.*
- ❖ *The area has seasonal swamps, papyrus swamp.*
- ❖ *Some rivers meanders and have tributaries.*
- ❖ *There is a water fall in the South Western side of the area covered by the map.*

(d) Citing evidence from the map, explain three physical factors which may favor cattle rearing in the area covered by the map. (6 marks)

- ❖ *Large tracts of land for grazing as there are few settlements.*
- ❖ *Availability of pasture for grazing animals since there are scrubs.*
- ❖ *Presence of rivers/lake/seasonal swamps for watering animals*
- ❖ *Gentle slopes evidenced by widely spaced contours for easy movement of animals*

7. a) Differentiate between a drainage basin and a watershed.

- A drainage basin is the entire area drained by a river system while a watershed is a highland area separating two or more drainage basins.

b) Describe how rivers erode through the following processes: (i) Attrition: As rock materials are transported downstream by the river water, they constantly scratch and collide against each other. This wears them gradually thus reducing them in size. **(ii) Solution**: When river water comes into contact with soluble minerals on the bed and banks, the minerals are dissolved and carried away in solution form by the river water.

c) (i) List three factors that influence the development of drainage patterns.

- Occurrence of faults/fault lines
- The direction of slope
- The differences in rock resistance
- The arrangement of rock layers/strata.

(ii) State four characteristics of a river in its youthful stage.

- The river flows over a steep gradient.
- The river channel is narrow.

- The river valley is a steep gorge.
- River flows at a high speed/high stream velocity.
- Vertical erosion/down cutting is dominant.
- The river experiences headward erosion.
- Rapids/waterfalls/cataracts/cascades are common features.

d) (i) State two main causes of river rejuvenation.

- Change in base level/fall in sea level
- Increase in river discharge
- Change in rock resistance
- River capture.

(ii) Describe how an ox-bow lake is formed.

- Meanders form in the old stage of a river.
- Lateral erosion occurs on the outer bank.
- Deposition occurs on the inner bank.

e) (i) Identify three pieces of evidence of capture they are likely to have identified.

- Misfit stream
- Elbow of capture
- Dry valley or wind gap
- Incision of the valley at the point of capture.

(ii) Give two reasons why you are likely to rely on observation as a method of data collection.

- To collect firsthand data.
- To collect relevant data.

8. a) Differentiate between weathering and mass wasting.

- Weathering is the breakdown of rocks in or on the crust in situ, while mass wasting is the movement of materials down the slope due to the force of gravity.

b) State three factors which influence the character and rate of weathering.

- The texture and structure of rocks
- Vegetation cover
- Gradient of the slope
- The climate of the area
- Human activities
- The time the parent material has been exposed.

c) Describe how the following weathering processes occur:

(i) **Exfoliation**: It occurs in homogeneous rocks in hot dry climates. During the day the rocks are heated and the surface layer expands more than the interior. At night the surface contracts while the interior remains warm; repeated cycles cause cracks to form. The surface layer then peels off to form a rounded rock called an exfoliation dome.

(ii) **Frost action**: It occurs in fractured rocks found in temperate climates/mountain tops. Water enters cracks and freezes; the ice expands, enlarging the cracks. Repeated freezing and thawing causes the rocks to break along the cracks (shattering).

d) (i) Define the term solifluction.

- It is the movement of saturated materials over underlying frozen ground down a moderate slope.

(ii) State three effects of soil creep on the physical environment.

- It causes slope retreat.
- It fills hollows at the base of the soil.
- It forms soil mounds/ridges at the base of the slope.

e) (i) Apart from exfoliation, name any other two types of physical weathering.

- Pressure release, crystal growth, block disintegration, or granular disintegration.

(ii) State three problems they may have encountered.

- Attack by snakes/scorpions
- Thirst due to dehydration
- Low visibility due to dust storms
- Sunburn due to the hot sun.

9. a) (i) Distinguish between seismic focus and epicentre.

- Epicentre is the point on the earth's surface vertically above the focus where shock waves first hit the surface, while seismic focus is the point where shock waves originate from.

(ii) List three characteristics of primary waves.

- They travel through any media (solid, liquid, or gas).
- They are push or pull waves.
- They travel at a faster rate in rocks of high density.
- They travel from the focus through the earth's interior.
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(iii) State and explain three natural causes of earthquakes.

- **Tectonic plate movement**: Collision of plates along boundaries causes rocks to be squeezed and broken, releasing stored energy as earthquakes.
- **Magma movement**: Great pressure pushes magma into crustal cracks, making rocks move and causing vibrations.
- **Gravitational force**: After magma extrusion, a hollow is created; rocks move downward to fill it, causing vibrations.
- **Isostatic adjustment**: Weight changes from erosion or deposition cause crustal layers to adjust, releasing energy as vibrations.

(iv) Identify three scales that are used to measure intensity and magnitude of earthquakes.

- Mercalli scale
- Richter scale
- Rossi-Forel scale.

b) (i) Describe the plate tectonics theory.

- The theory states the earth is divided into semi-rigid blocks called plates.
- These plates float on semi-molten material in the mantle.
- They move horizontally due to slow convectional currents.
- Their movement toward or away from each other results in the construction or destruction of landform features.

(ii) Give four significances of the plate tectonics theory.

- Helps understand the formation of landforms.
- Explains the element of isostasy.
- Explains the formation of earthquakes.
- Helps understand vulcanicity and structural landforms.

(iii) What is subduction?

- It is the process through which the crustal rocks melt and turn into magma.

10. a) (i) What is faulting?

- Faulting is the cracking of the crustal rocks.

(ii) Apart from a thrust fault, name three other types of faults.

- Normal fault
- Reverse fault
- Anticlinal fault.

(iii) **Draw a well-labelled diagram of a thrust fault.**

b) (i) Differentiate between a fault scarp and a fault line.

- A fault plane is the surface separating land while a fault line is the position a fault can be traced to the surface of the earth.

(ii) Name three features found along the rift valley of Kenya.

- Lakes
- Escarpments
- Mountain ranges.

(iii) Explain the formation of a rift valley by tensional forces.

- Crustal rock layers are subjected to tensional forces.
- Lines of weakness develop, forming normal faults.
- Continued tension makes the middle block subside relative to the side blocks.
- This creates a vast depression bordered by escarpments.

c) Explain three ways features resulting from faulting are of significance to humankind.

- **Tourism**: Features like the Rift Valley attract tourists, earning foreign exchange.
- **Mining**: Escarpments can expose valuable minerals for mining and revenue.
- **Water Resources**: Rift Valley lakes provide fresh water for domestic and industrial use.
- **Agriculture**: Fault blocks can cause orographic rainfall on windward sides, promoting farming and settlement.