GEOGRAPHY GRADE 10

OPENER EXAM TERM 2 2026

NAME…….ADM NO…….

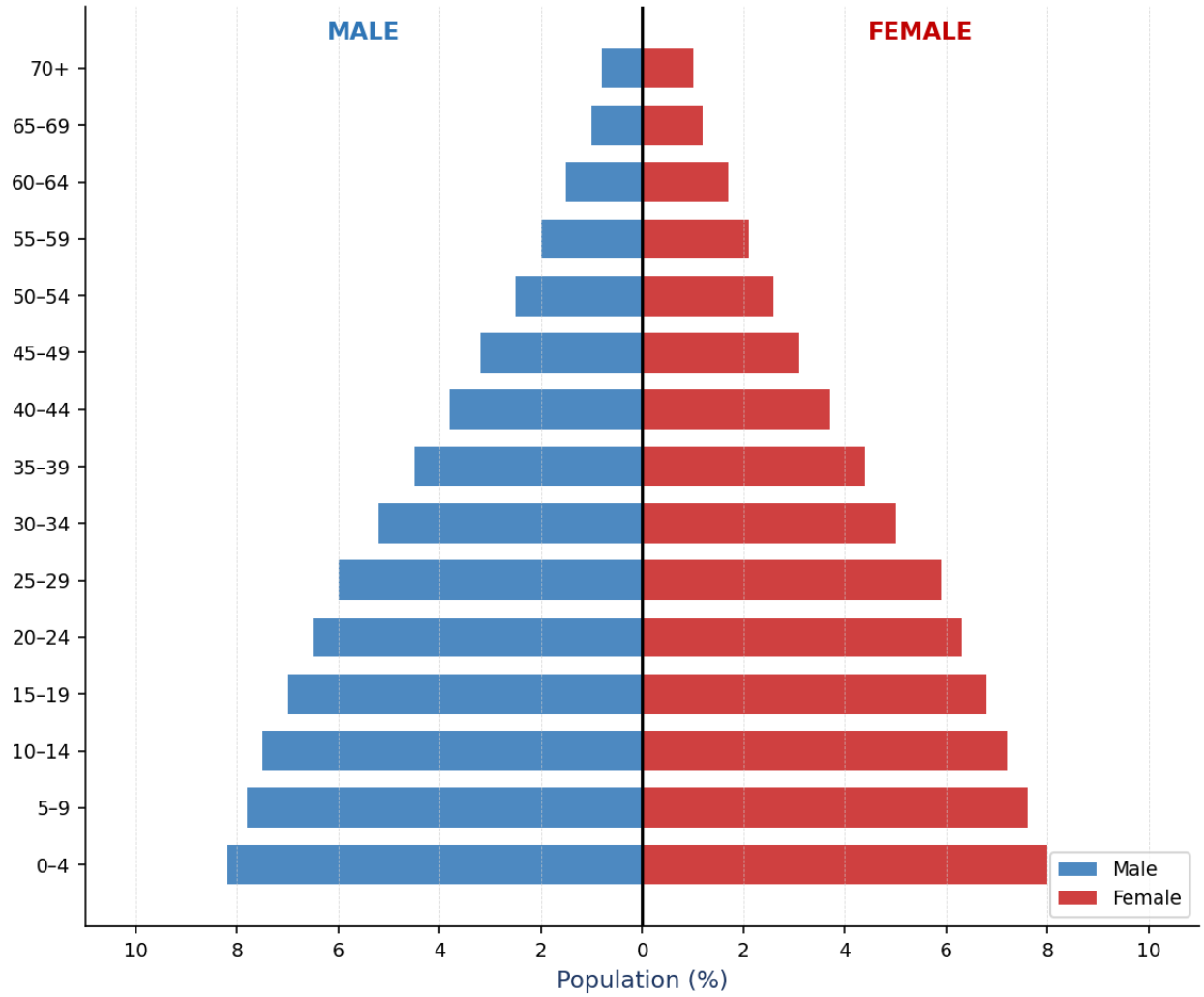
DATE……SIGN…….

INSTRUCTIONS TO CANDIDATES

1. ***Write your name, admission number and class in the spaces provided above.***
2. ***Answer ALL questions in ALL sections.***
3. ***All working must be clearly shown where calculations are required.***
4. ***Use the diagrams and figures provided to answer the respective questions.***

1.Study the population pyramid below and answer the questions that follow.

Figure 1 — Population Pyramid for a Developing Country



(a) Define the term population pyramid and state what information it conveys. (2 marks)

(b) Identify THREE characteristics of the population structure shown in Figure 1 and explain what each suggests about the country. (3 marks)

(c) Calculate the dependency ratio of the country given the following data: (3 marks)

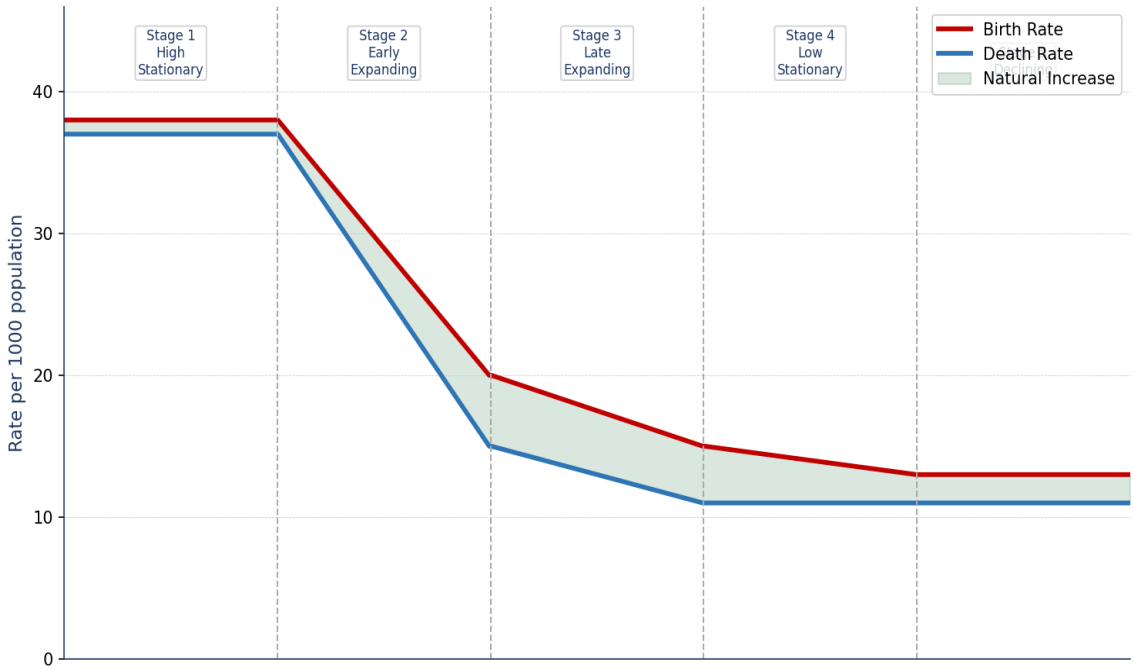
Age Group	Population (millions)
0–14 years (Young dependants)	18.6

15–64 years (Working population)	31.2
65+ years (Old dependants)	2.4

(d) State TWO problems caused by a high dependency ratio in a developing country. (2 marks)

2. Study the Demographic Transition Model (DTM) in Figure 2 and answer the questions.

Figure 2 — Demographic Transition Model (DTM)



(a) State the stage of the DTM most developing African countries are currently in and give TWO reasons for your answer. (3 marks)

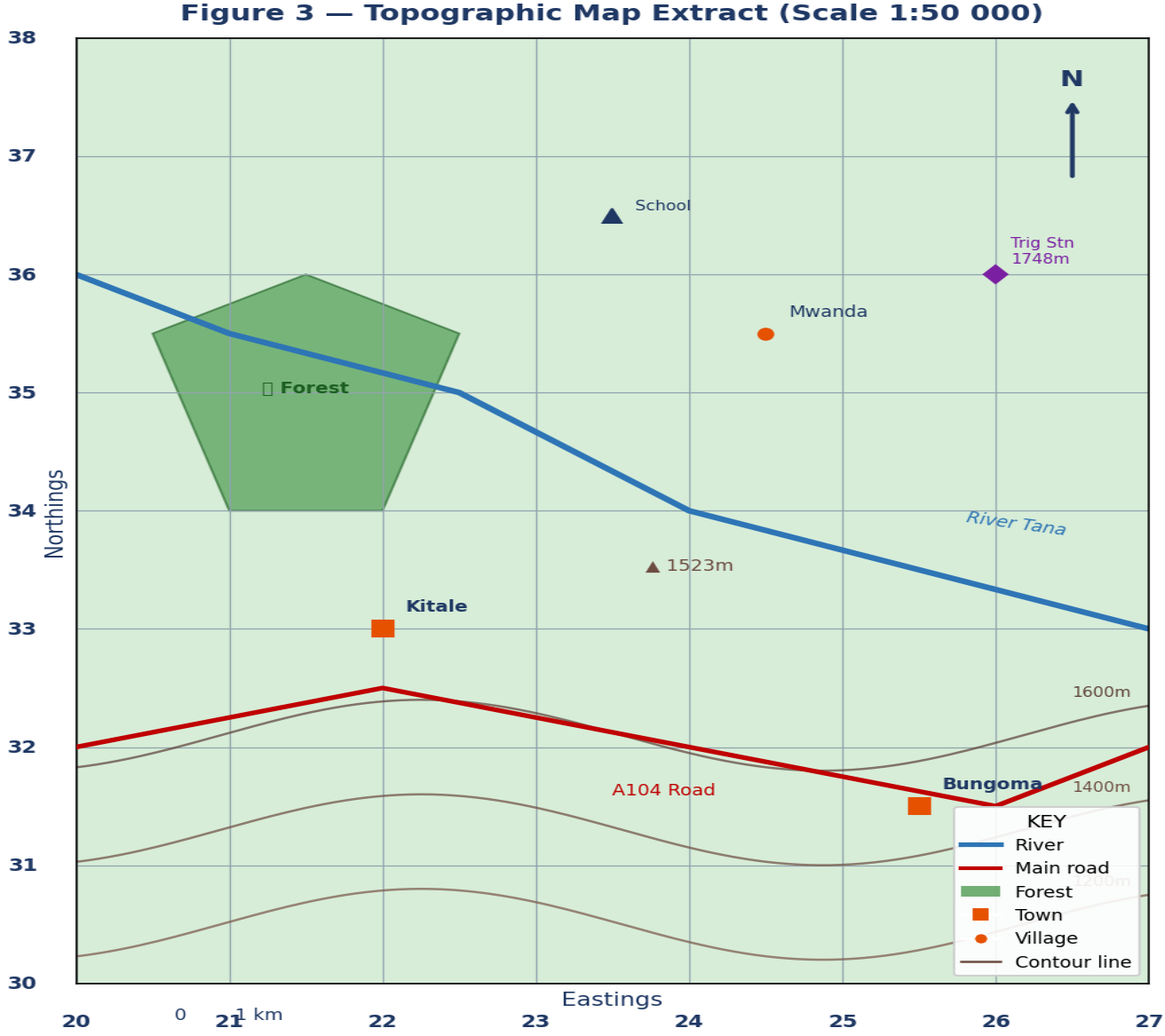
(b) Explain the meaning of the term 'natural population increase' and show how it is represented in Figure 2. (2 marks)

(c) Define the term 'urbanisation' and identify THREE factors that have led to rapid urbanisation in Kenya. (3 marks)

(d) Distinguish between 'push factors' and 'pull factors' in rural–urban migration, giving ONE example of each. (2 marks)

4.Study the topographic map extract carefully and answer all questions below.

Figure 3 — Topographic Map Extract (Scale 1:50 000)



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(a) Give the six-figure grid reference for the following features: (2 marks)

(i) The school symbol on the map

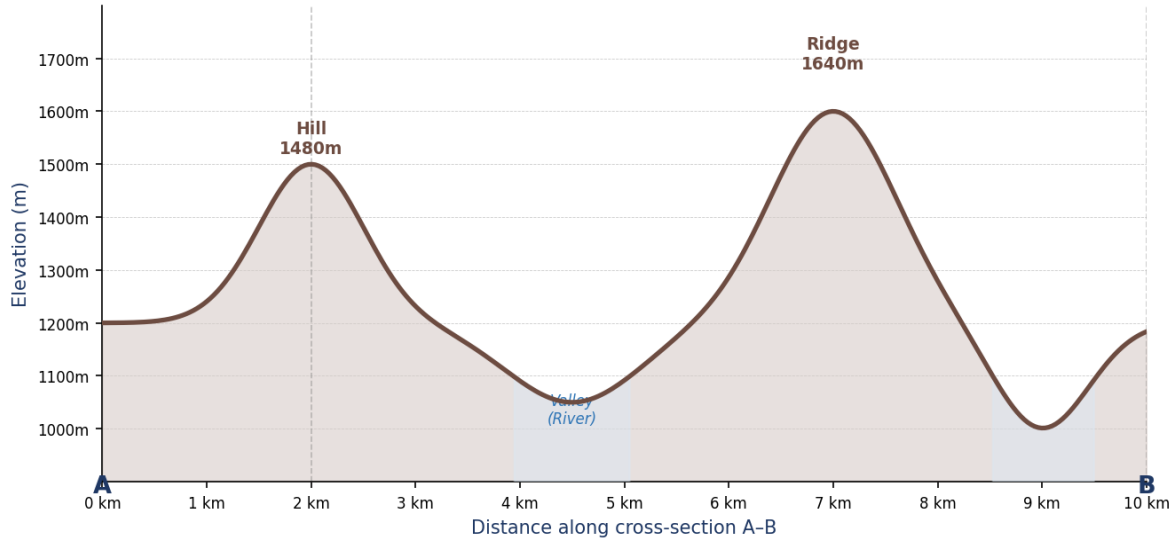
(ii) The trig station

(b) A student walks from Kitale town to Mwanda village. Using the map, estimate the straight-line distance in kilometres between the two settlements. Show your working. (3 marks)

Map scale: 1:50 000

(c) Describe the relief of the mapped area, making reference to the contour lines and the cross-section profile in Figure 4. (3 marks)

Figure 4 — Cross-Section Profile A–B (from Figure 3)



(d) Name the type of settlement pattern shown around Kitale and explain ONE reason why it may have developed there. (2 marks)

3. Use Figures 3 and 4 to answer the following questions.

(a) Define the following map terms: (3 marks)

(i) Contour interval

(ii) Spot height

(iii) Gradient

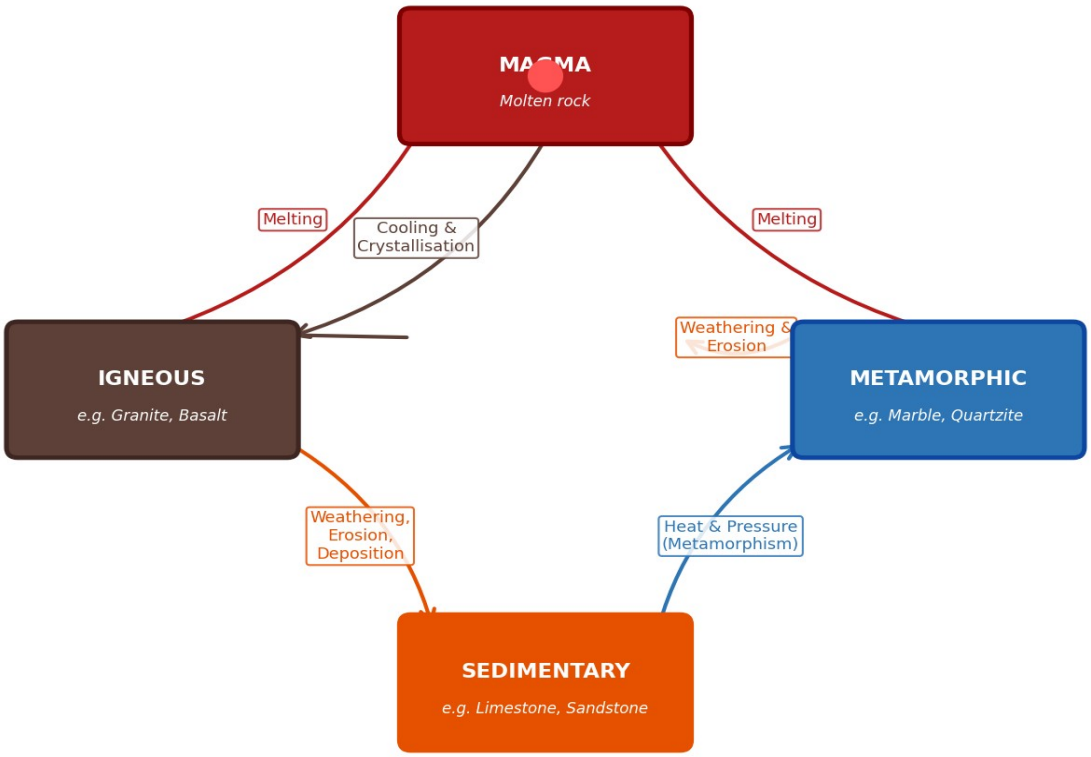
(b) Using Figure 4, calculate the gradient between the highest point of the Ridge (1640 m) and the Valley floor (1050 m) if the horizontal distance between them is 3 km. (3 marks)

(c) Identify the type of drainage pattern visible in Figure 3 and state ONE factor that may have influenced it. (2 marks)

(d) State TWO economic activities that could be carried out in the area shown in Figure 3 and give evidence from the map for each. (2 marks)

5.Study the Rock Cycle diagram (Figure 5) and answer the questions below.

Figure 5 — The Rock Cycle



(a) Using Figure 5, name and explain the process by which igneous rocks are formed. (2 marks)

(b) Describe the process of metamorphism and give ONE example each of: (3 marks)

(i) A rock formed from another igneous rock by metamorphism

(ii) A rock formed from a sedimentary rock by metamorphism

(c) Explain the difference between intrusive and extrusive igneous rocks, giving ONE example of each. (3 marks)

(d) State TWO economic importances of rocks and minerals to Kenya. (2 marks)

6.(a) Define the term 'soil profile' and draw a labelled diagram of a typical soil profile, showing at least THREE horizons. (3 marks)

(b) Describe THREE types of physical (mechanical) weathering, giving an example of where each commonly occurs in Kenya. (3 marks)

(c) Explain how climate influences the rate of chemical weathering. (2 marks)

(d) State TWO ways in which human activities lead to soil degradation. (2 marks)

7,.Study Figures 6, 7 and 8 and answer the questions that follow.

Figure 6 — Climate Graph for Nairobi, Kenya (Tropical Highland Climate)

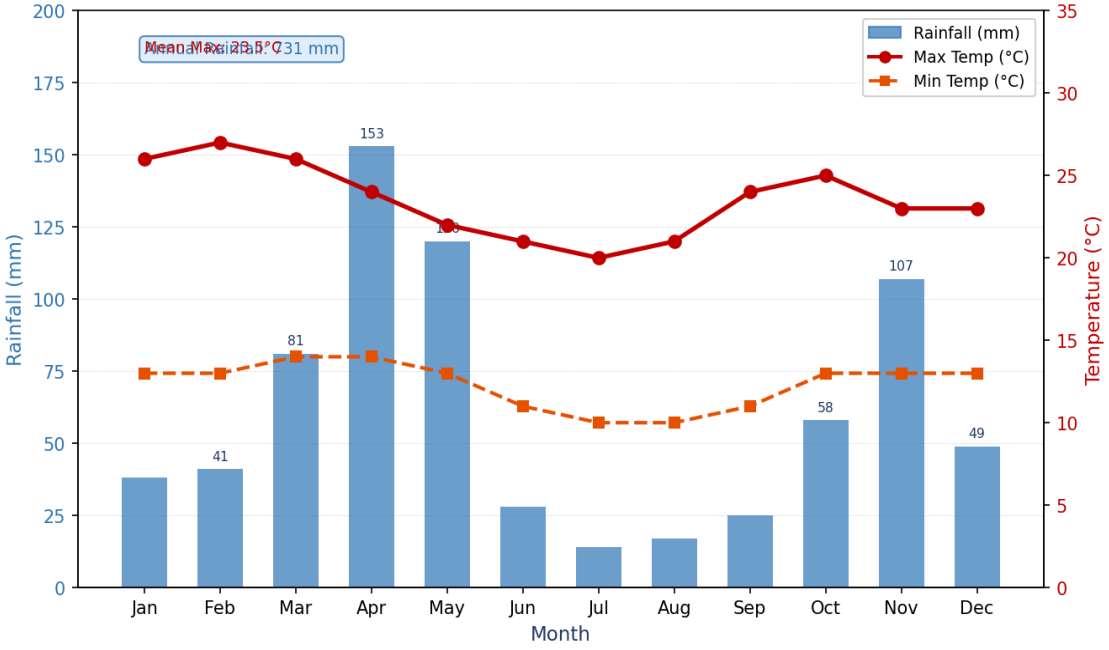
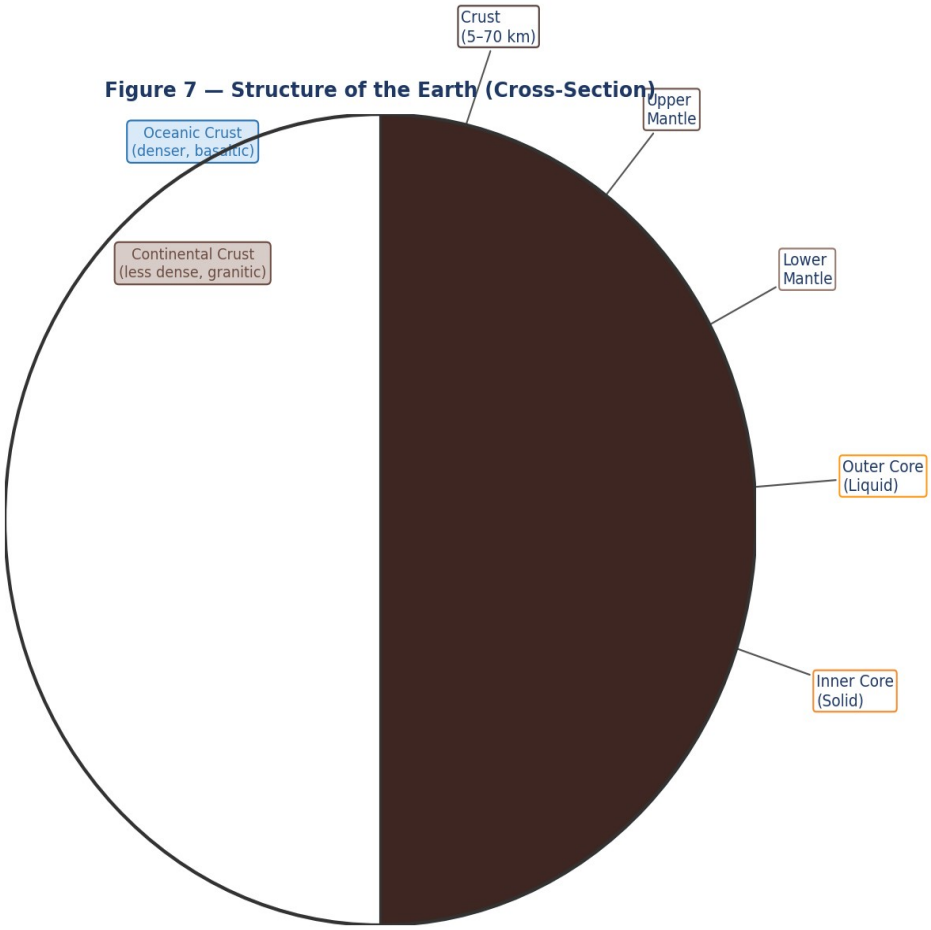


Figure 7 — Structure of the Earth (Cross-Section)



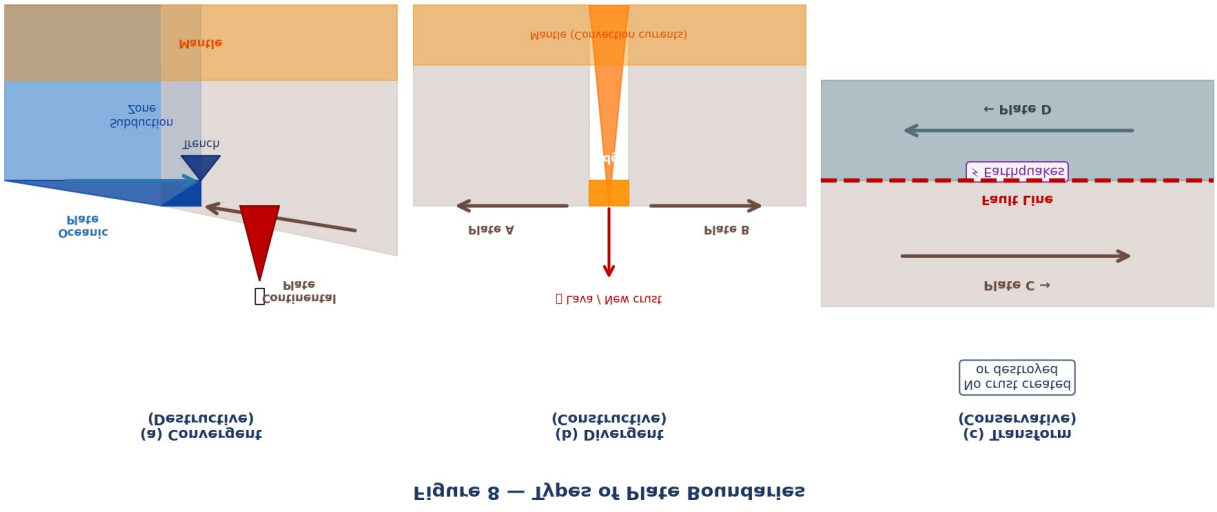


Figure 8 — Types of plate boundaries

(a) Using Figure 6, describe the climate of Nairobi under the following headings: (4 marks)

(i) Annual rainfall distribution and total

(ii) Temperature range and pattern throughout the year

(b) Calculate the annual temperature range for Nairobi using Figure 6. (2 marks)

(c) Using Figure 7, name the layer of the Earth that is directly responsible for plate movement and explain the mechanism involved. (2 marks)

8.(a) Explain why East Africa experiences frequent earthquake activity, with reference to the plate tectonics theory. (3 marks)

(b) Describe THREE effects of earthquakes on human settlements and the economy. (3 marks)

(c) Define the term 'drought' and explain TWO causes of drought in Kenya. (2 marks)

(d) Complete the table below by filling in the missing effects and management strategies for TWO natural hazards. (2 marks)

Natural Hazard	ONE Effect on People / Environment	ONE Management Strategy
Drought		
Flooding	Displacement of people / destruction of crops	

Volcanic Eruption		Evacuation & establishment of exclusion zones