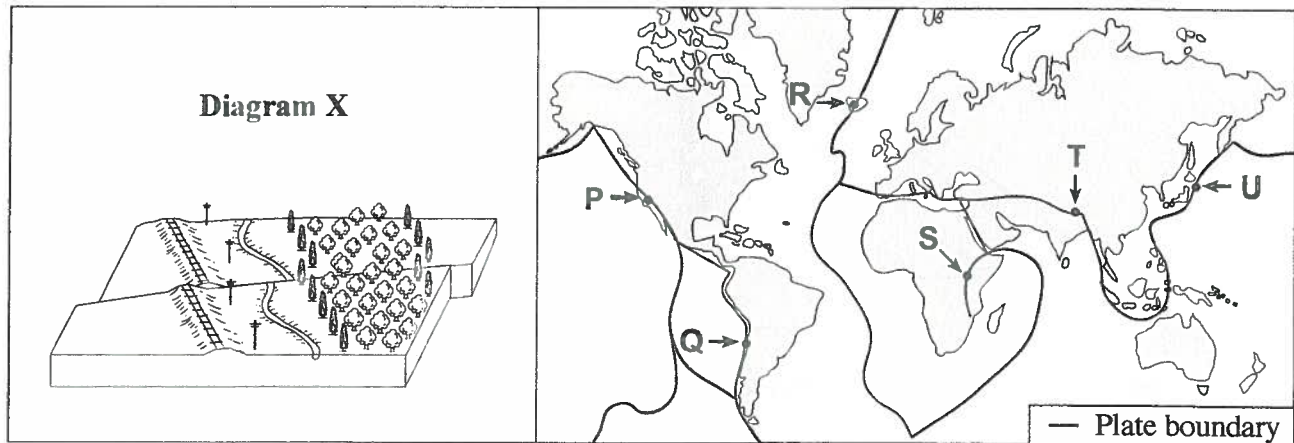


Value: 40 marks

Suggested Time: 40 minutes

**INSTRUCTIONS:** For each question, select the best answer and record your choice on the Response Form provided. Using an HB pencil, completely fill in the circle that has the letter corresponding to your answer.

Use the following diagram and map to answer questions 1 to 3.



1. The process illustrated by diagram X is found at which location on the map?

- A. P
- B. S
- C. T
- D. U

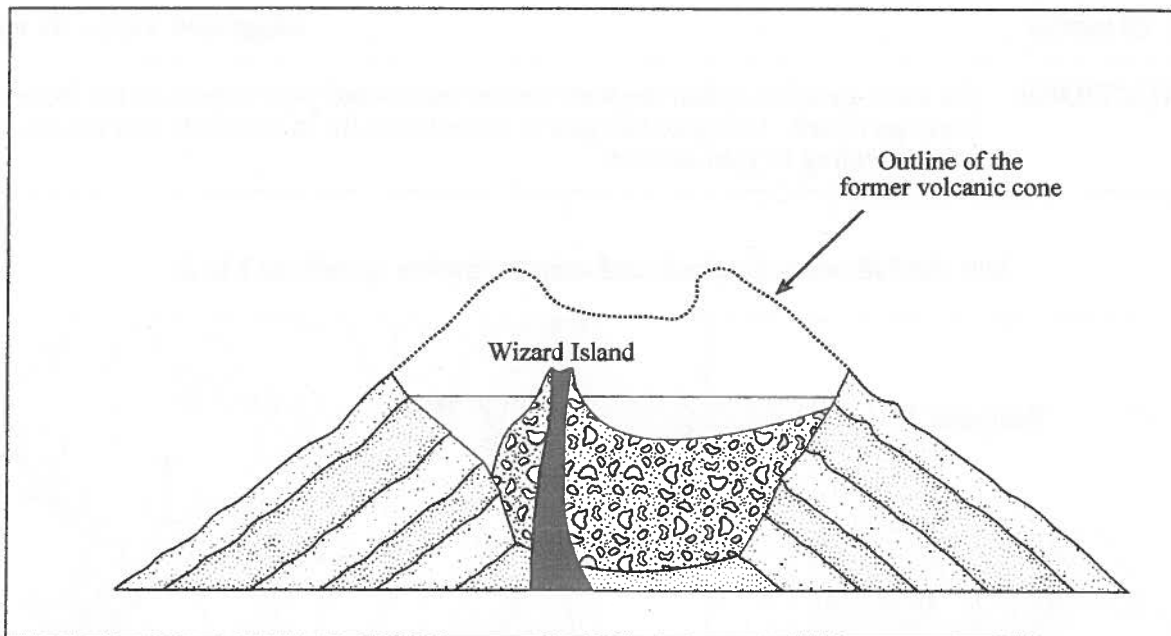
2. Which location on the map is associated with steep-sloped volcanic cones consisting of multiple layers of ash and thick, andesitic lava?

- A. Q
- B. R
- C. S
- D. T

3. The islands at location U on the map are the result of

- A. diverging oceanic plates.
- B. a subducting oceanic plate.
- C. colliding continental plates.
- D. diverging continental plates.

Use the following diagram to answer question 4.



4. The diagram above illustrates the formation of a(n)

- A. tarn.
- B. atoll.
- C. caldera.
- D. batholith.

5. When a block of the earth's crust slips between two normal fault lines, the resulting landform is a

- A. rift valley.
- B. thrust fault.
- C. reverse fault.
- D. fold mountain.

6. Coal deposits are formed as a result of

- A. magmatic activity.
- B. mineral precipitation.
- C. hydrothermal activity.
- D. sedimentary processes.

100000

16. Which farming practice may make agricultural areas of the world more sustainable?

- A. use of organic methods
- B. rapid farm mechanization
- C. increased sprinkler irrigation
- D. increased use of chemical fertilizer

17. Which of the following is a non-renewable resource?

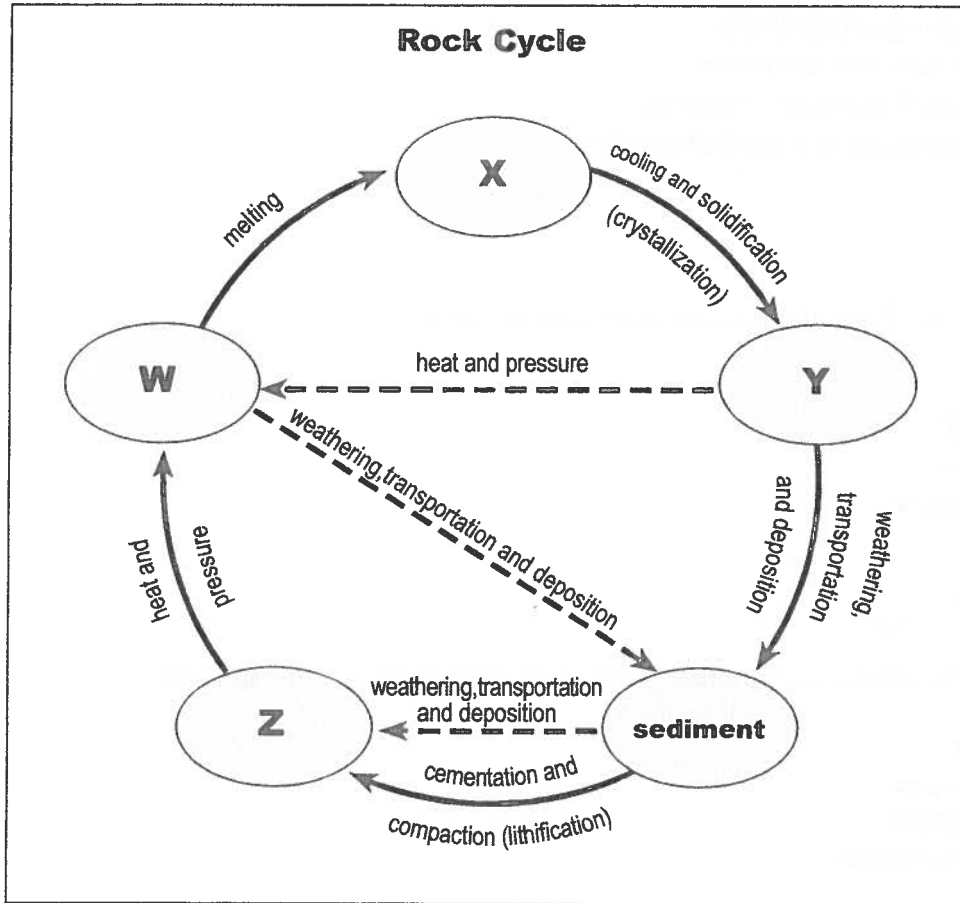
- A. fish
- B. water
- C. forest
- D. petroleum

*Tectonics* ↓

18. Convection currents responsible for plate movement are found within the

- A. crust.
- B. inner core.
- C. exosphere.
- D. asthenosphere.

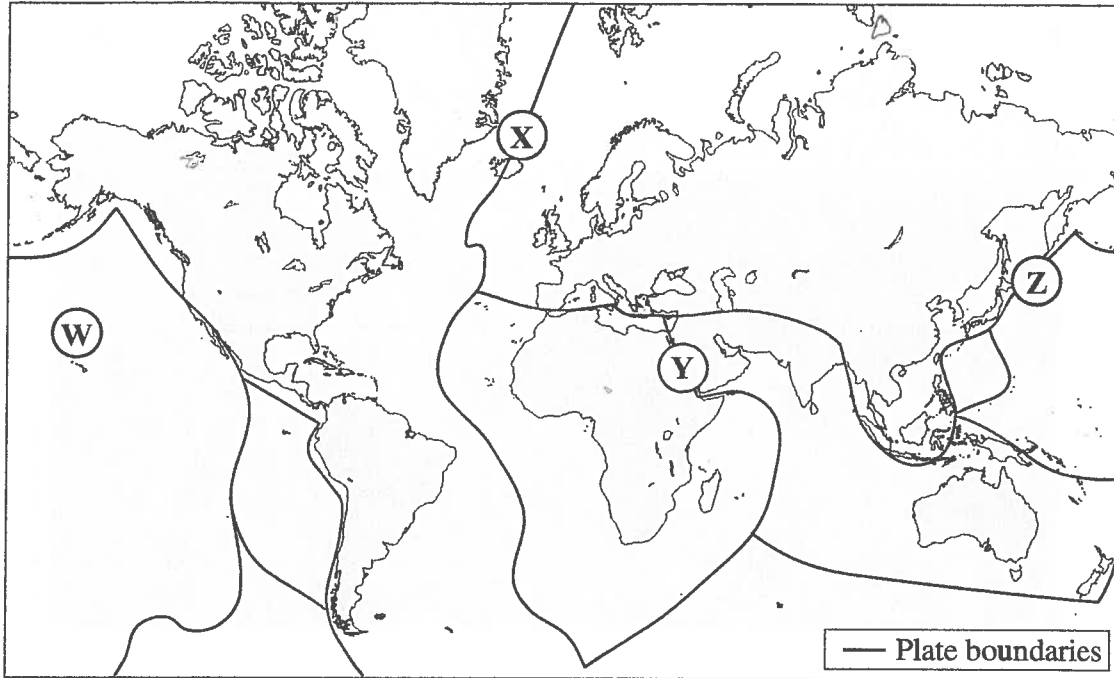
Use the following diagram to answer question 19.



19. The rock type found at W would be

- A. igneous.
- B. sedimentary.
- C. metamorphic.
- D. hydrothermal.

Use the following map to answer questions 20 and 21.



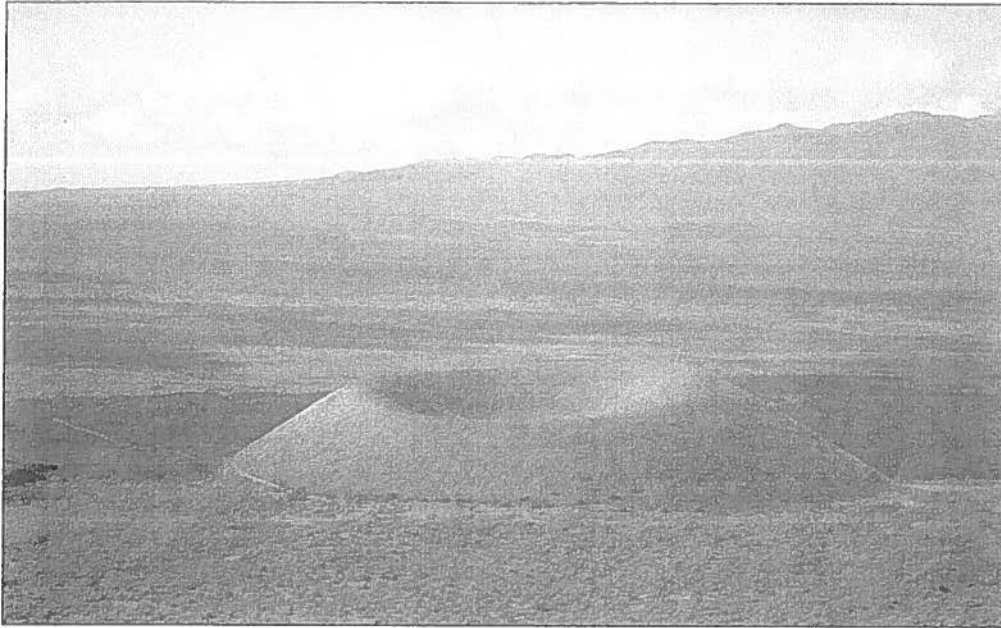
20. The tectonic process and resulting features associated with location X on the map above are

- A. subduction and rift valleys.
- B. faulting and fold mountains.
- C. divergence and shield volcanoes.
- D. convergence and composite cones.

21. The highest magnitude earthquakes have most frequently occurred at map location

- A. W.
- B. X.
- C. Y.
- D. Z.

Use the following photograph to answer question 22.



USGS Photo #30424305-084

22. What type of volcano is illustrated in the photograph above?

- A. dome
- B. shield
- C. cinder
- D. composite

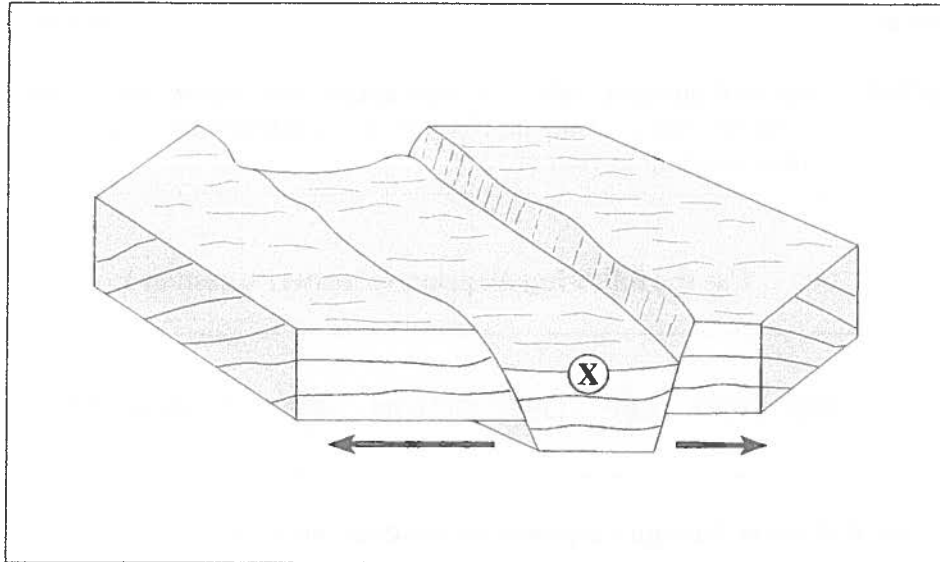
23. A solidified intrusion of magma found between layers of strata is called a

- A. sill.
- B. dike.
- C. fissure.
- D. batholith.

24. Anticlines and synclines are the result of

- A. rifting.
- B. tension.
- C. faulting.
- D. compression.

Use the following diagram to answer question 25.



25. The landform at X in the diagram above is a

- A. horst.
- B. scarp.
- C. graben.
- D. geosyncline.

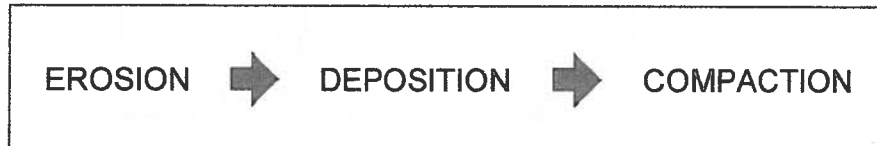
PART A: MULTIPLE CHOICE

Value: 40 marks

Suggested Time: 40 minutes

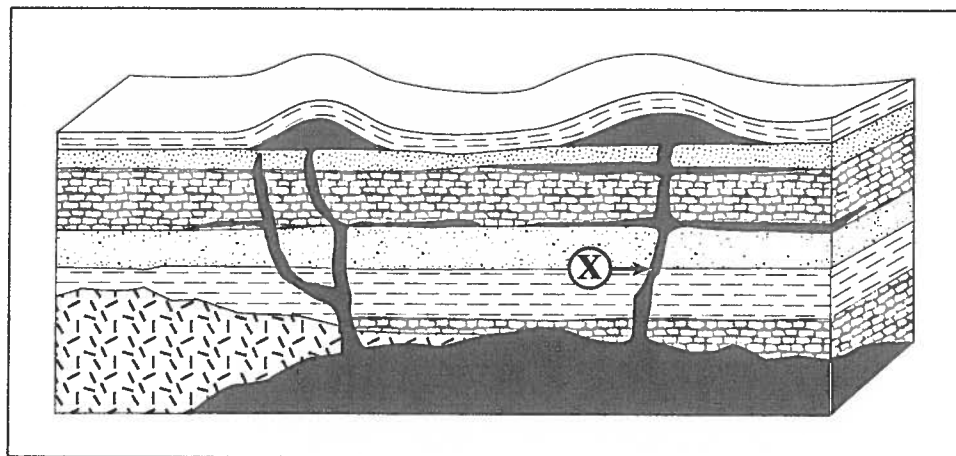
**INSTRUCTIONS:** For each question, select the best answer and record your choice on the Response Form provided. Using an HB pencil, completely fill in the circle that has the letter corresponding to your answer.

Use the following diagram to answer question 1.



1. A rock type that forms through the processes indicated above is
- A. basalt.
  - B. granite.
  - C. andesite.
  - D. sandstone.

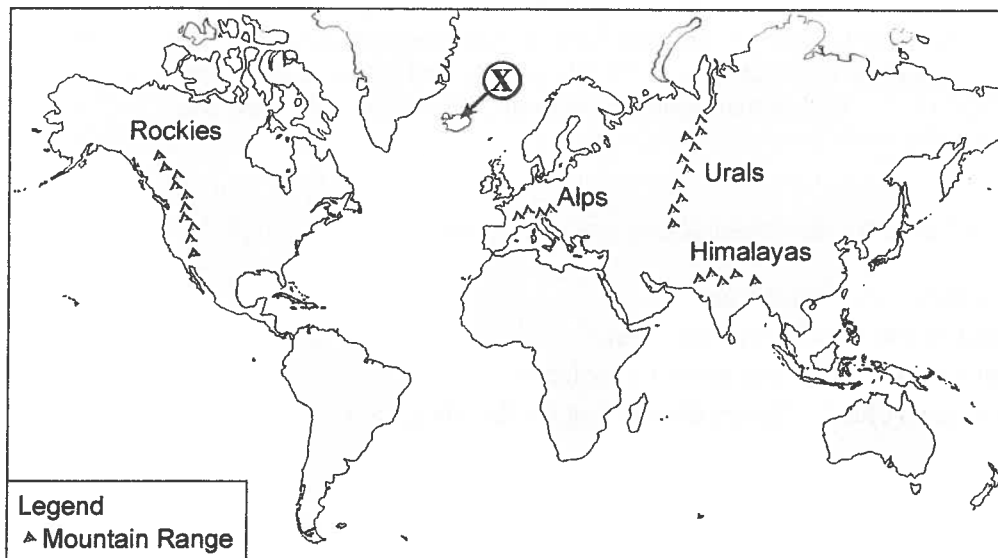
Use the following diagram to answer question 2.



2. Feature X in the diagram above is a
- A. sill.
  - B. dike.
  - C. laccolith.
  - D. batholith.



Use the following map to answer questions 3 to 6.



3. Which type of mountain is **mainly** associated with the mountain ranges named on the map above?

- A. fold
- B. dome
- C. tilted block
- D. composite volcano

4. The plate activity associated with the formation of the Himalayas is

- A. rifting.
- B. divergence.
- C. convergence.
- D. translocation.

5. The geographic theme represented by the mountains labelled on the map above is

- A. region.
- B. movement.
- C. spatial interaction.
- D. human and physical interactions.

6. The dominant volcanic feature associated with X on the map above is a

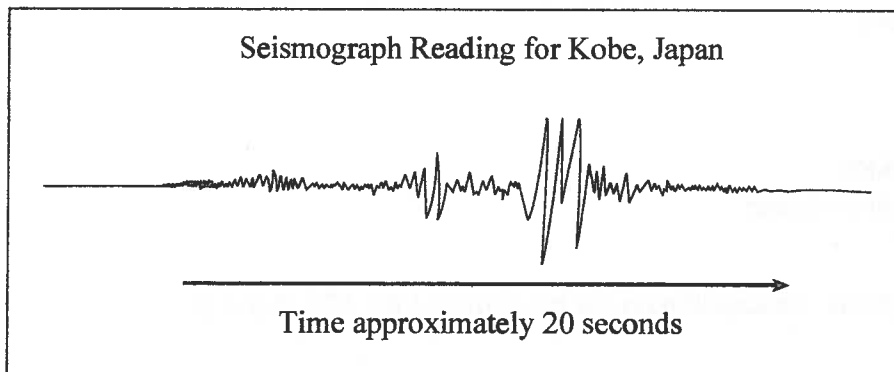
- A. caldera.
- B. batholith.
- C. shield cone.
- D. composite cone.

Use the following description to answer question 7.

The eruption of Nevado del Ruiz, a snow-capped mountain in the Andes, resulted in the deaths of 25 000 people and the total destruction of the Colombian town of Armeno, 50 km from the volcano.

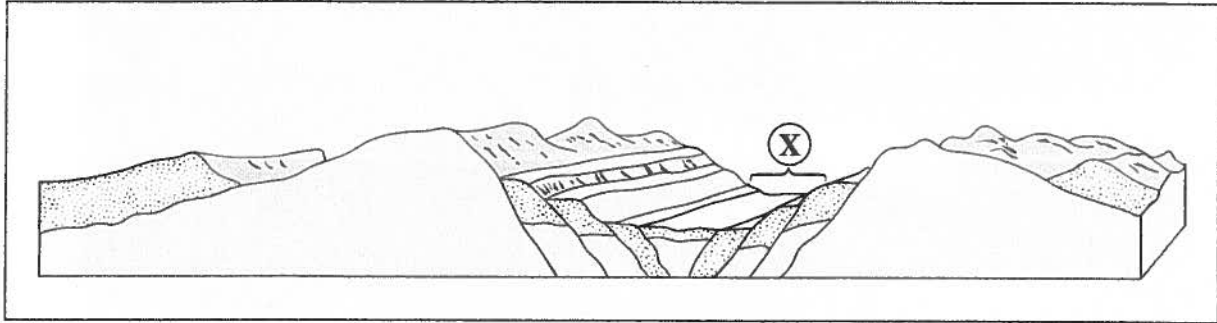
7. The natural disaster described above was caused by a
- A. lava flow covering the town.
  - B. cloud of ash smothering the town.
  - C. flow of mud as the ash melted the glacier.
  - D. poisonous cloud of gases descending on the town.

Use the following diagram to answer question 8.



8. The event indicated by the graph will likely have the greatest impact on the
- A. biosphere and atmosphere.
  - B. lithosphere and atmosphere.
  - C. hydrosphere and lithosphere.
  - D. atmosphere and hydrosphere.

Use the following diagram to answer questions 9 and 10.



Based on a diagram from *Earth Dynamics* by Chasmer. Oxford. P. 182.

9. Feature X in the diagram above is a

- A. horst.
- B. graben.
- C. plateau.
- D. syncline.

10. Which of the following processes was directly responsible for the creation of feature X ?

- A. lava flow
- B. tear faulting
- C. plate divergence
- D. crustal compression

Use the following photograph to answer question 19.



19. Which biome is associated with the photograph above?

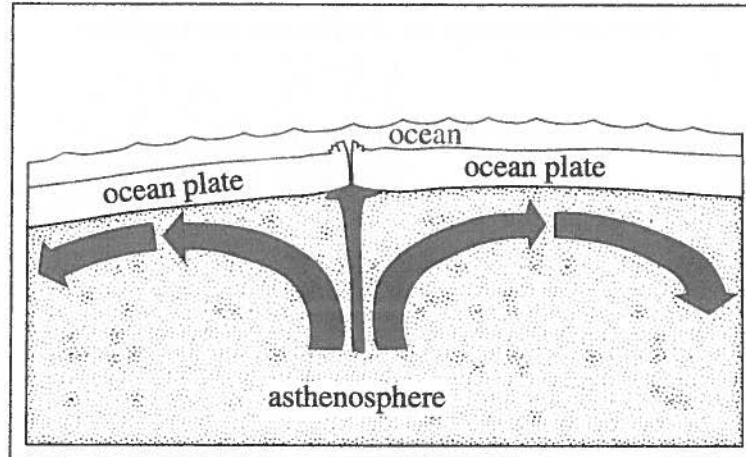
- A. taiga
- B. savanna
- C. prairie grassland
- D. mediterranean scrub

*Tectonics* ↓

20. Sandstone and shale are examples of which rock classification?

- A. igneous
- B. sedimentary
- C. metamorphic
- D. hydrothermal

Use the following diagram to answer questions 21 and 22.



21. The type of plate movement illustrated in the diagram above is

- A. divergence.
- B. subduction.
- C. convergence.
- D. translocation.

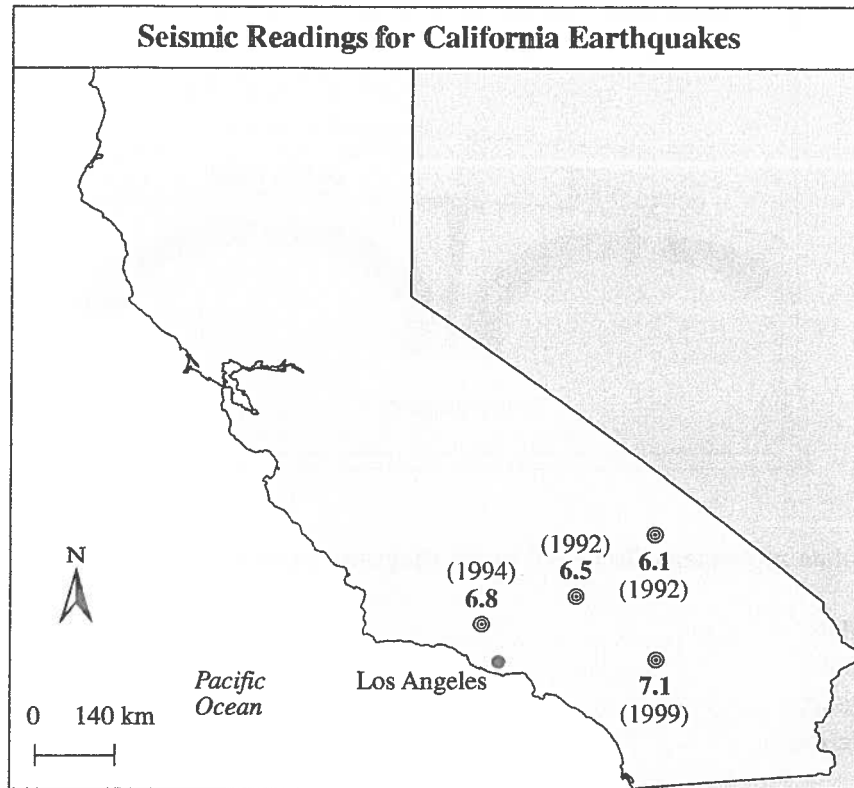
22. Which process is illustrated by the arrows in the diagram above?

- A. hydration
- B. infiltration
- C. convection
- D. conduction

23. Which of the following features is the result of compression?

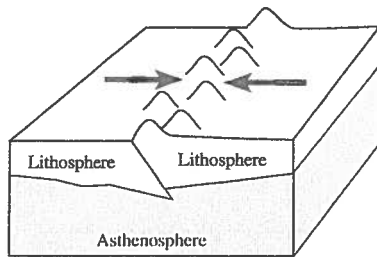
- A. sill
- B. fissure
- C. syncline
- D. batholith

Use the following map to answer question 24.

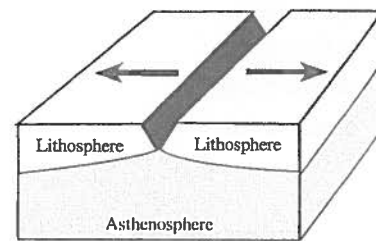


24. Which of the following plate movement diagrams is most likely responsible for the earthquakes indicated on the map above?

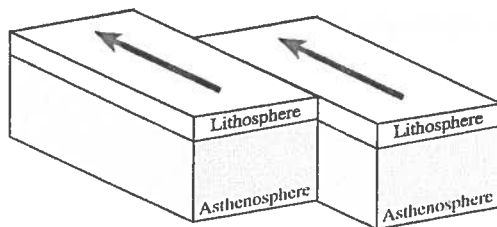
A.



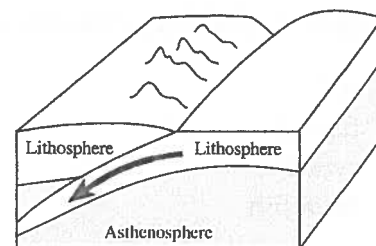
B.



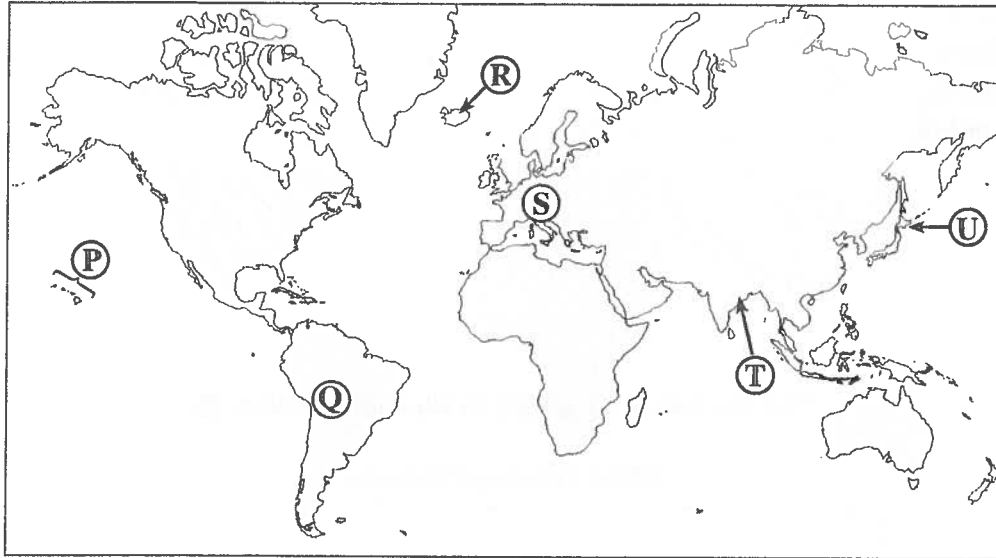
C.



D.



Use the following map to answer questions 25 and 26.



25. Composite volcanoes are found at which location on the map above?

- A. P
- B. R
- C. T
- D. U

26. Geothermal power is the main energy source at map location

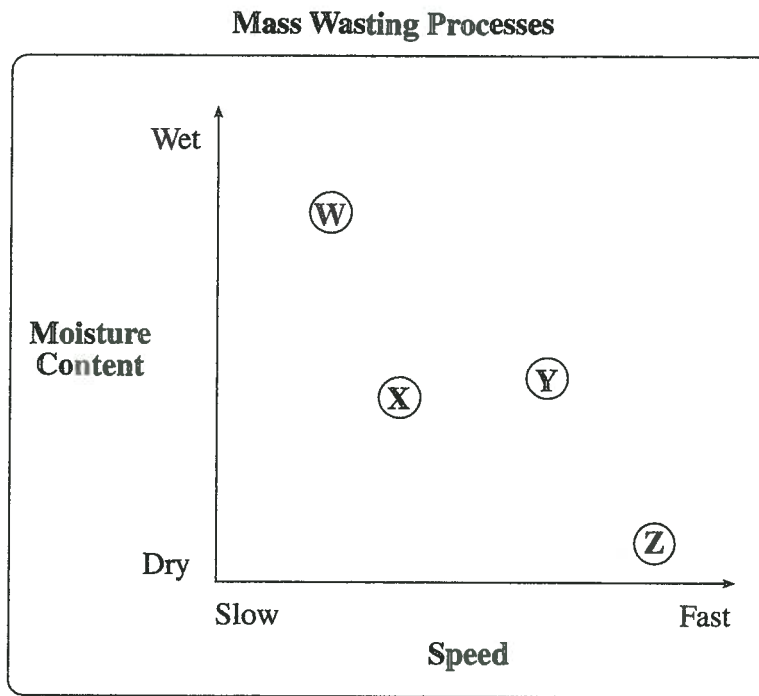
- A. Q.
- B. R.
- C. S.
- D. T.

27. An example of an intrusive volcanic feature is a

- A. cuesta.
- B. caldera.
- C. drumlin.
- D. laccolith.

*Gradation*

Use the following graph to answer question 28.

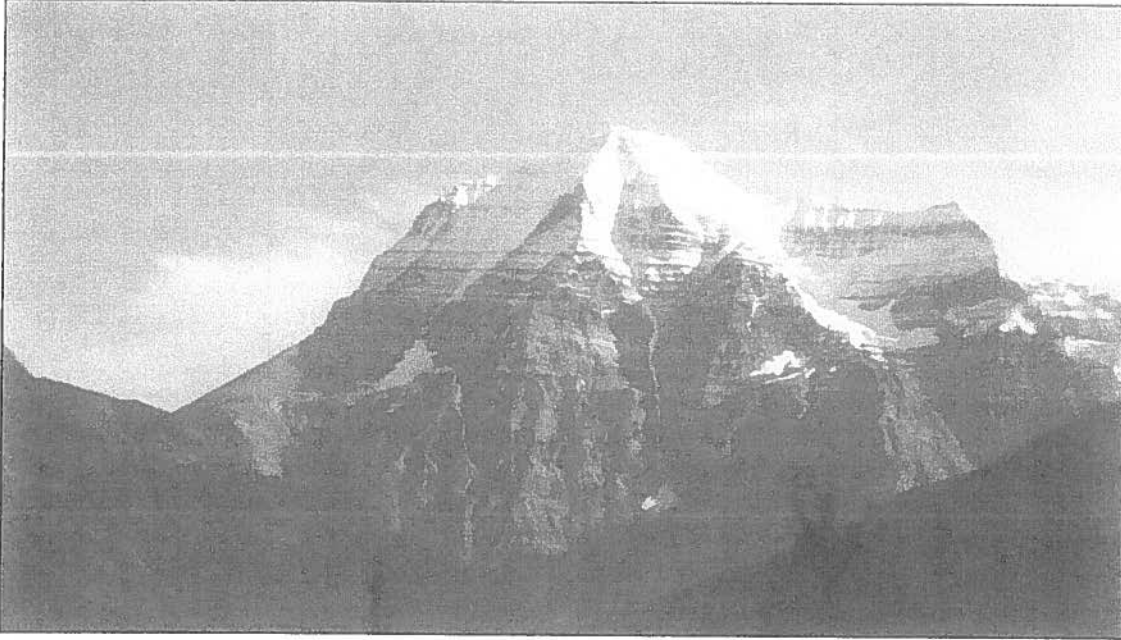


28. Which location on the graph above best represents the characteristics associated with rockfall?

- A. W
- B. X
- C. Y
- D. Z



Use the following photograph to answer question 21 and 22.



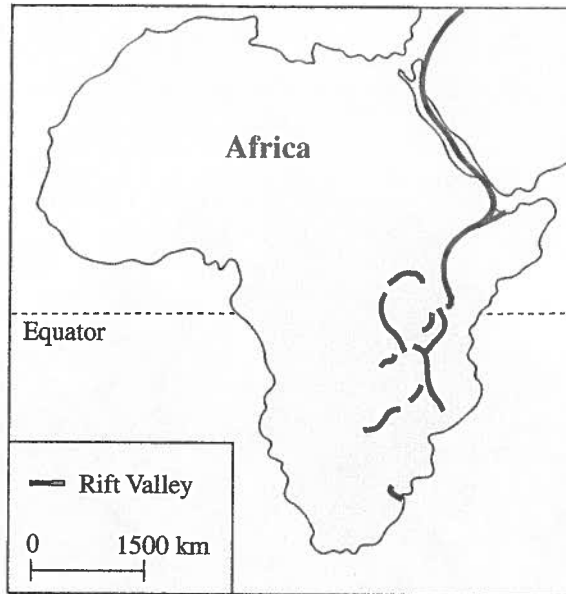
21. Identify the rock classification associated with the strata in the photograph.

- A. magmatic
- B. sedimentary
- C. metamorphic
- D. extrusive igneous

22. Which processes are responsible for the mountain formation in the photograph above?

- A. rifting and volcanism
- B. faulting and divergence
- C. hot spot activity and tension
- D. convergence and compression

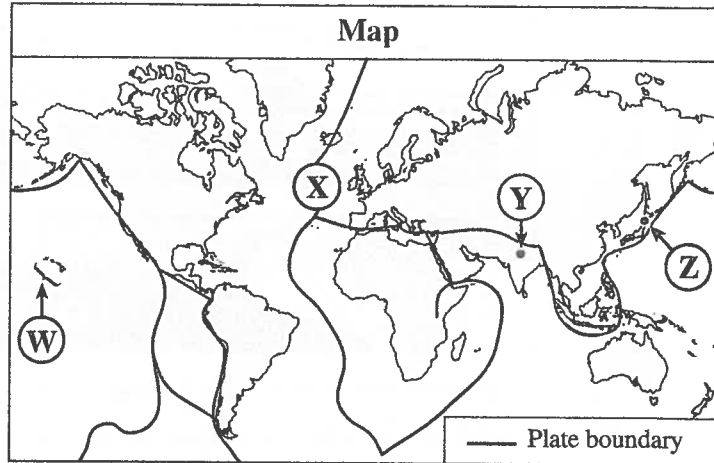
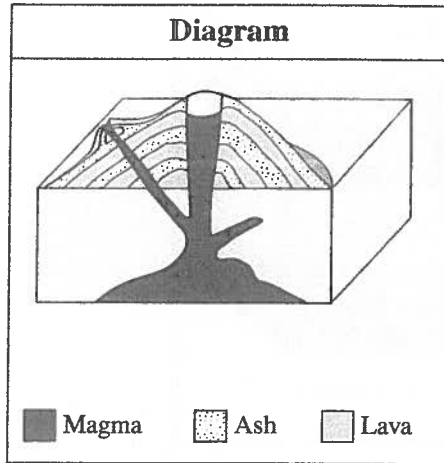
Use the following map to answer question 23.



23. Which process created the Great East African Rift Valley?

- A. deflation
- B. volcanism
- C. divergence
- D. subduction

Use the following diagram and map to answer questions 24 and 25.



24. Which of the following volcanic cones is illustrated in the diagram?

- A. shield
- B. cinder
- C. caldera
- D. composite

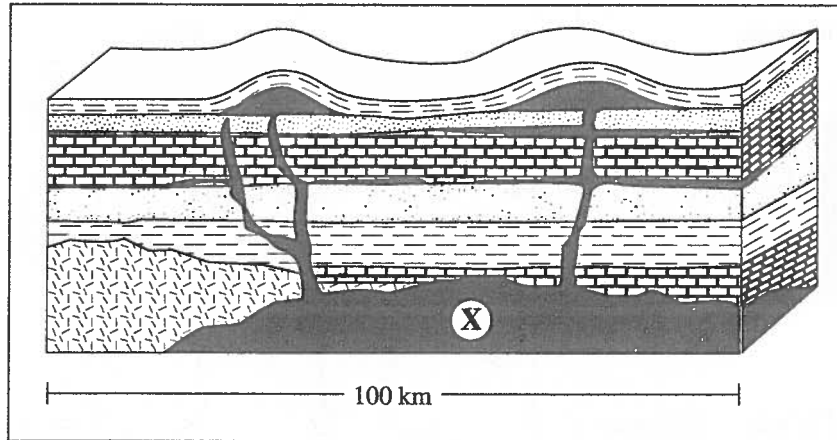
25. The volcanic cone illustrated above is most commonly associated with which map location?

- A. W
- B. X
- C. Y
- D. Z

26. California's earthquake preparedness programs have been improved largely due to a better monitoring of which plate activity?

- A. tearing
- B. isostasy
- C. subduction
- D. translocation

Use the following diagram to answer question 27.



27. Identify feature X in the diagram.

- A. sill
- B. dike
- C. laccolith
- D. batholith