GRADE 9\_\_\_\_

Duration  $1^{1}/2$  HRS.

Name: \_\_\_\_

1. Label the internal structure of the earth provided below. WRITE on the space provide.



- 2. The sections labelled A, B and C together, is known as the *Lithosphere*
- 3. What name is given to the section of the internal structure of the earth between A and B. <u>*Crust*</u>
- 4. What name is given to the transitional zone between the lower mantle and the outer core. <u>Gutenburg Discontinuity</u>

The map below relates to questions 5 to 10.



- 5. The plate moving away from plate 5 is known as *<u>Pacific</u>* Plate.
- 6. The two continents on Plate 8 are <u>*Europe*</u> and <u>*Asia*</u>.
- 7. The SEA between Plate I and 3 is known as the *Caribbean* Sea.

- 8. Which plate is chiefly made up of oceanic crust <u>*Pacific*</u> Plate.
- 9. Which one of plates 3 and 5 will go under the other? <u>3</u>

Plate #	Name of plate	Plate #	Name of plate	Plate #	Name of plate
1	<u>North America</u>	б	<u>Pacific</u>	11	<u>Phillipines</u>
2	<u>Caribbean</u>	7	<u>Africa</u>	12	<u>Indian-Australian</u>
3	<u>South America</u>	8	<u>Eurasian</u>	13	<u>Antarctic</u>
4	<u>Cocos</u>	9	<u>Arabian</u>	14	<u>Fiji-Micro</u>
5	<u>Nazca</u>	10	<u>Iraq</u>		

10. Name ten of the plates. Write the NUMBER and the NAME of the matching plate.

Fill in the blank spaces with the correct term from the diagram.



- 11. Identify and name four intrusive features shown on the diagram above.
  - (a) <u>Stock</u>
  - (b) <u>Sill</u>
  - (c) <u>Batholith</u>
  - (d) <u>Laccolith</u>
- 12. Name two extrusive volcanic landforms that **do not** have a conical shape.

# <u>Lava Mesa</u>

<u>Cinder Cone</u>

- The intrusive feature which forces up the overlying rocks into a dome shape is called *laccolith*
- 14. TWO cone-shaped volcanoes on the diagram are the:

<u>Composite</u> <u>Cinder Cone</u> 15. Give One difference between the sill and the laccolith.

## Complete the section below by looking at the diagrams

16. Name the types of fold labelled A to E.



- 17. (a) Another name for an up-fold is: *Anticline* 
  - (b) Another name for a down-fold is: *syncline*
- 18. What term is represented by each of these letters?

L <u>Limb</u>

X Axis

19. Number the volcanic features below according to the key given. Insert the matching number in the squares provided.



- 1 Cinder cone.
- 2 Dome, volcano
- 3 Shield volcano
- 4 Dykes cutting across rock strata
- 5 Composite volcano,
- 6 Caldera
- 7 Volcanic plug
  - exposed by erosion,
- 8 crater lake

20. In the space provided name each type fault shown below and also name the type of force that created each.

<u>Strike-slip or transform fault</u>	<u>Normal fault</u>	<u>Reversed fault</u>
<u>Shear force</u>	<u>Tensional force</u>	Compressional Force

### 21. Match the correct term with the correct definition.

Active volcano	Extinct volcano	lithosphere:	plate tectonics	Subduction
Anticline	Fault	mantle	plate	
Batholith	folding	mid-ocean ridge	pyroclast	
Composite volcano	lava	Oceanic crust:	Rift valley:	
crust	Limb:	outer core	Ring of Fire	

(a) A crack or fracture in the earth's surface

(b) A large mass of igneous intrusive rock that forms from cooled magma deep in the Earth's crust.

(c) Solid materials ejected from a volcano.

(d) A steep volcanic cone built by both lava flows and pyroclastic eruptions.

- (e) An undersea mountain chain where tectonic plates are diverging
- (f) A vent or fissure in the Earth's surface through which molten lava, ash, and gases are ejected.

(g) A volcano that is erupting.

(h) A volcano that is not presently erupting and is not likely to do

(i) An elongate down-dropped between two fault systems. -

- (j) Molten rock that erupts onto the Earth's surface through a volcanic vent or fissure.
- (k) One of several large, mobile pieces of the Earth's lithosphere

(l) Rock layers folded upward, like an arch.

(m) The bending of layers of rock, usually due to compression.

- (n) The earth's crust which lies under the oceans.
- (o) The layer within the interior of the Earth that lies between the crust and the core.
- (p) The name of the extensive area roughly coincides with the borders of the Pacific Ocean.
- (q) The outermost and thinnest of the solid Earth's layers
- (r) The process of one tectonic plate moving beneath another tectonic plate
- (s) The solid part of the earth consisting of the crust and outer mantle
- (t) The theory and study of plate formation, movement, interaction and destruction.
- (u) The upper or outermost part of the Earth's core

#### 22. Write TRUE if the statement is true or write FALSE of the statement is false.

- (a) The crust is the Earths only solid layer.
- (b) The asthenosphere is the thinnest layer of the earth.
- (c) There is no relationship between plate tectonics and volcanoes.
- (d) The transfer of heat by the movement of heated fluid is called convection.
- (e) Oceanic crust near the mid-ocean ridge is younger than oceanic crust farther away from the ridge.
- (f) Fluid lava flows as a thin sheet.
- (g) The lesser Antilles is an example of volcanic island arc.
- (h) Convergent plate margins are responsible for the world great mountain ranges.
- The Himalayan mountains was form by the collision of the Indian-Australian Plate and the Eurasian plate.
- (j) A Rift valley can be created by either tension or compression.

#### Read each statement carefully then CIRCLE the correct choice.

- 23. Which of the following best describes the material that makes up the earths asthenosphere?
  - A. a rigid solid
  - *B. a solid that is able to flow*
  - *C. a liquid at high temperature*
  - D. a gas under great pressure
- 24. The lithosphere is made up of the upper mantle and the
  - A. crust
  - *B. asthenosphere*
  - C. hydrosphere
  - D. core

- 25. The part of the earth that is solid but has the ability to flow is the
  - *A. lithosphere*
  - *B.* oceanic crust
  - C. asthenosphere
  - D. inner core
- 26. Which zone of the earth is made up of liquid
  - *A. the asthenosphere*
  - *B* the outer core
  - *C. the upper mantle*
  - D. the inner core

- 27. The boundary between the earth's crust is called the
  - A. Moho
  - B. shadow zone
  - C. magnetosphere
  - D. hydrosphere
- 28. The crust of the earth is made mostly of
  - A. oxygen & iron
  - B. alumina & silica
  - C. iron & nickel
  - D. alumina & nickel
- 29. The layer that makes up most of the earth's mass and volume is the
  - A. mantle
  - B. magma
  - C. crust
  - D. core
- 30. What is the Earth made of?
  - *A. The crust, the mantle and the core*
  - *B. The skin, the pulp and the core*
  - C. The plates, the magma and the core
  - D. The land, the sea and the atmosphere
- 31. The average thickness of the crust is:
  - *A.* 5-10 km
  - *B.* 30-70 km.
  - С. 100-150 кт.
  - D. 1 km.
- 32. The part of the earth on which the tectonic plates are able to move is the
  - A. lithosphere.
  - B. mesosphere,
  - C. asthenosphere.
  - D. subduction zone.
- 33. The ancient continent that contained all the landmasses is called
  - A. Pangaea.
  - B. Laurasia.
  - C. Gondwana. D. Panthalassa
- 34. The type of tectonic plate boundary involving a collision between two tectonic
  - A. divergent.

plates is

- *B. convergent.*
- C. transform.
- D. normal.
- 35. The San Andreas fault is an example of a
  - *A. divergent boundary.*
  - *B. convergent boundary.*
  - C. transform boundary.
  - D. normal boundary.

- 36. When a fold is shaped like an arch, with the fold in an upward direction, it is called a(n)
  - A. monocline.
  - *B* syncline
  - C. anticline
  - D. decline.
- 37. The type of mountain involving huge sections of the Earths crust being pushed up into anticlines and synclines is the
  - A. folded mountain.
  - B. volcanic mountain.
  - C. fault-block mountain.
  - D. strike-slip mountain.
- 38. Mid-ocean ridges are associated with
  - *A. divergent boundaries.*
  - B. convergent boundaries.
  - C. transform boundaries.
  - D. normal boundaries.
- 39. Magma that reaches the Earth's surface may form
  - A. mountains.
  - B. fault-block
  - C. volcanic
  - D. all
- 40. The type of tectonic plate boundary that has a subduction zone is
  - A. divergent.
  - B. convergent.
  - C. transform.
  - D. normal.
- 41. The type of fault that often results when rocks are pulled apart due to tension is called a
  - *A. strike-slip fault.*
  - B. normal fault.
  - C. reverse fault.
  - D. fault block.
- 42. A \_\_\_\_\_\_ fault often results when opposing forces cause rock to break and move horizontally.
  - A. strike-slip
  - B. normal
  - C. reverse
  - D. block
- 43. A reverse fault is the result of \_\_\_\_\_\_ stress.
  - A. tensional
  - B. shear
  - C. compressional
  - D. shear

- 44. What is a volcano?
  - *A.* The movement of the Earths crust by the movement of plate boundaries
  - *B. A* cone-shaped mountain or hill formed by eruptions of lava and ash
  - C. A mountain created by the folding of the Earth's crust
  - *D. All of the above*
- 45. A volcano that is flat and wide is called:
  - A. a cone volcano
  - *B. a shield volcano*
  - *C. a composite volcano*
  - D. cinder cone
- 46. Which of the statements listed below is NOT a positive aspect of a volcanic eruption?
  - A. The dramatic scenery created by volcanic eruptions attracts tourists.
  - B. The lava and ash deposited during a volcanic eruption breaks down to provide valuable nutrients for the soil.
  - C. Lava flows and lahars (mud flows) clear areas of woodland, agriculture and destroy settlements.
  - D) The high level of heat and activity inside the Earth, close to a volcano, can provide opportunities for generating geothermal energy.

- 47. Volcanoes often are found in areas on Earth where
  - A. mountains are found
  - B. rivers are found
  - C. plates fit together perfectly
  - D. plates collide
- 48. Intrusive igneous rocks are those which
  - A. Cool on Earth's surface
  - B. changed over time from one type of rock to another
  - C. cool beneath Earth's surface
  - D. are composed of sediments found in flood beds
- 49. Which type of volcano often erupts with a mix of steam, ash, rock and dust, causing a pyroclastic flow?
  - A. shield
  - B. cone
  - C. composite
  - D. dome
- 50. What is the difference between lava and magma?
  - A. They originate from different places.
  - B. After magma reaches the surface it's called lava.
  - C. They are different colours.
  - D. They are made of different types of