

6. Volcanic island arcs form upon the collision of . . . plates.

- a. two continental b. oceanic and continental c. two oceanic
d. all of the above e. none of the above
-

7. An earthquake of magnitude 7 (Richter scale) releases energy . . . times as much as an earthquake of magnitude 5.

- a. 900 b. 100 c. 30 d. 10
-

8. Rayleigh surface seismic waves are . . . than . . . waves.

- a. faster . . . only S b. slower . . . only P
c. faster . . . P and S d. slower . . . P and S
-

9. The type of physical weathering, when growing crystals crack rocks, is called:

- a. frost wedging b. pressure release fracturing c. abrasion
d. all of the above e. none of the above
-

10. . . . occurs when water-saturated soil moves over permafrost.

- a. Debris flow b. Earth flow c. Creep d. Solifluction
-

11. The three factors that control the velocity of streams are the

- a. gradient, discharge and climate
b. discharge, evaporation and channel characteristics
c. gradient, discharge and channel characteristics
d. precipitation, evaporation and infiltration
-

12. In deltas, stream splits into many channels called:

- a. tributaries b. distributaries c. meanders d. graded streams
-

13. When the stream exists before a mountain, and through which is cutting its channel, it is called:

- a. antecedent b. superimposed c. dendritic d. trellis
-

14. Speleothems include:

- a. stalactites, stalagmites and caverns
 - b. columns, caverns and sinkholes
 - c. stalactites, stalagmites and columns
 - d. columns, stalagmites and caverns
-

15. The principle of . . . states that a geologic feature that cuts another body of rock must be younger than it (the body of rock).

- a. original horizontality
 - b. cross-cutting relationships
 - c. superposition
 - d. original lateral continuity
-

16. . . . is the time-stratigraphic unit of an epoch.

- a. Era
 - b. System
 - c. Stage
 - d. Series
-

17. The . . . radiometric method is an indispensable aid to date very recent events in geologic history and also to the archeological research.

- a. Uranium-Lead
 - b. Potassium-Argon
 - c. Thorium-Lead
 - d. Carbon-14
-

18. . . . bears surface features of the original shell after its dissolution upon burial and lithification

- a. Cast
 - b. Mold
 - c. Petrification
 - d. Carbonization
-

19. The Mesozoic is best known as the age of:

- a. reptiles
 - b. mammals
 - c. amphibians
 - d. fishes
-

20. Camptosaurus belongs to . . . or . . . -hipped dinosaurs.

- a. ornithischians . . . lizard
 - b. Saurischians . . . lizard
 - c. ornithischians . . . bird
 - d. Saurischians . . . bird
-

Part II. Fill in the blanks (20 pts.)

1. The volcanic equivalent of granite is _____; gabbro is _____; and that of diorite is andesite.

2. The supercontinent _____ (all lands) was composed of two very large continents _____ and Laurasia.

3. Along _____ plate boundary the two plates move away from each other; whereas along _____ plate boundary the two plates slide horizontally past one another.

4. The earthquake damage is resulted from: 1) _____; 2) permanent alteration and landforms (fault slip); 3) _____; 4) _____ and 5) _____.

5. The soil profiles consist (from the top downwards) of: _____, _____, _____ and _____ horizons.

6. The three forms of sediment transport are: 1) _____, 2) _____ and 3) bed loads.

7. Alluvial fan forms when the stream _____.

8. Porosity (definition) is the _____.

9. The eons (largest divisions of the geologic time scale) are: 1) _____, 2) _____, 3) _____ and 4) _____.

10. Half-life (definition) is the _____.

Part III. Circle T = true and F=false and explain why if it is false (15 pts.)

T F 1. Lithification refers to all processes that convert loose sediment into hard rock and it includes compaction and cementation.

T F 2. Upon the subduction of oceanic plates, the zone of earthquakes is called Benioff zone, this zone extends to a depth of about 700 km.

T F 3. Foreshocks are small earthquakes that precede large volcanic eruptions or landslides.

T F 4. A slide occurs when a block of rock and regolith breaks away and moves downslope as a coherent unit.

T F 5. Hydraulic action is the mechanical wearing away of rock by rock fragments carried by stream.

T F 6. The probability of 25 year flood to occur in any year is 25%.

T F 7. An aquifer is any body of rock or soil that can store water, but it does not transmit it.

T F 8. Stratigraphic correlation is the determination of the equivalence of rock beds in different localities.

T F 9. The radioactivity which was discovered by Henri Becquerel, is the tendency of some isotopes to decay spontaneously.

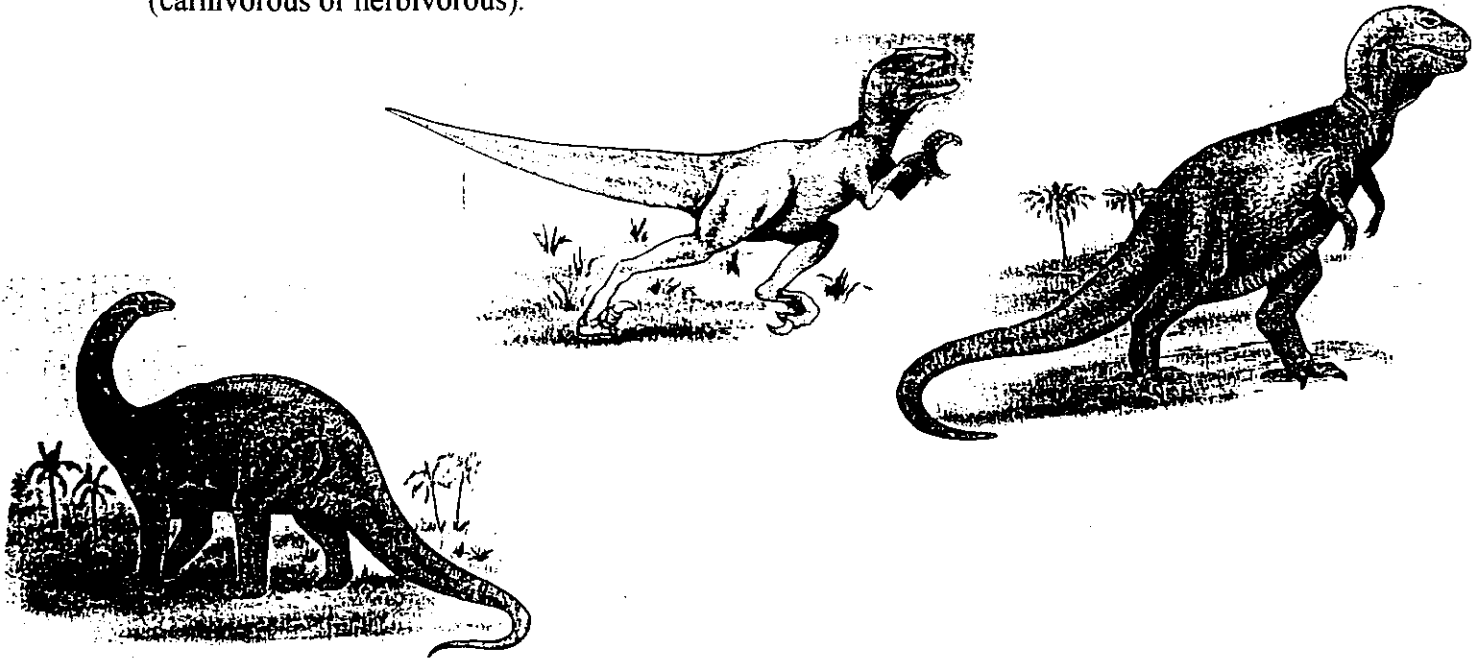
T F 10. The Mendelian principles of inheritance state, in short, that individuals of the same species vary in morphological and physiological features, these variations provide them with some advantage in a particular environment to survive and produce their offspring.

Part IV. Answer only one of the following two questions (5 pts.)

1. Match the relevant terminologies (one to one) in the following two columns (5 pts.)

- | | |
|---------------------------------|---------------------------------------|
| 1. intrusive igneous rock | ___ marble |
| 2. extrusive igneous rock | ___ artesian well |
| 3. clastic sedimentary rock | ___ dolostone |
| 4. nonclastic sedimentary rock | ___ ox-bow lake |
| 5. foliated metamorphic rock | ___ peridotite |
| 6. nonfoliated metamorphic rock | ___ schist |
| 7. chemical weathering | ___ andesite |
| 8. physical weathering | ___ thermal expansion and contraction |
| 9. meanders | ___ conglomerate |
| 10. confined aquifer | ___ oxidation |

2. Name the three dinosaur species shown on the figure and indicate their size and type (carnivorous or herbivorous).



Part V. Answer only two of the following three questions (²⁰ pts.)

1. Discuss magma as the source of igneous rocks and outline the textures of igneous rocks.
2. Indicate the factors that control mass wasting and discuss three of them
3. Define paleoecology and describe how fossils are used in reconstructing ancient geography.

Good Luck