



Final Exam of fundamental Geology (100G)  
For 1<sup>st</sup> year students – Summer-2022

Duration: 2 Hours

Total marks: 50

**Select the correct answer (50 Marks)**

**1- The earth's crustal plates move**

- a- a few meters per year  
b- a few millimeters per 1000 years  
c- a few centimeters per year  
d- a few millimeters a day

**2- The average thickness of continental crust is**

- a- 5 km  
b- 7 km  
c- 35 km  
d- 150 km

**3- The average density of the earth core is**

- a- 11 g/cm<sup>3</sup>  
b- 10 g/cm<sup>3</sup>  
c- 9 g/cm<sup>3</sup>  
d- 8 g/cm<sup>3</sup>

**4- What type of plate boundary show a horizontal sliding of two plates?**

- a- Divergent plate boundaries  
b- Convergent plate boundaries  
c- Transform-fault plate boundaries  
d- All of them

**5- Wegener's evidence of continental drift is**

- a- matching of animal and plant fossils  
b- fit of continental coastlines  
c- identical rock types of same age  
d- all of them

**6- ..... is igneous rock containing large crystals embedded in a fine-grained matrix.**

- a- Porphyry  
b- Basalt  
c- Coal  
d- Granite

**7- Along what type of plate boundary does subduction occur?**

- a- divergent  
b- transform  
c- convergent  
d- All of them

**8- Clastic sedimentary rocks such as conglomerates, sandstones and shales are classified based on:**

- a- color  
b- density  
c- grain size  
d- All of them

**9- .....crystal system has  $a = b = c$ ,  $\alpha = \beta = \gamma = 90^\circ$**

- a- Cubic  
b- Tetragonal  
c- Orthorhombic  
d- Monoclinic

**10- ..... metamorphism occurs along a fault zones**

- a- Cataclastic  
b- Contact  
c- Regional  
d- All of them

**11- The composition of continental crust is**

- a- granitic composition  
b- basaltic composition  
c- diorite composition  
d- andesitic composition

**12- .....is agent of thermal metamorphism**

- a- Pressure  
b- Temperature  
c- Hydrothermal solution  
d- All of them

**13- Sediment size ..... with increased transport distance.**

- a- decreases  
b- increases  
c- constant  
d- all of them

**14- .....has a soapy feel.**

- a- Talc  
b- Quartz  
c- Pyrite  
d- Calcite

**15- Which of the following pairs of igneous rocks has the same mineral composition?**

- a- granite- rhyolite  
b- granite- andesite  
c- granite- basalt  
d- granite-gabbro

16- ..... is made of mostly hydrocarbons from the burial, heating and compaction of organic material.

- a- coal                                      b- quartzite                                      c- limestone                                      d- conglomerate

17- Limestone is a sedimentary rock composed mostly of

- a- quartz                                      b- calcite                                      c- chlorite                                      d- mix of all

18- On Mohs hardness scale, calcite hardness number is

- a- 3                                      b- 4                                      c- 1                                      d- 2

19- .....crystal system has  $a_1 = a_2 = a_3 \neq c$ ,  $\alpha = \beta = \gamma = 120^\circ$

- a- Cubic                                      b- Hexagonal                                      c- Orthorhombic                                      d Orthorhombic

20- The luster of calcite mineral is .....

- a- glassy                                      b- pearly                                      c- earthy                                      d- silky

21- The fracture in quartz mineral is .....

- a- Hackly                                      b- Conchoidal                                      c- even                                      d- all of them

22- The luster of magnetite mineral is

- a- glassy                                      b- pearly                                      c- earthy                                      d- metallic luster

23- The dominant rock type in the uppermost mantle is .....

- a- limestone                                      b- granite                                      c- basalt                                      d- peridotite

24- ..... has a garlic-like odor

- a- Limestone                                      b- Phosphate                                      c- Sandstone                                      d- Coal

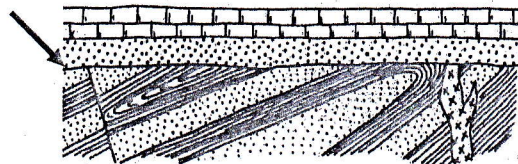
25- .....crystal system has  $a \neq b \neq c$ ,  $\alpha = \beta = \gamma = 90^\circ$

- a- cubic                                      b- tetragonal                                      c- Orthorhombic                                      d- triclinic

26- From primary structures are

- A. Rocks bent by crustal deformation into a series of wave-like undulations  
 B. fractures in rocks with no movement produced by brittle strain  
 C. a group of wave-like depositional structures that may form directly in water or in air  
 D. fractures in rocks with movement produced by brittle strain

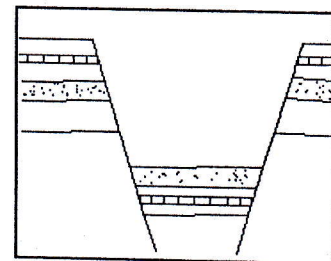
27- In the figure, a surface that separates older series from younger sedimentary rocks is called .....



- A. angular unconformity  
 B. disconformity  
 C. nonconformity  
 D. uniformity

28- Which of the following is NOT true about "dip-slip" faults?

- A. they are folded layers of rocks  
 B. they are "normal" or "reverse"  
 C. they are fractures where there is motion of the blocks on either side  
 D. they have motion in the plane of the fault



29- This feature (seen in cross-section) is:

- A. an anticline                                      B. a graben  
 C. a monocline                                      D. a syncline

30 - A crack along which no appreciable movement has occurred is called

- A. fault                                      B. anticline                                      C. joint                                      D. vein

31. Most folds result from ..... stresses which shorten and thicken the crust.

- A. Tensional                                      B. compressional                                      C. shear                                      D. compressional and shear

- 32 The breakdown of rock material in its current location. This is a definition of...**  
 A. Erosion  
 B. Weathering  
 C. Transportation  
 D. Deposition
- 33- In the hydration process of chemical weathering**  
 A. Feldspars are converted to clay  
 B. Anhydrite is converted to gypsum  
 C. Hematite is converted to magnetite  
 D. Gypsum is converted to anhydrite
- 34- Stalactites & stalagmites are famous features formed in**  
 A. Granitic rocks  
 B. Shales  
 C. Limestone  
 D. Limestone  
 E. All of them
- 35- The steeper, downwind side of a sand dune is called a**  
 A. Sand drift  
 B. Ventifact  
 C. Slip face  
 D. Streamline
- 36- How does desert pavement form?**  
 A. By intense chemical weathering  
 B. By stream erosion  
 C. By intense biological weathering  
 D. By wind erosion
- 37. Sand will accumulate \_\_\_\_\_.**  
 A. On the lee side (downwind) side of a boulder  
 B. On the windward side (upwind) of a boulder  
 C. On both the lee side and the windward side of a boulder  
 D. boulders cannot cause sand to accumulate
- 38- Which one of the following statements is FALSE?**  
 A. Sand dunes are the most common desert landform.  
 B. Ventifacts are not common in deserts.  
 C. Wind can move sand grains by saltation  
 D. In deserts, the process in which wind picks up sediment is called deflation.
- 39- Where does the maximum water velocity occur in a meander bend?**  
 A. In the middle of the river channel  
 B. On the inside of the bend  
 C. On the outside of the bend  
 D. On the surface near the middle
- 40- What features are created when rivers enter the ocean?**  
 A. Alluvial fans  
 B. Drainage basins  
 C. Deltas  
 D. Point bars
- 41 - Gravel-sized particles are transported by rivers as \_\_\_\_\_.**  
 A. suspended load  
 B. bed load  
 C. dissolved load  
 D. all of these
- 42- A stream in its mature stage has a**  
 A. moderate gradient and velocity  
 B. steep gradient and high velocity  
 C. very low gradient and velocity  
 D. None of above
- 43- Permeability is:**  
 A. The ability of a solid to allow fluids to pass through.  
 B. The process by which plants release water vapor to the atmosphere.  
 C. The amount of water vapor in the air relative to the maximum amount of water vapor that air can hold.  
 D. The percentage of pore space in the rock.

- 44- The boundary between the saturated zone and the unsaturated zone is called the:  
 A. water table                      B. Aquifer                      C. Aquiclude                      D. Porosity
- 45- .....Is an Impermeable strata that prevent flow of water.  
 A. Well                      B. Aquifers                      C. Perched water table                      D. Aquiclude
- 46- ..... is a place where water flows naturally from rock onto the land surface.  
 A. Well                      B. Stream                      C. Spring                      D. water incursion
- 47-Which one of the following statements is FALSE?  
 A fossil may be:  
 A. an original skeleton or shell;  
 B. a mold or cast;  
 C. traces such as footprints or worm tubes  
 D. an original body found in the present time
- 48- The Era which younger than the Mesozoic is the.....  
 A- Proterozoic                      B. Archean  
 C. Cenozoic                      D. Paleozoic
- 49- Body fossils are  
 A. actual parts of an organism, unaltered or altered  
 B. tracks, casts, and coprolites  
 C. Burrows or borings Spaces by living things and preserved as is or filled in  
 D. None of the above
- 50- One of the importances of fossils to Geology is .....  
 A. Give information about paleogeographic conditions.  
 B. Give information about hydrologic cycles.  
 C. Give information about volcanic rocks.  
 D. None of the above

-----GOOD LUCK-----

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