

Answer the following questions (50M)

ضع علامة √ على الجملة الصحيحة وعلامة X على الجملة الخطأ

1. Deformation is the change in shape of rocks in response to tectonic forces.
2. Conglomerate is a fine-grained clastic sedimentary rock
3. Metamorphism converts fossiliferous limestone to marble
4. Porosity is a measure of how easily water can flow through a material.
5. A cave is a natural underground opening with a connection to Earth's surface.
6. Permeability is the percent of void space in material.
7. Continental glaciation: exists where a large part of a continent is covered by glacial ice
8. Precambrian is the most recent and best understood Eon. It spans from 545 million years to the present day.
9. Carbonization process means that tissue material is decomposed or reduced to a film of carbon
10. Continental crust ranges from 7 to 10 kilometers in thickness and is composed mostly of basalt.
11. Deformation Changes in the shape and/or volume of a rock body.
12. At a convergent plate boundary, two plates move apart, or separate.
13. The core of the Earth is a sphere composed of an iron-nickel alloy
14. Crystalline substances is lacking both the external and the internal atomic structures
15. Weathering is a collective name for a group of processes responsible for the disintegration and decomposition of rock in place.
16. Organic sedimentary rocks are sedimentary rocks formed when evaporation of water concentrates
17. With increasing metamorphic grade and continuing deformation, the crystals grow larger and foliation becomes very well developed.
18. Confined Aquifer: An aquifer is highly permeable extending from ground surface downward to an aquitard -a "water table aquifer"
19. Foliated metamorphic rocks such as schist and gneiss form when tectonic forces deform rocks at the same time that rising temperature is causing new minerals to grow
20. Mature Streams are straight channel and a steep gradient.
21. At a transform plate boundary, two plates slide horizontally past each other.
22. Planes of symmetry: Any line through the center of the crystal around which the crystal may be rotated so that after a definite angular revolution the crystal appears the same as before is termed an axis of symmetry
23. Andesite is a volcanic rock intermediate in composition between basalt and granite
24. The Geologic Timescale is divided (not evenly) into 6 "Eons"

25. Graded bedding is a systematic variation in grain size within a bed, such that the sediment at one side of the bed is coarse and becomes progressively finer toward the other side.
26. Young Streams A stream has a moderate gradient and velocity because it has eroded its bed downward and is closer to base level.
27. Crystalline substances are lacking both the external and the internal atomic structures.
28. A tsunami can be generated when Divergent plate boundaries abruptly move and vertically displace the overlying water.
29. Cleavage is the tendency of some minerals to break along flat surfaces
30. Triclinic -Four axes, Three of the axes fall in the same plane and intersect at the axial cross at 120 degrees between the positive ends
31. Most mantle is composed of peridotite
32. Most Oceanic crust is granitic in composition.
33. Hardness is the resistance of a mineral to scratching
34. Chemical sedimentary rocks are composed of lithified clay. silt, sand, and gravel.
35. Contact metamorphism results from the intrusion of hot magma into cooler rocks.
36. At a divergent plate boundary, two plates move toward each other and collide.
37. Marble and quartzite form during both regional and contact metamorphism.
38. Evaporites consist of the lithified remains of plants and animals.
39. Streak is the color of a fine powder of a mineral
40. Physical, chemical, or biological weathering is a prerequisite to sedimentation
41. Terraces are Erosional remnants of old floodplain surfaces
42. Axes of symmetry is defined as any two dimensional surface that, when passed through the center of the crystal, divides it into two symmetrical parts that are mirror images
43. Basalt is a dark. very fine-grained volcanic rock.
44. Clastic sedimentary rocks form by direct precipitation of minerals from solution
45. A fossil is an original material, impression, cast, or track of any animal or plant that is preserved in rock after the original organic material is transformed or removed.
46. Orthorhombic Three axes, all at right angles, two of which are equal in length (a and b) and one (c) which is different in length (shorter or longer
47. An ocean is a large body of saline water, and a principal component of the hydrosphere
48. Trigonal :The three axes are all unequal in length and intersect at three different angles (any angle but 90 degrees,
49. A tsunami is a series of water waves (called a tsunami wave train) that is caused by the displacement of a large volume of a body of water, such as an ocean.
50. Tetragonal - Three axes, all at right angles, and all three of different lengths

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جامعة أسيوط

كلية العلوم - قسم الجيولوجيا

Ju.2023

(Total Marks: 25)

G100

Time: Two Hour

Answer the following questions: (Each One Mark)

Choose the correct answer of the following:

1- The composition of oceanic crust:

a-is granitic composition

b-is basaltic composition

c-is peridotite composition

2- Average thickness of mantle is

a-2500 km

b-1900 km

c-2900 km

3- Average thickness of core is

a-2500 km

b-1470 km

c-3470 km

4- Plate tectonics is a result of Earth's internal heat engine, powered by

a-the Sun

b-gravity

c- heat flowing from Earth's interior outward

5- Volcanic island arcs are associated with

a- transform boundaries

b-divergent boundaries

c- convergent boundaries

6- What type of plate boundary has the two plates moving away from each other?

a-Divergent plate boundaries

b-Convergent plate boundaries

c-Transform-fault plate boundaries

7- Convergent boundaries are areas where:

a-two plates come together

b-two plates slide past each other

c-two plates slide apart from each other

8- The type of plate boundary to have Earthquakes:

a-subduction

b- spreading center

c-all of the above

9-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

10-Average thickness of oceanic crust is

a-5 km

b-7 km

c-35 km

11-Wegener's evidence of continental drift:

a- Matching of animal and plant fossils

b-fit of continental coastlines

c- All of the above.

12-Extrusive rocks are formed from:

a-Magma cooling inside the earth

b-Lava cooling outside on the earth's surface

c-Magma cooling in two places

13- Mafic rocks contain about ----- % silica.

a- 20

b-50

c-80

14- Which is not an intrusive igneous rocks.

a-gabbro

b-basalt

c-granite

15- Types of sedimentary rocks are:

a- clastic sedimentary rocks

b- organic sedimentary rocks

c- all of the above

16- A Sedimentary rock made of CaCO_3 composition is:-

a-Coal

b-quartzite

c-limestone

17- Sand is

a-sediments

b-sedimentary rocks

c-organic sediments

18- Limestone recrystallizes during metamorphism into:-

a- schist.

b- marble

c- quartzite

19- Gneiss rocks is

a- regional metamorphism

b-thermal metamorphism

c-dynamic metamorphism

20- Types of metamorphic rocks

a- regional

b-thermal

c- all of the above

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

a- density

b- grain size

c- all of the above

22-The mineral composition of gabbro is?

a-plagioclase and pyroxene

b-plagioclase and mica

c-plagioclase and quartz

23-Slate rocks is

a- regional metamorphism b-thermal metamorphism

c-dynamic metamorphism

24-Agent of thermal metamorphism is

a-pressure

b-temperature

c- both

25-Along what type of plate boundary does subduction occur?

a- divergent

b- transform

c- convergent

26- A thrust fault is different from a reverse fault because _____.

a-it is higher-angle, and is the structure that transports its hanging wall block only a few meters

b-it is lower-angle, and is the structure that transports its hanging wall block many kilometers

c-it is usually smaller and less important

d-it is sometimes a normal fault if it is at an angle of about 45 degrees

27- A disconformity is :

a-a rock unit that does not contain fossils

b-an erosional surface between igneous and metamorphic rocks

c-an erosional surface between horizontal layers of sedimentary rocks

d-a rock unit that is different than units above or below it

28- The flat salt beds and lakes located in desert basins are:

a-Blowouts

b- Barchans

c- Playas

d- Mesas

29- Desert pavement is:

a-A highway across the desert

b- A salty crust in the desert

c-A layer of coarse rocks and pebbles left behind by deflation

d- An alluvial fan

30-Over the course of many floods coarser sediments are deposited in strips bordering the channel. The features are called?

a-levees

b- bars

c-berms

d-trenches

31- Which one of the following features is formed by wave erosion?

a-A barrier island

b-A spit

c-A cave

d-A beach

32- Aquiclude is:

a-Porous and permeable strata that store and transmit water freely

b-Impermeable strata that prevent flow

c-a place where water flows naturally from rock onto the land surface

d-a stream that receives water from the zone of saturation

33- Artesian Well is:

- a-natural or manmade well where water flood to the surface under pressure
- b-A "cone of depression" develops around the pumping hole
- c-a well of water that is warmer than the mean annual air temperature
- d-a stream that loses water to the zone of saturation

34-When a steep mountain stream enters a flat valley, sediments transported in the stream become deposited. These deposits are called ...?...

- a-Biogenic ooze
- b- Alluvial fans
- c- Turbidites
- d- Loess

35- 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.

36- The lowering effect on the water table about the base of the well stem is called:

- a-Aquifer
- b- Perched water table
- c-Cone of depression
- d- Hydraulic gradient

37- Which of the following rocks reflect the greatest porosity?

- a-A rock composed of partly fine consolidated grains
- b-A rock composed of partly cemented grains
- c-A rock composed of poorly-sorted grains with irregularly shaped particles
- d-A rock composed of coarse, and well-sorted grains

38. Stream piracy is a direct result of:

- a-incised meandering
- b-down cutting
- c-lateral erosion
- d- headward erosion

39-Hydrolysis is a chemical reaction in chemical weathering; it is responsible for:

- a-The Oxidation of the elements iron and copper
- b-The conversion of feldspars, the most common minerals in the earth's crust, to clay
- c-The addition of water to the mineral anhydrite
- d-The dehydration of the mineral limonite

40 -Carbonic acid is particularly effective in the solution weathering of :

- a-Limestone
- b- Sandstone
- c- Granite
- d- Shale

41- Curved tree trunks, fractured retaining walls, curved roots are typical features of

- a-slides
- b- slumps
- c- rock fall
- d- creep

42- The line formed by the intersection of an inclined sedimentary layer and a horizontal plane is called the:

- a-fold axis
- b- Dip
- c- Bed
- d- Strike

43. Which of the eons listed below is NOT considered to be part of the Precambrian?

- a-Phanerozoic
- b-Proterozoic
- c-Archean
- d-Hadean

44- Smooth stones from abdominal cavity of dinosaurs indicate.....

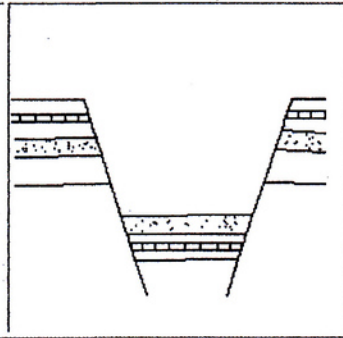
- a-Coprolites b-Mummification c-Gastroliths d-Refrigeration

45- Which of the following are not related to wind erosion?

- a- loess b-deflation c- blowout d- ventifact

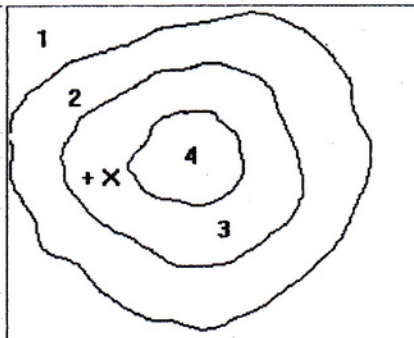
46- This feature (seen in cross-section) is

- a-an anticline
b-a grabben
c-a monocline
d-a syncline



47- In the structure at right, the oldest rocks are 1 and the youngest are 4. This is

- a-a dome
b-a basin
c-a homocline
d-an anticline



48- In moist environments limestone is a very resistant rock while in dry environments, it is a
A.True B. False

49- When water flow increases, a stream flowing in a channel that is cut into thick layers of alluvium will easily deepen its channel
A. True B. False

50- Body fossils are the actual parts of an organism, they always present as unaltered bodies and never be found as altered ones
A. True B. False

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

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