

عنوان درس: زبان تخصصی زمین شناسی

1- The lies directly below the crust.

- 1. granite
- 2. atmosphere
- 3. hydrosphere
- 4. mantle

2- The core is the of the earth's layers.

- 1. outermost
- 2. thinnest
- 3. innermost
- 4. smallest

3- Wind and water..... rocks down and carry bits of them away.

- 1. change
- 2. form
- 3. make
- 4. wear

4- Igneous rocks are formed from that has been cooled and solidified.

- 1. melted rock
- 2. crystalline rocks
- 3. compacted rocks
- 4. permanent rocks

5- What are the common sedimentary rocks?

- 1. dolomite, calcite and gypsum
- 2. sandstone, limestone and shale
- 3. schist, marble and gneiss
- 4. granite, basalt and andesite

6- Weathering may reduce a metamorphic rock to..... .

- 1. sediment
- 2. rock cycle
- 3. intrusive
- 4. magmatic

7- Geologists measure geological time by a simple principle called....., means "which came first".

- 1. absolute age
- 2. radioactive dating
- 3. relative age
- 4. hadean and archean age

8- Absolute age in geology is age in..... .

- 1. relative processes that operate on the Earth.
- 2. geologic processes we see today and we apply them to the past.
- 3. which came first
- 4. years

9- Worldwide correlation of rocks of all ages has resulted in the

- 1. inclusion
- 2. paleontology
- 3. geologic column
- 4. field

10- Rocks that contain the same kinds of.....formed over the same range of geologic time.

- 1. minerals
- 2. textures
- 3. fossils
- 4. composition

- 11- **The word is from the greek, meaning "visible life".**
1. mesozoic
 2. cenozoic
 3. phanerozoic
 4. proterozoic
- 12- **The science that deals with subsurface water is**
1. mineralogy
 2. hydrogeology
 3. historical geology
 4. paleontology
- 13- **Water on or beneath Earth's surface moves among the various reservoirs: the oceans, the atmosphere and the land in a**
1. infiltration
 2. hydrologic cycle
 3. runoff
 4. precipitation
- 14- **The ocean loses water at the surface by**
1. precipitation
 2. infiltration
 3. evaporation
 4. pore space
- 15- **What is called the distinctive quality of minerals that is determined by the Mohs scale?**
1. hardness
 2. color
 3. streak
 4. luster
- 16- **Cleavage is the of a mineral to break along preferred crystalline planes that are weakly bonded.**
1. property
 2. tendency
 3. pattern
 4. fracture
- 17- **What is the weight of a substance (mineral) relative to that of an equal volume of water?**
1. cleavage
 2. specific gravity
 3. fracture
 4. luster
- 18- **These are large group of minerals in which oxygen is combined with one or more metals.**
1. native elements
 2. sulfides
 3. anions
 4. oxides
- 19- **In the framework silicate, each shares all four of its oxygen with adjacent.**
1. micas
 2. plate-shaped crystals
 3. olivine
 4. tetrahedron
- 20- **A is a volcanically active place at the earth's surface directly above a mantle plume.**
1. magma
 2. basalt plateau
 3. tectonic plate
 4. hot spot
- 21- **Conglomerates are sedimentary rocks.**
1. fine-grained muddy
 2. structural
 3. chemical
 4. coarse-grained clastic

22-.....consists of small beds lying at an angle to the main sedimentary layering.

1. Ripple mark
2. Cross-bedding
3. Graded bedding
4. Mud crack

23-What is called a banded structure which is created by deformation?

1. parent rock
2. migmatite
3. foliation
4. protolith

24-Burial metamorphism mainly occurs in..... .

1. surface of the earth
2. very shallow depth
3. contact with hot magma
4. deep and underground in sedimentary basins

25-The rate at which temperature increases with depth is called the..... .

1. geothermal gradient
2. protolith
3. metamorphic facies
4. argillite

26-What are the most important processes of chemical weathering?

1. dissolution, hydrolysis and oxidation
2. abrasion, organic activity and hydrolysis
3. pressure-release fracturing and frost wedging
4. thermal expansion and contraction

27-What is called the uppermost layer of a typical mature soil?

1. O horizon
2. A horizon
3. B horizon
4. C horizon

28-When two plates converge, the denser plate enter beneath the lighter one and sinks into the
..... .

1. ocean
2. crust
3. mantle
4. core

29-What is called the ability of rock or soil to transmit water or any other fluid?

1. aquifer
2. saturation
3. porosity
4. permeability

30-If you dig below the water table into the zone of saturation, you have dug a...
..... .

1. spring
2. geyser
3. cave
4. well

شماره سوال	پاسخ صحیح
1	د
2	ج
3	د
4	الف
5	ب
6	الف
7	ج
8	د
9	ج
10	ج
11	ج
12	ب
13	ب
14	ج
15	الف
16	ب
17	ب
18	د
19	د
20	د
21	د
22	ب
23	ج
24	د
25	الف
26	الف
27	الف
28	ج
29	د
30	د

1-what is Seismology?

1. study of groundwater.
2. study of minerals and their classification.
3. study of earthquakes and related phenomena.
4. study of origin and structure of rocks.

2-What is the composition of continents?

- | | | | |
|-----------|------------|----------------|----------|
| 1. Basalt | 2. Granite | 3. Lithosphere | 4. Rocks |
|-----------|------------|----------------|----------|

3-What is equivalent of granite?

- | | | | |
|-------------|-----------|------------|-------------|
| 1. Andesite | 2. gabbro | 3. diorite | 4. rhyolite |
|-------------|-----------|------------|-------------|

4-What are the common igneous rocks?

- | | |
|-----------------------------------|---------------------------------|
| 1. sandstone, limestone and shale | 2. schist, marble and gneiss |
| 3. granite, basalt and andesite | 4. dolomite, calcite and gypsum |

5-What is meaning Phanerozoic is from the greek?

- | | | | |
|-----------------|----------------|----------------|-------------|
| 1. visible life | 2. recent life | 3. middle life | 4. old life |
|-----------------|----------------|----------------|-------------|

6-Which of the eons, cover the first 2.5 billion years of Earth history?

- | | |
|--------------------------------|--------------------------------|
| 1. The Hadean and Archean | 2. The Hadean and Proterozoic |
| 3. The Archean and Precambrian | 4. The Archean and Proterozoic |

7-What are important tools in time correlation?

- | | |
|--------------------------------|---------------------------------------|
| 1. fossils and geologic column | 2. key beds and geologic column |
| 3. Index fossils and key beds. | 4. successive beds and index fossils. |

8-What is Absolute age in geology ?

1. relative processes that operate on the Earth.
2. geologic processes we see today and we apply them to the past.
3. which came first
4. The age in years

9-What is called the sum of all rainwater that flows over the surface and then flow back to the surface?

- 1. infiltration
- 2. precipitation
- 3. evaporation
- 4. runoff

10-What is called the movment of water through the atmosphere?

- 1. Runoff
- 2. Transpiration
- 3. Transport
- 4. Grand water

11-What is the equivalent name for shiny luster?

- 1. Metallic
- 2. Dull
- 3. Viterous
- 4. Glassy

12-What is the softest minerals?

- 1. Talc
- 2. Diamond
- 3. Gypsum
- 4. Topaz

13-What is the weight of a substance relative to that of an equal volume of water?

- 1. cleavage
- 2. specific gravity
- 3. fracture
- 4. luster

14-What is an essential fertilizer in modern agriculture?

- 1. Apatite
- 2. Phosphate
- 3. Sulfate
- 4. Sulfide

15-What does make up the shells of many marine animls?

- 1. Calcite
- 2. Dolomite
- 3. Dolostone
- 4. Aragonite

16-Which of the following mineral groups aren't named for their anion?

- 1. Silicates
- 2. Native elements
- 3. Non silicates
- 4. Rock forming minerals

17-What is magma?

- 1. magma is a hot silicate liquid
- 2. magma is a hot silicate solid
- 3. magma is a hot non silicate liquid
- 4. magma is a hot non silicate solid

18-Which of the following rocks are uncommon in the earth's crust?

- 1. Peridotites
- 2. Granites
- 3. Rhyolites
- 4. Diorites

19-Which of the following structures are like dunes?

- 1. Ripple marks
- 2. Grade beddings
- 3. Cross beddings
- 4. Mud cracks

20-Which of the following rock salt?

- 1. chert
- 2. limeston
- 3. shale
- 4. conglomerate

21-Which of the following rocks are the most abundant sedimentary rocks?

1. Slate
2. Shale
3. Argillite
4. Limestone

22-What is called a banded structure which is created by deformation?

1. parent rock
2. migmatite
3. foliation
4. Protolith

23-Which of the following horizons consist of partially weathered rock?

1. O horizon
2. A horizon
3. B horizon
4. C horizon

24-What are the most important processes of chemical weathering?

1. dissolution, hydrolysis and oxidation
2. abrasion, organic activity and hydrolysis
3. pressure - release fracturing and frost wedging
4. thermal expansion and contraction

25-Which of the following processes cause the exfoliation?

1. Sheet joints
2. Abrasion
3. Frost wedging
4. Pressure-release fracturing

26-How much of the asthenosphere is melted?

1. 1-2 percent
2. 10-20 percent
3. zero percent
4. 1-16 percent

27-What is a subduction zone?

1. a lithospheric plate is sinking into the mantle.
2. The basaltic magma flows.
3. plates come together.
4. plates move apart.

28-What is called the ability of rock or soil to transmit water or any other fluid?

- 1. aquifer
- 2. saturation
- 3. porosity
- 4. permeability

29-What is formed when stalactites and stalagmites join in to one structure?

- 1. column
- 2. karst topography
- 3. sinkhole
- 4. cavern

30-What is named the porporation of rock or soil that consists of open space?

- 1. aquifer
- 2. saturation
- 3. porosity
- 4. permeability

باصخ صحیح شماره سوال

1	ج
2	ب
3	د
4	ج
5	الف
6	الف
7	ج
8	د
9	د
10	ج
11	الف
12	الف
13	ب
14	ب
15	د
16	ب
17	الف
18	الف
19	الف
20	الف
21	ب
22	ج
23	د
24	الف
25	د
26	الف
27	الف
28	د
29	الف
30	ج

1-Most of the earth isof rocks.

- | | | | |
|------------|------------|-------------|---------------|
| 1. mineral | 2. explore | 3. composed | 4. properties |
|------------|------------|-------------|---------------|

2-What is the composition of continents?

- | | | | |
|-----------|------------|----------------|----------|
| 1. Basalt | 2. Granite | 3. Lithosphere | 4. Rocks |
|-----------|------------|----------------|----------|

3-Igneous rocks are.....from melted rock that has and solidified.

- | | |
|--------------------------|---------------------|
| 1. variety/upward | 2. formed/cooled |
| 3. crystallization/refer | 4. original/texture |

4-Compacted and dried mud flats harden into

- | | | | |
|------------|--------------|----------|-----------|
| 1. granite | 2. sandstone | 3. shale | 4. marble |
|------------|--------------|----------|-----------|

5-The rock cycle simply expresses the idea that rock is not permanent but changes over..... time.

- | | | | |
|-------------|------------|--------------|-----------------|
| 1. geologic | 2. geology | 3. geologist | 4. geologically |
|-------------|------------|--------------|-----------------|

6-Igneous rocks form when a hot, molten liquid called magma

- | | | | |
|---------------|--------------|------------------|--------------|
| 1. solidifies | 2. intrusive | 3. lithification | 4. weathered |
|---------------|--------------|------------------|--------------|

7-Igneous rocks could change in to sediments by

- | | | | |
|------------------|------------|-------------------|---------------|
| 1. lithification | 2. melting | 3. solidification | 4. weathering |
|------------------|------------|-------------------|---------------|

8-Which of the following statements is true?

1. the earth is estimated to be about 4.5 trillion years old
2. the earth is estimated to be about 4.5 years old
3. the earth is estimated to be about 4.5 billion years old
4. the earth is estimated to be about 4.5 million years old

9-If the layers of sedimentary rocks were deposited without interruption, they are

- | | | | |
|-------------------|------------------|----------------|-------------------|
| 1. disconformable | 2. unconformable | 3. conformable | 4. nonconformable |
|-------------------|------------------|----------------|-------------------|

10-Index fossils are those species that lived only during a period.

- | | | | |
|---------------|------------|--------------|---------------|
| 1. recognized | 2. existed | 3. developed | 4. restricted |
|---------------|------------|--------------|---------------|

11-Phanerozoic is from the Greek, meaning:

- | | | | |
|-----------------|----------------|----------------|-------------|
| 1. visible life | 2. middle life | 3. recent life | 4. old life |
|-----------------|----------------|----------------|-------------|

12-..... concern the actual age of a rock or mineral.

- | | |
|----------------------|------------------|
| 1. Layered sequences | 2. Superposition |
| 3. Absolute age | 4. Relative age |

13-Groundwater follows in the subsurface according to its

- | | |
|----------------|-----------------------|
| 1. temperature | 2. pressure gradients |
| 3. water vapor | 4. transpiration |

14-What is called the sum of all rainwater that flows over the surface , and then flow back to the surface?

- | | | | |
|----------------|-----------|------------------|---------------|
| 1. Sublimation | 2. Runoff | 3. Precipitation | 4. Absorption |
|----------------|-----------|------------------|---------------|

15-What is named the transformation from a solid directly into a gas?

- | | | | |
|----------------|------------------|----------------|-----------------|
| 1. sublimation | 2. precipitation | 3. evaporation | 4. infiltration |
|----------------|------------------|----------------|-----------------|

16-What is the distinctive quality of minerals that is determined by the Mohs scale?

- | | |
|-------------------------|-------------|
| 1. color | 2. streak |
| 3. chemical composition | 4. hardness |

17-Each mineral has a set of characteristics that are easily tested in the field or laboratory.

- | | | | |
|---------------|------------------|---------------------|----------------|
| 1. geologists | 2. mineralogists | 3. inorganic origin | 4. distinctive |
|---------------|------------------|---------------------|----------------|

18-Most minerals into irregular shapes.

- | | | | |
|-------------|-------------|-------------------|-------------|
| 1. fracture | 2. cleavage | 3. characteristic | 4. reaction |
|-------------|-------------|-------------------|-------------|

19-The equivalent name for shiny luster is

- | | | | |
|-------------|---------|-------------|-----------|
| 1. metallic | 2. dull | 3. vitreous | 4. glassy |
|-------------|---------|-------------|-----------|

20-The are a group of double-chain silicates with similar properties.

- | | | | |
|----------|----------|--------------|---------------|
| 1. clays | 2. micas | 3. pyroxenes | 4. amphiboles |
|----------|----------|--------------|---------------|

21-What is an essential fertilizer in modern agriculture?

- | | | | |
|------------|--------------|------------|------------|
| 1. Apatite | 2. Phosphate | 3. Sulfate | 4. Sulfide |
|------------|--------------|------------|------------|

22-A is a volcanically active place at the Earth's surface directly above a mantle plume.

- | | | | |
|-------------|-------------|--------------------|----------|
| 1. plutonic | 2. hot spot | 3. subduction zone | 4. magma |
|-------------|-------------|--------------------|----------|

23-Which of the following processes may melt the asthenosphere?

1. Addition of water and decreasing temperature
2. Rising temperature and lowering of pressure
3. Lowering of temperature and increasing pressure
4. Addition of water and rising pressure

24-Basalt is a rock that of approximately equal amount of plagioclase feldspar and pyroxene.

- | | |
|--------------------------|---------------------------|
| 1. volcanic/equivalently | 2. acidic/commonly |
| 3. mafic/consists | 4. plateaus/mineralogical |

25-Cross-beddings are sedimentary structures which are formed by

- | | |
|------------------|--------------------------|
| 1. dried-up muds | 2. biochemical processes |
| 3. rock salts | 4. wind or water action |

26-Metamorphism is the solid-state of a rock mass into a rock of generally the same chemistry but with different

- | | |
|---|---|
| 1. parent rock/pressure and temperature | 2. melting/compositions |
| 3. subjected to shallow burial/structures | 4. transformation/textures and minerals |

27-Which of the following rocks are the most abundant sedimentary rocks?

- | | | | |
|----------|----------|--------------|--------------|
| 1. slate | 2. shale | 3. argillite | 4. limestone |
|----------|----------|--------------|--------------|

28-What is an example of physical weathering?

- | | | | |
|----------------|--------------|----------------|---------------|
| 1. dissolution | 2. oxidation | 3. exfoliation | 4. hydrolysis |
|----------------|--------------|----------------|---------------|

29-At a plate boundary, two lithospheric plates spread apart.

1. convergent
2. divergent
3. transform
4. subduction

30-Transform plate boundaries can occur in

1. oceans
2. continents
3. both oceans and continents
4. continental rifting

شماره سوال	پاسخ صحیح
1	ج
2	ب
3	ب
4	ج
5	الف
6	الف
7	د
8	ج
9	ج
10	د
11	الف
12	ج
13	ب
14	ب
15	الف
16	د
17	د
18	الف
19	الف
20	د
21	ب
22	ب
23	ب
24	الف
25	د
26	د
27	ب
28	ج
29	ب
30	ج

1-Petrology deals with:

1. The study of minerals and their classification
2. Science of the study of geological periods and the study of fossils
3. The deformation and movement of the Earth's crust
4. The study of origin, occurrence, structure and history of rocks

2-Oceanic crust is composed mostly of a dark, dense rock called ----- .

1. Granite
2. Nickel
3. Iron
4. Basalt

3-The upper part of the mantle consist of ----- .

1. Lithosphere and biosphere
2. Biosphere and hydrosphere
3. Lithosphere and asthenosphere
4. asthenosphere and hydrosphere

4-what is the composition of chert?

1. silica
2. carbon dioxide
3. plant remains
4. magnesium carbonate

5-Rusting is formed by the process of ----- .

1. hydrolysis
2. dissolution
3. abrasion
4. oxidation

6-The ----- of a rock refers to the size, shape, and arrangement of its mineral grains.

1. Extrusive rock
2. Plutonic
3. Volcanic glass
4. Texture

7-Igneous rocks are formed from ----- that has cooled and solidified.

1. limestone
2. Granite
3. porphyry
4. melted rock

8-All rocks change slowly from one of the three rock types to another. This continuous process is called ----- .

1. metamorphism
2. rock cycle
3. Foliated
4. solidify

9-Igneous rocks could change in to sediments by ----- .

1. lithification
2. solidification
3. melting
4. weathering

10-Dinosaurs became extinct 65 million years ago. This is a record of ----- .

1. Principle of superposition
2. Absolute age
3. Faunal succession
4. Relative age

- 11- ----- is the showing of equivalency of rocks that are geographically separated.
1. Widespread
 2. Flowering plants
 3. Correlation
 4. Primarily
- 12- The word Phanerozoic is from the Greek, meaning ----- .
1. Old life
 2. Visible life
 3. Middle life
 4. Recent life
- 13- What is hydrogeology?
1. The deformation and movement of the Earth's crust
 2. The hot ground water which rises to the surface
 3. The study of earthquakes and related phenomena
 4. Scientific study of water movements on and below the Earth's surface
- 14- Most of the water that evaporates from the oceans returns to them as ----- .
1. Runoff
 2. Infiltration
 3. Evaporation
 4. Precipitation
- 15- The ----- is the appearance of the light that is reflected from a mineral's surface.
1. Cleavage
 2. Hardness
 3. Streak
 4. Luster
- 16- ----- materials emit visible light when they are exposed to ultraviolet light.
1. Radioactivity
 2. Fluorescent
 3. Cleavage
 4. Phosphorescence
- 17- Each mineral group (except the native elements) is named for its ----- .
1. Silicates
 2. Cation
 3. Carbonates
 4. Anion
- 18- ----- consists mostly of feldspar and quartz but is very fine grained.
1. Basalt
 2. Granite
 3. Rhyolite
 4. Andesite
- 19- ----- is the plutonic equivalent of basalt?
1. Komatiite
 2. Olivine
 3. Gabbro
 4. Peridotites
- 20- ----- rocks make up only about 5 percent of the Earth's crust?
1. continental
 2. Magma
 3. Sedimentary
 4. deposit
- 21- ----- includes all rounded particles larger than 2 millimeters in diameter.
1. Gravel
 2. Mud
 3. Clay
 4. Sand ranges

22-Burial metamorphism change the shale and siltstone in to ----- .

- | | | | |
|--------------|-----------|--------------|----------|
| 1. Granulite | 2. Gneiss | 3. Argillite | 4. Slate |
|--------------|-----------|--------------|----------|

23-The ----- system is the Earth's longest mountain chain.

- | | |
|----------------------|------------------------|
| 1. mid-oceanic ridge | 2. continental rifting |
| 3. subduction zones | 4. basaltic magma |

24-Pyroclastic rock made up of material ejected ----- from a volcanic ven.

- | | | | |
|----------------|--------------|--------------|------------|
| 1. Explosively | 2. Exploding | 3. Explosion | 4. Explode |
|----------------|--------------|--------------|------------|

25-Island arcs are related to ----- .

- | | |
|-------------------------------|------------------------|
| 1. mid oceanic ridges | 2. subduction zones |
| 3. divergent plate boundaries | 4. lithospheric plates |

26-Deformation creates a banded structure called ----- .

- | | |
|------------------------|-------------------------|
| 1. Schist | 2. Contact metamorphism |
| 3. Burial metamorphism | 4. Foliation |

27-Which of the following rocks is felsic?

- | | | | |
|-----------|---------------|-----------|-------------|
| 1. gabbro | 2. peridotite | 3. basalt | 4. obsidian |
|-----------|---------------|-----------|-------------|

28-What is the essential fertilizer in modern agriculture?

- | | | | |
|------------|--------------|------------|------------|
| 1. apatite | 2. phosphate | 3. sulfate | 4. sulfide |
|------------|--------------|------------|------------|

29-What is the process by which water enters rock or small pore spaces between particles?

- | | | | |
|-----------------|----------------|----------------|----------------|
| 1. Infiltration | 2. Sublimation | 3. Water vapor | 4. evaporation |
|-----------------|----------------|----------------|----------------|

30-The Mesozoic Era is most famous for the ----- .

- | | |
|-----------------------|--------------|
| 1. Ammonoids | 2. Dinosaurs |
| 3. Microscopic plants | 4. Grasses |

1-What is the composition of continents?

- | | | | |
|-----------|------------|----------------|----------|
| 1. basalt | 2. granite | 3. lithosphere | 4. rocks |
|-----------|------------|----------------|----------|

2-Only a small portion of the surface of the earth has been ----- explored.

- | | | | |
|---------------|-------------|-----------------|---------------|
| 1. geologists | 2. geologic | 3. geologically | 4. geological |
|---------------|-------------|-----------------|---------------|

3-The ----- is the outermost and thinnest layer.

- | | | | |
|----------|-----------|---------|------------------|
| 1. crust | 2. mantle | 3. core | 4. asthenosphere |
|----------|-----------|---------|------------------|

4-When magma cools slowly, crystals grow from the ----- liquid.

- | | | | |
|----------|--------------|------------|-----------|
| 1. magma | 2. intrusive | 3. cooling | 4. molten |
|----------|--------------|------------|-----------|

5-When a rock is buried, ----- .

- | | |
|-------------------------------|---|
| 1. metamorphosed into schist. | 2. its temperature and pressure increase. |
| 3. it becomes sandstone. | 4. the limestone formed in the sea. |

6-The three rock groups are igneous, -----, and metamorphic rocks.

- | | | | |
|--------------|-------------|------------------|----------------|
| 1. extrusive | 2. porphyry | 3. unconsolidate | 4. sedimentary |
|--------------|-------------|------------------|----------------|

7-The main units of paleozoic are ----- for long distances.

- | | | | |
|-----------------|----------------|----------------|-----------------|
| 1. correlatable | 2. correlating | 3. correlation | 4. correlations |
|-----------------|----------------|----------------|-----------------|

8-The principle of ----- states that sedimentary rocks become younger from bottom to top.

- | | |
|-------------------------------|----------------------|
| 1. original horizontality | 2. superposition |
| 3. crosscutting relationships | 4. faunal succession |

9----- is the study of fossils.

- | | | | |
|--------------|-----------------|------------------|---------------|
| 1. Petrology | 2. Hydrogeology | 3. Palaeontology | 4. Seismology |
|--------------|-----------------|------------------|---------------|

10-What is named the transformation from a solid directly into a gas?

- | | | | |
|----------------|------------------|----------------|-----------------|
| 1. sublimation | 2. precipitation | 3. evaporation | 4. infiltration |
|----------------|------------------|----------------|-----------------|

11-The equivalent name for shiny luster is -----.

- | | | | |
|-------------|---------|-------------|-----------|
| 1. metallic | 2. dull | 3. vitreous | 4. glassy |
|-------------|---------|-------------|-----------|

12----- is the shape in which the individual crystals grow.

- | | | | |
|-------------|-----------------|-------------|------------|
| 1. Cleavage | 2. Crystal form | 3. Hardness | 4. Density |
|-------------|-----------------|-------------|------------|

- 13- **Chemical composition and ----- structure are the two most important properties of a mineral.**
1. crystalline
 2. cleavage
 3. correlate
 4. texture
- 14- **Basalt plateaus are found on ----- .**
1. continents
 2. oceans
 3. lithosphere
 4. asthenosphere
- 15- **----- are formed from the crystallization and solidification of magma.**
1. Metamorphic rocks
 2. Igneous rocks
 3. Sedimentary rock
 4. Carbonate rocks
- 16- **Several ----- environments have been suggested for the formations in Zagros.**
1. deposit
 2. deposition
 3. depositional
 4. depositionally
- 17- **In -----, the largest grains collect at the bottom of a layer and the grain size decreases toward the top.**
1. graded bedding
 2. ripple mark
 3. mud crack
 4. cross-bedding
- 18- **Which of the following rocks are biochemical?**
1. shale
 2. breccia
 3. limestone
 4. siltstone
- 19- **Deformation creates a banded structure called -----.**
1. gradient
 2. facies
 3. argillite
 4. foliation
- 20- **Which of the following types of metamorphism occur in or near mountain building regions?**
1. dynamothermal metamorphism
 2. burial metamorphism
 3. contact metamorphism
 4. low grade metamorphism
- 21- **Metamorphic rocks result from the ----- active during plate tectonic processes.**
1. forces
 2. faulting
 3. collision
 4. deform
- 22- **Which of the following processes cause the exfoliation?**
1. sheet joints
 2. abrasion
 3. frost wedging
 4. pressure-release fracturing
- 23- **Weathering and ----- of continents carry mud, sand, and salts to the sea.**
1. evaporation
 2. condensation
 3. erosion
 4. runoff

24-The combined O and A horizons are called ----- .

- | | |
|----------------|-------------------------|
| 1. topsoil | 2. subsoil |
| 3. parent rock | 4. zone of accumulation |

25-Island arcs are related to ----- .

- | | |
|-------------------------------|------------------------|
| 1. mid oceanic ridges | 2. subduction zones |
| 3. divergent plate boundaries | 4. lithospheric plates |

26-At a ----- plate boundary, two lithospheric plates move toward each other.

- | | | | |
|--------------|---------------|--------------|--------------|
| 1. divergent | 2. convergent | 3. transform | 4. spreading |
|--------------|---------------|--------------|--------------|

27-A plate is a segment of the ----- ; thus, it includes the uppermost mantle and all of the overlying crust.

- | | | | |
|-------------|--------------|------------|----------------|
| 1. interior | 2. continent | 3. oceanic | 4. lithosphere |
|-------------|--------------|------------|----------------|

28-What is formed when stalactites and stalagmites join into one structure?

- | | |
|-------------|---------------------|
| 1. column | 2. karst topography |
| 3. sinkhole | 4. cavern |

29-The process of percolation is called ----- .

- | | | | |
|-----------------|-------------|---------------|---------------|
| 1. infiltration | 2. porosity | 3. subsidence | 4. saturation |
|-----------------|-------------|---------------|---------------|

30-What is named the proportion of rock or soil that consists of open space?

- | | | | |
|------------|---------------|-----------------|-------------|
| 1. aquifer | 2. saturation | 3. permeability | 4. porosity |
|------------|---------------|-----------------|-------------|

شماره سوال	پاسخ صحیح
1	ب
2	ج
3	الف
4	د
5	ب
6	د
7	الف
8	ب
9	الف، ب، ج، د
10	الف
11	الف
12	ب
13	الف
14	الف، ب، ج، د
15	ب
16	ج
17	الف
18	ج
19	د
20	الف
21	الف
22	د
23	ج
24	الف
25	ب
26	ب
27	د
28	الف
29	الف
30	ج

1-Petrology deals with:

1. The study of minerals and their classification
2. Science of the study of geological periods and the study of fossils
3. The deformation and movement of the Earth's crust
4. The study of origin, occurrence, structure and history of rocks

2-Oceanic crust is composed mostly of a dark, dense rock called ----- .

1. Granite
2. Nickel
3. Iron
4. Basalt

3-The upper part of the mantle consist of ----- .

1. Lithosphere and biosphere
2. Biosphere and hydrosphere
3. Lithosphere and asthenosphere
4. asthenosphere and hydrosphere

4-what is the composition of chert?

1. silica
2. carbon dioxide
3. plant remains
4. magnesium carbonate

5-Rusting is formed by the process of ----- .

1. hydrolysis
2. dissolution
3. abrasion
4. oxidation

6-The ----- of a rock refers to the size, shape, and arrangement of its mineral grains.

1. Extrusive rock
2. Plutonic
3. Volcanic glass
4. Texture

7-Igneous rocks are formed from ----- that has cooled and solidified.

1. limestone
2. Granite
3. porphyry
4. melted rock

8-All rocks change slowly from one of the three rock types to another. This continuous process is called ----- .

1. metamorphism
2. rock cycle
3. Foliated
4. solidify

9-Igneous rocks could change in to sediments by ----- .

1. lithification
2. solidification
3. melting
4. weathering

10-Dinosaurs became extinct 65 million years ago. This is a record of ----- .

1. Principle of superposition
2. Absolute age
3. Faunal succession
4. Relative age

- 11- ----- is the showing of equivalency of rocks that are geographically separated.
1. Widespread
 2. Flowering plants
 3. Correlation
 4. Primarily
- 12- The word Phanerozoic is from the Greek, meaning ----- .
1. Old life
 2. Visible life
 3. Middle life
 4. Recent life
- 13- The Mesozoic Era is most famous for the ----- .
1. Ammonoids
 2. Dinosaurs
 3. Microscopic plants
 4. Grasses
- 14- What is hydrogeology?
1. The deformation and movement of the Earth's crust
 2. The hot ground water which rises to the surface
 3. The study of earthquakes and related phenomena
 4. Scientific study of water movements on and below the Earth's surface
- 15- Most of the water that evaporates from the oceans returns to them as ----- .
1. Runoff
 2. Infiltration
 3. Evaporation
 4. Precipitation
- 16- What is the process by which water enters rock or small pore spaces between particles?
1. Infiltration
 2. Sublimation
 3. Water vapor
 4. evaporation
- 17- The ----- is the appearance of the light that is reflected from a mineral's surface.
1. Cleavage
 2. Hardness
 3. Streak
 4. Luster
- 18- ----- materials emit visible light when they are exposed to ultraviolet light.
1. Radioactivity
 2. Fluorescent
 3. Cleavage
 4. Phosphorescence
- 19- Each mineral group (except the native elements) is named for its ----- .
1. Silicates
 2. Cation
 3. Carbonates
 4. Anion
- 20- What is the essential fertilizer in modern agriculture?
1. apatite
 2. phosphate
 3. sulfate
 4. sulfide
- 21- ----- consists mostly of feldspar and quartz but is very fine grained.
1. Basalt
 2. Granite
 3. Rhyolite
 4. Andesite

22- ----- is the plutonic equivalent of basalt?

- 1. Komatiite
- 2. Olivine
- 3. Gabbro
- 4. Peridotites

23- Which of the following rocks is felsic?

- 1. gabbro
- 2. peridotite
- 3. basalt
- 4. obsidian

24- ----- rocks make up only about 5 percent of the Earth's crust?

- 1. continental
- 2. Magma
- 3. Sedimentary
- 4. deposit

25- ----- includes all rounded particles larger than 2 millimeters in diameter.

- 1. Gravel
- 2. Mud
- 3. Clay
- 4. Sand ranges

26- Deformation creates a banded structure called ----- .

- 1. Schist
- 2. Contact metamorphism
- 3. Burial metamorphism
- 4. Foliation

27- Burial metamorphism change the shale and siltstone in to ----- .

- 1. Granulite
- 2. Gneiss
- 3. Argillite
- 4. Slate

28- The ----- system is the Earth's longest mountain chain.

- 1. mid-oceanic ridge
- 2. continental rifting
- 3. subduction zones
- 4. basaltic magma

29- Island arcs are related to ----- .

- 1. mid oceanic ridges
- 2. subduction zones
- 3. divergent plate boundaries
- 4. lithospheric plates

30- Pyroclastic rock made up of material ejected ----- from a volcanic vent.

- 1. Explosively
- 2. Exploding
- 3. Explosion
- 4. Explode

شماره سوال	پاسخ صحیح
1	د
2	د
3	ج
4	الف
5	د
6	د
7	د
8	ب
9	د
10	ب
11	ج
12	ب
13	ب
14	د
15	د
16	الف
17	د
18	ب
19	د
20	ب
21	ج
22	ج
23	د
24	ج
25	الف
26	د
27	ج
28	الف
29	ب
30	الف

1- ----- work to understand the history of our planet .

- | | | | |
|---------------|-------------|------------|---------------|
| 1. Geological | 2. Geologic | 3. Geology | 4. Geologists |
|---------------|-------------|------------|---------------|

2-The ----- is the innermost of the Earth's layers.

- | | | | |
|----------|---------|----------------|-----------|
| 1. Crust | 2. Core | 3. Lithosphere | 4. Mantle |
|----------|---------|----------------|-----------|

3-Igneous rocks could change in to sediments by

- | | | | |
|------------------|------------|-------------------|---------------|
| 1. lithification | 2. melting | 3. solidification | 4. weathering |
|------------------|------------|-------------------|---------------|

4-The process of ----- melts the rocks.

- | | | | |
|-------------------|---------------|-------------|-----------------|
| 1. solidification | 2. rock cycle | 3. foliated | 4. metamorphism |
|-------------------|---------------|-------------|-----------------|

5-Weathering may reduce a metamorphic rock to ----- .

- | | | | |
|-------------|------------------|-----------|---------------|
| 1. sediment | 2. igneous rocks | 3. schist | 4. rock cycle |
|-------------|------------------|-----------|---------------|

6-Common rocks include sandstone, limestone, and shale.

- | | | | |
|-------------|--------------|----------------|----------|
| 1. plutonic | 2. extrusive | 3. sedimentary | 4. magma |
|-------------|--------------|----------------|----------|

7-What is the synonym of the word "diversity"?

- | | | | |
|------------|-----------|----------|-----------|
| 1. Variety | 2. Useful | 3. Limit | 4. Before |
|------------|-----------|----------|-----------|

8----- concern the actual age of a rock or mineral.

- | | |
|----------------------|------------------|
| 1. Layered sequences | 2. Superposition |
| 3. Absolute age | 4. Relative age |

9-Layers of sedimentary rocks are ----- if they were deposited without interruption.

- | | | | |
|-------------|----------------|----------|--------------|
| 1. foliated | 2. conformable | 3. index | 4. inclusion |
|-------------|----------------|----------|--------------|

10-The ocean loses water by ----- .

- | | | | |
|------------------|----------------|-----------------|-----------|
| 1. precipitation | 2. evaporation | 3. infiltration | 4. runoff |
|------------------|----------------|-----------------|-----------|

11----- is the scientific study of water movements on and below the Earth's surface.

- | | | | |
|--------------|-----------------|---------------|-----------------|
| 1. Petrology | 2. Stratigraphy | 3. Mineralogy | 4. Hydrogeology |
|--------------|-----------------|---------------|-----------------|

12-What is named the tendency of some minerals to break along flat surfaces?

- | | | | |
|-------------|-------------|------------------|-------------|
| 1. Fracture | 2. Cleavage | 3. Crystal shape | 4. Hardness |
|-------------|-------------|------------------|-------------|

13----- is the property of a mineral which depends on the atomic weight.

- | | | | |
|------------|----------|-------------|--------------|
| 1. Density | 2. Color | 3. Fracture | 4. Magnetism |
|------------|----------|-------------|--------------|

- 14- ----- is the color of a fine powder of a mineral.
1. Gravity
 2. Hardness
 3. Streak
 4. Luster
- 15- Which of the following minerals form by evaporation of seawater or salty lake water?
1. Calcite
 2. Dolomite
 3. Gypsum
 4. Phosphates
- 16- Minerals have a ----- structure.
1. habit
 2. plaster
 3. crystalline
 4. dull
- 17- Basalt plateaus are found on ----- .
1. continents
 2. oceans
 3. lithosphere
 4. oceanic crust
- 18- Andean ----- is well developed in two regions.
1. magmatism
 2. magmatic
 3. magma
 4. magmatically
- 19- A ----- represents magma extruded at the Earth's surface
1. hot spot
 2. lava
 3. plume
 4. felsic
- 20- Which of the following rocks are biochemical?
1. Shale
 2. Breccia
 3. Limestone
 4. Siltstone
- 21- The rivers carry and ----- sands and gravels in their beds.
1. angular
 2. lagoon
 3. clast
 4. deposit
- 22- ----- is formed by deformation.
1. parent rock
 2. foliation
 3. protolith
 4. grade
- 23- Burial metamorphism changes the shale and siltstone in to ----- .
1. schist
 2. slate
 3. argillite
 4. gneiss
- 24- ----- occurs where hot magma intrudes cooler country rock.
1. Contact metamorphism
 2. Burial metamorphism
 3. Regional metamorphism
 4. Dynamic metamorphism
- 25- Rusting is formed by the process of ----- .
1. hydrolysis
 2. oxidation
 3. dissolution
 4. abrasion
- 26- The processes of ----- reduce mountains to hills, create canyons, valleys, and soils.
1. metamorphism
 2. erosion
 3. evaporation
 4. condensation

27-At a ----- plate boundary, also called a spreading center and a rift zone, two lithospheric plates spread apart.

- | | | | |
|---------------|--------------|--------------|-----------|
| 1. convergent | 2. divergent | 3. transform | 4. normal |
|---------------|--------------|--------------|-----------|

28-Magmatic arcs are related to ----- .

- | | | | |
|------------|-------------|---------------|---------|
| 1. topsoil | 2. faulting | 3. subduction | 4. rift |
|------------|-------------|---------------|---------|

29-What is named the proportion of rock or soil that consists of open space?

- | | | | |
|-----------------|-------------|------------|---------------|
| 1. Permeability | 2. Porosity | 3. Aquifer | 4. Saturation |
|-----------------|-------------|------------|---------------|

30-The equivalent name for shiny luster is ----- .

- | | | | |
|-------------|---------|-------------|-----------|
| 1. metallic | 2. dull | 3. vitreous | 4. glassy |
|-------------|---------|-------------|-----------|

نمبر رد سوال	ياستخ صحيح
1	د
2	ب
3	د
4	د
5	الف
6	ج
7	الف
8	ج
9	ب
10	ب
11	د
12	ب
13	الف
14	ج
15	ج
16	ج
17	الف
18	الف
19	ب
20	ج
21	د
22	ب
23	ج
24	الف
25	ب
26	ب
27	ب
28	ج
29	ب
30	الف

1-What is geology?

1. geology is the study of the Earth.
2. geology is the study of the Moon.
3. geology is the study of the Sea.
4. geology is the study of the element.

2-What is seismology?

1. study of groundwater.
2. study of minerals and their classification.
3. study of earthquakes and related phenomena.
4. study of origin and structure of rocks.

3-Which rock is equivalent of Basalt?

1. diorite
2. gabbro
3. granite
4. andesite

4-What are the common sedimentary rocks?

1. dolomite, calcite and gypsum
2. sandstone, limestone and shale
3. schist, marble and gneiss
4. granite, basalt and andesite

5-What is age in years?

1. absolute age
2. relative age
3. radioactive dating
4. geology age

6-What are important tools in time correlation?

1. fossils and geologic column
2. key beds and geologic column
3. Index fossils and key beds
4. successive beds and index fossils

7-What is called water below the surface in soil layers and gaps?

1. run off
2. sea water
3. ground water
4. infiltration

8-What is the science that deals with subsurface water?

1. mineralogy
2. hydrogeology
3. historical geology
4. paleontology

9-What is the softest minerals?

1. talc
2. diamond
3. gypsum
4. topaz

10-What is called the pattern in which a mineral breaks?

1. specific gravity
2. cleavage
3. crystal form
4. fracture

- 11-Which of the following mineral groups are combined oxygen with one or more metals?**
1. oxides
 2. native elements
 3. sulfides
 4. anions
- 12-In the framework silicates, each shares all four of its oxygen with adjacent unit.**
1. micas
 2. plate-shaped crystals
 3. olivine
 4. tetrahedron
- 13-what is magma?**
1. magma is a hot silicate liquid.
 2. magma is a hot silicate solid.
 3. magma is a hot non silicate liquid.
 4. magma is a hot non silicate solid.
- 14-What is a volcanically active place at the earth's surface directly above a mantle plume?**
1. magma
 2. hot spot
 3. lava
 4. mantle
- 15-what is the composition of mud?**
1. wet silt and sand
 2. wet sand and clay
 3. wet gravel and breccia
 4. wet silt and clay
- 16-Which of the following rock form by lithification of the remains of animals?**
1. chert
 2. sandstone
 3. shale
 4. conglomerate
- 17- Which of the following structures consists of small beds lying at an angle to the main sedimentary layering?**
1. ripple mark
 2. cross-bedding
 3. graded bedding
 4. mud crack
- 18-Which of the following rocks are the most abundant sedimentary rocks?**
1. limestone
 2. argillite
 3. shale
 4. slate
- 19-What is a metamorphic grade?**
1. temperature and depth at which rock formed.
 2. pressure and depth at which rock formed.
 3. location and temperature at which rock formed.
 4. temperature and pressure at which rock formed.
- 20-What is called a banded structure which is created by deformation?**
1. parent rock
 2. migmatite
 3. foliation
 4. Protolith

21-Which of the following zones are called the uppermost layer of a typical mature soil?

1. O horizon
2. A horizon
3. B horizon
4. C horizon

22-Which of the following processes are the most important processes of chemical weathering?

1. dissolution, hydrolysis and oxidation
2. abrasion, organic activity and hydrolysis
3. pressure - release fracturing and frost wedging
4. thermal expansion and contraction

23-Which of the following horizons consist of partially weathered rock?

1. O horizon
2. A horizon
3. B horizon
4. C horizon

24-Where are found the oceanic trenches?

1. at the mid oceanic ridge
2. at the subduction zones
3. at the transform boundaries
4. at the divergent plate boundaries

25-How much of the asthenosphere is melted?

1. 1-2 percent
2. 10-20 percent
3. 8-11 percent
4. 1-16 percent

26-What is formed when you dig below the water table into the zone of saturation.

1. spring
2. geyser
3. cave
4. well

27-What is named the ability of rock or soil to transmit water or any other fluid?

1. aquifer
2. saturation
3. porosity
4. permeability

28-What is formed when stalactites and stalagmites join in to one structure?

1. column
2. karst topography
3. sinkhole
4. cavern

29-What is named the proportion of rock or soil that consists of open space?

1. Aquifer
2. Saturation
3. Porosity
4. Permeability

30-Where do external processes occur?

1. Earth's surface
2. Earth's biosphere
3. Earth's atmosphere
4. Earth's mantle

شماره سوال	پاسخ صحیح
1	الف
2	ج
3	ب
4	ب
5	الف
6	ج
7	ج
8	ب
9	الف
10	د
11	الف
12	د
13	الف
14	ب
15	د
16	الف
17	ب
18	ج
19	د
20	ج
21	الف
22	الف
23	د
24	ب
25	الف
26	د
27	د
28	الف
29	ج
30	الف

1-Palaeontology is the science of the history of the

- | | | | |
|----------|--------------------|------------|---------------|
| 1. Earth | 2. Water resources | 3. Climate | 4. Earthquake |
|----------|--------------------|------------|---------------|

2-The appearance of the light that is reflected from a mineral's surface is called:

- | | | | |
|-------------|-----------|-----------|-------------|
| 1. Cleavage | 2. Luster | 3. Streak | 4. Hardness |
|-------------|-----------|-----------|-------------|

3-The sedimentary rock which is very soft and its minerals are clay is called

- | | | | |
|------------|-----------|----------|--------------|
| 1. granite | 2. basalt | 3. shale | 4. sandstone |
|------------|-----------|----------|--------------|

4-Scientists generally agree that the Earth formed by:

1. Accretion of small particles
2. Thin zones near the surface
3. Resources and technological world
4. Roots penetrating at most a few meter into rocks

5-Processes that originate in the Earth's interior are called:

- | | |
|-----------------------|----------------------|
| 1. Internal processes | 2. Asthenosphere |
| 3. Core | 4. Surface processes |

6-No rock is permanent over geologic time and all rocks are continually changing. This means that they are within a:

- | | |
|--|---------------------|
| 1. Stable shape | 2. solidified phase |
| 3. Principle of original horizontality | 4. Rock cycle |

7-Which of the following word has the same meaning as "compact"?

- | | | | |
|----------|-------------|-------------|----------|
| 1. Loose | 2. Condense | 3. Separate | 4. Vapor |
|----------|-------------|-------------|----------|

8-Dinosaurs became extinct 65 million years ago. This is a record of:

- | | |
|-------------------------------|-----------------|
| 1. Principle of superposition | 2. Relative age |
| 3. Faunal succession | 4. Absolute age |

9-If tectonic activity tilted older sedimentary rock layers before younger sediments accumulated, it results in:

- | | |
|-------------------------|------------------|
| 1. Angular unconformity | 2. Index fossil |
| 3. Invertebrates | 4. Paleozoic Era |

- 10-When magma, usually at depths of thousands of feet, a coarse-grained intrusive rock forms.
1. Grows and cools rapidly
 2. originates respectively
 3. melts and erupts at surface
 4. cools slowly
- 11-The process of metamorphism does not melt the rocks, but them into denser, more compact rock.
1. foliated and cement
 2. solid-state deformation
 3. Instead transform
 4. create and appearance
- 12-Mohs scale measures which of the following properties of minerals?
1. Hardness
 2. Streak
 3. Luster
 4. Color
- 13-The word Phanerozoic is from Greek, meaning “.....”.
1. Eon and Era
 2. Archean time
 3. Visible life
 4. Old life
- 14-Weathering may reduce a metamorphic rock to
1. intrusive
 2. rock cycle
 3. sediment
 4. magmatic
- 15-Correlation in geology means:
1. variable
 2. diversity
 3. change in age and rock properties from different locations.
 4. showing of the age equivalent of rock from different locations.
- 16-Groundwater follows often following fractures and conduits in circulation path.
1. Aquifer and distribution
 2. pressure gradients
 3. vapor condenses
 4. hydrogeology and external
- 17-The ocean loses water at the surface by
1. precipitation
 2. infiltration
 3. evaporation
 4. pore space
- 18-Magma usually toward the Earth’s surface because it is of lower density than rocks that surround it.
1. classification
 2. textures
 3. mixture
 4. rises

19-..... is a type of sandstone that consists of more than 15 percent silt-sized or clay-sized (finer-grained) material.

- | | | | |
|---------|--------------|-----------------|--------------|
| 1. coal | 2. greywacke | 3. conglomerate | 4. limestone |
|---------|--------------|-----------------|--------------|

20-Angular is the synonym of

- | | | | |
|----------------|------------|-----------|----------------|
| 1. not rounded | 2. rounded | 3. sphere | 4. very smooth |
|----------------|------------|-----------|----------------|

21-Rusting is formed by the process of

- | | | | |
|---------------|-------------|----------------|--------------|
| 1. hydrolysis | 2. abrasion | 3. dissolution | 4. oxidation |
|---------------|-------------|----------------|--------------|

22-It is a type of weathering and occurs when air and water chemically react with a rock.

- | | |
|------------------------|------------------------|
| 1. chemical weathering | 2. Physical weathering |
| 3. Thermal expansion | 4. burrowing |

23-Unloading is a type of physical weathering in which rocks gives to:

- | | |
|-------------------------------|------------------|
| 1. pressure-release fractures | 2. frost wedging |
| 3. hydrolysis | 4. Dissolution |

24-Erodible, means

- | | |
|--------------------------|-------------------------------|
| 1. to wear away the land | 2. causing erosion |
| 3. able to be worn away | 4. The degree of being eroded |

25-laterites are highly leached soils in tropical regions. They form by

- | | |
|----------------|------------------------|
| 1. evaporation | 2. capillary action |
| 3. Pedocals | 4. chemical weathering |

26-The rate at which temperature increases with depth is called the

- | | |
|------------------------|-----------------------|
| 1. argillite | 2. metamorphic facies |
| 3. geothermal gradient | 4. protolith |

27-Burial metamorphism mainly occurs in

1. surface of the earth
2. very shallow depth
3. in contact with hot magma
4. deep and underground in sedimentary basins

28- Weathering decomposes bedrocks. Decomposes means

- | | |
|---------------------------------|------------------------------|
| 1. changes into loose sediments | 2. built into large blocks |
| 3. transporting sediment | 4. cement sediments together |

29- Magnetite, a naturally magnetic iron oxide, is an iron ore. What is the antonym of naturally?

- | | | | |
|---------------|--------------|--------------|------------|
| 1. Artificial | 2. Different | 3. Important | 4. Complex |
|---------------|--------------|--------------|------------|

30- The study of rocks and minerals is a branch of science which is called:

- | | | | |
|-----------------|--------------|------------|----------|
| 1. Gastronomist | 2. Geologist | 3. Geology | 4. Geode |
|-----------------|--------------|------------|----------|

نمبر سوال	ياسخ صحيح
1	الف
2	ب
3	ج
4	الف
5	الف
6	الف
7	ب
8	د
9	الف
10	د
11	ج
12	الف
13	ج
14	ج
15	د
16	ب
17	ج
18	د
19	ب
20	الف
21	د
22	الف
23	الف
24	ج
25	د
26	ج
27	د
28	الف
29	الف
30	ج

1- External processes are all of those processes that form the

1. earth's surface
2. earth's biosphere
3. earth's atmosphere
4. earth's mantle

2-The atmosphere is a mixture of gases, mostly and oxygen.

1. hydrogen
2. carbon dioxide
3. nitrogen
4. ozone

3-Theis the innermost of the Earth's layers.

1. core
2. asthenosphere
3. mantle
4. lithosphere

4-Igneous rocks are formed fromthat has been cooled and solidified.

1. crystalline rocks
2. melted rock
3. compacted rocks
4. permanent rocks

5-What are the common sedimentary rocks?

1. dolomite, calcite and gypsum
2. sandstone, limestone and shale
3. schist, marble and gneiss
4. granite, basalt and andesite

6-Weathering may reduce a metamorphic rock to..... .

1. sediment
2. rock cycle
3. intrusive
4. magmatic

7-Geologists measure geological time by a simple principle called, means “which came first”.

1. absolute age
2. radioactive dating
3. relative age
4. hadean and archean age

8-Absolute age in geology is age in

1. relative processes that operate on the Earth.
2. geologic processes we see today and we apply them to the past.
3. which came first
4. years

9-Worldwide correlation of rocks of all ages has resulted in the

1. inclusion
2. paleontology
3. geologic column
4. field

- 10- Rocks that contain the same kinds of formed over the same range of geologic time.
1. minerals
 2. textures
 3. fossils
 4. composition
- 11- The word is from the Greek, meaning "visible life".
1. mesozoic
 2. cenozoic
 3. phanerozoic
 4. proterozoic
- 12- The science that deals with subsurface water is
1. mineralogy
 2. hydrogeology
 3. historical geology
 4. paleontology
- 13- Water on or beneath Earth's surface moves among the various reservoirs: the oceans, the atmosphere and the land in a
1. infiltration
 2. hydrologic cycle
 3. runoff
 4. precipitation
- 14- The ocean loses water at the surface by
1. precipitation
 2. infiltration
 3. evaporation
 4. pore space
- 15- What is called the distinctive quality of minerals that is determined by the Mohs scale?
1. hardness
 2. color
 3. streak
 4. luster
- 16- Cleavage is the of a mineral to break along preferred crystalline planes that are weakly bonded.
1. property
 2. tendency
 3. pattern
 4. fracture
- 17- What is the weight of a substance (mineral) relative to that of an equal volume of water?
1. cleavage
 2. specific gravity
 3. fracture
 4. luster
- 18- These are a large group of minerals in which oxygen is combined with one or more metals.
1. native elements
 2. sulfides
 3. anions
 4. oxides
- 19- In the framework silicate, each shares all four of its oxygen with adjacent.
1. micas
 2. plate-shaped crystals
 3. olivine
 4. tetrahedron
- 20- A is a volcanically active place at the earth's surface directly above a mantle plume.
1. magma
 2. basalt plateau
 3. tectonic plate
 4. hot spot

21-Conglomerates are sedimentary rocks.

1. fine-grained muddy
2. structural
3. chemical
4. coarse-grained clastic

22- consists of small beds lying at an angle to the main sedimentary layering.

1. Ripple mark
2. Cross-bedding
3. Graded bedding
4. Mud crack

23-What is called a banded structure which is created by deformation?

1. parent rock
2. migmatite
3. foliation
4. Protolith

24-Burial metamorphism mainly occurs in

1. surface of the earth
2. very shallow depth
3. contact with hot magma
4. deep and underground in sedimentary basins

25-The rate at which temperature increases with depth is called the

1. geothermal gradient
2. protolith
3. metamorphic facies
4. argillite

26-What are the most important processes of chemical weathering?

1. dissolution, hydrolysis and oxidation
2. abrasion, organic activity and hydrolysis
3. pressure - release fracturing and frost wedging
4. thermal expansion and contraction

27-What is called the uppermost layer of a typical mature soil?

1. O horizon
2. A horizon
3. B horizon
4. C horizon

28-When two plates converge, the denser plate enters beneath the lighter one and sinks into the

- 1. ocean
- 2. crust
- 3. mantle
- 4. core

29-What is called the ability of rock or soil to transmit water or any other fluid?

- 1. aquifer
- 2. saturation
- 3. porosity
- 4. permeability

30-If you dig below the water table into the zone of saturation, you have dug a

- 1. spring
- 2. geyser
- 3. cave
- 4. well

شماره سوال	پاسخ صحیح
۱	الف
۲	ج
۳	الف
۴	ب
۵	ب
۶	الف
۷	ج
۸	د
۹	ج
۱۰	ج
۱۱	ج
۱۲	ب
۱۳	ب
۱۴	ج
۱۵	الف
۱۶	ب
۱۷	ب
۱۸	د
۱۹	د
۲۰	د
۲۱	د
۲۲	ب
۲۳	ج
۲۴	د
۲۵	الف
۲۶	الف
۲۷	الف
۲۸	ج
۲۹	د
۳۰	د

1-What is the composition of the core?

- | | | | |
|-----------|-----------|------------|------------------|
| 1. Basalt | 2. Liquid | 3. Granite | 4. Nickel & Iron |
|-----------|-----------|------------|------------------|

2-.....work to understand the history of our planet.

- | | | | |
|---------------|-------------|-----------------|---------------|
| 1. Geologists | 2. Geologic | 3. Geologically | 4. Geological |
|---------------|-------------|-----------------|---------------|

3-Diorite is the equivalent of andesite.

- | | | | |
|-------------|-------------|---------------|-------------|
| 1. plutonic | 2. magmatic | 3. fine grain | 4. volcanic |
|-------------|-------------|---------------|-------------|

4-The intrusive equivalents of basalt is

- | | | | |
|------------|-------------|-----------|------------|
| 1. granite | 2. rhyolite | 3. gabbro | 4. diorite |
|------------|-------------|-----------|------------|

5-There are no marine in the rift valley of Africa.

- | | | | |
|----------------|--------------|------------------|------------------|
| 1. Sedimentary | 2. Sediments | 3. Sedimentology | 4. Sedimentation |
|----------------|--------------|------------------|------------------|

6-Ferns, & conebearing trees developed during:

- | | | | |
|--------------|-------------|-------------|----------------|
| 1. Paleozoic | 2. Mesozoic | 3. Cenozoic | 4. Proterozoic |
|--------------|-------------|-------------|----------------|

7-Absolute age in geology is age in

- 1. years
- 2. which came first
- 3. relative processes that operate on the Earth.
- 4. geologic processes we see today & we apply them to the past.

8-The word Mesozoic is from the Greek meaning

- | | | | |
|----------------|-----------------|-------------|----------------|
| 1. Recent life | 2. Visible life | 3. Old life | 4. Middle life |
|----------------|-----------------|-------------|----------------|

9-The word Phanerozoic is from the Greek meaning

- | | | | |
|-----------------|----------------|----------------|-------------|
| 1. Visible life | 2. Middle life | 3. Recent life | 4. Old life |
|-----------------|----------------|----------------|-------------|

10-The Ocean loses water by

- | | | | |
|-----------|-----------------|----------------|------------------|
| 1. runoff | 2. infiltration | 3. evaporation | 4. precipitation |
|-----------|-----------------|----------------|------------------|

11-The cycle begins with the evaporation of water.

- | | | | |
|---------|-------------------|--------------|--------------|
| 1. rock | 2. hydrogological | 3. lithology | 4. hydrology |
|---------|-------------------|--------------|--------------|

12-The equivalent name for shiny Luster is

- | | | | |
|-------------|-----------|---------|-------------|
| 1. vitreous | 2. glassy | 3. dull | 4. metallic |
|-------------|-----------|---------|-------------|

13-Hardness of a knife blade is about

- | | | | |
|------|------|------|-------|
| 1. 1 | 2. 7 | 3. 5 | 4. 10 |
|------|------|------|-------|

14-What dose make up the shells of many marine animals?

- | | | | |
|-------------|--------------|--------------|------------|
| 1. Dolomite | 2. Aragonite | 3. Dolostone | 4. Calcite |
|-------------|--------------|--------------|------------|

15-Minerals have a structure.

- | | | | |
|----------------|----------------|--------------------|--------------------|
| 1. crystalline | 2. crystallize | 3. crystallization | 4. crystallography |
|----------------|----------------|--------------------|--------------------|

16-Granite is called rock.

- | | | | |
|----------|-----------|---------------|-----------------|
| 1. mafic | 2. felsic | 3. ultramafic | 4. intermediate |
|----------|-----------|---------------|-----------------|

17-Basalt plateaus are found on

- | | | | |
|----------------|------------------|---------------|-----------|
| 1. lithosphere | 2. oceanic crust | 3. continents | 4. oceans |
|----------------|------------------|---------------|-----------|

18-The molten rock cools in chambers.

- | | | | |
|-------------|----------|-----------------|--------------|
| 1. magmatic | 2. magma | 3. magmatically | 4. magmatism |
|-------------|----------|-----------------|--------------|

19-What is the composition of chert?

- | | |
|-----------------------|-------------------------|
| 1. plant remains | 2. magnesium carbonates |
| 3. calcium carbonates | 4. silica |

20-Several environments have been suggested for the formations in Zagros.

- | | | | |
|-----------------|------------|---------------|-------------------|
| 1. Depositional | 2. Deposit | 3. Deposition | 4. Depositionally |
|-----------------|------------|---------------|-------------------|

21-Shale & siltstone become harder & better lithified to form

- | | | | |
|-------------|--------------|--------------|-----------|
| 1. hornfels | 2. argillite | 3. quartzite | 4. marble |
|-------------|--------------|--------------|-----------|

22-The hornfels is a hard,dark, rock.

- | | | | |
|-------------------|----------------|-----------------|------------------|
| 1. coarse grained | 2. fine graine | 3. fine grained | 4. coarse graine |
|-------------------|----------------|-----------------|------------------|

23-Gneiss is highly deformed & recrystallized rock.

- | | |
|-----------------|--------------------|
| 1. metamorphic | 2. metamorphically |
| 3. metamorphism | 4. metamorphite |

24-What is an example of mechanical weathering?

- | | | | |
|----------------|---------------|----------------|--------------|
| 1. exfoliation | 2. hydrolysis | 3. dissolution | 4. oxidation |
|----------------|---------------|----------------|--------------|

25- What is an example of chemical weathering?

- | | | | |
|----------------|-------------|----------------|---------------------|
| 1. exfoliation | 2. abrasion | 3. dissolution | 4. organic activity |
|----------------|-------------|----------------|---------------------|

26-Rusting is formed by the process of

- | | | | |
|----------------|-------------|---------------|--------------|
| 1. dissolution | 2. abrasion | 3. hydrolysis | 4. oxidation |
|----------------|-------------|---------------|--------------|

27-B horizon is the zone of

- | | | | |
|-------------|-----------------|---------------|--------------|
| 1. leaching | 2. accumulation | 3. hydrolysis | 4. oxidation |
|-------------|-----------------|---------------|--------------|

28-What is the east African rift?

- | | |
|-----------------------------|------------------------------|
| 1. Divergent plate boundary | 2. Convergent plate boundary |
| 3. Subduction zone | 4. Transform plate boundary |

29-Some ophiolites comprise of harzburgite.

- | | | | |
|--------------|-----------------|--------------|-------------|
| 1. tectonics | 2. tectonically | 3. tectonism | 4. tectonic |
|--------------|-----------------|--------------|-------------|

30-What is formed when stalactites & stalagmites join into one structure?

- | | |
|-------------|---------------------|
| 1. cavern | 2. column |
| 3. sinkhole | 4. karst topography |

شماره سوال	پاسخ صحیح
۱	د
۲	الف
۳	الف
۴	ج
۵	ب
۶	الف
۷	الف
۸	د
۹	الف
۱۰	ج
۱۱	ب
۱۲	د
۱۳	ج
۱۴	ب
۱۵	الف
۱۶	ب
۱۷	الف، ب، ج، د
۱۸	ب
۱۹	د
۲۰	الف
۲۱	ب
۲۲	ج
۲۳	الف، ب، ج، د
۲۴	الف
۲۵	ج
۲۶	د
۲۷	ب
۲۸	الف
۲۹	د
۳۰	ب

1- is the study of the Earth, including the material that it is made of, the physical and chemical changes that occur on its surface and in its interior, and the history of the planet and its life forms.

- | | |
|---------------|---------------------|
| 1. Seismology | 2. Economic geology |
| 3. Geology | 4. Ore deposits |

2-What is the mixture of gases, mostly nitrogen and oxygen that is held to the Earth by gravity and thins rapidly with altitude?

- | | | | |
|----------|---------------|----------|-------------|
| 1. Earth | 2. atmosphere | 3. crust | 4. minerals |
|----------|---------------|----------|-------------|

3-What is the most abundant constituent of the continental crust?

- | | | | |
|--------------|------------|-----------|----------------|
| 1. biosphere | 2. granite | 3. mantle | 4. hydrosphere |
|--------------|------------|-----------|----------------|

4- are formed from melted rock that has cooled and solidified.

- | | |
|----------------------|-------------------------|
| 1. Igneous rocks | 2. Sedimentary rocks |
| 3. Metamorphic rocks | 4. Coarse-grained rocks |

5-Nearly all magmas are magmas.

- | | | | |
|----------|-----------------|------------|-------------|
| 1. solid | 2. fine-grained | 3. texture | 4. silicate |
|----------|-----------------|------------|-------------|

6-An extrusive, or igneous rock forms when magma erupts and solidifies on the Earth's surface.

- | | | | |
|-------------|------------------|----------|-------------|
| 1. plutonic | 2. metamorphosed | 3. solid | 4. volcanic |
|-------------|------------------|----------|-------------|

7-Geologists measure geologic time in two different ways, relative age and

- | | | | |
|-----------------|---------------|---------------------|------------------|
| 1. absolute age | 2. time scale | 3. time correlation | 4. index fossils |
|-----------------|---------------|---------------------|------------------|

8-Geologists have divided Earth history into units displayed in the

- | | |
|------------------------|----------------------|
| 1. visible life | 2. index fossils |
| 3. geologic time scale | 4. faunal succession |

9-What is the scientific study of water movements on and below the Earth's surface?

- | | | | |
|-----------------|----------|-----------------|------------|
| 1. condensation | 2. joint | 3. hydrogeology | 4. aquifer |
|-----------------|----------|-----------------|------------|

10-What is named the transformation from a solid directly into a gas?

- | | | | |
|----------------|------------------|----------------|-----------------|
| 1. sublimation | 2. precipitation | 3. evaporation | 4. infiltration |
|----------------|------------------|----------------|-----------------|

- 11-What is the transfer of water from the atmosphere to land (rain, snow, hail, sleet and freezing rain are different types of it) ?
1. rock
 2. transport
 3. groundwater
 4. precipitation
- 12-What is a distinctive quality of minerals that is determined by the Mohs hardness scale?
1. radioactivity
 2. magnetism
 3. hardness
 4. streak
- 13-..... is the color of a fine powder of a mineral.
1. Streak
 2. luster
 3. Specific gravity
 4. Cleavage
- 14-It is clear that the of igneous rocks have crystallized out of a melt.
1. chemicals
 2. minerals
 3. crystal form
 4. hardness
- 15-The are a large group of minerals in which oxygen is combined with one or more metals.
1. sulfides
 2. oxides
 3. native elements
 4. pyroxene
- 16-Chemical composition and structure are the two most important properties of a mineral.
1. translucent
 2. hardness
 3. conchoidal
 4. crystalline
- 17-..... is a hot silicate liquid beneath the Earth's surface (at depth between 100 to 350 kilometers) containing crystals and dissolved gases.
1. Mantle
 2. Komatiite
 3. Magma
 4. Dunite
- 18-Volcanic rocks are usually, whereas plutonic rocks are medium or coarse grained.
1. igneous
 2. fine grained
 3. basalt
 4. porphyritic
- 19-In Australia, major..... activity occurred in the Cambrian-Ordovician.
1. magmatic
 2. phenocryst
 3. dunite
 4. felsic
- 20-Shales, conglomerate, breccia and sandstones are some types of
1. pyroclastic rocks
 2. metamorphic rocks
 3. igneous rocks
 4. sedimentary rocks
- 21-..... is an example of chemical sedimentary rock forms when salt precipitates from evaporating seawater or saline lake water.
1. Deposit
 2. Clast
 3. Chert
 4. Rock salt

22- The rivers carry and sands and gravels in their beds.

- 1. deposit
- 2. single
- 3. laminate
- 4. lagoon

23- The solid-state transformation (no melting) of a rock mass into a rock of generally the same chemistry but with different textures and minerals.

- 1. diagenesis
- 2. foliation
- 3. metamorphism
- 4. igneous process

24- What is the name of a hard, dark, fine grained rock usually formed by contact metamorphism of shale?

- 1. basalt
- 2. hornfels
- 3. metamorphic facies
- 4. country rock

25- is the movement of the particles by ice, wind, or water.

- 1. Bedrock
- 2. Humus
- 3. Erosion
- 4. Tectonic uplift

26- What is the name of the process by which rocks are broken down into smaller pieces by external conditions, such as the freezing of water in cracks in the rock.

- 1. mechanical weathering
- 2. abrasion
- 3. dissolution
- 4. intrusion

27- When two plates....., the denser plate enter beneath the lighter one and sinks into the mantle.

- 1. rise
- 2. spread
- 3. diverge
- 4. converge

28- forms where two plates slide horizontally past one another as they move in opposite directions.

- 1. Convergent plate boundary
- 2. Divergent plate boundary
- 3. Transform plate boundary
- 4. Plate tectonics

29- Most of the rain that falls on land seeps into soil and bedrock to become

- 1. well
- 2. ground water
- 3. fresh water
- 4. hot spring

30- The dissolution of calcite from limestone by slightly acidic groundwater results in the gradual widening of joint that may develop into openings, or

- 1. geyser
- 2. infiltration
- 3. permeability
- 4. caves

شماره سوال	پاسخ صحیح
1	ج
2	ب
3	ب
4	الف
5	د
6	د
7	الف
8	ج
9	ج
10	الف
11	د
12	ج
13	الف
14	ب
15	ب
16	د
17	ج
18	ب
19	الف
20	د
21	د
22	الف
23	ج
24	ب
25	ج
26	الف
27	د
28	ج
29	ب
30	د

1-What is economic geology?

1. The study of minerals and their classification
2. Science of the study of geological periods and the study of fossils
3. Understanding of ore deposits
4. Study of earthquakes and related phenomena

2-Rocks are composed of

1. Minerals
2. The earth
3. Granite
4. Solids

3-What is the composition of continent?

1. Basalt
2. Granite
3. Lithosphere
4. Rocks

4-Wind and water rocks down and carry bits of them away.

1. Change
2. Form
3. Wear
4. Make

5-Weathering may reduce a metamorphic rock to.....

1. Sediment
2. Igneous rock
3. Schist
4. Rock cycle

6-In a the sedimentary layers above and below the unconformity are parallel.

1. Unconformity
2. Disconformity
3. Angular unconformity
4. Nonconformity

7-A key bed is a thin..... sedimentary layer which occur over a wide area and is easily recognized.

1. Correlation
2. Widespread
3. Primarily
4. Flowering plants

8-.....concern the actual age of rock or mineral.

1. Layered sequences
2. Superposition
3. Absolute age
4. Relative age

9-.....is an area of geology that deals with the distribution and movement of groundwater in the soil and rocks of Earth's crust.

1. Hydrogeologist
2. Hydrogeologic
3. Hydrogeology
4. Hydrological cycle

- 10- The process by which water enters rock or soil through joints or small pore spaces between particles is called :
1. Precipitation
 2. Historical geology
 3. Infiltration
 4. Hydrology
- 11- What is named the transformation from solid directly into a gas?
1. Sublimation
 2. Precipitation
 3. Evaporation
 4. Infiltration
- 12- Another name for shiny luster is.....
1. Metallic
 2. Vitreous
 3. Dull
 4. Glassy
- 13- What is named the tendency of some minerals to break along flat surfaces?
1. Fracture
 2. Cleavage
 3. Crystal shape
 4. Hardness
- 14- Which of the following minerals form by evaporation of seawater or salty lake water?
1. Calcite
 2. Dolomite
 3. Gypsum
 4. Phosphates
- 15- are a large group of minerals in which oxygen is combined with one or more metals.
1. Sulfides
 2. Oxides
 3. Silicates
 4. Native minerals
- 16- What does make up the shells of many marine animals?
1. Calcite
 2. Dolomite
 3. Aragonite
 4. Dolomite
- 17- Which of the following rocks is felsic?
1. Granite
 2. Gabbro
 3. Peridotite
 4. Basalt
- 18- Granite contains mostly which of minerals?
1. Quartz and feldspar
 2. Pyroxene and feldspar
 3. Olivine and pyroxene
 4. Quartz and olivine
- 19- Basalt plateaus are found on
1. Continents
 2. Oceans
 3. Lithosphere
 4. Ocean crust
- 20- Conglomerates are sedimentary rocks.
1. Fine-grained muddy
 2. Structural
 3. Chemical
 4. Coarse-grained clastic

21-Insmall beds lying at an angle to the main sedimentary layering.

- | | | | |
|-----------------|-------------------|---------------|------------------|
| 1. Ripple marks | 2. Graded bedding | 3. Mud cracks | 4. Cross bedding |
|-----------------|-------------------|---------------|------------------|

22-Rubble is as the same size range as

- | | | | |
|-----------|---------|---------|--------|
| 1. gravel | 2. Sand | 3. Clay | 4. Mud |
|-----------|---------|---------|--------|

23-With rising temprature and continued deformation, schist change into..... .

- | | | | |
|------------|----------|--------------|-----------|
| 1. Phylite | 2. Slate | 3. Migmatite | 4. gneiss |
|------------|----------|--------------|-----------|

24-As region metamorphism begins, the clay minerals break down and are..... by mica and chlorite.

- | | | | |
|---------|-------------|--------------|-----------|
| 1. Grew | 2. Replaced | 3. Developed | 4. Formed |
|---------|-------------|--------------|-----------|

25-About 95 percent of the Earth's crust consists of igneous rock and igneous rock.

- | | | | |
|------------------|------------------|-------------------|-----------------|
| 1. Metamorphosed | 2. Metamorphical | 3. Metamorphicaly | 4. Metamorphism |
|------------------|------------------|-------------------|-----------------|

26-Which of the following horizons consist of partially weathered rock?

- | | | | |
|--------------|--------------|--------------|--------------|
| 1. A horizon | 2. O horizon | 3. C horizon | 4. B horizon |
|--------------|--------------|--------------|--------------|

27-Which of the following processes cause the exfoliation?

- | | |
|------------------|-------------------------------|
| 1. Sheet joints | 2. Abrasion |
| 3. Frost wedging | 4. Pressure- release fracture |

28-Many lakes in active or volcanic rigions are influenced by hydrothermal springs.

- | | | | |
|-------------|--------------|-----------------|--------------|
| 1. Tectonic | 2. Tectonics | 3. Tectonically | 4. Tectonite |
|-------------|--------------|-----------------|--------------|

29-Transform plate boundaries can occure in

- | | |
|-------------------------------|------------------------|
| 1. Oceans | 2. Continents |
| 3. Both oceans and continents | 4. Continental rifting |

30-What is named the proportion of rock or soil that consists of open space?

- | | | | |
|-----------------|-------------|------------|---------------|
| 1. Permeability | 2. Porosity | 3. Aquifer | 4. Saturation |
|-----------------|-------------|------------|---------------|

سؤالات	نمبر رد	ياشيخ صحيح
1	ج	
2	الف	
3	ب	
4	ج	
5	الف	
6	ب	
7	الف، ب، ج، د	
8	ج	
9	ج	
10	ج	
11	الف	
12	الف	
13	ب	
14	ج	
15	ب	
16	ج	
17	الف	
18	الف	
19	الف، ب، ج، د	
20	د	
21	الف، ب، ج، د	
22	الف	
23	د	
24	ب	
25	الف، ب، ج، د	
26	ج	
27	د	
28	ج	
29	ج	
30	ب	

1-What is a geyser?

1. Is hot ground water which rises to the surface
2. Is an explosive hot spring that periodically erupt extremely hot water and steam
3. Is vent from which steam and other gases escape
4. Is a body of rock that can provide economically significant quantities of water

2-What is the east African rift?

1. a convergent plate boundary
2. a transform plate boundary
3. a divergent plate boundary
4. a subduction zone

3-Which of the following zones are named the zone of accumulation?

1. A horizon
2. B horizon
3. C horizon
4. O horizon

4-With rising temperature and continued deformation, schist change in to..... .

1. phyllite
2. gneiss
3. slate
4. migmatite

5-Which of the following rocks are biochemical?

1. Limestone
2. Shale
3. Breccia
4. Siltstone

6-What is the composition of chert?

1. Calcium carbonate
2. Plant remains
3. Magnesium carbonate
4. Silica

7-Which of the following structures are like dunes?

1. graded beddings
2. Ripple marks
3. Cross beddings
4. Mud cracks

8-Which of the following rocks is mafic?

1. obsidian
2. gabbro
3. syenite
4. rhyolite

9-Which of the following minerals make up most of the mantle?

1. amphibole and feldspar
2. native Iron and Nickel
3. quartz and feldspar
4. olivine and pyroxene

- 10- The structures and compositions of silicate minerals are based on the silicate..... .
1. characteristics
 2. tetrahedron
 3. formula
 4. form
- 11- What does make up the shells of many marine animals?
1. aragonite
 2. calcite
 3. dolostone
 4. dolomite
- 12- What is an essential fertilizer in modern agriculture?
1. sulfate
 2. phosphate
 3. carbonate
 4. hydroxide
- 13- A small quantity of iron or titanium turns corundum into the
1. sapphire
 2. ruby
 3. glass
 4. spinel
- 14- What are the tendency of some minerals to break along flat surfaces?
1. fracture
 2. crystal shape
 3. cleavage
 4. hardness
- 15- materials emit visible light when they are exposed to ultraviolet light.
1. Radioactive
 2. Silicate
 3. Conchoidal
 4. Fluorescent
- 16- The equivalent name for shiny luster is
1. dul
 2. viterous
 3. metallic
 4. glassy
- 17- Geologist classify minerals according to their
1. cations
 2. anions
 3. oxides
 4. sufides
- 18- is a distinctive quality of minerals that is determined by the Mohs scale.
1. Streak
 2. Hardness
 3. luster
 4. Crystal form
- 19- The principle of states that sedimentary rocks become younger from bottom to top.
1. Superposition
 2. Original horizontality
 3. Faunal succession
 4. Absolute age
- 20- Common metamorphic rocks include schist, marble and
1. granite
 2. gneiss
 3. basalt
 4. gabbro
- 21- Igneous rocks cooled beneath the earth's surface are called
1. volcanic rocks
 2. intrusive rocks
 3. extrusive rocks
 4. metamorphic rocks

22-What is the process by which water enters rock or soil through joints or small pore spaces between particles?

- 1. infiltration
- 2. precipitation
- 3. evaporation
- 4. runoff

23-What is named the transformation from a solid directly into a gas?

- 1. sublimation
- 2. precipitation
- 3. evaporation
- 4. infiltration

24-Paleozoic is from the Greek, meaning:

- 1. middle life
- 2. old life
- 3. recent life
- 4. visible life

25-Igneous rocks could change in to..... by weathering.

- 1. sediments
- 2. solidification
- 3. melting
- 4. lithification

26-Andesite is the equivalent of diorite.

- 1. fine grain
- 2. volcanic
- 3. igneous rock
- 4. magmatic

27-Coal, petroleum, and natural gas are

- 1. mineral resources
- 2. minerals
- 3. rocks
- 4. fossil fuels

28-What is the composition of oceans?

- 1. rhyolite
- 2. granite
- 3. basalt
- 4. lithosphere

29-The includes water in streams, wetlands, lakes, and oceans.

- 1. biosphere
- 2. atmosphere
- 3. hydrosphere
- 4. lithosphere

30-What is the scientific study of sediments?

- 1. mineralogy
- 2. petrology
- 3. economic geology
- 4. sedimentology

شماره سوال	پاسخ صحیح
1	ب
2	ج
3	ب
4	ب
5	الف
6	د
7	ب
8	ب
9	د
10	ب
11	الف
12	ب
13	الف
14	ج
15	د
16	ج
17	ب
18	ب
19	الف
20	ب
21	ب
22	الف
23	الف
24	ب
25	الف
26	ب
27	د
28	ج
29	ج
30	د

1-Most of the Earth is composed of

- | | | | |
|----------|---------------|-------------------|----------------|
| 1. rocks | 2. accretions | 3. driving forces | 4. fertilizers |
|----------|---------------|-------------------|----------------|

2-The Crust is thepart of the Earth.

- | | | | |
|--------------|------------|-------------|----------|
| 1. outermost | 2. differs | 3. particle | 4. gases |
|--------------|------------|-------------|----------|

3-The.....of a rock refers to the size, shape, and arrangement of its mineral grains, or crystals.

- | | | | |
|--------------|------------|--------------|-----------------|
| 1. extrusive | 2. texture | 3. intrusive | 4. coarse grain |
|--------------|------------|--------------|-----------------|

4-All rocks cahnge slowly from one of three types to another. This is called..... .

- | | | | |
|---------------|--------------|--------------|-----------------|
| 1. rock cycle | 2. magmatism | 3. permanent | 4. accumulation |
|---------------|--------------|--------------|-----------------|

5-The principle of superposition states that..... .

1. sedimentary rocks become younger from bottom to top.
2. the present is the key to the past.
3. sedimentary rocks formed as nearly horizontal layers.
4. fossil species succeed one another in undisturbed rocks in a definite and recognizable order around the world.

6-Correlation is the showing ofof rocks that are geographically separated.

- | | | | |
|----------------|--------------|------------|---------------|
| 1. equivalency | 2. different | 3. radidly | 4. restricted |
|----------------|--------------|------------|---------------|

7-The release of water vapor from plants is named..... .

- | | | | |
|-----------------|----------------|------------------|----------------|
| 1. infiltration | 2. sublimation | 3. transpiration | 4. evaporation |
|-----------------|----------------|------------------|----------------|

8-Water below the surface and its location in different soil layers and gaps is named.....

..... .

- | | | | |
|-----------------|-----------------|------------------|-----------|
| 1. ground water | 2. condensation | 3. transpiration | 4. runoff |
|-----------------|-----------------|------------------|-----------|

9-What is the synonym of the word "glassy"?

- | | | | |
|---------|-------------|---------|----------|
| 1. matt | 2. vitreous | 3. dull | 4. shiny |
|---------|-------------|---------|----------|

10-The appearence of the light that is reflected from a mineral surface is called..... .

- | | | | |
|-----------|-------------|-------------|-------------|
| 1. luster | 2. fracture | 3. hardness | 4. cleavage |
|-----------|-------------|-------------|-------------|

- 11- **What is the meaning of "Mineralization"?**
1. pertaining to mineralogy
 2. of the study of minerals, of mineralogy
 3. A geologist whose field of study is mineralogy
 4. transformation into mineral form
- 12- **Native iron and nickel are thought to comprise most of the Earth's**
1. rocks
 2. core
 3. minerals
 4. fertilizers
- 13- **The weight of a substance relative to that of an equalvolume of water is called.....**
1. isometric
 2. dispersion
 3. specific gravity
 4. opaque
- 14- **A hot spot is a active place at the Earth's surface directly above a mantle plume.**
1. volcanism
 2. volcano
 3. volcanically
 4. volcanic
- 15- **Diorite is the plutonic of andesite.**
1. equivalent
 2. volcanism
 3. mineralization
 4. magmatism
- 16- **Organic sedimentary rocks, such as chert and coal, form by of the remains of plants and animals.**
1. mineralization
 2. composition
 3. solidification
 4. lithification
- 17- **Studies of fossils and of the order of sedimentary layers led to the principles of fossil succession.**
1. deposit
 2. depositionally
 3. depositional
 4. deposition
- 18- **What is the synonym of the word "perpendicular"?**
1. horizontal
 2. vertical
 3. abundant
 4. passive
- 19- **Gneiss is a highly deformed and recrystallized rock.**
1. metamorphically
 2. metamorphism
 3. metamorphic
 4. metamorphite
- 20- **..... is the movement of the particles by ice, wind, or water.**
1. Erosion
 2. Alteration
 3. Erosive
 4. Sedimentation

21-Laterites are highly leached, soils that form in tropical regions.

- | | | | |
|-------------|--------------|-------------|------------|
| 1. residual | 2. capillary | 3. valuable | 4. intense |
|-------------|--------------|-------------|------------|

22-At transform-fault boundaries

1. a lithospheric plate is sinking into the mantle.
2. plates move apart.
3. plates come together.
4. plates slide horizontally past each other.

23-Groundwater is derived from rain and melting snow that downward from the surface.

- | | | | |
|--------------|---------|----------|-----------------|
| 1. percolate | 2. rise | 3. float | 4. permeability |
|--------------|---------|----------|-----------------|

24-The cloud that made our solar system formed from matter ejected from an star.

- | | | | |
|--------------|------------|----------------|--------------|
| 1. explosion | 2. explode | 3. explosively | 4. exploding |
|--------------|------------|----------------|--------------|

25-Some hazards are related to Earth's surface processes, including of rivers and coastal erosion.

- | | | | |
|-----------|---------|-----------|-------------|
| 1. uplift | 2. sink | 3. floods | 4. creeping |
|-----------|---------|-----------|-------------|

26-If the sea floor suddenly shifts upward or downward, the sudden displacement of water results in seismic sea waves, or

- | | |
|-------------------------|--------------------------------|
| 1. tsunamis | 2. coastal erosion |
| 3. sea floor subsidence | 4. mid oceanic ridge volcanoes |

27-Volcanic domes are steep sided or rounded and form near the vent.

- | | | | |
|---------|-------------|------------|--------------|
| 1. lava | 2. volcanic | 3. volcano | 4. volcanism |
|---------|-------------|------------|--------------|

28-The epicenter is the point on the surface directly above the

- | | | | |
|----------|----------|---------------|----------|
| 1. earth | 2. focus | 3. body waves | 4. rocks |
|----------|----------|---------------|----------|

29-Global warming is the in the average temperature of the Earth's near-surface air and oceans since the mid-20th century.

- | | | | |
|-------------|------------------|-------------|-------------|
| 1. emission | 2. contamination | 3. decrease | 4. increase |
|-------------|------------------|-------------|-------------|

30-Nuclear fuel is any material that can be consumed to derive nuclear

- | | | | |
|---------------|-----------|-------------|-----------|
| 1. processing | 2. wastes | 3. reaction | 4. energy |
|---------------|-----------|-------------|-----------|

نمبر سوال	ياسخ صحيح
۱	الف
۲	الف
۳	ب
۴	الف
۵	الف
۶	الف
۷	ج
۸	الف
۹	ب
۱۰	الف
۱۱	د
۱۲	ب
۱۳	ج
۱۴	ج
۱۵	الف
۱۶	د
۱۷	ج
۱۸	ب
۱۹	الف
۲۰	الف
۲۱	الف
۲۲	د
۲۳	الف
۲۴	د
۲۵	ج
۲۶	الف
۲۷	ب
۲۸	ب
۲۹	د
۳۰	د

1-What is named the study of the chemical composition of the Earth?

- | | | | |
|-----------------|-----------------|-----------------|--------------|
| 1. stratigraphy | 2. geochemistry | 3. paleontology | 4. tectonics |
|-----------------|-----------------|-----------------|--------------|

2-Which of the geological branches deal with the original succession and age relations of rock strata?

- | | | | |
|--------------|-----------------|-----------------|-----------------|
| 1. tectonics | 2. paleontology | 3. geochemistry | 4. stratigraphy |
|--------------|-----------------|-----------------|-----------------|

3-Which answer is age in years?

- | | | | |
|------------------|-----------------|-----------------|-----------------|
| 1. Disconformity | 2. Unconformity | 3. Absolute age | 4. Relative age |
|------------------|-----------------|-----------------|-----------------|

4-Index fossils and key beds are important tools in time

- | | | | |
|----------------|-----------------|--------------|----------------|
| 1. correlating | 2. correlatable | 3. correlate | 4. correlation |
|----------------|-----------------|--------------|----------------|

5-What is the synonym of the word "condense"?

- | | | | |
|------------------|-----------------|-----------------|------------------|
| 1. become liquid | 2. become solid | 3. become vapor | 4. become melted |
|------------------|-----------------|-----------------|------------------|

6-What is the meaning of the word "Condensation"?

1. The transformation of water from a liquid into a gas.
2. The transformation of water from gas into a liquid.
3. Transfer of water to the atmosphere by plants and vegetation.
4. The movement of water through the atmosphere.

7-The is the appearance of the light that is reflected from a mineral's surface.

- | | | | |
|-------------|-----------|-----------|-----------|
| 1. vitreous | 2. streak | 3. luster | 4. glassy |
|-------------|-----------|-----------|-----------|

8-Manganese occur in oceans.

- | | | | |
|--------------------|-----------------|-------------------|----------------|
| 1. mineralogically | 2. mineralogist | 3. mineralization | 4. mineralogic |
|--------------------|-----------------|-------------------|----------------|

9-About 20 elements occur naturally in their native states as

- | | | | |
|----------------|---------------|-------------|-------------------|
| 1. mineralized | 2. mineralogy | 3. minerals | 4. mineralization |
|----------------|---------------|-------------|-------------------|

10-Minerals have a structure.

- | | | | |
|------------|----------------|--------------------|----------------|
| 1. crystal | 2. crystallize | 3. crystallization | 4. crystalline |
|------------|----------------|--------------------|----------------|

11-A represents magma extruded at the Earth's surface.

- | | | | |
|------------|---------------|-----------|---------|
| 1. process | 2. hypabyssal | 3. pluton | 4. lava |
|------------|---------------|-----------|---------|

- 12-When the kimberlite reaches the surface, the sudden release of gas and interaction with groundwater causes explosions.**
1. magmatically
 2. magmatism
 3. magma
 4. magmatic
- 13-Clastic sediment is named according to size.**
1. particle
 2. mineralogy
 3. texture
 4. structure
- 14-What is a delta?**
1. A delta is a valley of the deep sea floor.
 2. A delta is a flat low-lying ground alongside a river that is flooded when the river overflows its banks.
 3. A delta is a shallow body of water which is cut off from the sea by sand dunes.
 4. A delta is triangular section of land at the mouth of a river.
- 15-What is the synonym of the word "parent rock"?**
1. gradient
 2. burial
 3. country rock
 4. protolith
- 16-Metamorphic rocks result from the active during plate tectonic processes.**
1. protolith
 2. geothermal gradient
 3. country rocks
 4. forces
- 17-The process of weathering rocks at the earth's surface and breaks them into fine-grained particles of sediment and soil.**
1. alters
 2. erosion
 3. erosive
 4. complex
- 18-Parent rocks form soils the most rapidly in wet, humid**
1. climate
 2. weathering
 3. erosion
 4. leaching
- 19-At a plate boundary, also called a spreading center and a rift zone, two lithospheric plates spread apart.**
1. divergent
 2. convergent
 3. transform
 4. tectonic
- 20-At the mid-ocean ridges**
1. a lithospheric plate is sinking into the mantle.
 2. plates move apart.
 3. plates slide horizontally past each other.
 4. plates come together.

21-The process of percolation is called

- 1. depression
- 2. infiltration
- 3. saturation
- 4. emission

22-The groundwater that percolates through the cracks in the cave contains calcium and bicarbonate from the of limestone.

- 1. column
- 2. dissolution
- 3. stalactites
- 4. stalagmites

23-Some hazards arein origin, such as the occasional impact of meteorites and asteroids with Earth.

- 1. associated
- 2. dynamic
- 3. extraterrestrial
- 4. coastal

24-What is named a solid body that has fallen to the Earth's surface from an extraterrestrial source?

- 1. landslide
- 2. asteroid
- 3. creep
- 4. meteorite

25-What is the synonym of the word "summit"?

- 1. peak
- 2. steep
- 3. neck
- 4. crater

26-Gold is mined from some deposits.

- 1. volcanism
- 2. volcano
- 3. volcanist
- 4. volcanogenic

27-Earthquakes can be some of the worst natural

- 1. disasters
- 2. pressures
- 3. seismology
- 4. faults

28-The Earth's crust is characterized by an upper active zone.

- 1. seismic
- 2. seismically
- 3. seismicity
- 4. seismology

29-Sunshine radiates back into the atmosphere as

- 1. climate
- 2. greenhouse
- 3. gas
- 4. heat

30-After several months in a reactor, the U-235 concentration in the fuel drops.

- 1. rods
- 2. nuclear
- 3. industry
- 4. fission

سؤالات	نمبر رد	ياستخ صحيح
1	ب	
2	د	
3	ج	
4	د	
5	ب	
6	ب	
7	ج	
8	ج	
9	ج	
10	د	
11	د	
12	د	
13	الف	
14	د	
15	د	
16	د	
17	الف	
18	الف	
19	الف	
20	ب	
21	ب	
22	ب	
23	ج	
24	د	
25	الف	
26	د	
27	الف	
28	ب	
29	د	
30	الف	