



(Total Marks: 25)

G100

Time: One Hour

Answer the following questions: (Each One Mark)

Choose the correct answer of the following:

1- The Hexagonal system

a- $(a = b = c) (\alpha = \beta = \gamma = 90^\circ)$

b- $(a_1 = a_2 = a_3 \neq c) (\alpha = \beta = \gamma = 120^\circ)$

c- $(a \neq b \neq c) (\alpha \neq \beta \neq \gamma = 90^\circ)$

2- The Triclinic System

a- $(a \neq b \neq c) (\alpha \neq \beta \neq \gamma = 90^\circ)$

b- $(a = b = c) (\alpha = \beta = \gamma = 90^\circ)$

c- $(a \neq b \neq c) (\alpha \neq \beta \neq \gamma \neq 90^\circ)$

3- The Monoclinic System

a- $(a \neq b \neq c) (\alpha = \gamma \neq \beta = 90^\circ)$

b- $(a = b = c) (\alpha = \beta = \gamma = 90^\circ)$

c- $(a = b \neq c) (\alpha = \beta = \gamma \neq 90^\circ)$

4-Coal is

a-a clastic sedimentary rock

b-an evaporite

c-none of the above

5-What holds a sedimentary rock together?

a-cement

b-fossils

c-water in its pore spaces

6-The clastic sedimentary rocks are classified primarily on the basis of:

a-color

b- grain size

c- composition

7- Deposits of clay become consolidated to form:

a-limestone

b-sandstone

c-shale

8-Gneiss:

a-shows dark and light bands of minerals

b- has recrystallized at low temperatures

c- has good rock cleavage parallel to banding

9-What is the correct metamorphic sequence of increasingly coarser grain size?

a- phyllite  $\rightarrow$  slate  $\rightarrow$  gneiss  $\rightarrow$  schist

b- slate  $\rightarrow$  phyllite  $\rightarrow$  schist  $\rightarrow$  gneiss

c- gneiss  $\rightarrow$  phyllite  $\rightarrow$  slate  $\rightarrow$  schist

10-Which is not a common volcanic rock?

a-andesite

b-basalt

c-gabbro

**11- Granites and rhyolites are related by:**

- a-their grain size                      b- their mode of emplacement  
c- their mineralogical composition

**12-An igneous rock with large crystals in a fine-grained matrix.**

- a-vesicular                      b-glass                      c-porphyry

**13-What are the two major kinds of igneous rocks:**

- a-volcanic and plutonic                      b-sills and lava                      c-dikes and batholiths

**14-Which of the following pairs of igneous rocks have the same mineral composition?**

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

**15- Zones where subduction occurs are characteristically marked by:**

- a- island arcs                      b-deep trenches                      c- all of the previous

**16-At a mid-ocean ridge, you would expect to find:**

- a- very ancient rocks                      b- very thick accumulations of sediment  
c- relatively young rocks

**17- Plates:**

- a-are the same thickness everywhere                      b-vary in thickness                      c- all of the previous

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

- a- divergent                      b- transform                      c- convergent

**19- The man who is credited with developing the continental drift hypothesis is:**

- a-Wilson                      b-Wegener                      c- Hess

**20-Mid-oceanic ridges are, examples of what type of boundary?**

- a- divergent                      b- convergent                      c-transform

**21-Which property is related to planes of weakness between atoms in a mineral?**

- a- hardness                      b- Density                      c- Cleavage

**22-Volcanic rocks can usually be distinguished from plutonic rocks by:**

- a-color                      b-the size of their mineral grains                      c-composition

**23-Volcanoes are least likely to be associated with:**

- a-subduction zones                      b- transform faults                      c- mid-ocean ridges

**24- The composition of oceanic crust:**

- a- is granitic composition                      b- is basaltic composition  
c- is peridotitic composition

**25- The average thickness of mantle is:**

- a- 2500 km                      b- 1900 km                      c- 2900 km





Final Exam of fundamental Geology (G100)  
For 1<sup>st</sup> year students- Faculty of Science - 2023-2024  
**Part II (External Processes) - Total marks: 25 marks**

**Answer only 3 from the following:**

**أجب في كراسة الإجابة**

**Question 1- Explain with drawing only**

**وضح بالرسم فقط**

- A- A right-lateral (dextral) Strike Slip fault
- B- A recumbent fold
- C- An unconfined aquifer
- D- A sand dune with its parts

**Question 2- Just Mention:-**

- A- The causes of Physical weathering
- B- The characteristics of Deserts?
- C- The relative dating principles?
- D- The characterization of A river in its Young stage

**Question 3-**

- A- Compare between Porosity and Permeability?
- B- Compare between Gastroliths and Coprolites

C- The attached figure shows the geological development over time for geological units A, B, C, D, and E

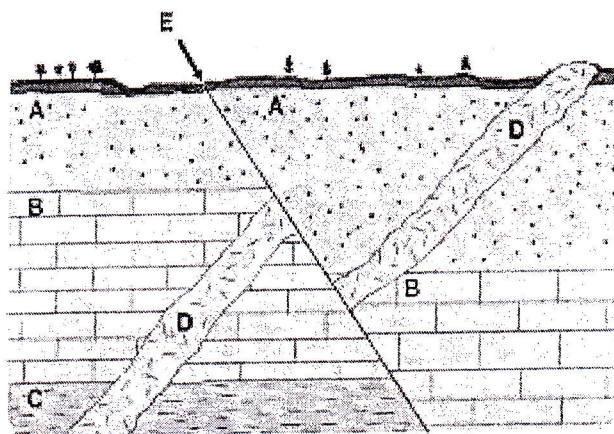
Arrange the various geological events that these units went through?

الشكل المرفق يوضح التطور الجيولوجي مع الزمن

للوحدات الجيولوجية A, B, C, D, E

رتب الأحداث الجيولوجية المختلفة التي مرت بها

هذه الوحدات ؟



**Question 4- Write on:-**

- A- The effect of Compressive and tensional stress and strain on the Earth's Crust
- B- The chemical formula of the following minerals : Gypsum – Sphalerite – Biotite (الميكالسوداء) – Barite – Magnetite - Halite.
- C- The Formation of desert pavement

انتهت الأسئلة / مع أطيب الأمنيات بالتوفيق / أ. د/ ممدوح فراج سليمان