

1- Student should answer (A) or (B) only. (1 Mark)

(A) calcite minerals or manganese or copper G1 p. 16

(B) Permian G1 p. 18

2- Student should answer (A) or (B) only. (1 Mark)

(A) Smoothing of pebbles and get a round faces as a result of friction with the bottom G5 p. 80

(B) expansion of rocks, the rock surface separates into successive spheroid shells following the direction of joints. This feature, known as spheroidal weathering G5 p. 73

3- Student should answer (A) or (B) only. (1 Mark)

(A) because the multiplicity of species in ecosystems increases the mutual relationship among them and thus increasing the stability of the ecosystem E1 p. 99

(B) cycles start with the liberation of important elements from the bodies of the living organism after their death and precipitation in the depth. As the water is moving upward plant live in the top water layers, and thus the animals that feed on them increase which increase fish production accordingly. E1 p. 104

4- (1 Mark)  
Ancient Evaporites Deposits G4 p. 59

5- (1 Mark)  
it activates living organisms in the soil and enters into the food chains  
thus giving the soil desirable physical characteristics . E2 p. 116

6- (1 Mark)  
b) 2 times atmospheric pressure E1 p. 101,105

7- (2 Marks)  
a. Flint G2 p. 23  
b. Chemical sedimentary rocks G3 p. 46

8- (2 Marks)  
G2 p. 28

	Hematite	pyrite
color	has two colours dark grey and red	golden colour
streak	red	black

- 9- (2 Marks)
- i. (A) Littoral Zone (½ Mark)
- ii. from 200 to 2000 m (½ Mark)
- iii. The sediments containing red clay, which is of volcanic deposits, also this area contains fine grains organic sediments of limestone and silicic deposits that are remains of micro-organisms like foraminifera and diatoms. (1 Mark) G5 p. 88

10- Student should answer (A) or (B) only. (1 Mark)

(A) Slate rock produced G3 p. 48

(B) Kerogen decomposes to oil substances G3 p. 47

11- (1 Mark)

b) Very hot during day and night. E1 p. 47

12- (1 Mark)

Rocks consisting mostly of silicate minerals represented in feldspars and Mica and others minerals containing iron and magnesium mainly turn by chemical weathering into a set of clay minerals found in the agriculture soil. G5 p. 76

13- (1 Mark)

Conglomerate is formed G5 p. 45

14- (1 Mark)

The crystal symmetrical axis G1 p. 15

15- (1 Mark)

The percentage of pores, cracks and spaces between the rocks and grains. G5 p. 85

نموذج إجابة مادة الجيولوجيا والعلوم البيئية (باللغة الإنجليزية) لشهادة إتمام الدراسة الثانوية العامة - الدور الأول - العام الدراسي ٢٠١٨/٢٠١٩  
النموذج (ج)

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16- Student should answer (A) or (B) only. (2 Marks)

(A) G1 p. 9 G4 p. 60

	Sial	Sima
Type of rock	granitic rocks	basaltic rocks
Composition	Silica and Aluminium	Silica and Magnesium

(B) G4 p. 63

Volcanic earthquakes.	Tectonic earthquakes.
Their occurrences are associated with volcanic activity	They occur in areas where the rocks subjected to faulting as a result of the motion of tectonic plates
are local earthquakes, their impact do not extend in large areas	They are the most common earthquakes occurrence

17- (2 Marks)

- Anticlines Folds (½ Mark) - Strike - slip fault (½ Mark)

- Fault is younger (1 Mark) G1 p. 12 ,15

18- (2 Marks)

1<sup>st</sup>: \*Using synthetic fibers instead of cotton fibers to save a larger agricultural area for planting (1 Mark) E2 P.116

2<sup>nd</sup>: which nourishes the soil and keeps its fertility (1 Mark) E 2P .118

19- Student should answer (A) or (B) only. (1 Mark)

(A) Rationalizing the consumption E2 p. 121

(B) The sunset period E2 p. 30

20- (1 Mark)

c) Stalactite G5 p. 81

21- (1 Mark)

Evidences supporting theory of continental drift G4 p. 58

22- (1 Mark)

Due to rotational convergent currents in the upper mantle G4 p. 60

23- (1 Mark)

1<sup>st</sup>: Graphite G2 P.30

2<sup>nd</sup>: Malachite G2 P. 28

24- (1 Mark)

A water level that all the pores below, cracks and spaces are saturated with water and the depth of this level differs as it's near the surface of areas near the sea, rivers and places of rain and far from the surface in dry areas. G5 p. 85

25- Student should answer (A) or (B) only. (2 Marks)

(A) Once the surface water temperature reaches  $3^{\circ}\text{C}$ , the water expands and its density is decreased and it floats to the surface where it freezes on the surface thus protecting the aquatic life below from freezing  
E1 p. 104

(B) Annual plants appears only in the winter after the rainfalls and withers away by the arrival of draught in summer and disappears after leaving its seeds in the soil.  
E1 p. 110

26- (2 Marks) G1 p. 15

1<sup>st</sup>: Reverse fault

2<sup>nd</sup>: The hanging wall is moving upward along the fault plane with respect to the footwall.

3<sup>rd</sup>: Angular unconformity

4<sup>th</sup>: Angular unconformity

27- (2 Marks) G3 p. 39,41

	Komatite	rhyolite
mineralogical composition	Rich in olivine & pyroxene	Quartz , orthoclase , mica, sodium plagioclase
classification	Ultrabasic igneous rocks (Ultramafic- volcanic)	Acidic igneous rocks (Felsic - volcanic)



28- Student should answer (A) or (B) only. (1 Mark)

(A) Rectangular dunes or Longitudinal Dunes G5 p. 77

(B) Saline lakes. G5 p. 89

29- (1 Mark)

(b) hydrous calcium sulfate G5 p. 75

30- (1 Mark)

spangling or what known as “Cat’s eyes” is also where mineral luster which has fibrous tissues, is rippling depending on the direction of view. G2 p. 29

31- (1 Mark)

a. Phosphate

b. These deposits reflected that ordinary temperature and normal salinity prevailed in shallow marine conditions.

G4 p. 53

32- (1 Mark)

Measuring the Intensity of Earthquakes G4 p. 67

33- (1 Mark)  
produced friction sometimes causes increase in temperature G3p. 49

34- Student should answer (A) or (B) only. (2 Marks)

(A) E2 P.119

overgrazing	organized Grazing
When the rate of grass growing less than the rate of animal consumption of grass	When the grass growth rate is more than animals consumption rate to this grass.

(B)

Causes of Mineral depletion	Causes of fossil fuel depletion
increasing of population and progress of technology E2 P.121	Coal, oil and natural gas are non-renewable resources as they are found in limited amounts the developed countries and the individual's consumption of energy increases E2 P.122

35- (2 Marks)

herbivorous marine ecosystems	herbivorous desert ecosystems
a large group of protozoa, worms, small crustaceans, and different larvae E1 P.106	Many different kinds of desert insects such as grasshoppers and beetles ,some reptiles some desert mammals such as rodents and dears E1 P.110

36- (2 Marks)

Sea waters store large quantities of heat which it absorbs from the sun-rays during the day and it leaks it at night to the space and the surrounding earth. This provides warmth to the coastal areas which are characterized by heat stability  
E1 p. 104

37- Student should answer (A) or (B) only. (1 Mark)

(A) Secondary Geological Structures(tectonic geological structures)

G1 p. 12

(B) Hadean

G1 p. 17

38- Student should answer (A) or (B) only. (1 Mark)

(A) c) corundum

G2 p. 30

(B) b) diamond

G2 p. 28

39- Student should answer (A) or (B) only. (1 Mark)

(A) the origin of the magnetic field of Earth may be generated from the presence of outer core that composed of molten iron and nickel material revolves with earth around its axis. G1 p. 10

(B) Since any fold always consists of a succession of different layers and each one of these layers has its own axis, then it is expected that the axial plane should contain all these axes G1 p. 13

40- (1 Mark)

plant grow upward (no tropism occur)

E1 p. 99

41- (1 Mark)

raw materials necessary for many industries such as wood, synthetic fibers and paper. E1 p. 118

42- (1 Mark)  
c) monoclinic G2p. 27

43- (2 Marks)  
1<sup>st</sup>: The isostatic balance G4 p. 54  
2<sup>nd</sup>: gradual flow of the light molten rock (magma) in upper mantle layers under the deposition areas to the disintegration areas so the mountains rise up and earth crust regain its balance.

44- (2 Marks)  
a. Environment: every thing around man of living and nonliving components that affects him and is affected by him.  
a. Ecology: the studies of what determines life and how the living organism uses what is available to him where he lives.

E1 p. 95

45-

(2 Marks)

	residual soils	transported soils
Texture	Gradually changing texture of grains size until it reaches the original rock	differ in the texture, there is no gradual texture and there are rounded angled pebbles

G5 p. 90