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UNIVERSITY OF GHANA

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DEPARTMENT OF TEACHER EDUCATION

SCHOOL OF EDUCATION AND LEADERSHIP

COLLEGES OF EDUCATION

END OF SEMESTER ONE EXAMINATIONS FOR LEVEL 200, 2021/2022

B.ED. PROGRAMME

COURSE CODE: TEJS 221

COURSE TITLE: BIOPHYSICAL ENVIRONMENTAL SYSTEMS

Instruction: Answer all questions in Section A and any three questions in Section B.

Time: 2 hours

SECTION A

[25 Marks, One (1) Mark for Each Question]

Answer all the questions in this section.

1. The average weather condition of a place studied over a long period of time usually over 35 years is referred to as

- A. Climate
- B. Humidity
- C. Temperature
- D. Weather

STUDENT'S ID NO: _____ SIGNATURE: _____

2. What is the final product of rock weathering?
 - A. Deposition of rock particles
 - B. Removal of weathered materials
 - C. Formation of soils
 - D. Transportation of mineral matter
3. What name is given to fragments of rocks that fall from larger rock outcrops to the base of slopes and cliffs during exfoliation?
 - A. Grains
 - B. salt
 - C. Scree
 - D. Soil
4. The process whereby certain rock minerals absorb water, expand and crumble into powdered clay is known as
 - A. Hydration
 - B. Hydrolysis
 - C. Oxidation
 - D. Solution
5. The reason for keeping thermometer inside a Stevenson's screen is to prevent
 - A. birds from making their nests in the screen of the thermometer
 - B. direct sunshine from affecting readings on the thermometer
 - C. lighting from damaging the inner and outer part of the thermometer
 - D. thieves from damaging and stealing the thermometer
6. The wrinkling or bending of the earth's crust which occurs along lines of weakness is known as...
 - A. Denudation
 - B. Faulting
 - C. Folding
 - D. Weathering
7. All the following are examples of extrusive volcanic feature EXCEPT....
 - A. Caldera Lake
 - B. Dyke

STUDENT'S ID NO: _____

SIGNATURE: _____

- C. Lava plateau
- D. Geyser

8. The shaking and vibration of the Earth's crust due to the movement of the Earth's plates is referred to as....

- A. Earthquake
- B. Faulting
- C. Folding
- D. Volcanicity

9. The process of weathering where a rock losses oxygen element to disintegrate is termed as.....

- A. acidic reaction
- B. ionization
- C. oxidation
- D. reduction

10. The refers to the totality of plant and animal life on earth.

- A. Atmosphere
- B. Biosphere
- C. Hydrosphere
- D. Stratosphere

11. The erupted magma on the surface of the earth is known as

- A. Cone
- B. Lava
- C. Molten Magma
- D. Plummerm

12. The general term for all processes that cause the wearing away of the earth's surface by moving water, ice, wind and waves is known as

- A. Denudation
- B. Erosion
- C. Mas Wasting
- D. Weathering

STUDENT'S ID NO: _____ SIGNATURE: _____

13. Which of the following is NOT a type of physical process of weathering?
- A. Exfoliation
 - B. Granular Disintegration
 - C. Reduction
 - D. Unloading
14. The consist of all water bodies including the ocean or saline waters and freshwater bodies such as rivers, lakes and streams.
- A. Biosphere
 - B. Hydrosphere
 - C. Mesosphere
 - D. Thermosphere
15. A line of weakness in the bedrock along which there has been some displacement of rock strata relative to one another is termed as
- A. Break
 - B. Crack
 - C. Fault
 - D. Fracture
16. Gravity is constantly trying to pull rock and debris down the slope of a mountain. At the same time, the resistive forces of the mountain, including the cohesive strength and internal friction between the materials, referred to as the mountain's, constantly pulls back against gravity.
- A. Energy
 - B. Residual Strength
 - C. Shear Strength
 - D. Tensional Strength
17. The continuous movement of water between hydrosphere, atmosphere, and lithosphere in a cyclic manner is termed as
- A. Atmospherical Cycle
 - B. Biosperical Cycle
 - C. Hydrological Cycle
 - D. Litospherical Cycle

STUDENT'S ID NO: _____ SIGNATURE: _____

18. Which of the following represents the correct arrangement of the layers of the earth's crust from the surface to the interior?

- A. Sial, sima, mantle, core
- B. Mantle, sial, sima, core
- C. Core, mantle, crust, atmosphere
- D. Sima, mantle, sial, core.

19. The trees have thick bark, long tap roots, small leathery leaves with many shrubs and bushes in areas with poor soils. The vegetation type being described is

- A. Equatorial
- B. Coniferous
- C. Mediterranean
- D. Temperate grassland.

20. Which of the following conditions will result in low precipitation?

- | | |
|----------------------|------------------------------|
| i. Continental winds | iii. Atmospheric instability |
| ii. Maritime winds | iv. Cold ocean currents |
- A. i and ii only
 - B. i and iv only
 - C. ii and iii only
 - D. iii and iv only

21. In which of the following soil profile horizons is the parent rock partially weathered?

- A. The A horizon
- B. The B horizon
- C. The C horizon
- D. The D horizon

22. Koppen's climatic classification is based on

- A. Temperature and precipitation
- B. Temperature and pressure
- C. Precipitation and vegetation
- D. Temperature and vegetation.

STUDENT'S ID NO: _____ SIGNATURE: _____

23. Dark clouds extending to heights of about 15,000 metres which bring a lot of rain to tropical lands are known as

- A. Cirrocumulus
- B. Cirrus
- C. Cumulonimbus
- D. Cumulus

24. In which zone of the atmosphere is the ozone layer found ?

- A. Troposphere
- B. Mesosphere
- C. Stratosphere
- D. Thermosphere

24. Carbon dioxide gives rise to the greenhouse effect because it

- A. Traps the heat that the earth's surface radiates
- B. Absorbs water vapour from the atmosphere
- C. Prevents ultraviolet rays from reaching the earth's surface
- D. Increases the rate of evaporation from the earth's surface.

SECTION B

[75 Marks. Each Question is twenty-five (25) Marks]

Answer any three questions in this section.

1. a. Distinguish between intrusive and extrusive volcanic rocks. {4mks}
- b. With the aid of a diagram, explain the characteristics and mode of the composite volcano {21mks}
2. Discuss the tropical rainforest vegetation under the following:
 - a. Location {1mks}
 - b. Two climatic factors affecting its distribution. {4mks}
 - c. Four vegetation characteristics {8mks}
 - d. Four economic importance. {12mks}
3. a. What is denudation?
- b. Describe three (3) processes of physical weathering.
- c. Comment on the importance of weathering to man.
4. a. What is soil catena?
- b. With the aid of a diagram describe the soil profile showing the major horizons.
- c. State two (2) factors that affect soil formation.
5. Write short notes on the processes that produce the following landforms and support your answers with illustrations.
 - a. Faulting
 - b. Folding
 - c. Volcanicity
 - d. Mass wasting