

STUDENT'S ID NO: _____ SIGNATURE: _____



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 300, 2021/2022

B.ED. PROGRAMME

COURSE CODE: TEEG 311

COURSE TITLE: INTRODUCTION TO EARLY GRADE SCIENCE III

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

Time: 2 hours

SECTION A

[25 Marks]

Answer all the questions in this section.

1. Which part of the plant receives carbon dioxide from the air for photosynthesis?
 - A. Leaf Veins
 - B. Root Hair
 - C. Sepals
 - D. Stomata

2. In plants, water is transported through
 - A. phloem
 - B. root hair
 - C. stomata
 - D. xylem

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3. The fusion of the male and the female gametes is called
- A. fertilization
 - B. pollination
 - C. reproduction
 - D. seed formation
4. Which of the following is a feature of shrubs?
- A. Long branches
 - B. Short and bushy stem
 - C. Weak stem
 - D. All of the above
5. The following are characteristics common to aquatic plants EXCEPT
- A. aquatic plants have a less rigid structure since water pressure supports them
 - B. aquatic plants keep their stomata always closed
 - C. aquatic plants keep their stomata always open
 - D. the presence of air sacs enables them to float
6. The following plants can be propagated by leaf cuttings EXCEPT
- A. begonia
 - B. bryophyllum
 - C. hibiscus
 - D. sansiveria
7. Which of the following methods is suitable for combining the desirable characters of two plants together in a single plant?
- A. Chinese layering
 - B. Cutting
 - C. Grafting
 - D. Layering
8. Flowers with both androecium and gynoecium are called
- A. anther
 - B. bisexual flower
 - C. stamens
 - D. unisexual flower

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9. The transfer of pollen grains from the anther to stigma is called

- A. adoption
- B. diffusion
- C. fertilisation
- D. pollination

10. The male reproductive parts of a flower, the stamens are collectively known as

- A. androecium
- B. filament
- C. gynoecium
- D. sepals

11. What is the reproductive unit in angiosperms?

- A. Flower
- B. Stalk
- C. Pedicel
- D. Leaf

12. If moistened seeds are placed in their respective flasks, they would germinate best in the flask containing

- A. carbon dioxide
- B. nitrogen
- C. oxygen
- D. water

13. Removal of seed coat in dormant seeds by mechanical methods is called

- A. emasculation
- B. scarification
- C. separation
- D. vernalisation

14. Which of the following is a dicotyledonous seed?

- A. Maize
- B. Pea
- C. Rice
- D. Wheat

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15. Hypogeal germination is found in

- A. bean
- B. cucurbita
- C. maize
- D. rhizophora

16. The following are parts of a seed **EXCEPT**

- A. halum
- B. hilum
- C. micropyle
- D. testa

17. Seed dormancy allows the plants to

- A. develop healthy seeds
- B. overcome unfavourable climatic conditions
- C. prevent deterioration of seeds
- D. reduce viability

18. Which class has the largest number of animals?

- A. Fishes
- B. Insects
- C. Mammals
- D. Reptiles

19. An organism that eats remaining of other consumers' prey is known as

- A. decomposers
- B. detritivores
- C. omnivores
- D. scavengers

20. Organisms that feed on both animals and plants are known as

- A. carnivores
- B. decomposer
- C. herbivores
- D. omnivores

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21. Small creatures that breakdown decayed matters into further smaller pieces are called

- A. detritivores
- B. primary consumers
- C. primary producers
- D. scavengers

22. Which of the following is responsible for removing liquid waste?

- A. Brain
- B. Heart
- C. Kidneys
- D. Lungs

23. The organ system that moves blood throughout the body is

- A. cardiovascular system
- B. muscular system
- C. nervous system
- D. reproductive system

24. Which system is responsible for carrying oxygen and carbon dioxide in and out of the body?

- A. Circulatory system
- B. Excretory system
- C. Reproductive system
- D. Respiratory system

25. Human beings belong to the class called.....

- A. animalia
- B. homo
- C. mammalia
- D. sapien

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SECTION B

[75 Marks]

Answer any three questions in this section.

QUESTION 1

1. a) Outline the two ways through which water is made impure for drinking (2 marks)
- b) Mention any five physical properties of water (5 marks)
- c) List the Carolus Linnaeus system of classification in sequential order (3 marks)
- d) Outline five strategies for teaching parts of the human body to a primary one pupil (10marks)
- e) Outline five characteristics/properties of air (5 marks)

QUESTION 2

2. a) What is a seed? (2 marks)
- b) Describe the structure of a dicotyledonous seed (5 marks)
- c) i. What are terrestrial habitats? (2 marks)
- ii. Mention any four major types of terrestrial habitat. (4 marks)
- d) Convert the following quantities (7 marks)
 - I. Convert 7.5km into meters
 - II. Convert 753mm into cm
 - III. Convert 746kl into liters
 - IV. Convert 38 degrees Celsius into kelvin
 - V. Convert 345 kelvin into degree Celsius
- e) List five important uses of Air (5 marks)

QUESTION 3

- a) Write five industrial uses of water (5 marks)
- b) Describe briefly any five of the human systems (10 marks)

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c) With appropriate examples, distinguish between Hypogeal and Epigeal germinations (3 marks)

d) Classify Mr. Johnson Kofi Ackah based on the following as specified by Carolus Linnaeus (7 marks)

1. Kingdom

2. Phylum

3. Class

4. Order

5. Family

6. Genus

7. Species

QUESTION 4

a) Identify five parts of the human body and write their function (5marks)

b) Differentiate between pure and impure water (4 marks)

c) Discuss the composition of Air (5 marks)

d) With appropriate examples, define the following terms (5marks)

- I. Herbivore
- II. Carnivore
- III. Omnivore
- IV. Scavengers
- V. Decomposers

e) i) what is seed dormancy and how is seed dormancy broken (2marks)

ii) Mention the conditions necessary for germination (4marks)

QUESTION 5

a) Discuss soil under the following headings (5 marks)

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- I. Sandy soil
- II. Clayey soil
- III. loamy soil
- IV. Humus
- V. Soil erosion

b) Explain the following terms

- I. Photosynthesis (2 marks)
- II. Autotrophs (2 marks)
- III. Heterotrophs (2 marks)

c) List and discuss four types of terrestrial habitats (8 marks)

d) With appropriate example, distinguish between monocotyledonous and dicotyledonous seeds (6 marks)