

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: TEUP 305

COURSE TITLE: INTEGRATED SCIENCE III FOR UPPER PRIMARY

Instruction: Answer all questions in Section A and any three (3) questions in Section B.

Time: 2 hours

SECTION A

[25 Marks]

Answer all the questions in this section.

1. Which of the following statements about corolla is true?
 - A. The patterns on the petals are similar
 - B. The petals are dissimilar in size
 - C. The petals are five and free
 - D. The petals are five and fused

2. A flower that is pollinated by an insect is likely to have
 - A. feathery stigma.
 - B. light and smooth pollen grains.
 - C. long, dangling anthers.
 - D. sticky stigma.

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3. Relatively large and fibrous fruits can conveniently be dispersed by ...
 - A. Explosion
 - B. Insects
 - C. Water
 - D. Wind

4. Which of the following features is most likely to belong to a wind-dispersed seed?
 - A. Large and light
 - B. Seed-coat with sticky hairs
 - C. Small and winged
 - D. Succulent fruit

5. The main advantage of sexual reproduction over asexual is that, sexual reproduction
 - A. brings about variation than asexual reproduction.
 - B. is quicker than asexual reproduction.
 - C. provides more offspring than asexual reproduction.
 - D. takes place at all times.

6. A characteristic feature of a wind-pollinated flower is the possession of
 - A. brightly coloured petals.
 - B. horny guider.
 - C. large pendulous stamens.
 - D. large petals.

7. Which of the following parts of a flower forms the innermost whorl?
 - A. Androecium
 - B. Calyx
 - C. Corolla
 - D. Gynaecium

8. The solubility of a substance in water will increase by
 - A. adding more solute.
 - B. exposure to light.
 - C. increasing the temperature.
 - D. reducing the light intensity.

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9. Which parts of the flower make up the carpel?

- A. Anther and filament
- B. Ovary, filament and stigma
- C. Ovary, style and anther
- D. Ovary, style and stigma

10. A mixture of sodium chloride and ammonium chloride can be separated by

- A. crystallization
- B. distillation
- C. filtration
- D. sublimation

11. The ----- are collectively called the calyx.

- A. petals
- B. pistils
- C. sepals
- D. stamens

12. What forms the androecium in a flower?

- A. Petals
- B. Pistils
- C. Sepals
- D. Stamens

13. The kind of kinetic energy capable of allowing various forms of lights visible to the human eyes is called

- A. kinetic energy
- B. light energy
- C. molecular energy
- D. potential energy

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14. The reproductive organs inside a flower are -----

- A. calyx and corolla
- B. carpel and stamen
- C. ovary and anther
- D. ovary and filament

15. The component of air that has a sharp acidic smell at higher concentrations is the.....

- A. carbon dioxide
- B. nitrogen
- C. Oxygen
- D. water vapour

16. A modified leaf that looks more like a petal than a leaf, as it is usually brightly colored and shaped differently to other leaves on the plant is referred to as?

- A. Bract
- B. Corolla
- C. Petal
- D. Style

17. The teeth are part of which body system?

- A. Digestive
- B. Integumentary
- C. Nervous
- D. Skeletal

18. A sessile flower is borne directly on the stem. This assertion is

- A. false
- B. true

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19. The fleshy substances that usually surrounds a mature ovary containing matured ovules called seeds is termed as fruit.
A. False
B. True
20. The way and manner in which the teacher presents a lesson to enable students to acquire knowledge in the subject under consideration is termed as
21. Monoecious plants have imperfect flowers, both male and female, on the same plant. This means that some of the flowers on the same plant will only have a functioningi..... but lack carpel, while other flowers on the same plant will have the reverse situation: functioning carpel but notii.....
22. They are medium sized, woody plants taller than herbs and shorter than a tree. Their features include bushy, hard and woody stems with many branches, these are
23. The large group of animals that possess spinal column, including mammals, birds, reptiles, amphibians and fishes are -----
24. Pedagogic deficiencies in connecting learning abilities to content presentation complicates learners' abilities to form comprehend scientific concepts and acquire the -----
25. As a primary four science teacher, you directed your pupils to prepare a checklist of floral parts of a flower and present in groups of five. Mention two basic scientific skills to be developed by pupils i..... ii.....

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SECTION B – (75MARKS)

Answer any three (3) questions from this section. All questions carry equal marks.

Answer any one (1) question from Part I and any two (2) from Part II.

PART I

1. a.i. Sketch female reproductive structure of a typical flower and label it. [6mks]

ii. State four functions of the pollen grain [4mks]

b. i. Why is external water not essential for fertilization in seed plants? [5mks]

ii. Fruits and seeds are formed before fertilization. True / False [2mks]

iii. What is an angiosperm? [2mks]

c. i. What is plasmogamy in botany? [2mks]

ii. State two agents of seed dispersal [4mks]

2. a. State and explain any three (3) reasons why it is important to conserve water. (9mks)

b. Explain the following terms. (6mks)

 - Transparent
 - Translucent
 - Opaque

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c. Briefly explain the following terminologies relating to change of states of matter.

i. freezing

ii vaporization,

iii. condensation

iv. melting

v. sublimation

(10mks)

PART II

3. a) How will you differentiate scheme of work from lesson plan? (10mks)

b) Explain the following terminologies in relation to the lesson plan.

i. Learning indicator

ii. Performance Indicator

iii. Strands

iv. Sub-strands

v. Teaching/ Learning Resources

(10mks)

c) Copy and complete the unique annotation; B3.2.4.1.2 in the table below as used for numbering the learning indicators in the curriculum for the purpose of referencing. (5mks)

ANNOTATION	MEANING/ REPRESENTATION
B3	
2	
4	
1	
2	

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4. a. i) Draw the root system of a flower plant and clearly label its developments parts.
[10marks]

(ii) which part of the root undergoes an elongation during growth? [2mks]

(iii) State at least five science curriculum materials you observed during your STS
scheduled this semester in your partner schools? [3mks]

b. As a teacher to teach Basic six pupils science, prepare a check list of five materials you will
employ to teach classification of plants, state one teaching strategy you will use so that pupils will
understand the concept of manipulation in your class. [10mks]

5. a) List three human organ systems. For each organ system, identify two (2) of its organs
and functions. (14marks)

b). Kofi was diagnosed of defective digestive system; how will this affect his circulatory
and muscular system. (11marks)