

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 TWO EXAMINATIONS FOR LEVEL 200, 2023/2024

B.ED. PROGRAMME

COURSE CODE: TEEG 214

COURSE TITLE: EARLY GRADE SCIENCE II

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 of the following electromagnetic radiations has the longest wavelength?
 - A. Blue light
 - B. Green light
 - C. Red light
 - D. Yellow light

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2. Which of the following electromagnetic radiations is the most utilized in thermometers?
A. Gamma
B. Infra-red
C. Ultra violet
D. X rays
3. _____ light is not a component of visible light spectrum.
A. Indigo
B. Green
C. Orange
D. Purple
4. The most common cause of sunburn in humans is _____
A. Heat radiations
B. Infra-red radiations
C. Ultra violet radiations
D. X-rays
5. _____ are the products of photosynthesis.
A. Carbon dioxide and Chlorophyll
B. Carbon dioxide and Sunlight
C. Chlorophyll and Sunlight
D. Glucose and Oxygen
6. The following processes is not common to plants only?
A. Transpiration
B. Photosynthesis
C. Pollination
D. Respiration
7. _____ does not contain all the essential amino acids.
A. Beans
B. Beef
C. Eggs
D. Fish

8. Which of these is not a good source of calcium to the human body?
A. Beans
B. Carrot
C. Groundnut
D. Lettuce
9. Consumption of _____ is good for the prevention of scurvy.
A. Beet roots
B. Carrots
C. Coconuts
D. Oranges
10. Deficiency of _____ is responsible for the occurrence of rickets in children.
A. Vitamin A
B. Vitamin C
C. Vitamin D
D. Vitamin K
11. Which of the following metals is good for controlling current flowing in an electronic circuit?
A. Aluminium
B. Constantan
C. Copper
D. Lead
12. _____ store electric charges for use in electronic circuits.
A. Lithium batteries
B. Capacitors
C. Diodes
D. Transistors
13. _____ control the direction of electric current flowing through an electronic circuit.
A. Capacitors
B. Diodes
C. Transistors
D. Resistors

14. Which component of toothpaste strengthens human teeth?

- A. Calcium
- B. Fluorine
- C. Glycerol
- D. Sodium

15. Exposure of human skin to sunlight result in the synthesis of _____

- A. Vitamin A
- B. Vitamin C
- C. Vitamin D
- D. Vitamin K

16. The following are vegetables EXCEPT _____

- A. Cabbage
- B. Carrot
- C. Lettuce
- D. Tomato

17. _____ has three electrical terminals.

- A. Cell
- B. Diode
- C. Inductor
- D. Transistor

18. _____ is used to pry open objects.

- A. Crowbar
- B. Scissors
- C. Screwdriver
- D. Spanner

19. _____ is used for pruning hedges.

- A. Garden fork
- B. Hand trowel
- C. Rake
- D. Shears

20. Regular brushing, washing, and trimming human hair _____

- A. change colour of hair
- B. increase hair growth
- C. maintain healthy hair
- D. prevent hair loss

21. _____ is not a skilful use of spanner to tighten bolt.

- A. Applying appropriate torque to a spanner
- B. Selecting the appropriate spanner size
- C. Holding the shaft of the spanner
- D. Holding the profile of the spanner

22. The shape and size of spanner that makes contact with the fastener is the _____

- A. groove
- B. head
- C. shaft
- D. profile

23. _____ is more appropriate for setting rivets.

- A. Ball pen hammer
- B. Claw hammer
- C. Mallet
- D. Sledge hammer

24. _____ is the most versatile type of spanner.

- A. Combination spanner
- B. Double ring spanner
- C. Single open end spanner
- D. Tubular box spanner

25. State one practice for proper maintenance of tools _____

SECTION B

[75 Marks]

Answer any three questions in this section.

1. (a) Give three importance each of the following personal hygiene practices:

- i. Cleaning the teeth [3 marks]
- ii. Washing the hand [3 marks]
- iii. Bathing [3 marks]

(b) i. Explain the term balanced diet.

ii. What are the constituents of balanced diet?

(c) Classify the following foods under the following headings: Body building, energy giving and protective foods [millet, wheat, pepper, spinach, sugar, cottage cheese, tomatoes, lettuce, soybeans, chicken, eggs, oyster, almond, barley, strawberries, corn, grapes, bread, beans, apples]

[10 marks]

2. (a) Explain the functions of five named electronic components/devices in a circuit.

[10 marks]

(b) Draw a simple labelled electronic circuit to show:

- i. P-N junction in forward bias [6 marks]
- ii. P-N junction in reverse bias [6 marks]
- (c) Distinguish between intrinsic and extrinsic semiconductors. [3 marks]

3. (a) i. Draw a simple labelled diagram of visible light spectrum, including infra-red and ultra violet rays.

[6 marks]

ii. Distinguish between infra-red and ultra violet rays.

[3 marks]

iii. Give two uses of ultra violet rays.

[2 marks]

(b) i. Distinguish between grains and nuts.

[7 marks]

ii. Give four examples each of grains and nuts.

[4 marks]

iii. Distinguish between fruits and vegetables.

[3 marks]

4. (a) i. What is a simple machine?

[2 marks]

ii. Name four classes of simple machines.

[4 marks]

iii. Copy and complete the following table showing the names of simple machines and their classes.

Simple machine	Class of machine
Scissors	
Wheelbarrow	
Axe	

Door hinge	
Bicycle	
Car jack	
Hammer	
Nut cracker	
Bolt and nut	
Shovel	[10 marks]

- (b) What are the conditions for occurrence of photosynthesis in green plants? [4 marks]
- (c) Distinguish between food substances and food nutrients. [5 marks]
5. (a) Name and explain characteristics of the main classes of food. [14 marks]
- (b) i. Briefly explain personal hygiene to a class three pupil. [3 marks]
- ii. Explain to JHS 2 pupils how economic factors such as cost, income, availability affect food choices of a family. [5 marks]
- (c) i. Give one symptom of vitamin A deficiency in children. [1½ marks]
- ii. What is the treatment for Vitamin A deficiency in children? [1½ marks]