

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 300, 2021/2022

B.ED. PROGRAMME

COURSE CODE: **TEUP 306**

COURSE TITLE: **PREPARING TO TEACH UPPER PRIMARY SCIENCE**

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*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. Land and sea breezes occur because of \_\_\_\_\_.
  - a. convectional currents
  - b. heat transfer by land
  - c. the different position of the moon
  - d. the revolution of the earth

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2. Biological control of malaria involves \_\_\_\_\_.
  - a. burying empty cans
  - b. draining breeding grounds of mosquitoes
  - c. introducing fish into ponds to feed on larvae
  - d. spraying surfaces on which mosquitoes settle with insecticides
3. The process in the hydrological cycle which results in water vapour condensing and falling on the earth surface is \_\_\_\_\_.
  - a. evaporation
  - b. infiltration
  - c. precipitation
  - d. sublimation
4. A hot body will radiate heat most rapidly if its surface is \_\_\_\_\_.
  - a. black and polish
  - b. black and rough
  - c. white and polish
  - d. white and rough
5. A mosquito has four stages in its life cycle.
  - i. egg ii. larva iii. Pupa iv. adultMosquito requires food only during which stage?
  - a. i, ii, iii and iv
  - b. i, ii and iv
  - c. ii and iv
  - d. iv only
6. The boiling point of water is
  - a. 373 K
  - b. 32 °F
  - c. 60 °C

d.  $90^{\circ}\text{R}$

7. Which of the following is not used for the measurement of temperature?

- a. Thermistor
- b. Geyser
- c. Pyrometer
- d. Thermometer

8. A bar magnet is divided in two pieces. Which of the following statements is true?

- a. The bar magnet is demagnetized.
- b. The magnetic field of each separated piece becomes stronger.
- c. The magnetic poles are separated.
- d. Two new bar magnets are created.

9. Which of the following statement is incorrect according to heat transfer?

- a. A material medium is not necessary for heat transmission
- b. For heat exchange, a temperature gradient must exist
- c. Heat flow doesn't depend on temperature
- d. The process of heat transfer is an irreversible process

10. Which is one of the 4-stages of a mosquito's life cycle?

- a. Baby
- b. Drone
- c. Pupa
- d. Teenager

11. Which of the following organs functions as an air conditioner?

- a. Larynx
- b. Nasal chamber
- c. Pharynx
- d. All the above

12. The normal breathing process is controlled by \_\_\_\_\_.  
a. dorsal respiratory group  
b. lungs  
c. ventral respiratory group  
d. both (a) and (c)
13. Which of the following statements is true about the entry of air into the lungs?  
a. Air enters the body and travels to the lungs through the mouth and the nose  
b. Air enters the body and travels to the lungs through the oesophagus and gullet  
c. Air enters the body and travels to the lungs through the windpipe and the pores  
d. Air enters the body and travels to the lungs through the nose and the nervous system.
14. Which of the following gas is released out during the process of respiration?  
a. Carbon dioxide  
b. Hydrogen  
c. None of the above  
d. Oxygen
15. The tiny air sacs present in human lungs is called \_\_\_\_\_.  
a. alveoli  
b. bronchus  
c. bronchioles  
d. all the above
16. What is the SI unit of temperature?  
a. Celsius  
b. Degree  
c. Fahrenheit  
d. Kelvin

17. Which of these is a non-magnetic substance?

- a. Cobalt
- b. Gold
- c. Iron
- d. Nickel

18. The Rennin enzyme is secreted in which of the following areas of the Alimentary Canal?

- a. Duodenum
- b. Mouth
- c. pancreas
- d. Stomach

19. Protein is transformed after digestion into \_\_\_\_\_.

- a. Amino acid
- b. Fat
- c. Glucose
- d. Sucrose

20. Saliva helps in the digestion of \_\_\_\_\_.

- a. Fats
- b. Fibre
- c. protein
- d. Starch

21. Your salivary glands are a mixture of secretions that help break down food.

- a. False
- b. True
- c. All the above

d. None of the above

22. A long tube that carries food from the mouth to the stomach:

a. Esophagus

b. Intestine

c. Trachea

d. Urethra

23. This part of the digestive system removes solid wastes such as feces from the body:

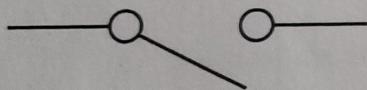
a. Esophagus

b. Large intestine

c. Liver

d. Small intestine

24. This is the symbol for a \_\_\_\_?



a. Switch

b. Light

c. Battery

d. Wires

25. What is the correct order of Mosquito Life Cycle?

a. Eggs - larva - pupa - adult mosquito

b. Pupa - larva - egg – butterfly

c. Larva - adult mosquito - eggs – pupa

d. Butterfly-pupa-larva-eggs

SECTION B

[75 Marks]

Answer any three questions in this section.

1. a. Define the term magnetic field. 2 marks  
b. Give three uses of magnets. 6 marks  
c. What are the functions of the following organs in the digestive system of humans? 4 marks
  - i. salivary gland.
  - ii. Small intestine.

d. i. State Ohm's law. 3 marks  
ii. Describe the mechanism of inhalation in humans. 10 marks
2. a. Distinguish between convection and radiation of heat. 3 marks  
b. State three differences between heat and temperature. 6 marks  
c. Name three components of a simple electric circuit. 6 marks  
d. Describe how magnetic materials can be distinguished from non-magnetic materials. 10 marks
3. a. Define the following terms 2 marks
  - i. Absorption in digestion 2 marks
  - ii. Chyme 2 marks
  - iii. Maltase 2 marks
  - iv. Dyspepsia 2 marks
  - v. State one (1) function of the gall bladder 2 marks

b. Describe the following mechanisms in human respiration. 2 ½ marks
  - i. Inhalation 2 ½ marks
  - ii. Exhalation 2 ½ marks
  - iii. What is complete metamorphosis 2 marks

c. State and explain any three (3) ways by which mosquitoes can be controlled. 3 marks

- d. As a teacher in a Basic school in Ghana, prepare a lesson plan to teach electricity using the content standard, "B5.4.2.1.1 Identify the components of an electric circuit and their functions" with the following core competencies; Observing, Manipulating, Analysing, Evaluating, and Communicating. 5 marks
4. a. Draw a bar magnet and identify the necessary parts. 5 marks
- b. State four (4) applications of magnetism. 4 marks
- c. State two (2) differences between a male mosquitoes and female mosquitoes. 8 marks.
- d. Draw a simple electrical circuit showing five (5) components. 8 marks
5. a. State five (5) important effects of heat on object 5 marks
- b. Explain the effect heat gain and heat loss have on water 7 marks
- c. State the stages of mosquito life pattern 8 marks
- d. State five (5) conditions that affect the respiratory system in human. 5 marks