



UNIVERSITY OF GHANA

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DEPARTMENT OF TEACHER EDUCATION

SCHOOL OF EDUCATION AND LEADERSHIP

COLLEGES OF EDUCATION

END OF YEAR ONE SEMESTER TWO EXAMINATIONS, 2023/2024

B.ED. PROGRAMME

TEJS_TEUP_TEEG 106: INTRODUCTION TO INTEGRATED SCIENCE II

1. Which of the following is a unit of energy?
 - a. Nm
 - b. $\frac{kgm^3}{s^2}$
 - c. Watts
 - d. ms^{-2}
2. Removal of heat from water in the liquid state will cause it to change into the state
 - a. gaseous
 - b. Liquid
 - c. Solid
 - d. Plasma
3. Which of the following statements is/are correct?
 - I. Energy is a fuel
 - II. Energy is a force
 - III. An object at rest has no energy
 - a. All the above
 - b. I and II only
 - c. I and III only
 - d. None of the above
4. Which of the following items in a first aid kit is used to protect minor injuries from infection and help prevent a wound from getting stuck to a bandage?
 - a. Antibiotic cream
 - b. Tweezers
 - c. Emergency blanket
 - d. Adhesive tape

5. Which of the following is a **not** a renewable source of energy?
- Biomass
 - Natural gas
 - Hydropower
 - Solar energy
6. The ABC of first aid is a list of important things first aiders must check when dealing with a patient. What does this acronym stand for?
- Airway, Brainstorming and Communication
 - Airway, Bronchioles and Circumstantiate
 - Airway, Breathing and Circulation
 - Airway, Blastomycosis and Communication
7. When someone is unconscious, to keep the person's heart and brain oxygenated, a first aider must
- immediately give the person oxygen
 - rush the victim to hospital.
 - force spoon into the victim's mouth
 - let someone call an ambulance and perform CPR.
8. To perform high quality CPR on a six months old baby you must begin with.....
- 30 chest compressions
 - 20 chest compressions
 - 2 rescue breaths
 - 5 rescue breaths
9. CPR is a combination of
- Compressions, airway management and rescue breathing.
 - Compressions, communication and blastomycosis.
 - Compressions, airway management and responses.
 - Compressions, recovery skills and treatment.
10. What does the acronym CPR stand for?
- Chest Pressing Resuscitation
 - Cardio Pressing Resuscitation
 - Cardiovascular Pulmonary Resuscitation
 - Cardio Pulmonary Resuscitation
11. All the following are caused by protozoa except
- Dysentery
 - Malaria
 - Pneumonia
 - Trypanosomiasis

12. Tuberculosis disease is caused by
- Fungi
 - Virus
 - Bacteria
 - Worm
13. Typhoid is a disease caused by
- Fungi
 - Virus
 - Bacteria
 - Worm
14. All the following are infectious diseases except
- Anorexia
 - Malaria
 - Cholera
 - Pneumonia
15. Which of the following is a household electronic appliance?
- Test tube rack.
 - Dishwasher.
 - Micrometer screw gauge.
 - Mass spectrometer.
16. During CPR, what follows after you have given 30 compressions to a casualty?
- Administer two rescue breaths
 - Administer five rescue breaths
 - Administer eight rescue breaths
 - Administer eleven rescue breaths
17. What does the acronym AED stand for?
- Automatic Exterior Defibrillator
 - Automated Extra Defibrillator
 - Automated Exterior Defibrillator
 - Automated External Defibrillator
18. What is the function of AED?
- To perform chest compression to help the heart reestablish an effective rhythm.
 - To give rescue breaths to help the heart reestablish an effective rhythm.
 - To give electrical shock to help the heart reestablish an effective rhythm.
 - To give blood to help the heart reestablish an effective rhythm.
19. The statement "energy can be created and destroyed" violates which of the following:
- The law of definite proportion
 - The law of conservation of energy
 - The law of multiple proportion
 - Faraday's first law of electrolysis

20. The energy conversion that takes place when a television set is switched on is
- Chemical to light energy.
 - Electrical to light + sound + heat energy.
 - Electrical to heat energy.
 - Mechanical to potential + sound energy.
21. A colourless, odourless poisonous gas which combines with blood haemoglobin to form carboxyhaemoglobin is
- Nitrogen (IV) oxide
 - Carbon monoxide
 - Hydrogen sulphide
 - Ammonia
22. The primary source of energy is
- Humans
 - Plants
 - Sun
 - Sea
23. The enzyme that converts sucrose into fructose and glucose is
- Glucagon
 - Zymase
 - Invertase
 - Pancreatic Juice
24. What makes sugar cane sweet?
- Fructose
 - Glucose
 - Sucrose
 - Maltose
25. All the following scientific processes are involved in the production of ethanol from sugarcane except
- Fermentation
 - Distillation
 - Condensation
 - Polymerization

Section B

Attempt any 3. All questions carry equal marks

1. a. Explain each of the following:

- i) Zoonotic disease
- ii) Incubation period of a disease
- iii) Passive carrier
- iv) Active carrier
- v) Asymptomatic carrier.

[10 marks]

b. State three importance of exercise to an individual.

[6 marks]

c. Your eight-month-old baby accidentally swallowed a coin.

- α) Name the technique you will use to relief her from choking
- β) Outline the steps you will following to relief her from choking

[8 marks]

d. What does "R" in the acronym DR ABC denote? [1 mark]

2. a. State the importance of each of the following items found in a first aid kit.

- i) Tweezer
- ii) First aid guide
- iii) Pocket mask

[6 marks]

b. Giving rescue breaths to an unconscious person during CPR is vital. The pictures below indicate the steps to follow when giving rescue breaths. Arrange the pictures using the corresponding numbers to show the correct order or procedures you will follow when giving rescue breaths.



I



II



III



IV

[4 marks]

c. Explain each of the following:

- i) Pandemic disease
- ii) Endemic disease
- iii) Endermic disease.

[6 marks]

- d. i) What is a pathogen?
- ii) Name the five main types (classes) of pathogen.
- e. What is a fomite?

[7 marks]

[2 marks]

3. a. Define energy.

[2 marks]

b. Give the energy conversions that take place when

- i) you light a candle.
- ii) when lightning strikes

[8 marks]

c. Opata sat behind fire from firewood to keep himself warm. Name the energy stored in firewood?

[2 marks]

d. What is the major difference between an electrical and an electronic circuit?

[3 marks]

e. What is the function of each of the following components as used in an electronic circuit?

- α) Capacitor
- β) Transistor
- γ) Resistor

[6 marks]

f. Distinguish between passive and active electronic.

[4 marks]

4. a. Distinguish between science and technology

[3 marks]

b. State one technological practice that can be found in the community where you live, and describe the main scientific principles stage(s) involved.

[4 marks]

c. Discuss one factor that may be responsible for the low technological development in the community you live in.

[3 marks]

d. Describe three characteristics of an industry.

[6 marks]

e. State three importance of maintaining a portfolio as a trainee teacher.

[6 marks]

f. What is endogenous technology?

[3 marks]

5. a. State three benefits of a forest reserve.

[6 marks]

b. Explain each of the following:

- α) Endangered species
- β) Threatened species
- γ) Rare species

[6 marks]

c. Name two gases that contribute to acidic rain.

[3 marks]

d. The predicted rise in earth average surface temperature due to the build-up of heat trapping gases is referred to as global warming. Mention three effects of global warming.

[6 marks]

e. Give two effects of high concentration of Sulphur dioxide in the atmospheren [4 marks]