

TRENDING-GHANA EXAMINATIONS CONSULTS

(INTELLIGENCE IS OUR HALLMARK)

NAME:

INDEX NUMBER:

DATE:

FIRST TERM MOCK ASSESSMENT I

FORM THREE (3)

MOCK ONE (1)

INTEGRATED SCIENCE 2 & 1

2 HOURS

This examination consists of two papers. Paper 2 which comes first as (practical and theory) and Paper 1 which contains the objectives. Paper 2 will last for 1 hour 15 minutes and is in two parts; I & II. Answer all questions in part I and any other four questions in part II.

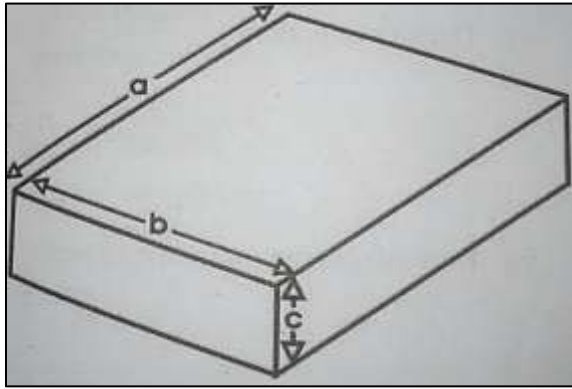
INSTRUCTIONS

- Do not open this booklet until you are told to do so
- While you are waiting, read the instructions carefully
- Write your **name, index number and date**
- Do not talk to your friends during exams
- Leave space between every sub – question
- Direct all questions to the invigilator during exams
- Do not start work until you are told to do so.

PART I – PRACTICALS (40marks)

Answer all of Question 1

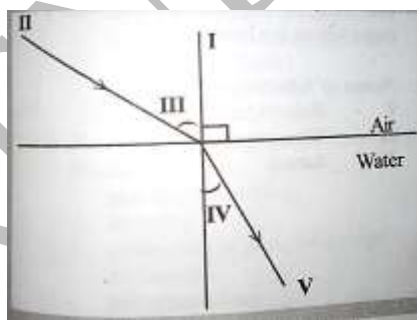
Q1a. The diagram below shows a rectangular block with dimensions **a**, **b** and **c**
 Use the diagram below to answer the following questions



Use your ruler to measure the sides marked **a**, **b** and **c**

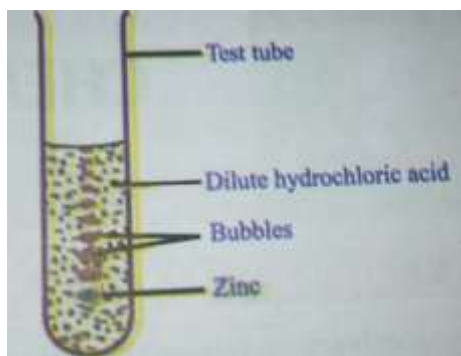
- i) Read and record the lengths of the sides marked **a**, **b** and **c**. (*in cm*) [3marks]
- ii) Determine the *volume* of the rectangular block [2marks]
- iii) If the mass of the block is *40g*, calculate the density of the rectangular block. [5marks]

b. The diagram below is an illustration of a scientific phenomenon which occurs in nature
 Study the diagram carefully and answer the following questions.



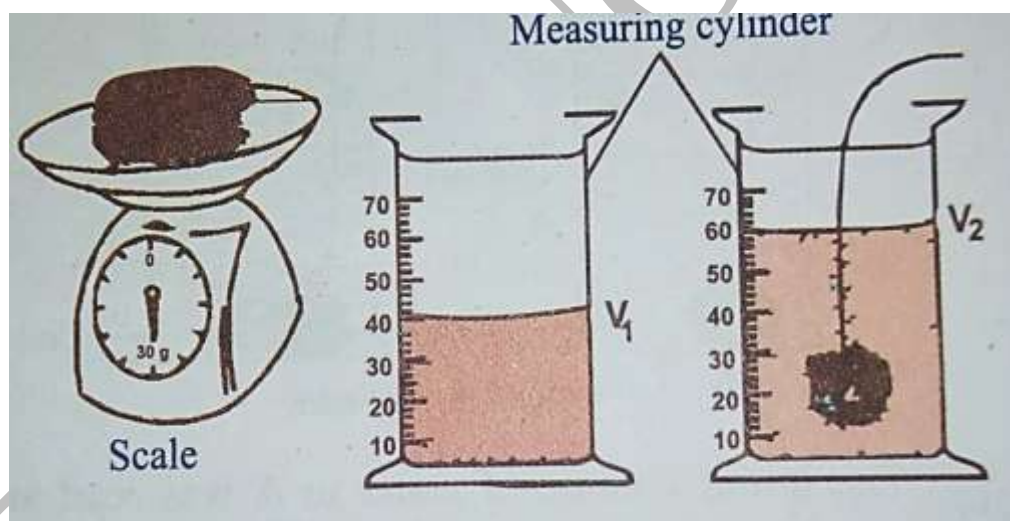
- i) What phenomenon does the diagram illustrate? [2marks]
- ii) Identify each of the parts labelled **I**, **II**, **III**, **IV** and **V** [5marks]
- iii) Explain why an object at the bottom of a pond appears closer to the surface than it actually is. [3marks]

c. Study the diagram carefully and answer the following questions



- i) Write a balanced chemical equation for the reaction that occurred in the experiment. [2marks]
- ii) Name the gas evolved [2marks]
- iii) List **two** metals which can react in a similar way as Zinc. [2marks]
- iv) Name **two** metals which cannot react in a similar way as Zinc. [2marks]
- iv) Name **two** glass apparatus which could have been used instead of the test tube. [2marks]

d) The diagrams below show how a student determined the density of a piece of stone.
Study the diagram carefully and answer the following questions



- i) What is the *mass* of the stone? [2marks]
- ii) What is the *initial volume* of the water? [2marks]
- iii) What is the *final volume* of the water? [2marks]
- iv) Calculate the *volume* of the stone [2marks]
- v) Calculate the *density* of the stone [2marks]

PART II - THEORY (60marks)

Answer **four** questions **only** from this part

- Q2**(a) i) What are *base units*?
ii) Mention **three** examples of base units [4marks]
- (b) i) Differentiate between *chemical* and *physical* changes
ii) Give an example each of a
 α) *chemical change* β) *physical change* [4marks]
- (c) i) What is *density*?
ii) A stone of mass 80.0g was put in a measuring cylinder containing water. If the level of the water rises by 20.0cm³, calculate the density of the stone. [5marks]
- (d) Name **two** diseases associated with the respiratory system of humans [2marks]
- Q3.** a. i) What is *weather*? [1mark]
ii) Differentiate between *weather* and *season*. [2marks]
- b. i) What is *germination of seeds*? [1mark]
ii) State **two** conditions necessary for germination of seeds to occur [2marks]
iii) Name **four** farming systems in crop vegetation [4marks]
- c. i) Define *potential energy*
ii) An object of mass 10kg is moving at a velocity of 2m/s². Calculate the kinetic energy of the object. [5marks]
- Q4**(a) i) What is *reflection of light*?
ii) Sketch a diagram to show how light reflects on a plane mirror [4marks]
- (b) i) List **two** components of the soil
ii) State **two** human activities that pollutes the environment [4marks]
- (c) **Explain** each of the following terms
i) annual plants ii) perennial plants [4marks]
- (d) i) What is a *fruit*?
ii) State **two** differences between a *fruit* and a *seed* [3marks]
- Q5**(a) i) Define the term *ecosystem*
ii) Differentiate between a *prey* and a *predator* [4marks]
- (b) In a tabular form, state **three** differences between *plants* and *animals* [3marks]
- (c) i) Define *alloys*
ii) List **three** examples of alloys [4marks]
- (d) i) **Explain** why it is advisable to wash clothes with soft water
ii) A stone weighing 100g displaced 45m³ of water, calculate its density [4marks]
- Q6**(a) i) What is *matter*?
ii) Make sketches to show how particles are arranged in **each** state of matter [4marks]
- (b) (i) What are *liquids*?
(ii) Explain *why* liquids flow [3marks]
- (c) (i) What is a *soil*?
List **three** uses of soil [4marks]
- (d) i) Define *light energy*
ii) List **two** laws of reflection of light [4marks]

- 1) Crops which complete their life cycle in the two years are called
A) Perennial B) Biennials C) Annuals D) Vegetables
- 2) Which of the following is an example of a citrus fruit?
A) Guava B) Orange C) Cocoa D) Pineapple
- 3) Viable seeds are seed that
A) Fail to germinate under suitable conditions
B) Are able to germinate under suitable conditions
C) Are eaten by bird after planting
D) Contain a lot of fat
- 4) The type of germination in which cotyledons remain below the soil is called
A) Epigeal germination B) Hypogeal germination C) Endosperm germination d) epigeal germination
- 5) All the following are sources of fresh water except
A) River B) Sea C) Streams D) Wells
- 6) Which of the following vegetables contains high amount of fiber?
A) Garden eggs B) Garlic C) Cabbage D) Carrot
- 7) Which of the following is not a cultural practice in a vegetable crop production?
A) Weeding B) Pest control C) Watering D) Harvesting
- 8) The following organisms are harmful to vegetable crop production except
A) Fungi B) Nematode C) Viruses D) Earthworm
- 9) Which of the following vegetable crop are to be staked?
A) Cabbage B) Onion C) Tomato D) Okra
- 10) Which of the crops is a legume?
A) Pepper B) Sweet potato C) Maize D) Soya beans
- 11) Which of the following is not a source of energy?
A) Wind B) Sand C) Coal D) Water
- 12) Organic material made from plants and animal is called
A) Humus B) Bumpass C) Energy D) Biogas
- 13) Which of the following is not a benefit of energy?
A) For heating homes B) For cooking food C) For moving car D) Burning houses
- 14) Electricity is used by appliances to do work. This means that electricity is a form of
A) Energy B) Force C) Generator D) Machine

- 15) When a mango is falling from a tree its potential energy is changed to
 A) Kinetic energy B) Sound energy C) Heat energy D) Chemical energy
- 16) The ultimate source of light comes from
 A) The sun B) The plants C) Crude oil D) Fluorescent tube
- 17) Which of the following factor is a characteristic of light?
 A) It is always reflected in a medium
 B) It passes through all objects
 C) It is refracted at polished surfaces
 D) It travels in a straight line
- 18) A mirror is used to direct the sun's rays onto the classroom wall by
 A) Radiation B) Reflection C) Conduction D) Convection
- 19) A ray of light makes an angle of 20 with the surface of a plans mirror. Determine the angle of reflection
 A) 20 B) 50 C) 70 D) 90
- 20) A plane mirror can be described as opaque because it
 A) Absorbs all the light incident on its
 B) Reflect all the light incidents on it
 C) Allows all the light incident on it
 D) Allows all the light incident on it
- 21) The structure which help a fish to breath in water is the
 A) Kidney B) Heart C) Gills D) Buccal cavity
- 22) Two organisms belonging to the same species
 A) Grow at the same rate
 B) Can produce fertile offspring
 C) Cannot communication with each other
 D) cannot live in different habitat
- 23) Which of the following human activities maintains the balance of the nature?
 A) afforestation B) Deforestation C) Mining D) Pollution
- 24) Which of the following disease is prevalent in an environment where air is heavily pollute with dust particles?
 A) Asthma B) Measles C) Cholera D) Colon cancer
- 25) An atom of an element Y has N protons and 12 neutrons. What is the number of electrons in it?
 A) 12 B) 11 C) 23 D) 1
- 26) Hydrogen is represented by the chemical symbol H₂. This symbol represents
 A) Two molecules of hydrogen B) Two atom of hydrogen
 C) Two element of hydrogen D) Two ions of hydrogen

- 27) The electron charge of an atom is
A) -1 B) +1 C) 0 D) +2
- 28) Gold is usually used to make jewelry because it is
A) Less reactive with air B) Highly reactive with air C) Expensive D) Precious
- 29) Which of the following alloys is widely used for making statues?
A) Bronze B) Brass C) Steel D) Iron
- 30) Which of the following metal is used for making roofing sheet?
A) Zinc B) Silver C) Mercury D) Aluminum
- 31) The number of hydrogen atom present in a molecule of water is
A) 4 B) 6 C) 2 D) 1
- 32) Which of the substance is a compound?
A) Argon B) Iron C) Water D) Sulphur
- 33) Gin can be obtained from palm wine by
A) Filtration B) Condensation C) Distillation D) Sublimation
- 34) Liquefied petroleum gas (L P G) is obtained from grudge oil by
A) Magnetic separation B) Crystallization C) Filtration D) Distillation
- 35) The boiling point of water is
A) 70° B) 80° C C) 90 °C D) 100 °C
- 36) When sugar is put into water, it
A) Melts B) Evaporates C) Dissolves D) Sublimes
- 37) The process of fusion of sperm and ovum in humans is known as
A) Fertilization B) Evaporation C) Pollination D) Ovulation
- 38) An example of natural source of light is known as
A) Torchlight B) Burning candles C) Star D) Burning paper
- 39) One advantage of soft water over hard water is that soft water
A) Has pleasant taste B) Can prevent heart disease
C) Does not waster soup D) Form scales in kettles
- 40) Conduction of electricity is associated with metals because of the movement of free
A) Protons B) Ions C) Atom D) Electrons