

26. What does NPK, written on inorganic fertilizer, stands for?
 A. Nitrate, phosphate, potash
 B. Nitrogen, phosphorus, kilos
 C. Nitrogen, phosphorus, potassium
 D. Nitrate, phosphate, potassium
27. Which of the following is not a breed of guinea fowl?
 A. Pencil guinea fowl
 B. Helmeted guinea fowl
 C. Plumed guinea fowl
 D. Vulturine guinea fowl
28. An animal that chews the cud is known as
 A. Ruminants B. Birds
 C. Poultry D. Monogastric
29. Lack of iron in your meal can cause you to develop
 A. Scurvy B. Kwashiorkor
 C. Anaemia D. Ricket
30. Metallic bonding is exhibited in all the following except
 A. Magnesium
 B. Sodium
 C. Silver
 D. Sodium chloride
31. The bond between two atoms through the sharing of electrons is known as
 A. Covalent B. Inter-atomic
 C. Ionic D. Tripolar
32. Which of the following cells functions as a transporter of sugar through plants?
 A. Xylem cell
 B. Phloem cell
 C. Cambium cell
 D. Palisade cell
33. What type of multicellular organisms have specialized cells?
 A. Plants only
 B. Animals only
 C. Both plants and animals
 D. None of the above

34. Which of the following helps in clotting blood?
 A. Thrombocytes
 B. Myocytes
 C. Leucocytes
 D. Erythrocytes
35. The following are examples of leguminous plants except
 A. Cowpea B. Sweet potato
 C. Cassava D. Crotalaria
36. Which of the following inserts undergoes incomplete metamorphosis?
 A. Mosquito
 B. Housefly
 C. Grasshopper
 D. Lizard
37. Plants that are primarily grown for its beauty, accent and aesthetic is describes as
 A. Ornamental crops
 B. Industrial crops
 C. Feed crops
 D. Food crops
38. The following are examples of roots and tuber crops except
 A. Yam B. Cassava
 C. Plantain D. Cocoyam
39. Haemoglobin and oxygen combine to form a compound known as
 A. Fibrinogen
 B. Albumen
 C. Oxyhaemoglobin
 D. Erythrocytes
40. Which of the following is directly used during respiration?
 A. Glucose
 B. Starch
 C. Fatty acids
 D. Amino acids



ALPHA EXAMINATIONS

SUPER MOCK EXAMINATION

JUNE, 2024

INTEGRATED SCIENCE 2 & 1

BASIC: 9

1 hour 45 minutes

NAME:.....

DISTRICT:.....

SCHOOL:.....

DATE:.....

SUPER MOCK EXAMINATION

INTEGRATED SCIENCE 2 & 1

*Do not open this booklet until you are told to do so. While you are waiting, read and observe the following instructions. Write your **name** and **index number** in **ink** in the spaces provided above.*

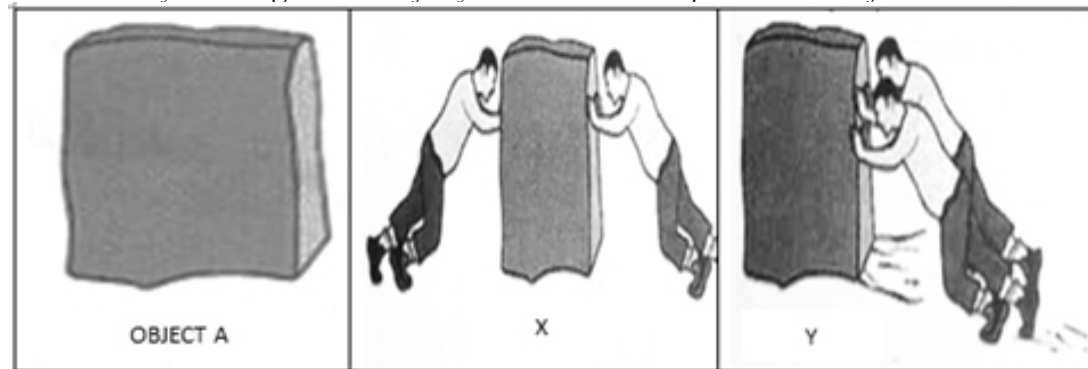
*This booklet consists of two papers. Answer Paper 2 which comes first, in your answer booklet and Paper 1 on your Objective Test answer sheet. Paper 2 will last 1 hour 15 after which the answer booklet will be collected. Do **not** start Paper 1 until you are told to do so. Paper 1 will last **45** minutes.*

ALPHA EXAMINATIONS
SUPER MOCK EXAMINATION
SUBJECT: SCIENCE 2

SECTION B
PAPER 2
ESSAY

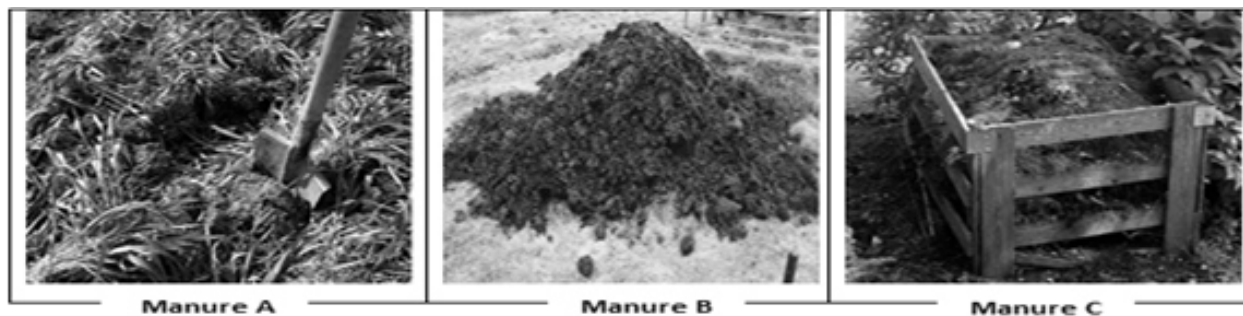
Practical (Compulsory) – [40 marks]

1. (a) The diagram below illustrate Newton's Law of Motion of two forces.
Study the diagrams carefully and answer the questions that follow.



- (i) The tendency of an object A to remain in its state and position is called? [2 marks]
(ii) What type of force is acted upon object A in the X diagram? [2 marks]
(iii) What name is given to the force acted upon object A in the Y diagram? [2 marks]
(iv) List **two** ways how the force named in (iii) above can cause motion. [4 marks]

- (b) The table below represent types of manure.
Study the diagrams carefully and answer the questions that follow.



- (i) Identify the types of manure illustrated in A, B and C [3 marks]
(ii) Which of the above manure is prepared from materials such as cow dung and urine? [2 marks]
(iii) Which of the manure is/are categorised as plant waste? [2 marks]
(iv) Name any **three** merits of using manure in farming. [3 marks]

12. A soccer player kicks a ball with a large force. According to Newton's second law, what will happen to the ball's acceleration?
A. It will be slow because the ball is round
B. It will be very high due to the large force
C. It will depend on the weight of the ball
D. It won't accelerate at all
13. A washing machine uses several components to clean clothes. What is the main function of the agitator?
A. Control the water temperature
B. Loosen dirt and debris from the clothes through agitation
C. Pump water in and out of the machine
D. Spin the clothes at high speed for drying
14. What is the first step in the process that a dammed river goes through to produce electricity?
A. Dam construction
B. Turbine rotation
C. Water flow regulation
D. Water heating
15. This human activity contributes to the increase of greenhouse gases in the atmosphere.
A. Recycling waste materials to reduce emissions
B. Planting More trees to absorb carbon dioxide
C. Conservation efforts to reduce emissions
D. Burning fossil fuels and deforestation.
16. Which of the following is not an adaptive feature of plants that do well in dry environments with little water?
A. Stem coated with a waxy
B. Roots deep in the earth
C. Leaves look like spines
D. Complicated root system.
17. The efficiency of a machine is 75%. If the work output is 450J, what is the work output?
A. 600 J B. 500 J
C. 450 J D. 400 J
18. Which organelle in the plant cell is responsible for photosynthesis?
A. Vacuole
B. Golgi apparatus
C. Chloroplast
D. Endoplasmic reticulum
19. Which of the following does not manufacture digestive juices?
A. Kidney B. Pancreas
C. Liver D. Stomach
20. What does ammonification in the nitrogen cycle refer to?
A. Absorption of nitrogen by plants through their roots
B. Breakdown of organic nitrogen compounds into ammonia by decomposers.
C. Conversion of atmospheric nitrogen into a usable form by plants.
D. Release of nitrogen gas back into the atmosphere by denitrifying bacteria.
21. Which of the following best describes evaporation?
A. Evaporation B. Precipitation
C. Fertilisation D. Collection
22. Water cycle helps to regulate....
A. Wind patterns
B. Weather patterns
C. Solar patterns
D. Soil patterns
23. The first stage of the life cycle of a housefly is called...
A. Pupa B. Adult
C. Egg D. Imago
24. Which of the following can be done to reduce the activities of houseflies?
A. washing our cars
B. Disposing waste correctly
C. Dropping litters
D. Open defecation
25. Which of the following plant nutrient sources releases nutrients quickly to plants?
A. Manure
B. Poultry droppings
C. NPK
D. Cow dung

ALPHA EXAMINATIONS
SUPER MOCK EXAMINATION
SUBJECT: INTEGRATED SCIENCE 1
BASIC: 9

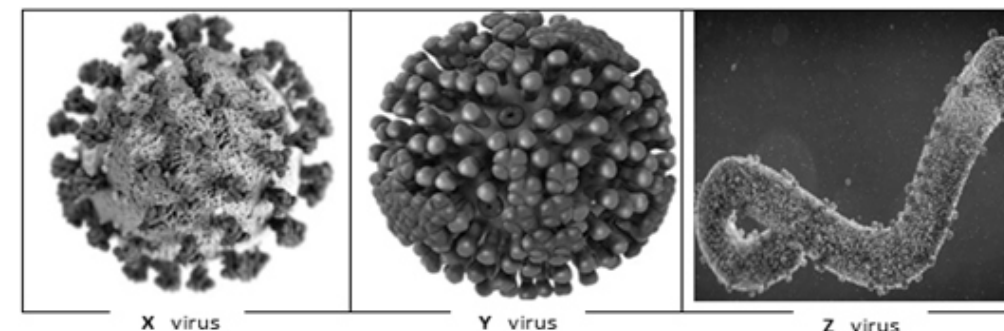
SECTION A

Choose the correct answer from the option A-D

1. Two learners are discussing the colours of light. They decided to think about how they are able to see the colours of Ghana flag. What scientific principle is helping them to see the colours?
A. diffraction B. Mirage
C. Reflection D. Refraction
2. Efficiency of energy is never 100% this is because part of the energy put into work...
A. I changed into other forms of energy
B. are used to overcome friction and inertia
C. are used to overcome weight and gravity
D. vanish into thin air without being seen
3. What is the digestive system?
A. The body's blood transporting system
B. The body's food processing system
C. The body's system nerves
D. The body's breathing system
4. What are the common symptoms of hepatitis?
A. Fever, cough, sore throat
B. Rash, dizziness, chest pain
C. Jaundice, abdominal pain, nausea
D. Muscle aches, fatigue, headache
5. Magnetic force is non-contact force. This means the magnet...
A. Can exert a force on another magnet or magnetic material even at a distance
B. Needs to be physically touching the object to exert a force
C. Only attracts objects
D. Requires a pushing force to be exerted

6. A Fox eats a rabbit, which gets its energy from eating grass. How many trophic level are there in this food chain?
A. 1 B. 2
C. 3 D. 4
7. When a torch is switched on in a foggy atmosphere, the path of the light becomes visible. The scattering of the light is caused by...
A. air particles in the fog
B. dust particles in the fog
C. Sunlight passing in the fog
D. Water droplets in the fog
8. After studying the arrangement of elements in the periodic table, the first thing you may notice is the number that lies above the symbol. This number represents the...
A. Atomic number of the elements
B. Isotopes number of the elements
C. Mass atomic number of the elements
D. Molecular number of the elements
9. A magnet repels a steel ball with a certain force. This force will cause the steel ball to....
A. Accelerate away from the magnet
B. Accelerate in the direction of the magnet
C. Attract the magnet
D. Remain motionless
10. A prokaryotic cell possesses all the following characteristics except.
A. Lack of nuclear membrane
B. Exhibit sexual reproduction
C. Have genetic materials in its nucleus
D. Exhibit asexual reproduction
11. Two toy cars with the same mass are pushed with different forces. The car pushed with a greater force will...
A. Experience a higher acceleration than the other car
B. Experience a lower acceleration than the other car
C. Experience the same acceleration as the other car
D. It's impossible to determine without more information.

- (c) The diagrams below shows the structure of microorganisms.
Study the diagrams carefully and use them to answer the questions that follow.



- (i) What kind of microorganisms are illustrated as X, Y and Z? [3 marks]
- (ii) Name the diseases caused by X, Y and Z microorganisms? [3 marks]
- (iii) Mention **two** symptoms of X disease. [2 marks]
- (iv) What **two** ways can the disease of X be prevented from spreading to other people? [2 marks]

- (d) These are pictures of National and International Scientists and Science Educator.
Study the pictures carefully and answer the questions that follow.



- (i) Match the pictures with these names: Prof. (Mrs.) Ibok Oduro, Prof. Francis K.A. Allotey, Sir. Alexander Fleming and Sir. Isaac Newton. [4 marks]
- (ii) Which of the Scientist become instantly fame with his work on Soft X-Ray spectroscopy? [2 marks]
- (iii) Which of the Scientist formulated the laws of motion? [2 marks]
- (iv) Which of the Scientist made the discovery of penicillin? [2 marks]

PART II – [60 MARKS]

Answer any four questions from this Part.

2. (a) Name the orderly stages of the cycle of Anopheles mosquitoes. [4 marks]
- (b) Define the following terms;
(α) Seedbed
(β) Sowing
(μ) Transplanting [6 marks]
- (c) Briefly explain why there is no life on the outer planets. [3 marks]

- (d) State two impacts of the technological advancement on the Ghanaian environment. [2 marks]
3. (a) Name the problem each of managing these renewable energy;
 (i) Geothermal energy
 (ii) Tidal energy
 (iii) Biomass [3 marks]
- (b) Name any four agricultural tools and their function. [4 marks]
- (c) (i) What is disease?
 (ii) Distinguish between communicable and contagious diseases [4 marks]
- (d) Mention four indigenous technologies that exist in Ghana. [4 marks]
4. (a) What is the difference between malleability and ductility of metals. [4 marks]
- (b) (i) What are organelles?
 (ii) Why is mitochondrion mostly called power house of the cell? [4 marks]
- (c) Two resistors $4\ \Omega$ and $6\ \Omega$ are connected in series and are supplied with current from 150 volt battery. Find the current that flows through the circuit. [4 marks]
- (d) Why would a producer select the scheduled-feeding method? [3 marks]
5. (a) (i) What is feed formulation?
 (ii) List the stages of growth of chicken. [4 marks]
- (b) Describe any three non-planetary bodies. [6 marks]
- (c) What is the difference between a suspended particle and colloidal particle? [3 marks]
- (d) Name any two specialized cells of humans. [2 marks]
6. (a) Write a well-balanced chemical equation to represent anaerobic respiration. [4 marks]
- (b) (i) What is a decomposer in food web?
 (ii) Describe three ways plants depends on animals for survival. [5 marks]
- (c) Differentiate between monocropping and monoculture. [3 marks]
- (d) State the energy transformation involves in the following;
 (i) Mango falling from a tree.
 (ii) Carpenter hitting a nail with hammer. [3 marks]

**DO NOT TURN OVER THIS PAGE
UNTIL YOU ARE TOLD TO DO SO.**

**YOU WILL BE PENALIZED SEVERELY IF YOU ARE
FOUND LOOKING AT THE NEXT PAGE BEFORE
YOU ARE TOLD TO DO SO**

PAPER 1
OBJECTIVES TEST

1 HOUR

Answer all the questions on your Objective Test answer sheet

- Use 2B pencil throughout
- On the pre-printed answer sheet, check that the following details are correctly printed: Your surname followed by your other name, the Subject Name, Your index number, Centre Number and the Paper Code.
- In the boxes marked Candidate Number, Centre Number and Paper code, re-shade each of the shaded spaces. An example is given below. This is for a candidate whose name is SEPENU KOFI EMMANUEL. His index number is 772384155 and he is writing the examination at Centre Number 77234. He is offering Integrated Science and the Paper Code is 0301.

CANDIDATE NAME: SEPENU KOFI EMMANUEL	SUBJECT NAME: SCIENCE 1
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- Use 2B pencil Press firmly your first mark completely.
- Answer each question by choosing one letter and then shade through the letter chosen like this [A] [C] [E]
- If you want to change an answer erase
- If only four alternatives are given for each question, ignore the letter E.
- Our question paper may have fewer than 60 questions.

CANDIDATE NUMBER										CENTRE NUMBER					PAPER CODE				For Supervisors Only. If Candidate is absent shade this space <input type="checkbox"/>
7	7	2	3	8	4	1	8	8		7	7	2	3	4	0	7	0	1	
[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]	<input checked="" type="checkbox"/>	[0]	<input checked="" type="checkbox"/>	[0]	
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