

SCIENCE 2 & 1 END OF TERM

Essay & Objective

2 hours: 15 minutes

2 & 1

Name.....

Index Number.....

FINALPREPS

EXAMINATIONS CONSORTIUM



END OF TERM 2 EXAMINATIONS

SCIENCE 2 & 1

2 hours: 15 minutes

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 minutes 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

© 2026 FinalPreps Examinations Consortium

Contact us on 0542232515

Log on onto our website via www.finalpreps.com

PAPER 2

1¼ hours

ESSAY

[100 marks]

This paper is in two parts: I and II. Answer Question 1 in Part I and any other four questions in Part II.

Answer all the questions in your answer booklet.

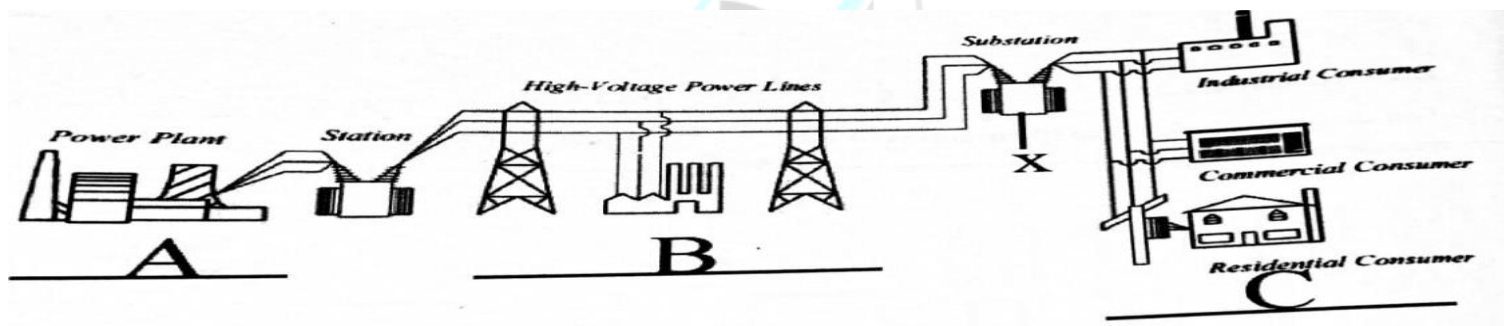
Credit will be given for clarity of expression and orderly presentation of materials

PART I

[40 marks]

Answer all of Question 1

- (a) The diagram below is an illustration of electricity transmission from various power plants in Ghana to the final consumers. Study the diagram below carefully and use it to answer the questions that follows.

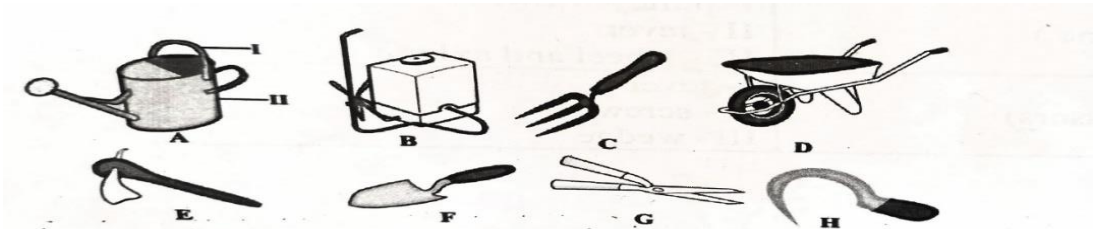


- (i) Name the stages labelled A, B and C respectively [3 marks]
- (ii) Identify the structure labelled X and state its functions [2 marks]
- (iii) State the two types of structure labelled X and give their function each. [2 marks]

(iv) Copper metal is mostly used for making the high voltage power transmission lines, state **two (2) properties** of the metal that makes it suitable for that purpose. [2 marks]

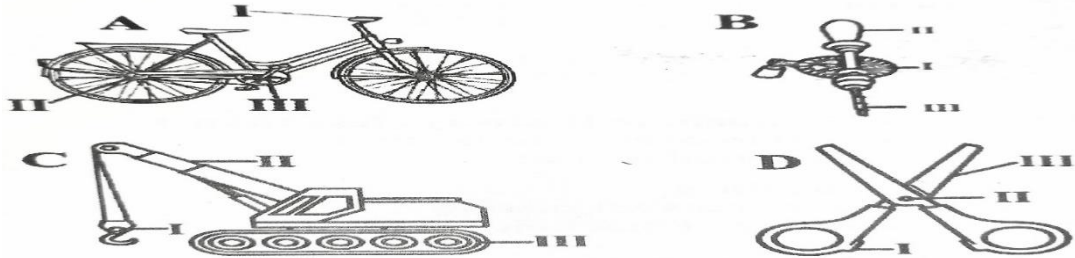
(v) You are given the electrical power ratings, **313kV** and **240V**. As an expert in electricity generation and transmission, which of the power ratings given to you above will you supply to Mr. Samuel Dadzie’s household? [1 mark] [10 marks]

(b) Mr. Morrison, a commercial farmer uses the following Agric tools shown below in performing various farming activities. Study the tools below carefully and answer the questions that follows.



- i. Identify each of the tools **A, B, C, D, E, F, G** and **H** used by Mr. Morrison. [4marks]
 - ii. State one (1) use of each of the tools labelled **A, B, C** and **D** [2 marks]
 - iii. Name the parts of the tool **A** labelled as **I** and **II** [1mark]
 - iv. State three (3) ways Mr. Morrison can maintain the tools shown above [3 marks]
- [10 marks]

(c) The diagram below illustrates some examples of machines. Carefully study them and answer the questions that follow.



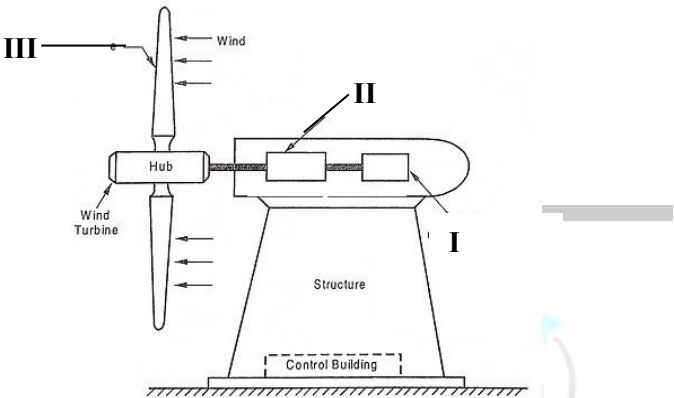
- (i) What type of machines are illustrated above? [2marks]
- (ii) Identify the names of each of the machines labelled **A, B, C** and **D** shown in the diagram above. [2marks]
- (iii) In each of the diagrams, copy and complete the table with the machines labelled **I, II** and **III** [6 marks].

Complex machine	Simple machines found in the complex machine
A	

B	
C	
D	

[10 marks]

(d) The diagram below shows a major device used in harnessing a renewable energy source in the



generation of electricity. Study the diagrams carefully and answer the questions that follow.

- (i) Identify the device illustrated above. [2 marks]
- (ii) State the names of the part of the device labelled I, II and III [3 marks]
- (iii) What is the energy transformation likely to take place in the operation of the device above? [2 marks]
- (iv) The device above was originally constructed for a purpose rather than what is being used today; What is this purpose of the device shown above? [3marks]

[10 marks]

THEORY
PART II (60 MARKS)
ANSWER ONLY THREE QUESTIONS FROM THIS PART.

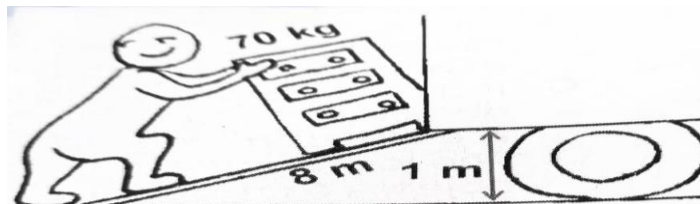
2. (a) (i) State **two** (2) reasons why there is no life on the planet Jupiter. [2 marks}
(ii) List **two** (2) other planets without life [2 marks}

- (b) (i) Give **two** (2) reasons why energy from the sun is said to be renewable. [2 marks]
(ii) State **three** (3) differences between heat and temperature [3 marks]

- (c) (i) What is a food chain? [3 marks]

(ii) Use any **four** (4) of the following to form a food chain: Man, bird, green grass, goat, grasshopper

- (d) **Figure 1a** below illustrates a machine in use. Study it and answer the questions that follow.

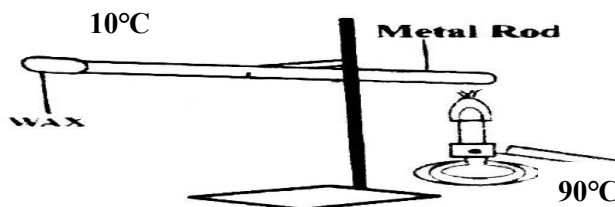


- (i) What type of machine is in use in the **Figure 1a** above? [2marks]
- (ii) Name the machine used in the illustration above. [2 marks]
- (iii) State the use of the machine illustrated in **Figure 1a** above. [1 mark]
- (iv) What **three** (3) devices makes use of the machine shown above in our daily everyday life activities. [3 marks]

3. (a) Define each of the following and give **three** examples each.

- (i) simple machine
(ii) complex machines [7 marks]

(b) Your science teacher demonstrated the flow of heat in an object by using a metal rod. The illustration is shown in the diagram below.



- (i) How does heat flow in an object? [3marks]
- (ii) What will happen to the candle wax when at the other end of the metal rod after 5 minutes? [2 marks]
- (iii) Calculate the **difference** in **temperature** in the metal rod. [3 marks]

(d) You are going to the school farm to clear or weed the land to enable you construct a seedbed for young plant seeds.

(i) List any **two** (2) simple farm tools you would need to weed or clear the field and make the seedbeds.
[3 marks]

(ii)Mention any **two** (2) examples of seedbeds that you can construct on school field.
[2 marks]

4. (a) (i) What is dentition? [1mark]

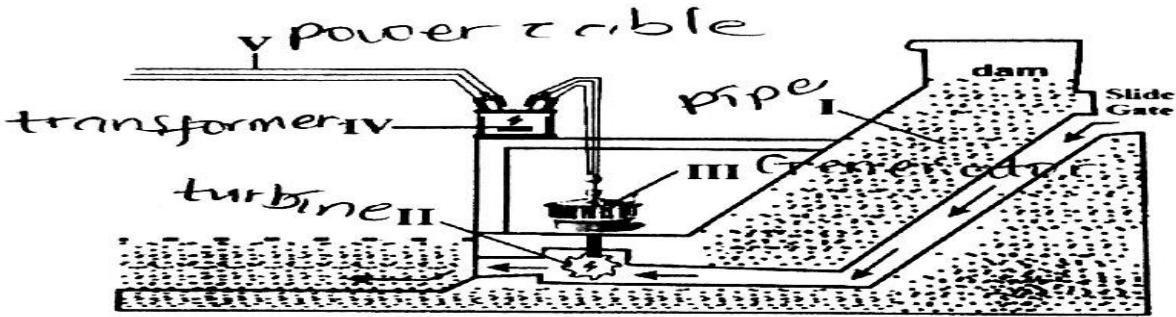
(ii) Mention the **four** (4) different types of teeth in human beings and the function for each of them.
[4 marks]

(b) (i) Briefly **differentiate** between renewable and non – renewable sources of energy. [2 marks]

(ii) Classify the following energy sources as renewable or non- renewable: Coal, solar, wind, geothermal, hydropower, methane, nuclear
[2 marks]

Renewable sources of energy	Non – renewable sources of energy.

(c) In the process of generating electricity from a dammed river, the structure below was constructed by an engineer and the following six steps indicated below are required. Study the diagram and the steps below carefully and answer the questions that follow.



Steps

- I. Gravity causes water to fall through the tunnels/penstock inside the dam.
- II. The generator produces electricity.
- III. The river is dammed to create a reservoir
- IV. The energy of water flowing through the dam's tunnels causes turbines to rotate or turn.
- V. Water is channeled through tunnels in the dam.

VI. The generators convert mechanical energy from turbines into electricity

(i) Rearrange and copy the steps in the correct sequence. [6 marks]

(ii) Write the **energy transformations** that takes place in the dam. [1 mark]

(d) (i) What is meant by **energy transformation**? [1 mark]

(ii) State the energy changes that will take place **when a torch is switched on** [3 marks]

5. (a) (i) What is a prokaryotic cell? [1 mark]

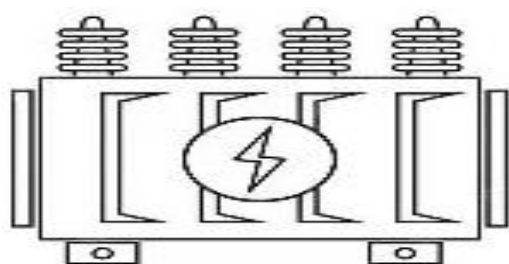
(ii) Name the **two** (2) examples of organelles found in a prokaryotic cell [2 marks]

(b) Classify a mixture of each of the following pairs of substances as either a homogenous or heterogeneous mixture: (i) oil and water (ii) salt and water (iii) alcohol and water [3 marks]

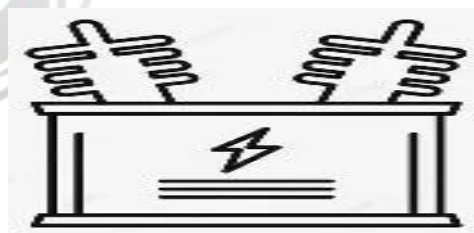
(c) (i) Define the term “force”

(ii) State Newton’s second law of motion. [2 marks]

(d) In the transmission of electricity, the use of the electrical devices below is very important. Study them carefully and answer the questions that follow.



Device X



Device Y

(i) What is device X and Y? [2marks]

(ii) Which of the devices above is used in (a) primary transmission? (b) secondary transmission? [3marks]

END OF EASSY TEST

SECTION A

1. An organism that lives on decaying organic matter, contaminates human food, feeds on rotten fruits and transfers germs is most likely a... (a) Fungus (b) Grasshopper (c) Housefly (d) Mosquito
2. Which of the following organisms is prokaryotic? (a) Bacteria (b) Earthworm (c) Fungus (d) Plant
3. The S.I unit of energy is represented as (a) Joule (b) joule (c) j. (d) Js
4. To stop the spread of a disease caused by a dirty environment, one must (a) Eat healthy food (b) Ensure regular exercise (c) Avoid alcohol intake (d) Practice good personal hygiene
5. A grassland ecosystem that consists of snakes, toads and grasshoppers is **most** likely to produce a food chain of
A. Toad → grass → grasshopper → snake
B. Grass → grasshopper → toad → snake
C. Grasshopper → grass → toad → snake
D. Grass → toad → grasshopper → snake
6. An animal feed made up of high fibre is most likely to contain (a) Maize grain (b) Silages and Hays (c) Soyabean meal (d) Wheat grain
7. Which of the following parts cannot be found in eukaryotic cell? (a) Mitochondrion (b) Capsule (c) Cell membrane (d) DNA
8. A greenhouse gas is a gas that (a) Contain carbon atoms (b) Is used by plants to make food (c) Destroys the ozone layer (d) Traps the sun's heat and prevent it from escaping into space
9. Which of the following human activities does not increase the amount of carbon dioxide in the atmosphere? (a) Planting of trees (b) Burning of bushes (c) Using petrol – engine cars (d) Deforestation
10. Which of the following practices will destroy breeding grounds of mosquitoes? (a) Sleeping in mosquito nets (b) Spraying with insecticides (c) Introducing mosquito – eating fishes into ponds (d) Burying empty cans
11. A nursery bed that is constructed to be below the surrounding soil level is known as (a) Flat beds (b) Sunken beds (c) Ridges (d) Raised beds
12. Hay and silages are normally fed to A. Pigs B. Poultry C. Ruminants D. Rabbits
13. The part of the tooth that makes it sensitive to its environment is (a) Cement (b) Dentine (c) Enamel (d) Pulp cavity
14. The cheek tooth comprises of A. Incisors and canines B. Canines and molars C. Molars and premolars D. Canines and premolars

15. The largest planet in our solar system is

(a) Saturn (b) Jupiter (c) Uranus (d) Neptune **A-**

16. Life on the earth is sustained by...(a)
green plants (b) animals (c) the sun
(d) the soil

17. A car battery produces electrical energy
from..... A. chemical energy B.
sound energy C. Kinetic energy D.
Heat energy

18. The energy that causes the turbine of
hydro-electric plant to rotate is

A. chemical energy B. potential energy
C. electric energy D. kinetic energy

19. Which of the following is **not** a
disadvantage of wind energy?

A. It is a threat to wildlife because
turbines kill birds B. It causes noise
pollution C. There are limited locations
suitable for wind turbines D. The space
in between wind turbines can be used for
farming.

20. Which of the following has the ability
to do work? A. Temperature B.
Thermometer

21. C. Heat D. kelvin

21. Which of the following statement is
true?
A. Heat in a body is measured with a
thermometer
B. Temperature increase when the
body is cooled.
C. Temperature decrease when the
body is heated
D. Heat flows from a body at higher
temperature to a body at lower
temperature.

22. What is the standard voltage for
households in Ghana?
A. 770V B. 240V C. 110V D. 55V

23. In which of the following stages of
power distribution is it necessary to use
a step- down transformer?

A. Just after generation
B. During long distant transmission
C. Before domestic distribution
D. None of them.

24. Which of the following does not form
part of the electrical grid?

A. Power plants
B. Substations
C. The Dam
D. Distribution stations

25. The use of inverters in solar panels is to

A. Stabilize direct currents
B. Step-down direct currents
C. Step -up alternating currents
D. Converts direct current to
alternating current

26. Which of these is not a complex
machine?

A. Wheel barrow
B. Bicycle
C. A pair of scissors
D. Claw hammer

27. Which of these can do more difficult
work?

A. Lever
B. Wedge
C. Screw
D. Lawn mower

28. The highest composition of gas in a
biogas is

A. Carbon dioxide
B. Methane
C. Nitrogen
D. Sulphur

29. The two main types of cells are

A. Plant and animal cells
B. Plant and bacterial cells
C. Eukaryotic cells and prokaryotic
cells
D. Cell walls and cell membrane

30. Green house gas include the following except
- A. Carbon monoxide
 - B. Carbon dioxide
 - C. Nitrous oxide
 - D. Chlorofluorocarbon
31. Which of the following statements best explains the term ecosystem? It is
- A. A group of organisms of the same species that live in the same place at the same time.
 - B. A group of populations living in the same area at the same time.
 - C. The part of the earth's environment where life exists
 - D. A community of living and non-living interacting with each other.
32. The growing of crops and the rearing of farm animals on the same piece of land at the same time is called
- A. Crop rotation
 - B. Mixed farming
 - C. Mixed cropping
 - D. Pastoral farming
33. Producers in an ecosystem are plants that
- A. Feed on other plants
 - B. Feed on dead materials
 - C. Manufacture their own food
 - D. Attract insects
34. How many days does it take Neptune to orbit the Sun?
- A. 156 years
 - B. 165 years
 - C. 115 years
 - D. 105 years
35. Which of the outer planets has the biggest and brightest ring system?
- A. Neptune
 - B. Saturn
 - C. Uranus
 - D. Jupiter
36. The outer planets are referred to as.....
- A. Rocky planets
 - B. Terrestrial planets
 - C. Holy planets
 - D. Gas giants
37. Which of the following are prokaryotes?
- A. Lizard
 - B. Virus
 - C. Fish
 - D. Bacteria
38. The chemical symbol for potassium is
- A. K
 - B. N
 - C. P
 - D. S
39. The chemical symbol for iron is
- A. I
 - B. K
 - C. Fe
 - D. Au
40. Which of the following substances is made up of only one kind of atom?
- A. Iron
 - B. Salt
 - C. Steel
 - D. Water

END OF OBJECTIVE TEST.

