APRIL MOCK 2026
SCIENCE 2 & 1
Essay & Objective
2 hours: 15 minutes

2&1

Name: .....

Index Number: .....

FINALPREPS
EXAMINATIONS BUREAU

Special Private Mock Examinations for BECE Candidates

APRIL 2026

SCIENCE 2 & 1
(ESSAY AND OBJECTIVE TEST)

2 hours

INSTRUCTIONS

Do not open this booklet until you are told to do so. While you are waiting, read and observe the following instructions carefully. 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 provided. Paper 2 will last 75 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.

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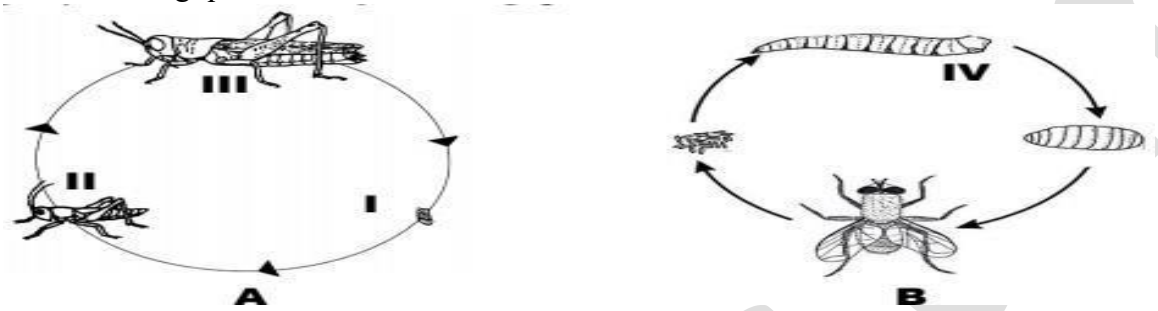
PART I
TEST OF PRACTICAL WORK
[40 marks]

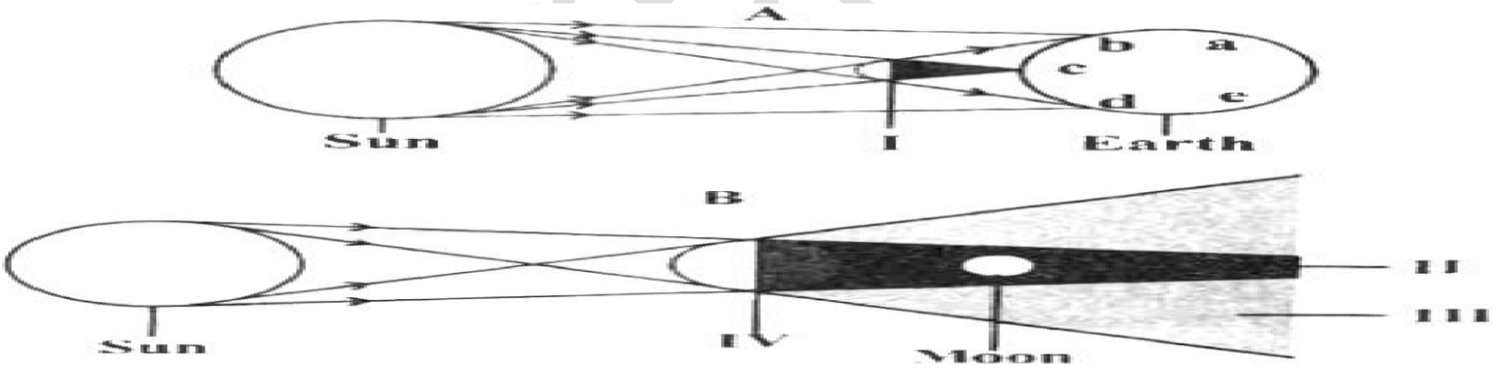
Answer* all *Questions from this part.

1 (a)The diagrams below illustrate the life cycles of organisms A and B. Study the diagrams carefully and answer the following questions.



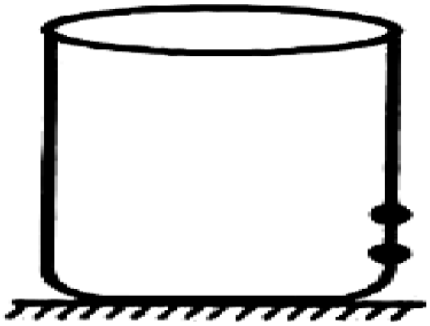
(i) Identify the life cycle labeled A and B above. [2 marks]
(ii) (ii) Name each stage labeled I, II, III and IV. [4 marks]
(iii) (iii) Provide the main difference between cycle A and B. [2 marks]
(iv) (iv) The stage labeled III belongs to which insect order? [2 marks] \

(b) The diagram is an illustration of a natural phenomenon. Study and answer the questions that follow.

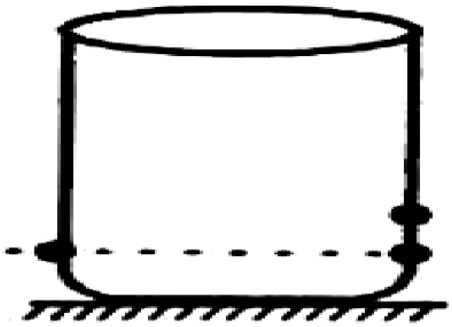


(i) Name the phenomena illustrated in diagrams A and B [2 marks]
(ii) Describe the phenomena in A and B [2marks]
(iii)Name the parts I, II, III and IV [2marks]
(iv)Describe the nature of shadow a student standing at region "c" will experience. [2 marks]
(v) Mention two differences between phenomenon A and B [2 marks]

(c) In an experiment, Mr. Swatson, a science facilitator in a Basic school took two empty Milo tins and made holes in their sides as shown below. He then filled the empty Milo tins with water. Use them to answer the questions that follows.



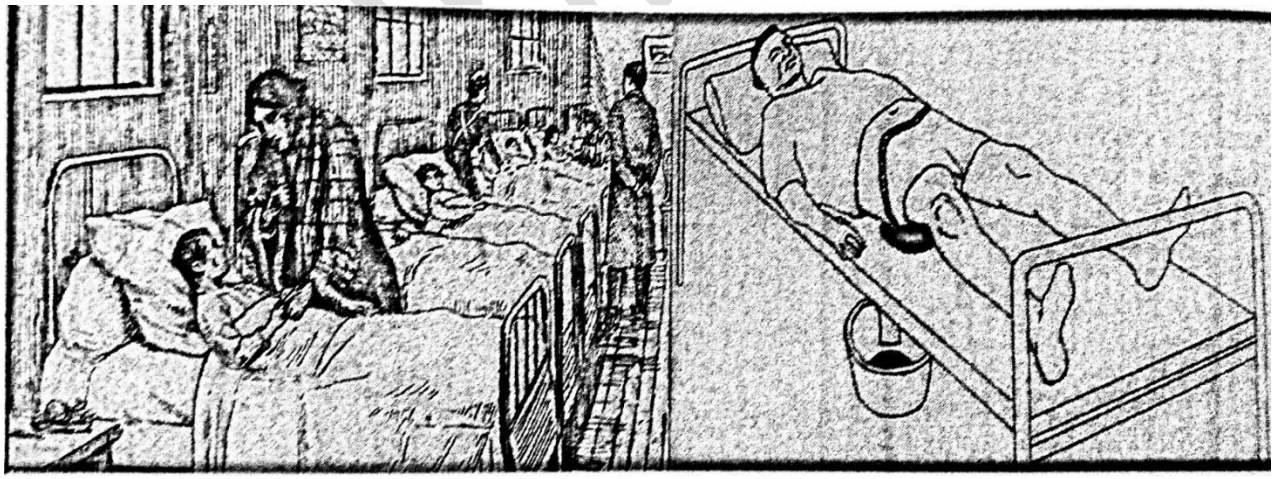
Set-up A



Set-up B

(i) Draw a diagram to show what will be observed when:
   (α) Milo tin A is filled with water and lifted. [2 marks]
   (β) Milo tin B is filled with water and lifted. [2 marks]
(ii) Explain your observations in setups A and B [2 marks]
(iii) What is the aim of setup A? [1 mark]
(iv) What is the aim of setup B? [1 mark]
(v) State two factors that affect pressure in liquids. [2 marks]

(d) In a certain small community, there was an outbreak of a disease. The people were ***vomiting, passing watery stool frequently*** and ***became dehydrated***. There were admitted in a hospital as shown in the diagram below. The doctor took samples of their stool for investigating and diagnosed that they had a disease caused by bacteria. The doctor gave them ORS as part of their treatment. Study it carefully and use the preamble above to answer the questions that follows.



a) Mention the name of the disease **[1 mark]**
b) Name the bacteria that caused the disease. **[1 mark]**
c) State two (2) possible ways through which people contracted the disease. **[2 marks]**
d) What one (1) word could be used to replace ***frequent passing of watery stool?*** **[2 marks]**
e) Mention any two (2) local items that could be used to replace the ORS. **[2 marks]**
f) Mention any two (2) ways of preventing the disease. **[2 marks]**

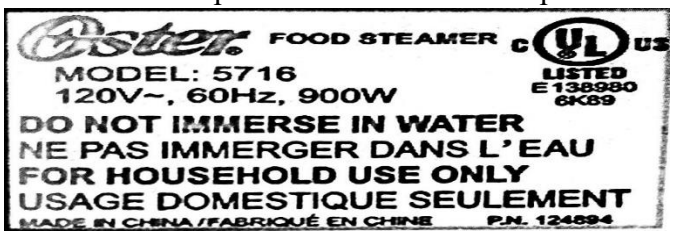
PART II
[60 marks]

PART II (60 MARKS)

ANSWER ALL QUESTIONS FROM THIS PART.

2a.(i) Use a well – labelled diagram to explain the term "Reflection of light" **[1 mark]**

The illustration below was pasted on a food steamer purchased newly by your parent.



(ii) If the food steamer is used for ***two*** hours, Calculate the amount of electrical power consumed by the food steamer. **[2 marks]**

(iii) An ammeter A, a cell of emf 8V and two resistors of resistances 4Ω and 5Ω are connected in series. A voltmeter V is connected across the 4Ω resistor. Draw a circuit diagram to show how the above arrangement will look like and determine the value of current flowing through the circuit. **[2 marks]**

(b) The table below shows some information on three chemical elements labelled **X, Y** and **Z**

Element	Number of protons	Number of electrons	Number of neutrons	Electronic configuration	Atomic number	Mass number	Period	Group
X	13			2,8		27		
Y	17			2,8,8		35	3	
Z	12			2,8,2		24		

(i) Copy and complete table above by providing the missing information. **[4 marks]**

(ii) Giving a reason, state which of the element is:

(α) A cation?

(β) An anion?

(γ) An atom? **[3 marks]**

(c) (i) Nhyiraba Adobea needed some water to drink. She only had some sea water which had sand in it. With the aid of appropriate diagrams, describe to her how she would clean the water to obtain pure drinking water.

(ii) Name two (2) primary green-house gases associated with industrialization.

[3 marks]

(d) A small toy car of mass ***2kg*** is at the top of a ramp. The top of the ramp is ***0.5 meters*** high.

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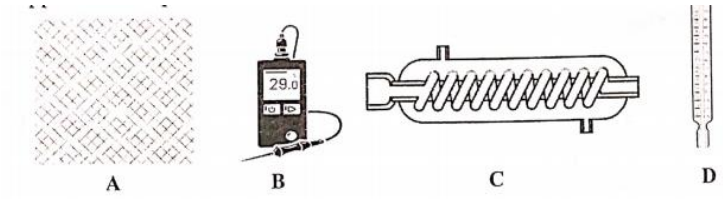
(i) Determine the car's potential energy at the top of the ramp. **[2marks]**

(ii) When the car rolls down the ramp, it reaches a velocity of 3m/s at the bottom. Calculate its kinetic energy at the bottom of the ramp. **[2 marks]**

(a) Esi, a Basic 8 learner of Chemistry was provided with the following apparatus. Help her to use them answer the following questions.

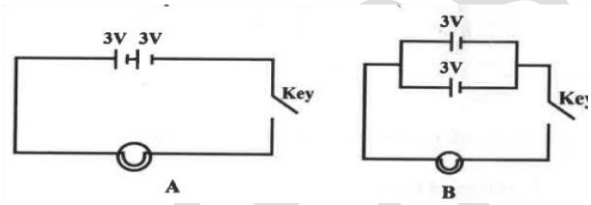


(i) Name each of the apparatus provided to Esi as **A, B, C** and **D** respectively. **[2 marks]**

(ii) If during her experiments, she finds out that B displays a measurement below **7**, what does it mean? **[1 mark]**

(iii) What will Esi use apparatus A and C for? **[1mark]**

(b) A science facilitator drew the diagrams below on the white board during class lessons. Use them to answer the questions that follows.



(i) State the type of arrangement in diagram A and B [1mark]

(ii) Calculate the total voltage each in diagrams A and B [1 mark]

(iii)Calculate the current flowing through each circuit if the bulbs have resistance of 1.0 [1mark]

(c) (i) Give two (2) examples of digestive juice you know.

(ii) Name one (1) example of digestive enzyme found in any of the digestive juice named in c (i) above.

(d) (i) What is a molecule? **[2mark]**

(ii) Describe the formation of hydrogen gas molecule with the aid of an appropriate diagram. [3 marks]

4. **(a)** (i) Name **three (4)** functions of the human circulatory system.

(ii) Explain why the absence of leguminous crops will affect the nitrogen cycle negatively.

(b) (i) What is pH scale? [2 marks]

(ii) Give the range of a pH scale and explain its significance. [3 marks]

(c) State the function of each of the following parts of the human digestive system;

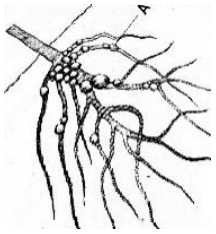
(α) Liver

(β) Small intestine. [2 marks]

(d) (i)Differentiate between physiological and harvest maturity among crops [2.5marks]

(ii) Outline the stages of crop growth after maturity [2.5marks]

5. (a) The figure below is an illustration of the nodules on a root of a crop family.



i. Name the crop family that are likely to possess or have this type of root nodules [1 mark]
ii. By which process are these crop plants able to fix nitrogen into the soil. [2 marks]

(b) Figure 1 is an illustration of a rectangular block of metal with dimensions *x, y* and *z*. Study it carefully and answer the questions that follow.

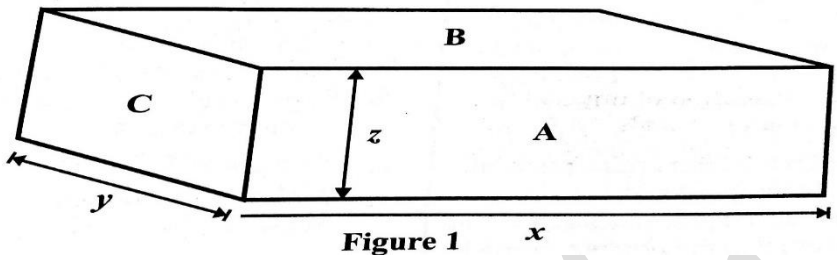


Figure 1

i. Measure and record the lengths *x, y* and *z* in centimeters (cm) **[1 ½ marks]**
ii. Calculate the surface areas of:
(a) Face A
(b) Face B
(c) **Face C** respectively of the rectangular block **[1 ½ marks]**
iii. If the weight of the rectangular block is **10N,** calculate the:
(a) **Pressure exerted by block when it lies on face A**
(b) **Pressure exerted by block when it lies on face C** **[1mark]**

iv. What is the relationship between the surface areas of the block and pressure exerted? **[1 mark]**

(c) An object is placed in front of a pinhole camera.
(i) Draw a labelled diagram to show how the image is formed. [2 marks]
(ii) Write any three (3) properties of the image formed by the pin-hole camera**. [3 marks]**

(d) (i) What is crop maturity? [1 mark]
(ii) Write any two (2) maturity indicators of the matured tomato crop [2 marks]

Good luck – Sir Sonny

END OF ESSAY

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OBJECTIVE TEST – 40 MARKS

1. An electric bulb is rated 40.0W. This means implies that the bulb

A. converts 40.0J of electrical energy into heat and light energy per second
B. supplies light energy, which is capable of doing work of 40.0J
C. can provide illumination which is equivalent to 40.0J
D. consumes electrical energy of 40.0J per hour

2. A coin placed at the bottom of a bucket of water appears closer to the surface than it really is. This is due to

A. reflection of light
B. refraction of light.
C. dispersion of light.
D. rectilinear propagation of light

3. Red blood cells are also referred to as

A. Erythrocytes
B. Leucocytes
C. Lymphocytes
D. Thrombocytes

4. Which of the following structures stores bile in the digestive system of an organism?

A. Pancreas
B. Liver
C. Spleen
D. Gall bladder

5. Ama weighed a rectangular wood on a beam balance and recorded 30.0N as its weight. She then lifted the rectangular wood onto a table from the ground of height 1.2m. Determine the likely result Ama will obtain if she wants to calculate her work done?

A. 28.8J
B. 31.2J
C. 36.0J
D. 40.0J

6. Pulmonary circulation involves the movement of blood from the ……

A. Heart to the body and back
B. Heart to the lungs and back
C. Lungs to the heart and back
D. Lungs to the body and back

7. When ammonium chloride salt is heated, it changes from…….

A. gas to liquid
B. liquid to gas
C. solid to gas
D. solid to liquid

8. The pressure in any part of a fluid depends on the ……..

A. weight and volume of the fluid
B. height and density of the fluid
C. mass and volume of the fluid
D. surface area and depth of the fluid

9. The bending of light at the boundary between two optically different media is caused by the ……

A. difference in the speed of light in the two media concerned
B. inability of the light to travel from the first medium to the second medium
C. rejection of the light when entering the second medium
D. non- existence of a permanent boundary between the two media

10. Which of the following characteristics is true of ionic compounds? They

A. have low melting point
B. have high boiling point
C. do not conduct electricity in solutions
D. do not form crystalline solids

11. Kojo stands 7m away from a vertical plane mirror and his image in the mirror. What is the distance between Kojo and his image?

A. 3.5m
B. 7.0m
C. 10.5m
D. 14.0m

12. The wall of the left ventricle of the human heart is thicker than the walls of the other chambers of the heart because ….

A. It pumps blood to a greater distance
B. It is made of a special muscle type

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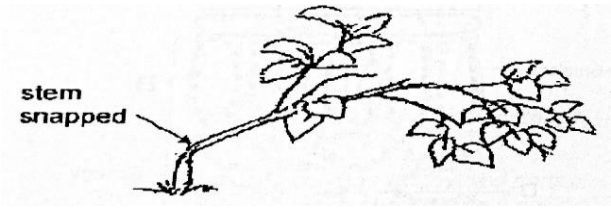
C. A large blood vessel supplies it with blood
D. It receives a relatively heavier blood

13. Shadow formation shows that light rays
A. Can be diffused
B. Travel in a straight line
C. Can be diffused
D. Can be reflected

14. Which of the following part of the tooth may be damaged when hot or very cold food is put into the mouth?
A. Enamel
B. Pulp cavity
C. Gum
D. Dentine

15. The stem of a plant is snapped as shown below.

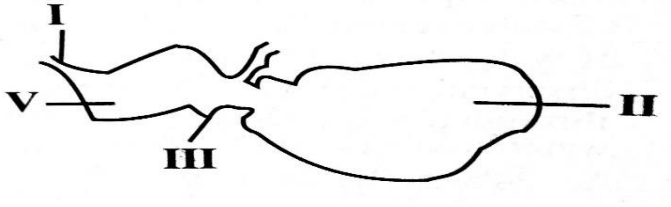


Three days later, the plant died because.
A. the leaves could not get enough water
B. the leaves could not get enough sunlight.
C. the root could not store food for the plant.
D. the root could not hold the plant firmly to the ground

16. Decay plants and animal material used for making soil fertile is known as ….
A. compost
B. guano
C. urea
D. cow dung

17. The main function of a fuse in an electrical circuit is to
A. regulate the voltage
B. alter the flow of current in the circuit.
C. prevent damage to electrical appliance.
D. minimize the use of current

The diagram below illustrates a part of a digestive system of a goat. Study it carefully and answer questions 18 to 20



.

18. The part labelled **III is the …….**
A. Abomasum
B. Omasum
C. Reticulum
D. Rumen

19. The **true** stomach is labelled
A. I
B. II
C. III
D. IV

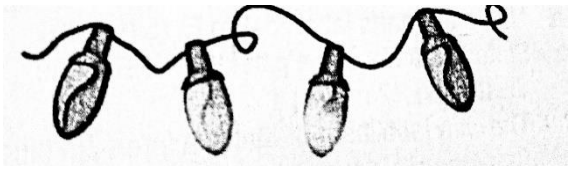
20. The function of the part labelled II is to
A. Mix the ingested food with saliva
B. Digest cellulose in the food
C. Absorb the digested food
D. Store excess carbohydrates as glycogen

21. A fertilizer is labelled NPK 20:10: 0. Which of the following statements correctly describe the fertilizer?
I. The fertilizer supplies nitrogen, phosphorus and potassium
II. The fertilizer supplies only nitrogen and phosphorus
III. The fertilizer is compound
IV. The fertilizer is straight
A. I and II only
B. III and IV only
C. II and III only
D. I and IV only

22. Monkeys are able to live in the canopies of trees because of their
A. Tails
B. hair
C. eyes
D. teeth

23. Akosua is 20 years old. She lost her tooth. She can get another tooth by….
A. using dentures
B. natural replacement
C. using dental braces
D. eating calcium foods

24. The image below shows arrangement of electric bulbs in



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A. A series circuit
B. A closed circuit
C. A parallel circuit
D. A short circuit

25. The term "*fluids"* is used to describe
A. Solids and liquids only
B. liquid and gas only
C. gas and solid only
D. liquid, solid and gas

26. One of the characteristics of the image formed by a plane mirror is that the image is
A. diminished
B. enlarged
C. laterally inverted
D. real

27. Bacterium cell is an example of a/an…
A. eukaryotic single cell
B. eukaryotic multi- cell
C. prokaryotic cell
D. akaryotic cell

28. The partial shadow of darkness is termed as ……
A. Umbra
B. Mirage
C. Eclipse
D. Penumbra

29. A lunar eclipse may occur when the ….
A. Moon is between the earth and the sun
B. Sun is between the earth and the moon
C. Earth is between the sun and the moon
D. Moon is positioned far away from the earth.

30. An element **A** has two electrons in its outer shell. Another element **B** has six electrons in its outer shell. The **most** likely compound which can be formed by the combination of the two elements is ……
A. AB
B. AB_2
C. A_2B
D. A_3B_2

31. The best period to harvest fodder for preparing silage or hay is
A. the flowering stage
B. the flower drop stage
C. before flowering
D. after flowering

32. Exhaled air may readily put off a burning candle because it contains high levels of
A. carbon dioxide and moisture
B. heat and oxygen
C. nitrogen and heat
D. oxygen and nitrogen

33. The girl in the picture below is climbing a rope in a gym class. If the girl weighs 300N, she must apply a force of 300N in order to pull herself up the rope. How much work of energy



will she do if she pulls herself up a 3m rope?

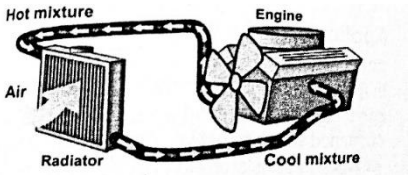
34. If life is to discovered in the outer solar system, then the organism are most likely to be …….
A. Fungi

A. 600J
B. 90J
C. 60J
D. 900J

to the management of Vita Milk Company of Ghana Limited to use plastic instead of glass bottles?
A. Empty plastic bottles can be compressed into small dustbins
B. Plastic bottles decompose completely within a year
C. Plastic -bottled drinks do not expire
D. Plastic bottles are admired by children

36. Which of the following statements about Anti-retroviral drugs is true?
A. They cure all viral diseases
B. They cure some viral diseases
C. They can prevent HIV positive person from being diseased
D. They can make an HIV positive person become negative

37. The diagram below shows the movement of liquid in a car from the engine through the



radiator and back to the engine. The purpose of this is to
A. cool the engine down

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B. heat the engine up
C. provide the engine with fuel
D. provide the engine with a spark

38. The second stage in development of a grasshopper is termed as …….
A. an adult
B. a larva
C. a nymph
D. an egg

39. One of the factors that determines the nutrients required by a particular farm animal is the …….
A. purpose of keeping it
B. colour of the animal
C. gender of the animal
D. type of pen in which it lives

40. An activity that restores balance in a burnt ecosystem is ……
A. Growing of crops
B. Construction of a fish pond
C. Volcanic eruption
D. Levelling of the land

END OF PAPER

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