

GUYANA
MINISTRY OF EDUCATION
NATIONAL GRADE SIX ASSESSMENT
2009
SCIENCE
PAPER

3, 44

TIME: 1 hour 10 minutes

READ THESE INSTRUCTIONS CAREFULLY BEFORE YOU ATTEMPT TO ANSWER THE QUESTIONS.

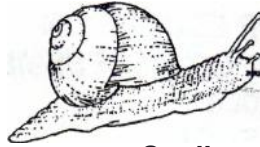
1. **WRITE YOUR CANDIDATE NUMBER ON THE ANSWER SHEET AND UNDERLINE THE SUBJECT.**
2. This test contains 40 questions. You are required to answer ALL questions. Four responses are given for each question. The responses are A, B, C and D. Only ONE response is correct.
3. If you are not sure of the answer to a question, then choose the one which you think is BEST. On your answer sheet, draw a heavy black line through the letter you have chosen.
4. **BE SURE THAT THE QUESTION NUMBER IN THE BOOKLET IS THE SAME AS THE ONE YOU HAVE USED ON YOUR ANSWER SHEET.**

Here is an example done for you.

- | | |
|------------------------|---------------------|
| 1. Carbon dioxide is a | ANSWER SHEET |
| (A) mixture | (B) liquid |
| (C) gas | (D) solid |
1. **A B ~~C~~ D**

A heavy black line has been drawn through the letter C on the answer sheet because gas, the correct answer, is next to C.

5. If you make a mistake, erase the line cleanly, then draw a heavy black line through the letter next to the answer you have now chosen.
6. **REMEMBER**, each answer **MUST** only be shown by a heavy black line on your Answer Sheet.
7. Remember only **ONE** answer must be provided for each question.
8. **DO NOT TURN OVER THIS PAGE UNTIL YOU ARE TOLD TO DO SO.**



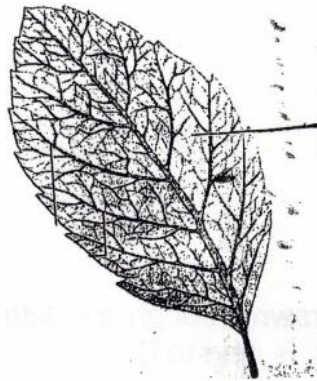
Snail

- 1 The organism shown above belongs to the group of
(A) crustaceans. (B) molluscs
(C) arthropods (D) myriapods

2. The largest sense organ of the human body is the
(A) nose. (B) skin.
(C) eye. (D) ear.

- 3 Which is a male reproductive organ?
(A) Uterus (B) Oviduct
(C) Ovaries (D) Testicle

Study the drawing of a leaf below, then answer question 4.



4. The part labelled A is the
(A) midrib. (B) margin.
(C) (D) ,lamina.

5. Erosion is the process by which
(A) trees are cut from the forest.
(B) plant roots hold the soil together.
(C) topsoil is removed by water and wind.
(D) the rainwater floods the low lands.

6. Which of the following forces is the greatest?

force 'r'

force's'

force'

force'

(A) r

(B)

(C) r

(D)

On which surface would there be the least friction?

(A) Tyres on a vehicle

(B) A gravel road

(C) A safety shoe

(D) A polished floor

8. Full moon is when

(A) the whole earth is in moonlight.

(B) the moon is seen as a whole

(C) light from the moon is on the earth.

(D) moonlight shines fully on the earth.

markes

Study the diagram below, then answer question 9.



9. The part labelled X is called the

(A) pathway.

(B) axis.

(C) rotation.

(D) orbit.

10. Which circuit symbol represents a bulb?

(A)

(B)

(C)

(D)

The instrument that measures the amount of moisture in the air is called a

- (A) hydrometer.
- (B) hygrometer.
- (C) barometer.
- (D) thermometer.

12. The handle of a kettle is most likely made of a/an

- (A) conductor.
- (B) insulator.
- (C) condenser.
- (D) resistor.

Study the diagram below, then answer questions 13 and 14.



13. Which one identifies the organism above as an insect?

- (A) it has six legs.
- (B) it has wings.
- (C) the wings are thin.
- (D) the body has fine hairs.

14. Which statement about insects is true?

- (A) Insects are not animals
- (B) All insects can fly
- (C) All invertebrates are insects
- (D) All invertebrates are insects

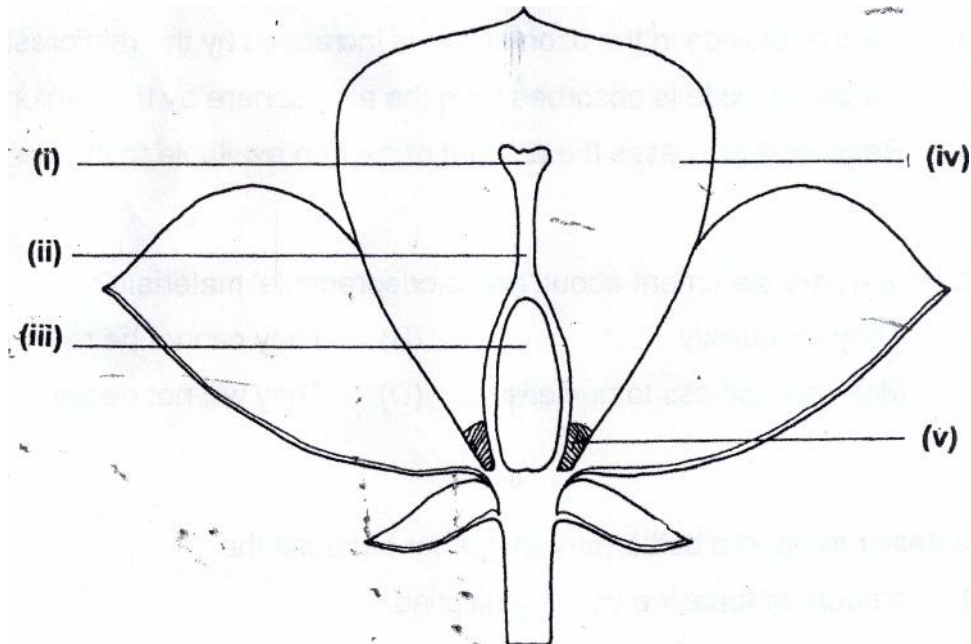
Study the diagram of a thermometer shown below, then answer question 15.



15. What is the difference between the temperature shown on the diagram and normal body temperature?

- (C) 22 °C
- (D) 35 °C

Study the diagram of a section of a flower shown below, then answer questions 16 and 17.



16. The structures that attract pollinators to the flower are
- | | |
|--------------------|--------------------|
| (A) (i) and (ii) | (B) (ii) and (iii) |
| (C) (iii) and (iv) | (D) (iv) and (v) |
17. The structure labelled (i) is sticky so that
- | | |
|--------------------------------|---------------------------------|
| (A) insects stick to it. | (B) pollen sticks to it. |
| (C) birds are attracted to it. | (D) the petals cannot fall off. |

Study the drawing of a food chain shown below, then answer question 18.



18. The grass is a producer because it
- | | |
|----------------------------|-----------------------------|
| (A) starts the food chain. | (B) is food for the rabbit. |
| (C) is monocotyledonous. | (D) can make its own food. |

9. Which statement is not true about the importance of the rain forest to humans?
- (A) Rainforest assists in the production of oxygen.
 - (B) Carbon dioxide in the ozone layer is increased by the rainforest.
 - (C) Carbon dioxide is absorbed from the atmosphere by the rainforest.
 - (D) Rainforest increases the amount of oxygen available to the planet.
20. Which is a true statement about 'non-biodegradable' materials?
- (A) They rot quickly
 - (B) They cannot be recycled
 - (C) Most are useless to humans
 - (D) They will not decay
21. It is easier to open a bottle with an opener because the
- (A) amount of force we use is multiplied.
 - (B) human hand is too soft.
 - (C) opener has a short handle.
 - (D) amount of force we use is divided
22. Mercury and Venus take less time than Earth to go around the sun because they
- (A) are closer to the sun.
 - (B) are smaller planets than Earth.
 - (C) have their own gravity.
 - (D) have further to travel than Earth.

Below is the picture of a moving car. Use it to answer question 23.



23. The car has kinetic energy because it
- (A) is painted black.
 - (B) has four wheels.
 - (C) is moving.
 - (D) is stationary.

24. Which is not needed for humans to see an object?

- (A) Brain. (B) Light.
(c) Pupil. (D) Colour.

25. Which is not a benefit of rainfall?

- (A) Providing water supply (B) Causing floods
(C) Helping plants to grow (D) Increasing crop production

26. If the weatherman forecasts stormy weather, which would be expected?

- (I) strong winds
(ii) loud thunder
(iii) constant drizzle
- (A) i and ii only (B) ii and iii only
(C) i and iii only (D) i, ii and iii

27. The process of weathering is caused by

- (A) floods, rain and thunder. (B) wind, thunder and heat.
(C) sun, floods and heat. (D) sun, rain and winds.

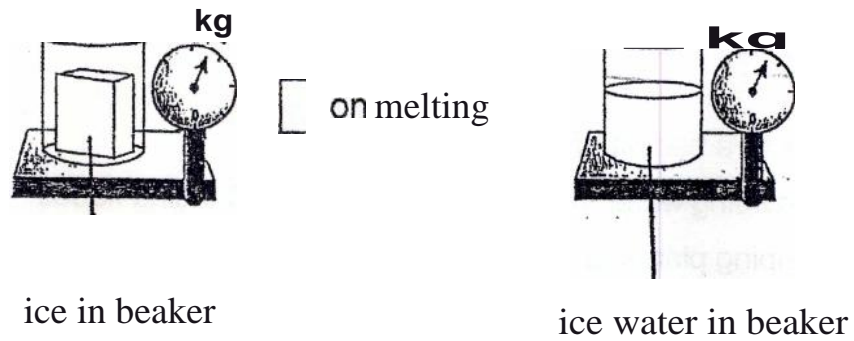
28. Liquids and gases are different because

- (A) gases change their volume, and liquids do not.
(B) liquids change their volume, but gases do not.
(C) gases change their shape, but liquids do not.
(D) liquids can change their shape, and gases do not.

29. The movement of particles of liquids as they are heated and cooled is the principle used in

- (A) making breezes. (B) measuring rainfall.
(C) measuring temperature. (D) making solutions.

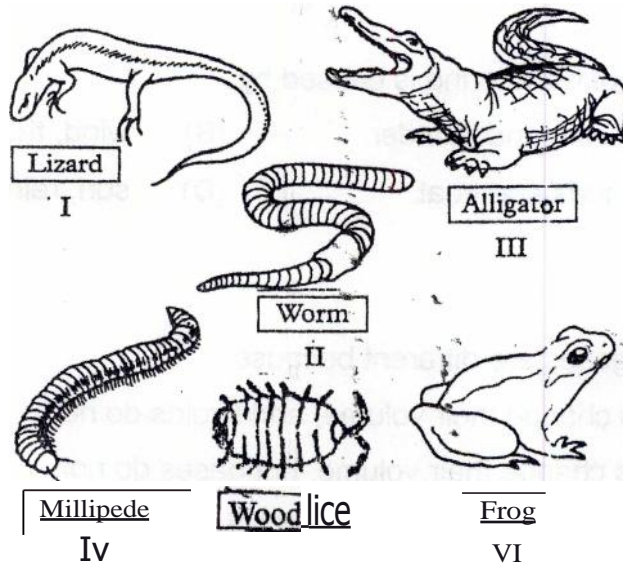
The diagram below shows the measurement of two masses before and after melting. Study the diagram, then answer question 30.



30. Which is true of the mass after melting?

- (A) It remains the same (B) It is increased
 (C) It is decreased (D) It is 2 kg greater

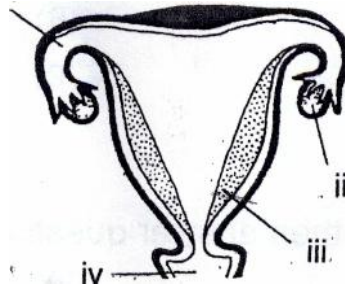
Study the drawings of living things below, then answer question 31.



31. Which are invertebrates?

- (A) i and ii only (B) ii and iv only
 (C) iii, iv and vi only (D) ii, iv and v only

The diagram below represents the female reproductive system. Study it, then answer question 32.



32. The placenta after fertilization is labelled

(C) iii

(D) iv

33. Before AIDS develops the HIV must enter the body. The HIV is carried in the

- ii semen.
- iii blood.
- iv faeces.
- saliva.

ds *pen*

(A) 1, ii and iii

(B) i, ii and iv

(C) ii, iii and iv

(D) 1, iii and iv

Study the table below then answer question 34.

Jars with seeds to grow	Conditions in each jar
1	Water, air and warmth
2	Water, warmth and light
3	Air, light and water
4	Air, warmth and light

34. In which jar will the seeds germinate?

(A)

(B) **2**

(C) **3**

(D) **4**

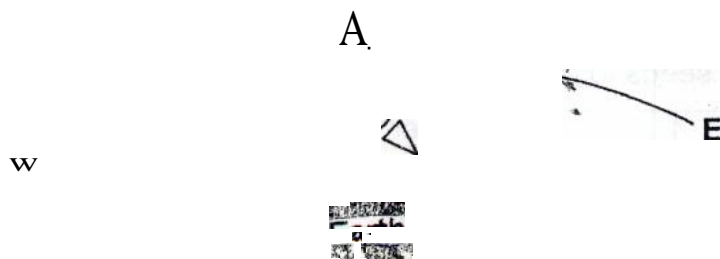
35. Animals and plants have features that equip them for finding food and avoiding predators in their particular habitats. This natural process is called
- (A) nutrition. (B) predation.
(C) adaptation. (D) respiration.

Study the picture below, then answer question 36.



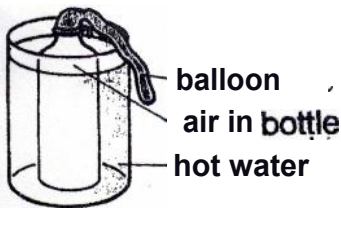
36. Which type of simple machine is the ladder used as?
- (A) Lever (B) Inclined-plane
(C) Pulley (D) Wheel-and-axle

Study the diagram below, then answer question 37.



37. The sun appears to move across the sky because
- (A) it is spinning.
(B) the earth is rotating.
(C) it moves from east to west.
(D) the earth moves from east to west

Study the apparatus below, then answer question 38.



38. Which statement best explains what will happen to the air in the bottle after 10 minutes?

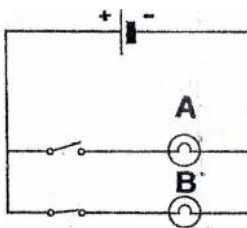
- (A) the air in the bottle will become cool and draw air from the balloon.
- (B) the balloon will decrease in size due to loss of air from the bottle.
- (C) the balloon will expand and air in the bottle will escape.
- (D) the air in the bottle will become hot, rise and fill the balloon.

39. The process of rocks breaking up into smaller pieces to form soil includes

- (i) heat from the sun causing rocks to expand during the day.
- (ii) rocks cooling down at nights and getting larger.
- (iii) rocks cracking and breaking up over a period of time.
- (iv) rain and water falling on rocks causing some parts to wear away.

- (A) i, ii and iii
- (B) i, ii and iv
- (C) ii, iii and iv
- (D) i, iii and iv

Study the circuit below, then answer question 40.



40. Bulb A will not light because

- (A) bulb B is getting all the current. (B) the circuit is parallel.
- (C) there is only one battery. (D) the switch is opened.

END OF TEST

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 2009
 ANSWER SHEET

MATH ENG SS SC

Candidate Number

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WRITE YOUR CANDIDATE NUMBER AND UNDERLINE THE SUBJECT YOU ARE WRITING AT THE TOP AS WELL AS AT THE BOTTOM OF THIS ANSWER SHEET.

SECTION SCORES

1	2	3	TOTAL

BE SURE THAT MARKS ON THIS SHEET CAN BE EASILY SEEN.
 ERASE COMPLETELY ANY ANSWER YOU WISH TO CHANGE.

- | | | |
|--------------------|--------------------|--------------------|
| 1. A B D | 15. A B C D | 29. A B C D |
| 2. A B C D | 16. A B C D | 30. A B C D |
| 3. A B C D | 17. A B C D | 31. A B C D |
| 4. A B C D | 18. A B C D | 32. A B C D |
| 5. A B C D | 19. A B C D | 33. A B C D |
| 6. A B C D | 20. A B C D | 34. A B C D |
| 7. A B C D | 21. A B C D | 35. A B C D |
| 8. A B C D | 22. A B C D | 36. A B C D |
| 9. A B C D | 23. A B C D | 37. A B C D |
| 10. A B C D | 24. A B C D | 38. A B C D |
| 11. A B C D | 25. A B C D | 39. A B C D |
| 12. A B C D | 26. A B C D | 40. A B C D |
| 13. A B C D | 27. A B C D | |
| 14. A B C D | 28. A B C D | |

MATH ENG SS SC

DO NOT BEND, FOLD OR DAMAGE THIS SHEET

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Candidate Number