

MINISTRY OF EDUCATION, SCIENCE & TECHNOLOGY



ANTIGUA AND BARBUDA

2015 GRADE SIX NATIONAL ASSESSMENT

SCIENCE

June 3, 2015

80 Marks

1 Hour and 40 Minutes

This paper contains four (4) sections: A, B, C, D

Do ALL sections and ALL questions.

Write your answers to Sections B, C, & D on this paper.

Student ID: _____

Fill in your ID immediately.

Do not write in the space below. For official use only

Sections		KC	UK	XS	Total
A. Multiple Choice	30 marks				
B. Fill in the Blanks	20 marks				
C. Short Answers	20 marks				
D. Skills and Processes	10 marks				
Total	80 marks				

Checked By: _____

Read the Following Instructions Carefully

1. Section A has 30 Multiple Choice questions.
2. Each question has four possible answers: A, B, C, D
3. Read each question carefully then choose the correct answer.
4. On the answer sheet, find the number of the question you want to answer.
5. Shade the circle with the letter of the answer you have chosen.

Sample Question:

How many legs does a spider have?

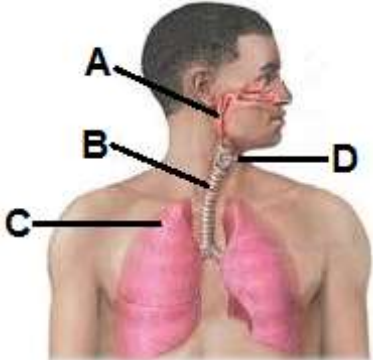





- A. 10
- B. 8
- C. 6
- D. 4


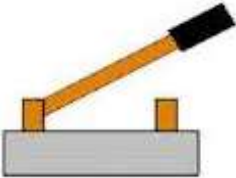
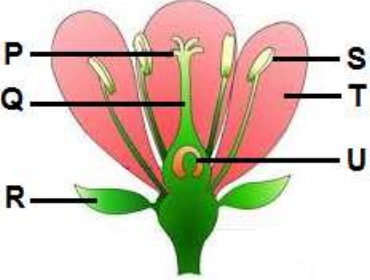
The correct answer is 8, so on your answer sheet you should shade the circle containing the letter *B*.



6. If you want to change your answer, be sure to erase your old answer completely and fill in your new choice.
7. If you cannot answer a question, omit it and go on to the next one. You can come back to the harder question later.
8. Your score will be the total number of correct answers.

Section A **Multiple Choice** **(30 Marks)**
Answer ALL these questions on the answer sheet provided.

<p>1. Which of the following is a type of fossil fuel?</p> <p>A. Oil B. Sun C. Wind D. Nuclear</p>	<p>6. Which system in the body is used for extracting nutrients from our food?</p> <p>A. Nervous B. Digestive C. Respiratory D. Reproductive</p>
<p>2. Any energy source that does not come from fossil fuels is called</p> <p>A. alternative energy B. traditional energy C. renewable energy D. reusable energy</p>	<p>7. Dane used a kitchen scale to find the weight of some sugar. Which of the following could be the weight?</p> <p>A. 2.0 Litres B. 2.0 grams C. 2.0 Newtons D. 2.0 kilograms</p>
<p>The diagram below is to be used to answer questions 3 and 4.</p> 	<p>8. What is the main energy change that takes place when a clothes iron is switched on?</p>  <p>A. Potential to kinetic B. Kinetic to potential C. Electrical to heat D. Heat to potential</p>
<p>3. Which system is being shown in the diagram?</p> <p>A. Nervous B. Digestive C. Respiratory D. Reproductive</p>	<p>9. Which piece of equipment is NOT correctly matched to its quantity?</p> <p>A.  temperature</p> <p>B.  mass</p> <p>C.  volume</p> <p>D.  time</p>
<p>4. Which letter represents the trachea?</p> <p>A. A B. B C. C D. D</p>	
<p>5. In which part of the hibiscus plant are the reproductive cells found?</p> <p>A. Roots B. Stems C. Leaves D. Flowers</p>	

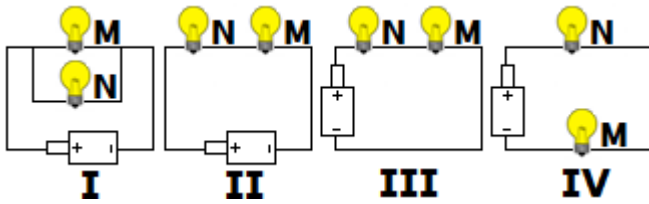
<p>10. What is the planet X in the picture?</p> <p>A. Mars B. Earth C. Saturn D. Jupiter</p>	
<p>11. Where in the body is the smallest bone found?</p> <p>A. Ear B. Back C. Thigh D. Shoulder</p>	<p>18. Which of the following reproduces asexually?</p> <p>A. Guava B. Mango C. Dumbs D. Sugar cane</p>
<p>12. What is the name of the electrical component shown below?</p>  <p>A. Cell B. Plug C. Fuse D. Switch</p>	<p>Use the diagram below to answer questions 19 to 23.</p> 
<p>13. Which of the following is NOT a characteristic of fish?</p> <p>A. They have fins. B. They are cold blooded. C. They breathe through lungs. D. They have skins covered with scales.</p>	<p>19. Which letter identifies a location where pollination takes place?</p> <p>A. P B. S C. R D. U</p>
<p>14. Which of the following represents a group of reptiles?</p> <p>A. bat, lizard, whales B. frog, iguana, snake C. iguana, turtle, lizard D. iguana, shark, snake</p>	<p>20. Which letter identifies a location where fertilization takes place?</p> <p>A. P B. S C. R D. U</p>
<p>15. A food chain always begins with a</p> <p>A. plant B. carnivore C. herbivore D. decomposer</p>	<p>21. Which letter represents the anther?</p> <p>A. P B. S C. R D. U</p>
<p>16. The amount of space an object occupies is a measure of its</p> <p>A. mass B. length C. density D. volume</p>	<p>22. Which part of the flower develops into the fruit?</p> <p>A. P B. S C. R D. U</p>
<p>17. Where does digestion begin?</p> <p>A. Mouth B. Stomach C. Large intestine D. Small intestine</p>	<p>23. Which letter represents the sepal?</p> <p>A. Q B. T C. R D. U</p>

24. Which is the largest planet in our solar system?
 A. Earth
 B. Jupiter
 C. Saturn
 D. Mercury

25. What quantity is being measured if the unit is correctly given as grams?
 A. Mass
 B. Force
 C. Height
 D. Weight

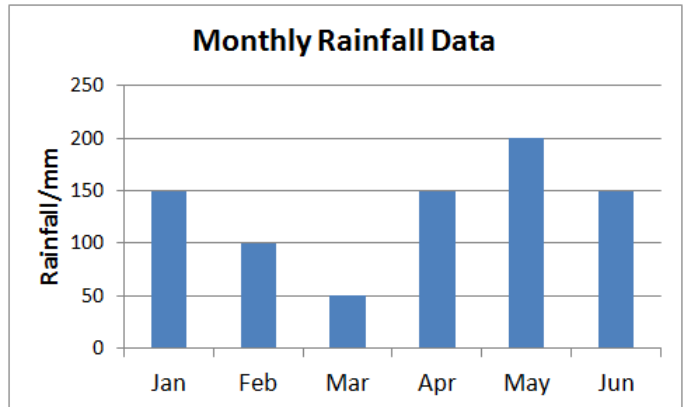
26. Which of the following is likely to be the pH of orange juice?
 A. 0
 B. 4
 C. 7
 D. 10

27. In which of the circuits below will bulb **M** light even if bulb **N** is blown?



- A. Circuit I
- B. Circuit II
- C. Circuit III
- D. Circuit IV

The graph below shows the monthly rainfall in Antigua and Barbuda from January to June. Use the graph to answer questions 28 to 30.



28. Which month had the lowest rainfall?

- A. January
- B. February
- C. March
- D. April

29. In which month was there most likely to have been a flood?

- A. March
- B. April
- C. May
- D. June

30. What was the total rainfall recorded?

- A. 150 mm
- B. 200 mm
- C. 600 mm
- D. 800 mm

Section B

Fill in the Blanks

(20 Marks)

Complete each sentence below by choosing the correct words from this list. No words should be used more than once. Answer in the space provided.

abstinence	effervesce	neutralise	parasite
acidic	friction	nerve	predator
alkaline	gas	negative	quickly
brain	gravity	oxygen	slowly
cabbage	humus	positive	solid
conserve	inclined plane	primary	south
cranium	moon	prey	sun

1. The main source of energy for the water cycle is the _____.
2. When baking soda is added to vinegar the mixture will _____.
3. The _____ protects the brain.
4. The force that pulls us to the ground is called _____ while the force that prevents motion is called _____.
5. A flight of stairs is an example of a/an _____.
6. Colours that cannot be made by mixing other colours are called _____ colours.
7. Every electrical cell has a _____ and a _____ terminal.
8. The part of air that we use in respiration is called _____.
9. A liquid left in a shallow wide container will evaporate more _____ than a liquid left in a deep narrow container.
10. The tick is a _____ because it feeds on the blood of a host such as cattle.
11. It is a good practice to _____ water by turning off the tap when brushing your teeth.
12. The best form of birth control for teenagers is _____.
13. Danny noticed that the family pet cat has been chasing the mice and eating them. He can conclude that each mouse is a/an _____.
14. One way of making soil more fertile is adding _____.

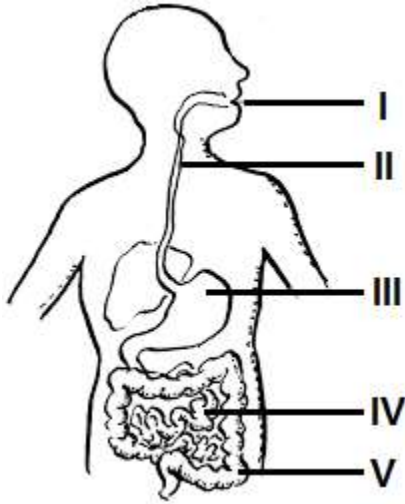
15. Grapefruit juice is acidic. If lemon juice is added to grapefruit juice the mixture will be _____.
16. Some children cannot feel pain. This is because the _____ which normally senses pain is damaged. Therefore, the _____ does not receive the signal that normally indicates pain.
17. Suzette's mother gave her milk of magnesia to _____ the acid in her stomach.

Section C

Short Answers

(20 Marks)

1. The diagram shows the structure of one of the systems in the body.



- A. What is the name of the system shown in the diagram?

_____ (1 mark)

- B. Write the name of each of the labelled parts in the space below:

(I) _____

(II) _____

(III) _____

(IV) _____

(V) _____ (5 marks)

- C. Suppose the part labelled III was reduced to half its regular size.

(I) Would the person want to eat more food, less food or the same amount of food at one meal?

(II) Explain your answer.

_____ (2 marks)

D. The part labelled IV is very long. Give one good reason why this part is very long.

(1 mark)

E. State one problem a person might have if the part labelled V is too short.

(1 mark)

2 A. Explain what each of the following terms mean.

(I) Endangered:

(1 mark)

(II) Extinct:

(1 mark)

B. The Barbuda Warbler is a bird that lives only in Barbuda. Describe **TWO** steps that can be taken to prevent the Barbuda Warbler from going extinct.



(I) _____

(1 mark)

(II) _____

(1 mark)

3. The diagram below shows the water cycle.



A. Each letter shows a process taking place. Identify the processes represented by the letters W and X.

The process taking place at W is called _____

The process taking place at X is called _____ (2 marks)

B. Which type of process (W, X or Y) would result in an increase in the amount of water in Pot Works Dam?

_____ (1 mark)

C. Which type of process (W, X or Y) would result in the greatest decrease in the amount of water in Pot Works Dam?

_____ (1 mark)

D. The process taking place at 'W' begins with water on the surface of the earth. Is this hard water or soft water?

_____ (1 mark)

E. Explain what would happen to the process at 'W' on a day when there are lots of clouds in the sky.

_____ (1 mark)

Section D

Skills and Processes

(10 Marks)

1. After learning that 2015 has been declared international year of light, a student performed an experiment to investigate how much a translucent material absorbs light. A part of her report is shown below.

Materials:

- 1 light meter
- 1 flashlight
- 5 translucent slides
(For each slide, length = 2 cm, width = 1 cm, thickness = 2 mm)
- 1 ruler

Procedure:

1. The flashlight was placed 50 cm from the light meter.
2. Both the flashlight and the light meter were turned on. The reading on the meter was recorded.
3. One slide was placed in front of the flashlight and the reading on the light meter was recorded.
4. Step 3 was repeated using different numbers of slides.

Diagram:

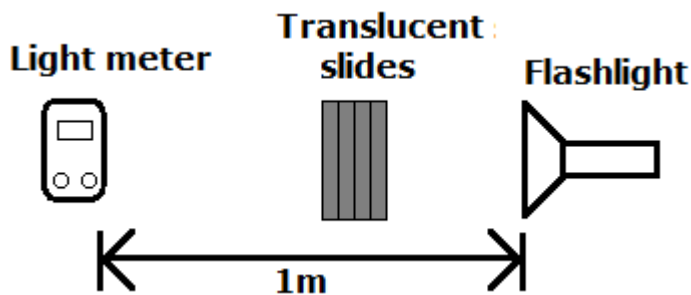
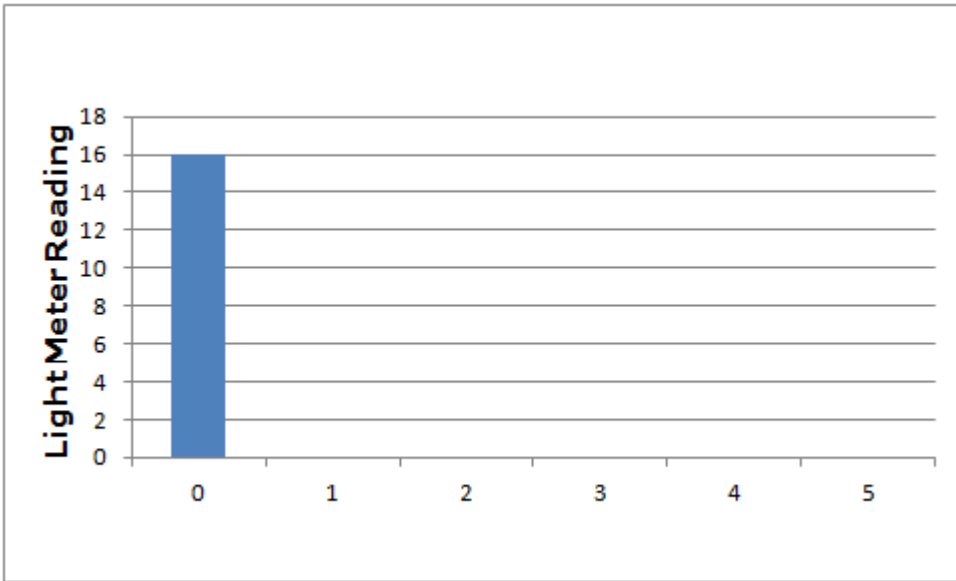


Table 1: Results of Experiment

Number of slides used	Reading on the light meter
0	16
1	13
2	11
3	9
4	
5	5

A. In the space below, **complete** the graph to show the results. (5 marks)



B. Classify the variables listed below by placing a tick (✓) in the correct part of the table.

Variables	Manipulated	Controlled	Responding
Size of glass slides			
Reading on the light meter			
Number of glass slides			
Distance between flashlight and light meter			

(4 marks)

C. Suggest a value for the reading on the light meter when 4 slides are used. (1 mark)
