

MINISTRY OF EDUCATION



ANTIGUA AND BARBUDA

2014 GRADE SIX NATIONAL ASSESSMENT

SCIENCE

June 4, 2014

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*.



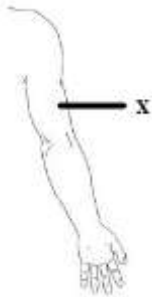
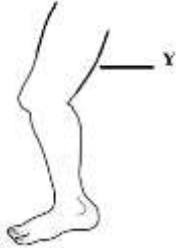



6. If you want to change your answer, be sure to erase your old answer completely and fill in your new choice.
7. If you cannot answer a question, omit it and go on to the next one. You can come back to the harder question later.
8. Your score will be the total number of correct answers.



Section A



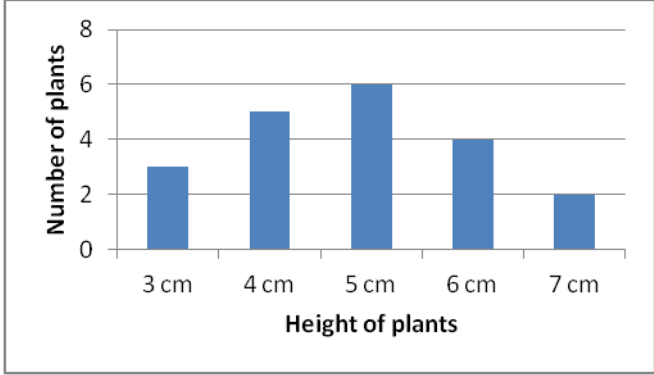
Multiple Choice

(30 Marks)

Answer ALL these questions on the answer sheet provided.

<p>1. Which organ is responsible for pumping blood around the body?</p> <p>A. Lungs B. Heart C. Brain D. Veins</p>	<p>4. Which part of the plant usually comes out first when a new plant grows?</p> <p>A. Leaf B. Root C. Stem D. Shoot</p>
<p>2. What is the name of the body part labelled X.</p>  <p>A. Arm B. Wrist C. Hand D. Elbow</p>	<p>5. The diagram below shows part of the body. Identify the part labelled Y.</p>  <p>A. Foot B. Knee C. Ankle D. Thigh</p>
<p>3. Which soil type is used to make the porcelain bowl shown below?</p>  <p>A. Silt B. Clay C. Sand D. Loam</p>	<p>6. Which of the following is NOT true about the local manchineel tree?</p>  <p>A. It produces an edible fruit B. It can provide shelter for animals C. It returns carbon dioxide to the air D. It reproduces by sexual reproduction</p>
<p>7. Which of the following shows how solar energy can be used in the home?</p>  <p>A. Picture A B. Picture B C. Picture C D. Picture D</p>	

<p>8. Which of the following is NOT a fish?</p> <p>A. Tuna B. Shark C. Sardine D. Dolphin</p>	<p>15. An example of a simple reflex action is</p> <p>A. running B. sleeping C. blinking D. fighting</p>
<p>9. Which of the following explains why a spider is NOT an insect?</p>  <p>A. It lays eggs B. It breathes air C. It is poisonous D. It has eight legs</p>	<p>16. Below is a picture of an ant. What is the part labelled W?</p>  <p>A. Hand B. Stinger C. Antenna D. Mandible</p>
<p>10. Into which group of vertebrates do turtles belong?</p> <p>A. Fish B. Reptiles C. Mammals D. Amphibians</p>	<p>17. The male parts of the flower are the</p> <p>A. anther and the ovary B. anther and the filament C. stigma, the style and the ovary D. stigma, the style and the filament</p>
<p>11. The relationship between fleas and dogs is an example of</p> <p>A. parasitism B. mutualism C. symbolism D. commensalism</p>	<p>18. Which type of thermometer normally has a constriction?</p> <p>A. Clinical B. Student C. Household D. Laboratory</p>
<p>12. Which of the following is a man made water source?</p> <p>A. Two foot bay in Barbuda B. A pond dug on a local farm C. Crabbs peninsular in Antigua D. Recently collected rain water</p>	<p>19. Which of the following produces its own light?</p> <p>A. The eye B. The moon C. A flashlight D. Transparent glass</p>
<p>13. Which of the following is NOT a part of the water cycle?</p> <p>A. Dissolving B. Evaporation C. Precipitation D. Condensation</p>	<p>20. What is the correct order for the development process in plants?</p> <p>A. Fertilization, pollination, germination B. Fertilization, germination, pollination C. Pollination, fertilization, germination D. Pollination, germination, fertilization</p>
<p>14. Which of the following are all parts of the digestive system?</p> <p>A. Heart, arteries, veins B. Lungs, trachea, nostrils C. Teeth, tongue, stomach D. Testes, prostate, urethra</p>	<p>21. In order to produce nutrients for the soil, leftover food such as banana peel and vegetable scraps are mixed with grass and left to rot. This process is called</p> <p>A. potting B. reusing C. mulching D. composting</p>

<p>22. Which of the following is NOT a function of the soil</p> <p>A. To supply the plant with water B. To provide chlorophyll to plants C. To help to anchor the plant firmly D. To supply nutrients to the growing plant</p>	<p>27. Which weather symbol below is best for showing that a hurricane is happening?</p> <div style="text-align: center;">  <p>A B C D</p> </div> <p>A. Symbol A B. Symbol B C. Symbol C D. Symbol D</p>
<p>23. Decay is brought about by tiny organisms called</p> <p>A. fungi B. composers C. respirators D. decomposers</p>	<p>28. An electric battery is made up of a set of</p> <p>A. cells B. bulbs C. circuits D. switches</p>
<p>24. The diagram below shows two different pictures of the same eye. Which statement is most likely correct?</p> <div style="text-align: center;">  <p>A B</p> </div> <p>A. Both pictures were taken at midday B. Both pictures were taken at midnight C. Picture A was taken at mid day and Picture B was taken at midnight D. Picture B was taken at midday and Picture A was taken at midnight</p>	<p>The graph below shows the heights of plants in a garden.</p> <div style="text-align: center;">  </div> <p>Use the graph to answer questions 29 to 30.</p>
<p>25. Which of the following is a warm blooded animal?</p> <p>A. Parrot B. Gold fish C. Cuban tree frog D. Antigua ground lizard</p>	<p>29. How high is the tallest plant?</p> <p>A. 5 cm B. 6 cm C. 7 cm D. 8 cm</p>
<p>26. The nerve that connects the ear to the brain is the</p> <p>A. optic nerve B. olfactory nerve C. trochlear nerve D. auditory nerve</p>	<p>30. How many plants are in the garden?</p> <p>A. 6 B. 8 C. 20 D. 25</p>

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.

adulthood	electrical	movement	rubber
acid	habitat	muscle	sand
alkali	hard	parallel	series
black clay	heat	pollution	skeleton
combustion	inclined plane	predator	skin
decomposer	larva	prey	soft
diet	meal	producer	steel
earth	mercury	puberty	sun
ecosystem	moon	pupa	temperature

1. The _____ is a tissue that causes the body to move when it contracts.
2. The natural home of an organism is called its _____.
3. The stage of life when your body starts to mature is called _____.
4. In the life cycle of the mosquito, the _____ comes before the adult.
5. A balanced _____ comprises of all the food groups in right proportion.
6. Water that contains a lot of minerals and does not lather well is called _____ water.
7. The _____ is the sense organ that normally detects smooth and rough textures.
8. Dumping empty bottles into ponds is a form of _____.
9. _____ takes place when materials get burned.
10. _____ may be transferred by conduction, convection or radiation.
11. The planet that takes the least amount of time to orbit the sun is _____.
12. All food chains MUST contain a/an _____.
13. Red clay soil will drain faster if it is mixed with _____.
14. Danny noticed that the family pet cat has been chasing the mice and eating them. He can conclude that the cat is a/an _____.
15. The best material for making a pot handle is _____.

A teacher used the diagram below to show the relationship between the sun moon and earth. Use the diagram to answer questions 16 and 17.



16. In the diagram the flashlight represents the _____.
17. In the diagram the mirror represents the _____.
18. If the pH of the soil is too low it can be raised by adding _____ to it.
19. The _____ circuit is the best type of electrical circuit to connect two speakers to an amplifier.
20. The major form of energy change when the fan below works is from _____ to kinetic.



Section C

Short Answers

(20 Marks)

1. A. Identify the simple machines shown below.



I

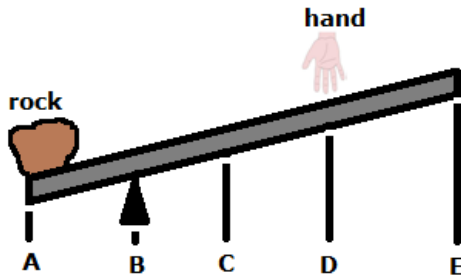


II

(I) _____

(II) _____ (2 marks)

B. The diagram below shows a piece of board being used as a simple machine.



(I) What is the name of the simple machine shown?
_____ (1 mark)

(II) Write the letter which shows the position of the effort, the fulcrum and the load.

Effort: _____

Fulcrum: _____

Load: _____ (3 marks)

(III) Where should the hand be placed to make it easier to lift the rock?

_____ (1 mark)

2. Danté was asked by his science teacher to classify the following: a stone, a mango tree, and a dog. He classified them into two groups as shown below.

Living things	Non-living things
Mango tree	Stone
Dog	

The teacher then gave Dahlia and Denton the following list: wooden spoon, silver ring, gold chain, leather bag, iron gate



wooden
spoon



silver
ring



gold
chain



leather
bag



iron
gate

Show how Dahlia can classify them into **two** groups.

(4 marks)

3. A. Explain how a volcano is formed.

(2 marks)

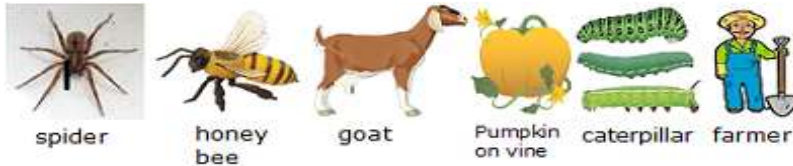
B. State **two** harmful effects of volcanoes.

(I)

(II)

(2 marks)

4. After observing a spider feeding on a honeybee, Delano wrote down the following list of organisms that were seen in his backyard: spider, honeybee, goat, pumpkin vine (with leaves, flower and ripe pumpkin), caterpillar and a man.



A. Draw a food web that includes **all** the organisms listed above.

(4 marks)

B. Draw a circle around an omnivore in the food web.

(1 mark)

Section D

Skills and Processes

(10 Marks)

1. Joanne crushed some blackberries and used the purple juice in an experiment. She added a few drops to some ammonia and the solution turned green. She then added a few drops to some vinegar and it turned pink. Next, she added a few drops of blackberry juice to different substances and wrote down her results as shown below.

Blackberry juice turned pink in solution #1.

Blackberry juice turned green in solution #2.

Blackberry juice remained purple in solution #3.

- A. Design a table and use it to write down Joanne's **RESULTS**. (5 marks)

- B. What was the manipulated variable in this experiment? (1 mark)

- C. What was the responding variable in this experiment? (1 mark)

- D. Which solution is an acid? (1 mark)

- E. Which solution is an alkali? (1 mark)

- F. Which solution is neutral? (1 mark)
