MINISTRY OF EDUCATION

ANTIGUA AND BARBUDA

2013 GRADE SIX NATIONAL ASSESSMENT

SCIENCE

June 4, 2013

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

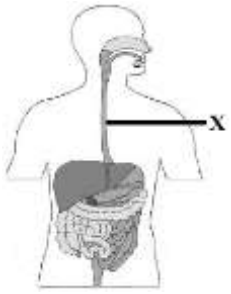
   The correct answer is 8, so on your answer sheet you should shade the circle containing the letter *B*.

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.

1. The process of pushing air out of the lungs is called
A. eating
B. inhaling
C. exhaling
D. swallowing

2. The diagram below shows part on the digestive system. Identify the part labeled X.



A. Appendix
B. Esophagus
C. Small intestine
D. Large intestine

3. The body system that holds itself erect with the help of bones and muscles is the
A. skeletal system
B. nervous system
C. digestive system
D. excretory system

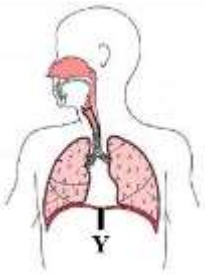
4. Ants, worms and cockles are all examples of
A. bugs
B. mollusks
C. vertebrates
D. invertebrates

5. Which part of the seed grows into the root?
A. Hilum
B. Radicle
C. Plumule
D. Cotelydon

6. An anemometer is used to measure
A. wind speed
B. wind direction
C. wind pressure
D. wind temperature

7. What is the process by which green plants make their own food?
A. Pollination
B. Fertilization
C. Photosynthesis
D. Chemosynthesis

8. The diagram below shows part on the respiratory system. Identify the part labeled Y.



A. Lungs
B. Trachea
C. Bronchus
D. Diaphragm

9. Which of the following does NOT undergo metamorphosis?
A. Fly
B. Bird
C. Butterfly
D. Mosquito

10. An empty bleach bottle was converted into a flower pot. This is an example of
A. reusing
B. reducing
C. recycling
D. repairing

11. Which of these waste materials are suitable for composting?
A. Glass bottles
B. Plastic bottles
C. Aluminium cans
D. Vegetable peelings

12. The female parts of the flower are the
A. anther and the ovary
B. anther and the filament
C. stigma, the style and the ovary
D. stigma, the style and the filament

13. In the life cycle of a mosquito, at which stage is it called a wriggler?
A. Egg
B. Larva
C. Pupa
D. Maggot

14. Which of the following is NOT usually considered a useful method to make soil more fertile?
A. Adding sugar
B. Adding humus
C. Adding manure
D. Adding fertilizer

15. The sense organ that detects bitterness and helps us to swallow is
A. skin
B. nose
C. teeth
D. tongue

16. Tony says "Jacky has brown eyes." The part of the eye he is describing is the
A. iris
B. lens
C. pupil
D. retina

17. In the water cycle, the process by which water falls to the earth is called
A. collection
B. evaporation
C. precipitation
D. condensation

18. Which force keeps the planets in orbit around the sun?
A. Frictional force
B. Electrical force
C. Magnetic force
D. Gravitational force

19. A friend says, "What goes up must come down." Which of the following was she describing?
A. Gravity
B. Friction
C. Electricity
D. Magnetism

20. Which of the following is an example of a marine ecosystem?
A. Pond
B. Tundra
C. Grassland
D. Coral Reef

21. Tiffani used a bathroom scale to find her mass. Which of the following could be her **mass**?
A. 40 pounds
B. 40 kilograms
C. 40 Newtons
D. 40 Litres

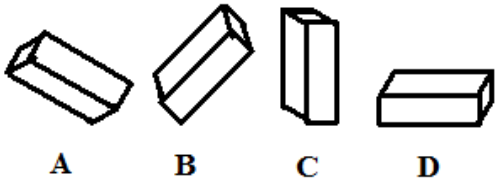
22. The natural home of an organism is known as its
A. town
B. village
C. habitat
D. population

23. Which of the following is an example of a non-renewable resource?
A. Oil
B. Sun
C. Wind
D. Waves

24. In order for something to burn, there **MUST** be heat, fuel and
A. water
B. oxygen
C. nitrogen
D. carbon dioxide

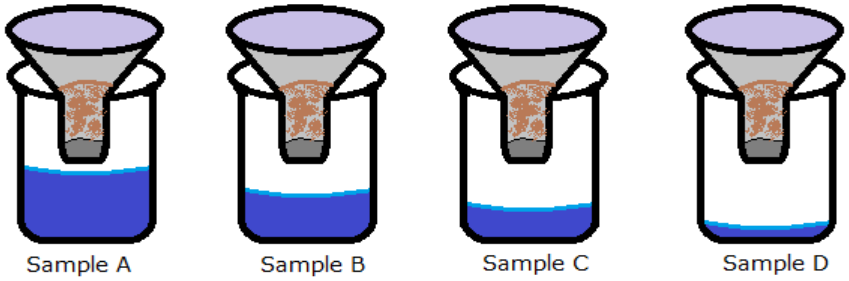
25. Which of the following is NOT a reptile found in Antigua and Barbuda?
A. Crocodile
B. Racer Snake
C. Ground Lizard
D. Green tree lizard

26. Which of the diagrams below shows the most stable arrangement of the block of wood?



A. A
B. B
C. C
D. D

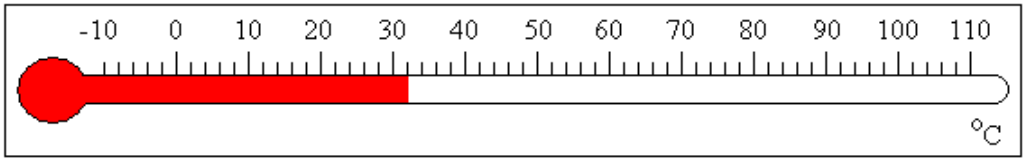
27. In an experiment on soil drainage and retention, the experiment below was set up. The same amount of soil was used in each sample. At the start of the experiment, an equal amount of water was poured over each sample at the same time. The diagram below shows how the samples looked after one minute.



Which soil sample holds water best?

A. Sample A
B. Sample B
C. Sample C
D. Sample D

28. What is the temperature reading on the laboratory thermometer below?



A. 30 °C
B. 31 °C
C. 32 °C
D. 33 °C

29. The census only gives an estimate of the size of the population and not the exact number. One reason is

A. Children grow older each day.
B. People always stay in the same place.
C. More houses are being constructed.
D. Births and deaths occur during counting.

30. Water would evaporate FASTEST from Pot Works Dam on a day that is

A. cloudy and still
B. cloudy and windy
C. sunny and windy
D. sunny and still

Section B **Fill in the Blanks** **(20 Marks)**

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

Axis	Experiment	Leaching	Series
Biodegradable	Frog	Litter	Solute
Boiling	Goat	Open	Solvent
Cat	Heat	Parallel	Solution
Chemical	Hypothesis	Physical	Stapes
Deforestation	Insulator	Pole	Steel
Dog	Inductor	Rat	Temperature

1. Melting and freezing are examples of _____ changes.

2. _____ is an example of a reversible change.

3. The earth rotates on its _____ once every 24 hours.

4. _____ tells how hot or cold something is.

5. _____ circuits have only one path for current to flow.

6. Trash, like plastic bags, left lying in the school ground is called _____.

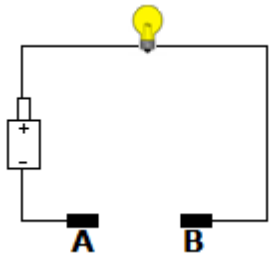
7. A substance which does not conduct electricity is called a (an) _____.

8. Materials that decay easily are _____.

9. The large scale cutting down of trees is called _____.

10. The smallest bone in the ear is the _____.

11. In the circuit below if _____ is placed between A and B, the bulb will light.



12. Elloy says, "Water cools faster in a metal cup than a plastic cup." This is an example of a (an) _____.

13. When sugar is mixed with water it dissolves. The sugar is called the _____, while the water is called the _____.

14. Lettuce and cabbage can be affected by _____because they are not deep- rooted plants.

Study the information below then answer questions 15, 16 and 17.

Animal	**Food eaten**
Goat	Leaves, trees, grass
Cat	Rats, fish, milk
Rat	Fruits, insects, eggs
Frog	Insects, worms, flies
Dog	Cooked rice, raw meat

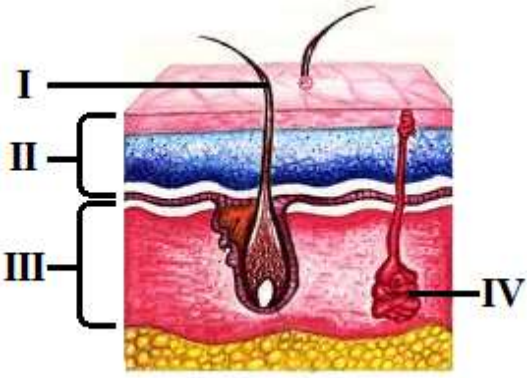
15. From the table, _____is an herbivore.

16. From the table, two omnivores are _____and _____.

17. From the table, two carnivores are _____and _____.

Section C **Short Answers** **(20 Marks)**

1. The diagram below shows the human skin.



A. Identify the parts labeled (I) to (IV).

(I) _____

(II) _____

(III) _____

(IV) _____ (4 marks)

B. If someone touches your body, the skin sends a message to your brain and you feel the touch. Describe how the skin sends a message to the brain.

_____

_____ (2 marks)

2. A. Explain what is meant by the term 'pollution'.

_____

_____ (2 marks)

B. State one way that people have helped to pollute water.

_____

_____ (1 mark)

C. State one way that people have helped to pollute the land.

_____

_____ (1 mark)

D. During a hurricane, Josette's rain water supply became polluted because harmful germs got into her cistern. Explain two things Josette can do to make the water safe for drinking.

(i) _____

_____

(ii) _____

_____ (2 marks)

3. In 1995 Hurricane Luis struck Antigua and Barbuda. The beach at Fort James in Antigua was badly damaged. The picture below shows that a large portion of the road at Fort James Beach was washed away during the storm.

A. Explain how a hurricane could have caused this damage.

_____

_____

_____

_____ (2 marks)

B. State two things people can do to reduce the chance that a hurricane will do as much damage to the beach in the future.

_____

_____

_____

_____

_____ (2 marks)

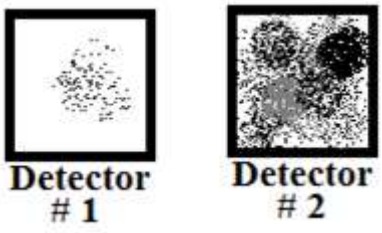
4. The picture below shows an ecosystem. The birds are called egrets and they eat ticks which may be on the cattle. They also eat small insects that are in the grass. The insects eat the same grass on which the cattle are feeding.

Draw a food web based on the information given about the picture.

(4 marks)

Section D **Skills and Processes** **(10 Marks)**

1. An experiment was conducted to observe the amount of air pollution found in three different areas. Two pollution detectors were made by cutting out identical pieces of white plastic and rubbing them with Vaseline (grease). Detector #1 was put inside the classroom and Detector #2 was put in the playfield. The following day, the two detectors were collected and examined. The diagram below shows the detectors.



A. Which area showed the lower level of pollution? (1 mark)

_____

B. Suggest one good reason why this area had the lower pollution level. (1 mark)

_____

_____

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

_____

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

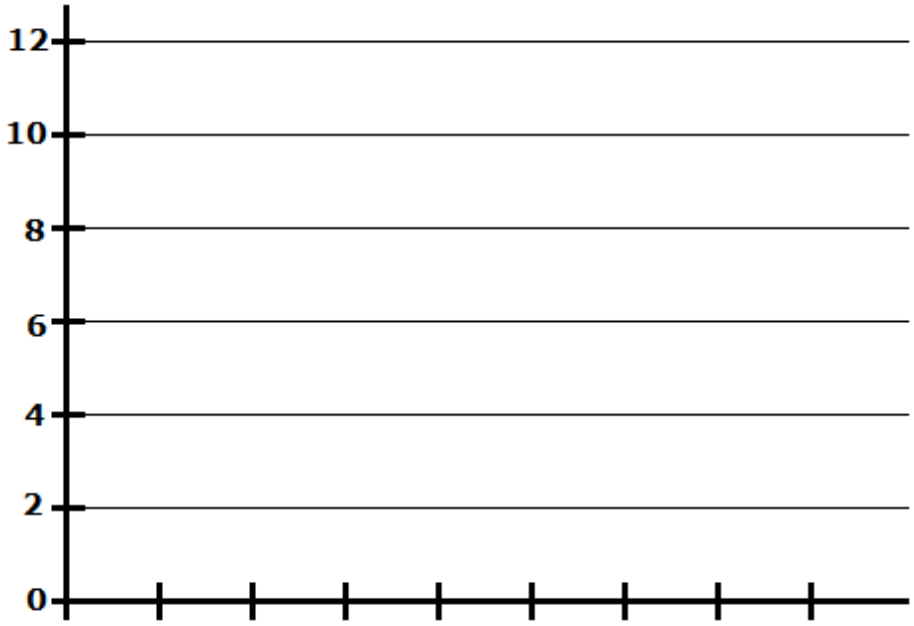
_____

2.

A. As part of his science SBA project on recycling, Jorel collected aluminium cans for five days. He recorded how many cans he collected each day and wrote this note in his book.

Monday (10 cans), Tuesday (8 cans), Wednesday (12 cans), Thursday (4 cans) Friday (7 cans).

In the space below, draw a graph of the results of the experiment. (5 marks)



B. Jorel was feeling a bit ill one day during the week. Based on the graph, on which day was Jorel most likely to be ill? (1 mark)

_____