Republic of Trinidad and Tobago
Ministry of Education
NATIONAL TEST 2010
SCIENCE STANDARD 2
(75 Minutes)

Directions for the Test

This test has three (3) sections and a total of 31 questions.

There are instructions for each section of the test, read them carefully.

Read each question carefully before answering it.

You should spend about 25 minutes on each section.

Work carefully but do not spend too much time on any one question.

Answer ALL questions in this test booklet.

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.
SECTION 1 - MULTIPLE CHOICE ITEMS

Answer ALL questions in this section by circling the correct answer. An example is shown below.

Example

Which of the following would be safe to do while carrying out an experiment?

(A) Running in the classroom  
(B) Not paying attention  
(C) Playing with matches  
(D) Following class rules

Answer (D) is the correct answer so it has been circled.

1. Which animal below is a mammal?

(A)  
(B)  
(C)  
(D)

2. Which animal below feeds on plants only?

(A)  
(B)  
(C)  
(D)
3. The glasses worn by the worker in the picture above helps to

   (A) see far
   (B) shield the eyes
   (C) block the sun
   (D) cool the eyes

Live on land and in water
Young breathe using gills
Adults breathe using lungs

4. The animal above is an example of a

   (A) bird
   (B) fish
   (C) mammal
   (D) reptile
5. Mark stood in front of the chart above and had trouble reading the second line. This means that Mark could

(A) be short sighted
(B) be long sighted
(C) read colour only
(D) read black and white

6. To which group does the animal above belong?

(A) Birds
(B) Amphibians
(C) Reptiles
(D) Mammals
7. Which of the following shows a correct feeding relationship?

(A) grass → rabbit → man
(B) rabbit → man → grass
(C) man → grass → rabbit
(D) grass → rabbit → cow

8. Dumping garbage in the river above will

(A) kill fish
(B) give fish food
(C) make fish grow bigger
(D) make more fish

9. What can happen due to cutting down of trees on the hillside above?

(A) There will be floods
(B) New rivers will be made
(C) The sea level will rise
(D) More plants will get water
10. During a very dry season, rivers may

   (A) dry up
   (B) get bigger
   (C) allow animals to reproduce faster
   (D) allow plant life to thrive

11. An aquatic animal is one that lives in

   (A) land
   (B) air
   (C) water
   (D) soil

12. Sugar will dissolve in water to form a

   (A) solvent
   (B) solution
   (C) solute
   (D) liquid

13. Four substances labeled W, X, Y and Z are mixed in the water in the glass tubes above. Which substance is soluble?

   (A) W
   (B) X
   (C) Y
   (D) Z
14. Which method can be used separate salt from water?

(A) Evaporation  
(B) Handpicking  
(C) Using a sieve  
(D) Filtration

15. The separation method shown above is

(A) evaporation  
(B) sifting  
(C) magnetism  
(D) Filtering

16. Which of the following will BEST tell the difference between salt water and fresh water?

(A) Adding soap and shaking  
(B) How they feel between the fingers  
(C) How they look in a clear glass  
(D) The difference in their smell
17. A force is also called

(A) light  
(B) speed  
(C) mass  
(D) a push

18. Four objects of the same weight are placed on a shelf close to a door. Which of the objects will most likely fall if the door is slammed?

(A)  
(B)  
(C)  
(D)

19. A force applied to a rubber band can cause it to

(A) change colour  
(B) lengthen  
(C) get lighter  
(D) get weaker

20. What is humus?

(A) Minerals in the soil  
(B) Small pieces of rock in the soil  
(C) Decayed remains of small plants and animals  
(D) Air and water that fills up the empty spaces in the soil
21. Which layer in the diagram above contains mainly clay?

(A) Layer W  
(B) Layer X  
(C) Layer Z  
(D) Layers X and Z

22. Grandma watered her cactus plant in her garden every day for a week. The plant, however, died and rotted. This suggests that the soil may have been

(A) sand  
(B) clay  
(C) silt  
(D) rock
23. Which object below can be placed in a group of things that can burn?

- Rock (A)
- Metal pot (B)
- Glass vase (C)
- Wooden chair (D)

24. The energy used by plants to make food is called

(A) solar energy
(B) wind energy
(C) electrical energy
(D) heat energy

25. Which sign is BEST suited for the picture above?

- Danger Explosives Keep Out (A)
- Danger No Smoking, Matches or Open Lights (B)
- Danger Wear Protective Clothing in This Area (C)
- Danger Confined Space Do Not Enter (D)

GO ON TO THE NEXT SECTION
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24. The energy used by plants to make food is called

- (A) solar energy
- (B) wind energy
- (C) electrical energy
- (D) heat energy

25. Which sign is BEST suited for the picture above?

- (A) DANGER: EXPLOSIVES KEEP OUT
- (B) DANGER: NO SMOKING, MATCHES OR OPEN LIGHTS
- (C) DANGER: WEAR PROTECTIVE CLOTHING IN THIS AREA
- (D) DANGER: CONFINED SPACE DO NOT ENTER

GO ON TO THE NEXT SECTION
SECTION 2 - STRUCTURED QUESTIONS

Answer ALL questions in the spaces provided. The number of marks for each part of the question is shown in brackets.

1. Two identical potted plants A and B are shown below.

[Image of Plant A placed in sunlight and Plant B placed in a dark room]

Complete the sentences below.

a) After one week plant A will

[Blank line]

This will happen because

[Blank line]

b) After one week plant B will

[Blank line]

(3 marks)
c) If the window next to Plant B is left opened for the next week, Plant B will

This will happen when the window is opened because

(2 marks)
2. The picture below shows a flooded pond

![Flooded Pond Image]

Complete the sentences below.

a) When it floods, the soil around the pond will

b) When it floods, tadpoles will

c) When it floods, water lilies that grow in the pond will
d) During a drought, all the water in a pond may dry up. What are two ways that animals in such a pond can survive? (2 marks)

3. Complete the sentences below.

a) In a sugar solution, sugar is a (1 mark)

b) Flour cannot dissolve in water so we can say that flour is (1 mark)

c) Draw lines to match the three (3) mixtures to the correct method of separation. One has been done for you.

<table>
<thead>
<tr>
<th>Mixture</th>
<th>Method of separation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. mixture of sand and marbles</td>
<td>Sifting</td>
</tr>
<tr>
<td>2. mixture of sand and flour</td>
<td>filtration</td>
</tr>
<tr>
<td>3. mixture of sand and water</td>
<td>A magnet</td>
</tr>
<tr>
<td>4. Iron filings and sand</td>
<td>Hand picking</td>
</tr>
</tbody>
</table>

(3 marks)
4. The picture shows a calculator with a solar cell.

Complete the sentence below.

a) To make the calculator work, the solar cell will provide

(2 marks)

<table>
<thead>
<tr>
<th>Water plants</th>
<th>Grass</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bird</td>
<td>Grasshopper</td>
</tr>
<tr>
<td>Fish</td>
<td>Mosquito</td>
</tr>
</tbody>
</table>

b) Construct a food chain by writing in the name of one living thing from the list above in each of the circles below.

(3 marks)
SECTION 3 ALTERNATIVE TO PRACTICAL

Answer ALL questions in this section. The number of marks for each part of the question is shown in the brackets.

5. Your teacher gives you two separate glasses of water and asks you to find out which contains salt water and which contains fresh water.

a) Write an X on the items you will need for your experiment.

- Ruler
- stop clock
- funnel
- salt water
- fresh water
- dish washing liquid
- glass tubes
- thermometer
- glass tube holders

(5 marks)
b). Number the steps you would have to take to perform the experiment in the correct order. The first one has been done for you.

1. Place the fresh and salt water in separate test tubes.

☐ Measure the amount of lather formed in each test tube with the ruler.

☐ Put 1 ml dishwashing liquid in each of the test tubes.

☐ Put both test tubes on a test tube rack for one minute.

☐ Shake each test tube for one minute.

(5 marks)
6.

John has three pieces of plasticine. He wants to find out what will happen if he squeezes each piece with a different force.

\[
\begin{align*}
A & \quad B & \quad C
\end{align*}
\]

a) Write one thing that should be the same with each piece of plasticine before the experiment.

______________________________

(1 mark)

b) John placed a book on Plasticine A and presses it with a small force. Draw in the box below what the plasticine will look like.

Plasticine A (small force)
c) He then placed the book on Plasticine B and presses it with a medium force. Draw in the box below what the plasticine will look like.

Plasticine B (medium force)

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d) John next placed the book on Plasticine C and presses it with a large force. Draw in the box below what the plasticine will look like.

Plasticine C (large force)

(2 × 3 marks)
e) Why did the plasticine look the way you drew them after they were pressed with the small, medium and large forces?


(3 marks)

END OF TEST

IF YOU ARE FINISHED BEFORE TIME IS UP GO BACK AND CHECK YOUR WORK.