TOM NEWBY SCHOOL EXAMINATION

Subject	**Natural Sciences**	**Examiner**	**Mrs Fourie, Mr Hudson**
Date	**14 November 2017**	**Total marks**	**100**
Session	**1**	**Duration**	**1½ hours**
Grade	**7**	**Moderator**	**Mrs Fourie**
Special instructions/ Equipment	**Use grey pencil for drawings.** **1. Answer all questions on the question paper.** **2. Write neatly and legibly.** **3. Take note of mark allocation.** **4. Think before you INK!** **5. Check your answers when you are done.**		
This assessment has been compiled using notes and information contained in the Tom Newby School resource material. The marking memorandum has been compiled accordingly. While alternative responses will be given due acknowledgement, the official memorandum will be considered a priority document to ensure uniformity of marking.			

Name:	Surname:	Class:

QUESTION 1 – CHOOOSE THE CORRECT ANSWER (10)

Choose the correct answer from the word/s in brackets. Write down the chosen word/s next to the given number.

1. A burning fire radiates (heat and light energy)/ (heat and flame) energy.

   _____

2. Earth remains tilted on its axis as it revolves in its (revolution)/ (orbit).

   _____

3. Oil forms from the remains of (dead plants)/ (sea animals).

   _____

4. Day is (always)/ (never) longer than night at the equator.

   _____

5. In the water cycle, the sun's energy is used for (condensation)/ (evaporation).

   _____

6. A microwave warms food by (warmth and light)/ (by radiation).

   _____

7. A bent ruler has (elastic potential energy)/ (elastic kinetic energy).

   _____

8. A torch battery, inserted into a torch, creates a (biological)/ (chemical) reaction, which releases electrons that flow through the circuit.

   _____

9. There is high tide at the same place, at the coast, every (twelve)/ (six) hours.

   _____

10. The Moon's mass is much (less)/ (much) more than Earth's mass.

_____

QUESTION 2 – MATCH THE COLUMNS **(10)**

Match the definition given in Column A, with the correct word/words in Column B. Write only the letter next to the number.

Column A	Column B
1. Non-renewable source of energy 2. Renewable source of energy. 3. Type of energy found in gas. 4. Energy produced when turbine turns. 5. Large, metal towers that carry electricity to our homes. 6. White mussels live in the wet sand and they put up two little tubes called _____ for breathing. 7. Temporary phenomena on the surface of the sun. 8. Predictable, repeated rise and fall of sea and ocean levels. 9. Large kind of seaweed that grows mostly in cold sea water. 10. A circle of twelve constellations seen at certain times of the year.	A. Wind B. Potential energy C. Pylons D. Coal E. Mechanical energy F. Thermal energy G. Tides H. Zodiac I. Ecliptic J. Kelp K. Sunspots L. Sun stripes M. Ocean rises N. Steel frames

1		2		3		4		5		6		7		8		9		10	

_____

QUESTION 3 – CLASSIFY ENERGY SOURCES **(10)**

Classify each of the following energy sources as either renewable or non-renewable and list what the image is or what type of energy is being shown in the images.

A. 

Is it renewable/non-renewable?

_____

What is it/where is energy used?

_____

B. 

Is it renewable/non-renewable?

_____

What is it/Where is energy used?

_____

C. 

Renewable/non-renewable?

_____

What is it/Where is energy used?

_____

D. 

Renewable/non-renewable?

_____

What is it/Where is energy used?

_____

E. 

Renewable/non-renewable

_____

What is it/Where is energy used?

_____

QUESTION 4 – TRUE OR FALSE **(10)**

Say whether the following statements are TRUE or FALSE. If FALSE, correct it, to make it TRUE.

1. One would be able to jump and throw balls higher and further on the Moon, that on the Earth.

   _____

   _____

2. The energy of the Sun is transferred to Earth by absorption.

   _____

   _____

3. Efficiency, means being able to do “less with more”.

_____

_____

4. When fluid (liquid) is warmed up, the particles move around more quickly.

_____

_____

5. If you put a frying pan on a stove, the pan will be hot in about a half an hour.

_____

_____

6. Some substances, like plastic and wood, are poor conductors of heat.

_____

_____

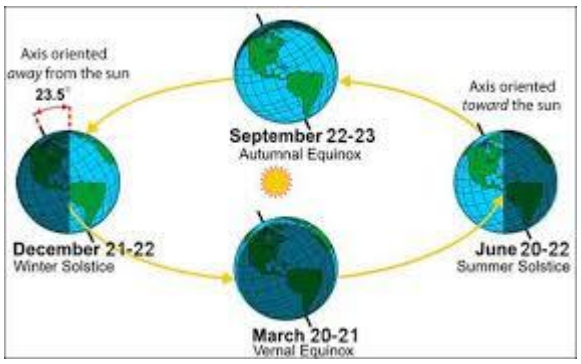
7. It takes the Moon, almost a month, 29,5 days, to orbit earth once.

_____

_____

QUESTION 5 – DIAGRAMS **(10)**

1. Study the diagrams below carefully and answer the questions that follow:



a) In which month is the Southern Hemisphere tilted towards the Sun? (1)

_____

b) Explain why the Sun's rays strike different places on Earth at different angles. (2)

_____

_____

_____

_____

_____

c) How does the Sun's energy Support life on Earth? (3)

_____

_____

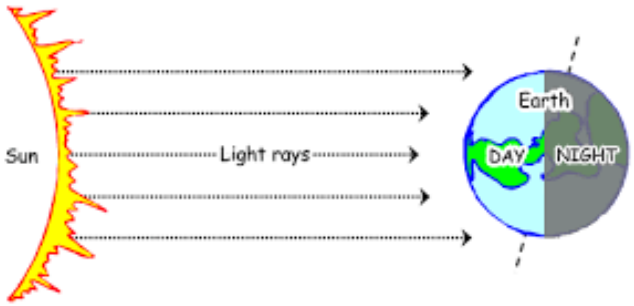
_____

_____

_____

_____

2. Study the diagram below to answer the questions. (4)



a) Which line runs horizontally across the Earth at 0°? (1)

_____

b) Is the Earth receiving oblique or direct sunrays? (1)

_____

c) What is the size of the angle of the line seen from the North to the South Pole. (1)

_____

d) Where is the Arctic circle situated? (1)

_____

QUESTION 6 – DEFINITIONS **(10)**

Define each of the following terms:

1. Global warming (2)

2. Biofuel (2)

3. Mass (2)

4. Sandy shore ecosystems (2)

5. Solar Energy (2)

QUESTION 7 – FACTS AND SHORT PARAGRAPHS

Answer the short questions and paragraphs.

1. Explain what makes it possible for the fire to keep the room in the house warm? (2)

_____

_____

_____

2. What is radiation? (2)

_____

_____

_____

3. Give one other example of how and where radiation can occur, and explain. (2)

_____

_____

_____

_____

4. Why is a fireplace, placed at the bottom of a room and not near the ceiling? (2)

_____

_____

_____

5. Explain the general function of insulating materials in and around the house. (2)

_____

_____

_____

_____

6. Explain the Law of Conservation briefly. (3)

_____

_____

_____

_____

_____

7. Give any 3 (three) facts of oil or what you know about oil. (3)

_____

_____

_____

_____

_____

8. Draw/explain the Input, the Process and the Output, and mention the wasted energy in the image below.

(4)

INPUT PROCESS OUTPUT

WASTED ENERGY

QUESTION 8 – DRAWINGS AND EXPLANATIONS **(10)**

8.1 Draw a diagram to show the alignment of the Moon, Earth and Sun at Full Moon. Label each object clearly.

(3)

1. What are moons? (1)

_____

_____

2. The moon has an effect on the _____ (1)

8.2

1. What is meant by the word solstice? (1)

_____

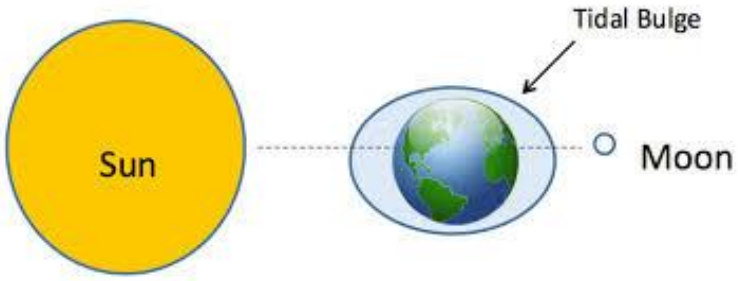
_____

_____

2. What is a tidal bulge? (2)

_____

_____



3. What does the word equinox mean? (1)

_____

_____

4. Explain the summer solstice. (1)

_____

_____

_____

_____

_____

_____

_____

NOW GO BACK AND CHECK YOUR WORK!

TOTAL : 100