LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
EDUCATION

VHEMBE EAST DISTRICT

NATURAL SCIENCES

GRADE 7

TERM 4 COMMON EXAM

QUESTION PAPER

2022

MARKS: 80

DURATION: 1.5 HOURS

INSTRUCTIONS:

1. This paper consists of TWELVE (12) pages including the cover.
2. Read the questions carefully before answering.
3. Number your answers correctly and exactly as in the questions.
4. Answer all the questions in this question paper

SECTION A

Choose the correct answer for each of the following and write the letter on your choice in the answer sheet.

1.1. The energy we get from moving water is called?

A. Hydro-electricity

B. Hydrogen

C. Thermal energy

D. Potential energy

1.2. Which one of these statements is false?

A. Potential energy is energy that is stored in an object or system

B. The food we eat has chemical potential energy

C. A compressed spring is an example of elastic potential energy

D. Potential energy cannot be transferred.

1.3. _____is the transfer or heat from one place to another by movement of liquids or gas particles.

A. Radiation

B. Conduction

C. Convection

D. Insulation.

1.4. Which one of these is not a useful insulator when building an energy efficient house?

A. Large glass windows

B. Thatch roofing

C. Foam ceiling boards

D. Hollow cement blocks

1.5. _____is a material that reduce heat loss.

A. Insulator

B. fan

C. Wasted energy

D. Input energy

1.6. An electric circuit is a system for the transfer of _____

A. Symbols

B. Energy

C. Components

D. Devices

1.7. Which planet is known as the red planet?

A. Mars

B. Neptune

C. Venus

D. Mercury

1.8. The Earth takes _____hours to complete one full rotation.

A. 24

B. 12

C.16

D.18

1.9. Earth axis is tilted at _____

A. 24,5^{o}

B.365^{o}

C.23.5^{o}

D.28^{o}

1.10. About how long does it take the moon to rotate once on its axis?

A. 48 hours

B. 24 hours

C. 30 days

D. 28 days (10x2=20)

Question 2

State whether the following statements are True or False by writing T OR F next to the appropriate number.

2.1. Energy is measured in unit called kilometres.

2.2. Conduction usually takes place in liquids.

2.3. A good conductor is a bad insulator.

2.4. The surface temperature of the sun is about 6000^{o}

2.5. Astronaut is a person who travels into moon. (5x1=5)

QUESTION 3

Choose the item in Column B that matches a description in Column A. Write only the letter next to the correct question number in the answer sheet.

COLUMN A	COLUMN B
3.1. A torch battery has_____ potential energy	A. 65%
3.2. Being able to work well with minimum waste.	B. 21 December
3.3. A space where there is no matter.	C. Efficiency
3.4. Cars waste about_____ of energy from the fuel in the form of heat.	D. Chemical
3.5. Longest day and shortest night in South Africa	E. Vacuum

(5x1=5)

SECTION B

Question 4: Sources of energy: Potential and Kinetic energy

4.1. Natural gas and solar energy are sources of energy.

4.1.1. Give two advantages of solar energy (2)

4.1.2. Which one of these is an example of renewable energy source. (1)

4.2.1. Identify the type of potential energy that is displayed by each of the items below (4)

A

B

C

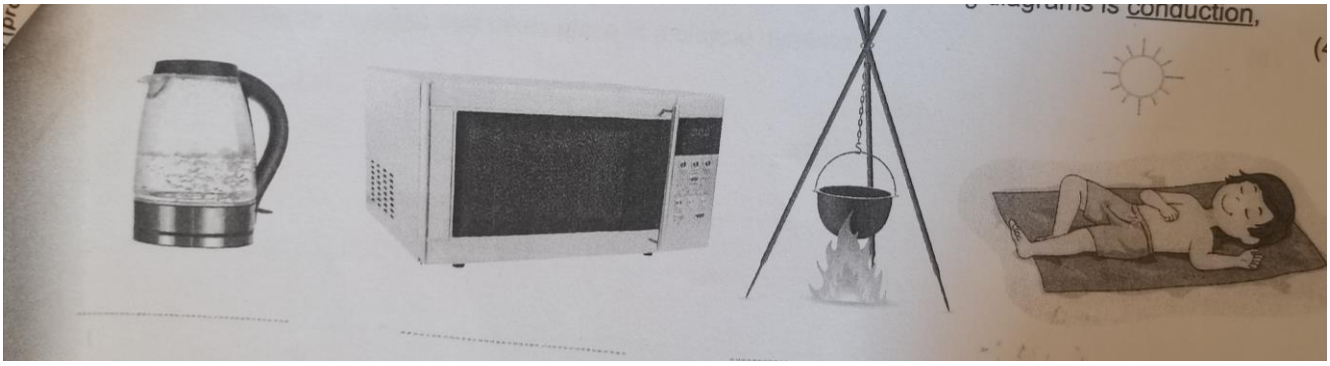
D

4.2.2. Differentiate between kinetic energy and potential energy. (2) (9)

QUESTION 5: HEAT TRANSFER

5.1. Give two examples of insulators. (2)

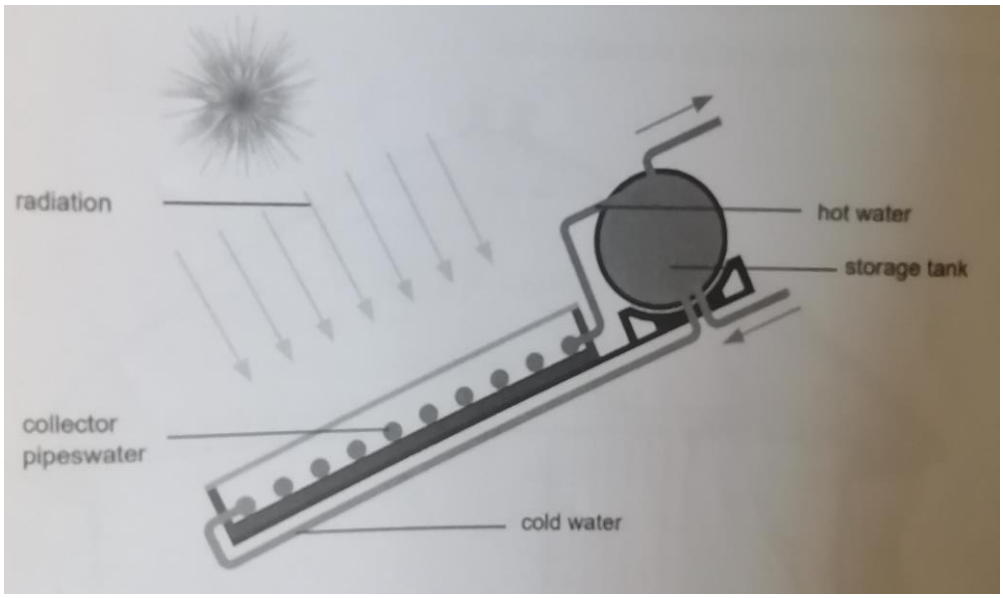
5.2. The pictures below represent how heat is transferred. Indicate the way in which heat is transferred in each picture. (4)



5.3. Why do many people paint their roofs shiny silver rather than black. (1)

QUESTION 6: INSULATION AND ENERGY SAVING

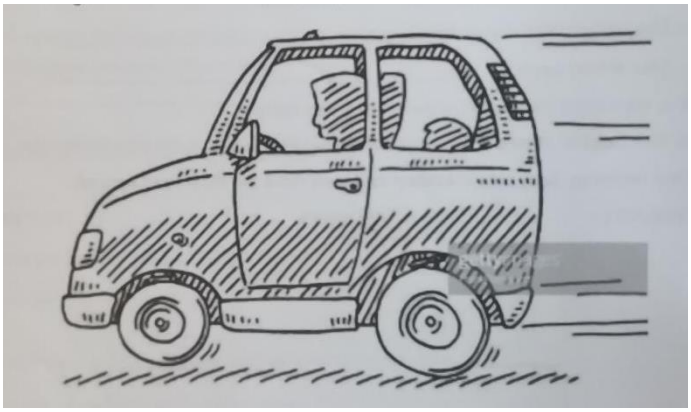
Study the diagram of a solar system below and then answer the question that follows.



6. Using what you have learnt and the above diagram, explain how a solar water heating system works. Hint: Include the terms below in your explanation **conduction, convection and radiation.** **(6)**

QUESTION 7: ENERGY TRANSFER TO SURROUNDING

Study the drawing of the car below. The car has a petrol engine and driving a family to a birthday party.

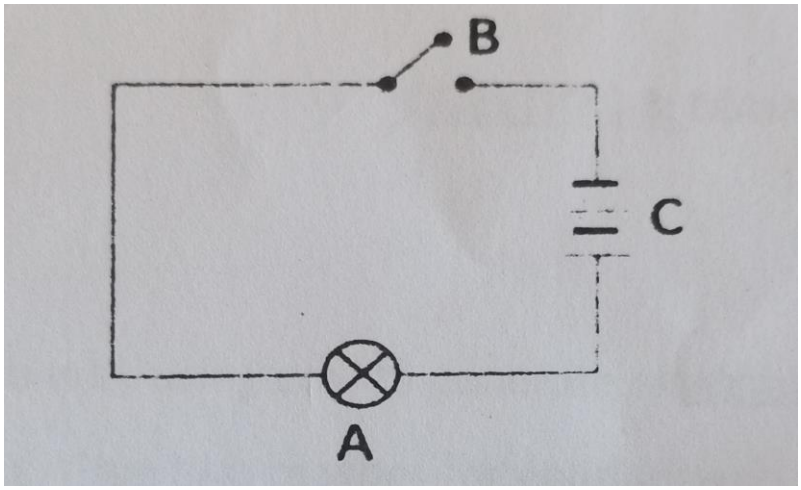


7.1. What do we call the input energy of the car? (1)

7.2. Except heat energy and sound energy, give the other type of released energy. (1)

7.3. Name one wasted output energy in this situation. (1)

QUESTION 8: ELECTRIC CIRCUITS, ELECTRICAL CONDUCTORS AND INSULATORS

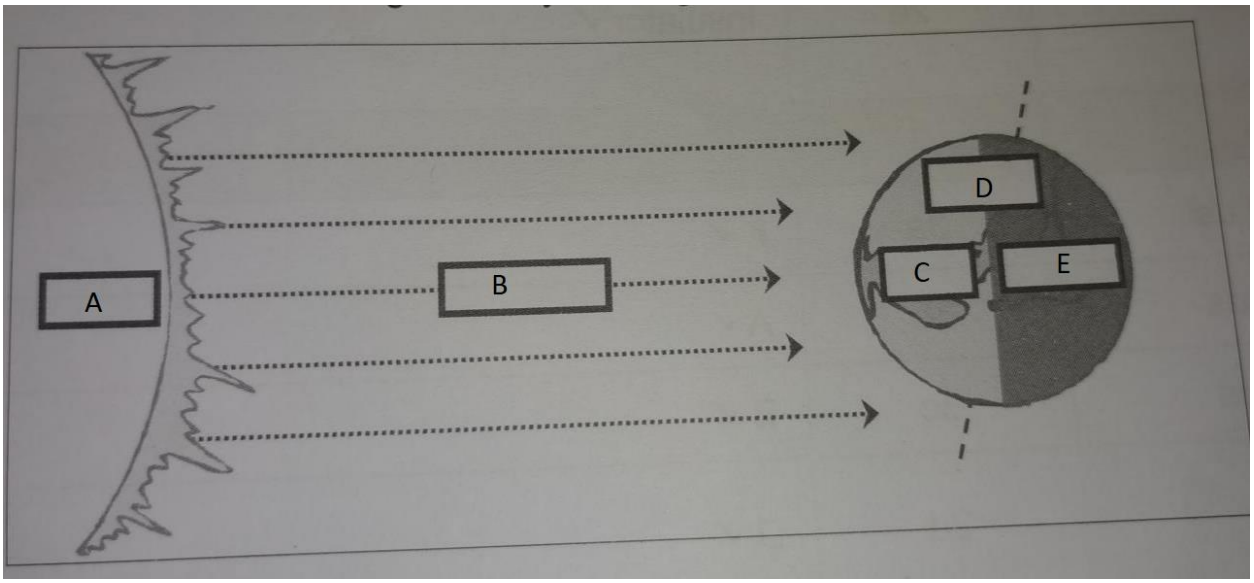


8.1.1. Label the parts marked C _____and A _____ (2)

8.1.2. The part marked A will (produce light /not produce light) (1)

QUESTION 9: The solar system, Movements of the earth and planets and the movement of the moon.

Study the diagram below and answer the questions underneath.



9.1. Give a heading for the above diagram. (1)

9.2. Fill in the blank spaces on the diagram above from A to E. (5)

9.3. Explain the difference between rotation and revolution (4)

QUESTION 10: RELATIONSHIP OF THE SUN TO THE EARTH

10.1. When it is summer in South Africa, the Southern Hemisphere is tilted _____the sun, and when it is winter, the Southern hemisphere is tilted _____from the sun (2)

10.2. Write a paragraph explaining what Indirect and Direct sunlight are and how they affect the temperature of the Earth. (6)

QUESTION 11: RELATIONSHIP OF THE MOON TO THE EARTH.

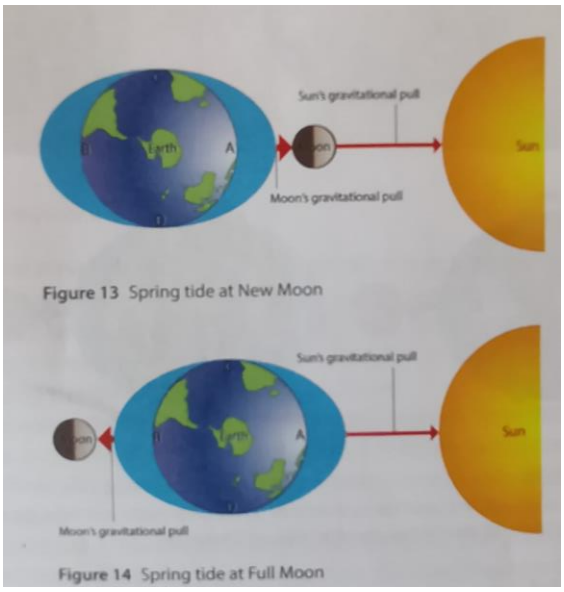


Figure 13 Spring tide at New Moon

Figure 14 Spring tide at Full Moon

11.1. What causes tides (2)

11.2. What kind of tides occur when the moon is in line with the sun? (1)

11.3. What kind of tides occur when the Sun, Earth and Moon are at right angles to each other (1)