This is a Class 1 exam

Lebanon Evangelical School
for Boys and Girls
Loueizeh - Baabda

Stage Exam 03

10FEB2026

Do NOT write in this box. Your MARK will be placed here.

Subject :	Science	
Class :	6A, 6B and 6E	
Teacher :	Ms. Lea Abdul Khalek	
Duration :	1 hour	
Your name :		*Time taken to complete exam*
Your Class :		
Exam Room :		
How many sheets, including cover sheet :		

- Do not open this paper until the teacher in charge instructs you to do so.
- The most important thing to remember in taking an exam is NEVER PANIC.
- If you are caught cheating in this exam, you will be awarded zero for ALL exams that are taken on this day.

- **Exercise 1:** *(15points)*

Choose the correct answer.

1- Which factor does the kinetic energy of an object depend on?
   A. Only its height
   B. Its mass and speed
   C. Its shape and color
   D. Only its position

2- An object resting on a shelf has energy mainly because of its:
   A. Motion
   B. Temperature
   C. Position above the ground
   D. Elasticity

3- Which situation best represents elastic potential energy?
   A. Riding a bicycle
   B. Stretching a rubber band
   C. Burning a candle
   D. An airplane flying

4- Gravitational potential energy increases when:
   A. Mass decreases
   B. Height increases
   C. Speed increases
   D. Temperature increases

5- Which form of energy is stored in fuel, batteries and food?
   A. Thermal energy
   B. Chemical energy
   C. Mechanical energy
   D. Nuclear energy

6- When gasoline burns in a car engine, chemical energy is mainly transformed into:
   A. Light energy
   B. Nuclear energy
   C. Mechanical energy
   D. Sound energy ONLY

7- Thermal energy is related to:
   A. The motion of an object
   B. The color of particles
   C. The height of an object
   D. Electric charges

8- Which example shows mechanical energy?
A. Light from the Sun
B. Electricity in a wire
C. Moving a hammer
D. Heat from a stove

9- Electrical energy is produced by the movement of:
A. Neutrons
B. Atoms
C. Electric charges
D. Light waves

10- Sound energy travels through:
A. Empty space only
B. Solids only
C. Liquids only
D. Any matter

11- Light energy is best described as:
A. Energy of vibrating particles
B. Energy carried by waves that can travel in vacuum
C. Energy due to motion of objects
D. Energy stored in bonds

12- Solar energy is a form of:
A. Chemical energy
B. Nuclear energy stored on Earth
C. Wind energy
D. Light and thermal energy from the Sun

13- Geothermal energy comes from:
A. The Sun
B. Fossil fuels
C. Heat inside the Earth
D. Ocean waves

14- Stretching a spring increases its:
A. Elastic potential energy
B. Thermal energy
C. Nuclear energy
D. Electrical energy

15- Mechanical energy is the sum of:
A. Kinetic and potential energy
B. Kinetic and light energy
C. Chemical and nuclear energy
D. Sound and electrical energy

- **Exercise 2:**

Tell whether each of the following statements is true or false, and correct the false statements by changing the underlined words. *(10points)*

1- Wind turbines convert wind energy into chemical energy.

2- Nonrenewable energy resources are mostly nonpolluting.

3- The usage of Geothermal energy can lead to the spread of radioactive wastes.

4- Radioactive wastes can remain hazardous for thousands of years.

5- Nuclear Powerplants release large amounts of greenhouse polluting gases.

6- Renewable energy resources are more expensive to install than fossil fuel powerplants.

7- Hydroelectric energy uses moving water to produce electricity.

8- An advantage of using solar energy is that energy storage systems are needed for the night.

9- Coal, oil, and natural gas are examples of fossil fuels.

10- Burning wood is an example of using fossil fuels.

- **Exercise 3:**

Fill in the blanks to complete the following paragraph about Energy Resources. *(14points)*

(DON'T copy the paragraph, just write the missing word corresponding to each number.)

There are different types of energy resources on Earth. Some resources are quickly replaced by nature no matter how fast humans use them; these are called __(1)__ resources, such as __(2)__, __(3)__, __(4)__ or __(5)__. However, __(6)__ resources are used faster than nature's ability to replace them, such as __(7)__, and __(8)__.

Fossil fuels are __(9)__ to produce electricity. They are easily used and __(10)__ but major disadvantages are that they cause __(11)__ because of the gases released during the burning process, and their supply is __(12)__. In addition, drilling and mining for fossil fuels have caused habitat disruption and land distortion, which requires authorities to take actions of __(13)__, meaning to refill lands with soil and plant them with vegetation.

Nowadays, governments and individuals are shifting to renewable energy resources because their impact on the environment is not harmful and their supply is unlimited, yet they have limitations related to day and night, geological locations or __(14)__ conditions.

- **Exercise 4:**

Sequence the steps of formation of coal. *(5points)*

(DON'T re-write the steps, just use the letters.)

A- The organic matter undergoes chemical changes to form peat.
B- Plants around prehistoric swamps die.
C- Bacteria decompose the dead remains.
D- High heat and pressure cause peat to harden and dry.
E- Layers of sediments form over the dead organisms.

- **Exercise 5:**

Sequence the steps of electricity production in a Nuclear Powerplant. *(6points)*

(DON'T re-write the steps, just use the letters.)

A- Nuclear fission occurs and heat is released.
B- Water is heated to become steam.
C- Uranium is used to form fuel rods for the reactor.
D- The turbine drives the generator to give electric energy.
E- The steam is condensed into liquid water to be re-used to keep the process going.
F- The steam causes the turbine to spin.

- **Exercise 6:**

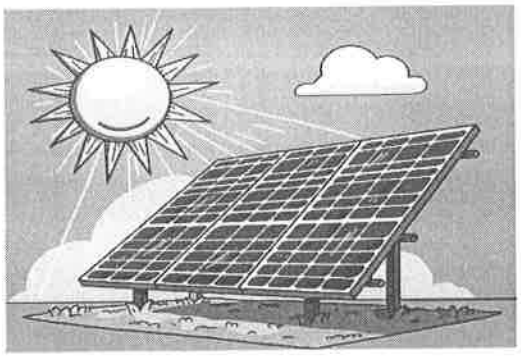
Give the energy transformations in each of the following examples. *(8points)*

1-



__(A)__ → __(B)__ + __(C)__ + __(D)__

2-



__(E)__ → __(F)__

3-



__(G)__ → __(H)__

- **Exercise 7:**
Answer the following questions by providing clear explanations. *(5points)*

1- Two balls are moving at the same speed. Ball A has twice the mass of Ball B. Which ball has *greater* kinetic energy? **Explain**.

2- Two books have the same mass. Book A is placed on a shelf higher than that of Book B.
a- Which book has *greater* gravitational potential energy? **Explain**.
b- What happens to the gravitational potential energy if the books fall down?

- **Exercise 8:**
Answer the following questions. *(7points)*

1- State the *law of conservation of energy*.

2- Indicate the two forms of energy carried by waves.

3- Compare *Geothermal* powerplants to *Nuclear* powerplants.

4- Compare and Contrast between *Hydroelectric* and *Tidal* power.

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• Exercise 1:

1_ B
2_ C
3_ B
4_ B
5_ B
6_ C
7_ A
8_ C
9_ C
10_ D
11_ B
12_ D
13_ C
14_ A
15_ A

(15 points ; 1 point each)

• Exercise 2:

1_ False (0.5), electric (0.5)
2_ False (0.5), Renewable (0.5)
3_ False (0.5), Nuclear (0.5)
4_ True (1)
5_ False (0.5), Fossil fuel (0.5)
6_ True (1)
7_ True (1)
8_ False (0.5), disadvantage (0.5)
9_ True (1)
10_ False (0.5), biomass. (0.5)

(10 points ; 1 point each)

• Exercise 3:

1_ renewable
2_ Solar energy (or any type of the 5 renewable resources)
3_ wind energy (" " " " " " " ")
4_ water energy (" " " " " " " ")
5_ Geothermal energy (" " " " " " " ")
6_ non renewable
7_ Fossil fuels
8_ nuclear energy
9_ burned
10_ transported
11_ pollution
12_ limited
13_ reclamation
14_ weather

(14 points ; 1 point each)

• Exercise 4:

B, E, C, A, D
(5 points ; 1 point each)

• Exercise 5:

C, A, B, F, D, E
(6 points ; 1 point each)

• Exercise 6:

1- A: Electric energy
B: Light / Sound / Thermal
C: Light / Sound / Thermal
D: Light / Sound / Thermal.
(4 points ; 1 point each)

2- E: Solar
F: Electric
(2 points ; 1 point each)

3- G: Kinetic
H: Thermal
(2 points ; 1 point each)

• Exercise 7:

1- Ball A has greater kinetic energy. (1 point)
Since it is heavier (has greater mass) (0.5 point), and kinetic energy (0.5 point) increases as the mass increases.

2- a- Book A has greater gravitational potential energy. (1 point)
Since it is placed on a higher shelf (is at a greater height) (0.5 point), and gravitational potential energy (0.5 point) increases as the height increases.

b- It transforms into kinetic energy. (1 point)

• Exercise 8:

1- Energy can't be created (0.5) or destroyed (0.5).
It can only be transferred (0.5) or transformed (0.5).

(2 points)

2- Sound and light (2 points)

3- Both powerplants rely on steam to move the turbines.
(1 point)

4- Both are ways to generate electricity through water.
Hydro electric power is generated by building a dam across a river, whereas tidal power is generated by placing turbines under the sea water that will be moved by tides (waves).

(2 points:
1 point for the similarity
& 1 point for the difference)