

**1 (A) Choose the correct answer :**

1. The roots of kapok tree don't grow deeply in the soil, because .....
  - a. the soil contains less water.
  - b. the soil contains more water.
  - c. the climate is very cold.
  - d. the climate is very hot.
2. The system responsible for moving your hand away from danger, such as touching a hot cup of tea, is the ..... system.
  - a. digestive
  - b. respiratory
  - c. nervous
  - d. stomach
3. Songs of humpback whales in winter are characterized by each of the following, except .....
  - a. it is for mating season.
  - b. moving better through cold water.
  - c. having soft sounds.
  - d. having low-pitched sounds.
4. When you move something toward you, this represents .....
  - a. pushing force.
  - b. light energy.
  - c. pulling force.
  - d. sound energy.

**(B) Give a reason for the following :**

Seatbelts in cars are very important.

.....

**2 (A) Put (✓) or (X) :**

1. Digestion process begins in stomach with the help of saliva. ( )
2. Some animals have extra abilities that humans do not have, and these extra abilities are called super sensory adaptations. ( )
3. Cats have excellent night vision, while humans are not. ( )
4. The bus that covers 60 kilometers in 1 hour has a speed = 60 m/sec, ( )

**(B) What happens to ...?**

The kinetic energy of a moving car if its speed increases.

.....

**3 (A) Write the scientific term of each of the following :**

1. The part of the kapok tree which is supported by the buttress roots. (.....)
2. It delivers messages between the spinal cord and different body organs. (.....)

3. It is the force that is exerted when objects rub against each other. (.....)
4. One of the measuring units of time. (.....)

(B) Find the speed of a runner, if you know that he covers 300 meters in 30 seconds.

.....

.....

### Model Exam 2

1 (A) Complete the following sentences :

1. Engineers use ..... to slow down the motion of the Shockwave truck.
2. The speed affects the ..... energy of a moving object.
3. In the electric bell, ..... energy changes into ..... energy.
4. Most animals can hunt when ..... energy bounces off a prey into their eyes, while bats can hunt when ..... energy bounces off a prey into their ears.

(B) Give a reason for the following :

When your friend catches a ball that is thrown in the air, the movement of the ball is stopped.

.....

.....

2 (A) Correct the underlined words :

1. Exhausts from factories and floods produce smog, that causes air pollution. (.....)
2. The energy that is produced due to the friction between the string and other parts of Newton's cradle, is the sound energy. (.....)
3. Hearing is one of the weak senses of jerboa. (.....)
4. The friction between the car's windows and the road decreases the speed of the car. (.....)

(B) Classify the following materials into opaque objects and transparent objects :

"Wood – Air – Water – Metal – Lenses"

Opaque objects	Transparent objects
.....	.....
.....	.....
.....	.....
.....	.....

**3 (A) Write the scientific term of each of the following :**

1. A group of ants which is responsible for sending smelly messages when there is a shortage of food. (.....)
2. It is the force that pulls objects toward the center of the Earth. (.....)
3. A structure that prevents the loss of water in the pine tree. (.....)
4. The organ used to differentiate between different scents. (.....)

**(B) A truck travels a distance of 160 kilometers in 2 hours. Find its speed.**

.....  
 .....

**Model Exam 3****1 (A) Choose the correct answer :**

1. Which of the following sentences describes the friction force ? .....
  - a. It pulls objects toward the ground.
  - b. It pushes objects away from the ground.
  - c. It slows down or stops the moving objects.
  - d. It doesn't affect the moving objects.
2. In penguin's body, the insulating layer of fat and dense feathers protect its body from .....
  - a. cold air.      b. cold water.      c. warm water.      d. warm air.
3. The energy that is stored in an object due to its position, is known as .....
  - a. kinetic energy.      b. potential energy.
  - c. electrical energy.      d. chemical energy.
4. When you see a car coming toward you, the sensory receptors ..... to get away from it.
  - a. in the ears send a signal to the brain first
  - b. in the eyes send a signal to the brain first
  - c. in the eyes send a signal to sensory receptors in the ears
  - d. in the ears send a signal to sensory receptors in the eyes

**(B) Give a reason for the following :**

Mirror can reflect the light better than a painted surface.

.....

**2 (A) Put (✓) or (X) :**

1. The kinetic energy of a toy car pushed on a flat surface is equal to the kinetic energy of another toy car pushed with the same force down a ramp. ( )
2. The main difference between pulling and pushing forces is the direction of the force. ( )
3. Sharp spines are examples of adaptation of some plants to prevent animals from eating them. ( )
4. As the height of an object from the Earth's surface increases, its potential energy increases. ( )

**(B) Find the speed of a car that moves a distance of 240 Kilometers in 3 hours.**

.....  
 .....

**3 (A) Write the scientific term of each of the following :**

1. They include the eyes, nose, ears, tongue and skin, and they receive information from the surroundings and send it to the brain. (.....)
2. They are present in car airbags, and allow them to deflate fast after collision. (.....)
3. A type of surface that reflects light in different directions when the light falls on it. (.....)
4. A large muscle that contracts during breathing in and relaxes during breathing out. (.....)

**(B) Classify the following living organisms according to their habitats into organisms live in deserts and organisms live in forests in the table below :**

(Starred agama lizard – Panther chameleon – Fennec fox – Kapok tree – Palm tree – Barbary fig plant).

Organisms live in deserts	Organisms live in forests
.....	.....
.....	.....
.....	.....

**Model Exam 4****1 (A) Write the scientific term of each of the following :**

1. A property that helps animals blend in with their surrounding environment. (.....)

2. A system that works inside the human body to keep the human away from danger. (.....)
3. The energy that is used to operate television. (.....)
4. The force that makes an object move a distance. (.....)

**(B) Give an example for the following :**

A light source that presents in the sky. (.....)

**2 (A) Choose the correct answer :**

1. The potential energy of an object depends on .....
- its mass only.
  - its height from the Earth's surface only.
  - its mass and its height from the Earth's surface.
  - its temperature.
2. .... is considered as a behavioral adaptation in the panther chameleon.
- Puffing up its body during danger
  - Each eye can move independently
  - V-shaped feet
  - Long sticky tongue
3. From the structural adaptation of water lily plant is that .....
- it has long roots.
  - it has sharp spines.
  - it has tiny leaves.
  - it has wide leaves.
4. All of the following are examples of motion, except .....
- a running person.
  - a ball travelling through the air.
  - a flying bird.
  - a sleeping dog.

**(B) What happens if ...?**

Humans stop throwing waste materials into waterways and soil in an ecosystem.

.....

**3 (A) Correct the underlined words :**

1. The balanced forces cause the object to move. (.....)
2. When you turn on a radio, the electrical energy changes into light energy. (.....)
3. Potential energy depends on the speed of an object. (.....)
4. The system that works with the eyes of living organisms for seeing objects is the digestive system. (.....)

**(B) A deer runs a distance of 200 meters in 5 seconds. Calculate its speed.**

.....

## Model Exam 5

### 1 (A) Choose the correct answer :

1. When a car suddenly stops, the passengers move .....  
 a. backward.      b. forward.      c. upward.      d. downward.
2. Reading and writing are common types of communication in ..... world.  
 a. humans      b. animals      c. birds      d. plants
3. Bears that live in forests have fur ..... that of polar bears.  
 a. whiter than      b. darker than  
 c. similar to      d. brighter than
4. When the roller coaster stops, its energy of motion .....  
 a. doesn't change.      b. increases.  
 c. decreases.      d. becomes zero.

### (B) What happens if ...?

The length of acacia taproot doesn't exceed 3 meters downward.

.....  
 .....

### 2 (A) Put (✓) or (X) :

1. At night, cat's eyes look like small lighted lamps. ( )
2. The sandy-colored fur of caracal helps it blend in with snow in polar environment. ( )
3. After car collision, the airbags deflate as fast as they inflate. ( )
4. The stopped object can't move until a force acts on it. ( )

### (B) Look at the following pictures, then choose if the forces are "balanced" or "unbalanced" :



1. A book on a table  
(Balanced – Unbalanced)



2. A seesaw  
(Balanced – Unbalanced)

**3 (A) Write the scientific term of each of the following :**

1. A type of foxes that has sandy-colored fur to adapt its desert environment. ( )
2. It is the force that pulls objects toward the center of the Earth. ( )
3. Safety equipment used to provide soft cushion, when it is inflated automatically with a gas during collision of cars. ( )
4. A plant lives in salt water habitat and has long, strong roots to resist the water waves. ( )

**(B) Give a reason for the following :**

Branches of acacia tree are gathered on the top of its trunk.

.....

.....

**Model Exam 6****1 (A) Choose the correct answer :**

1. All the following properties are considered as structural adaptations in the panther chameleon, except .....
  - a. each eye can move independently.
  - b. opening its mouth wide at danger.
  - c. V-shaped feet.
  - d. long sticky tongue.
2. When an object is in motion, this means that its ..... changes.
  - a. color
  - b. shape
  - c. size
  - d. position
3. Pine tree has a triangular shape to make snow slides over its branches without breaking it. This structural adaptation makes this tree face the extreme cold climate like the feet of .....
  - a. caracal.
  - b. penguin.
  - c. fennec fox.
  - d. brown bear.
4. If there is nothing to stop the movement of an object, this object will .....
  - a. stay in motion.
  - b. suddenly stop.
  - c. stop after few minutes.
  - d. stop after few seconds.

**(B) Give a reason for the following :**

Some animals have the ability to make camouflage adaptation.

.....

**2 (A) Put (✓) or (X) :**

1. Unbalanced forces keep an object in its place without moving. ( )
2. The moving objects only have energy, while the objects that don't move have no energy. ( )
3. In penguin's feet, the cold blood vessels can warm up the warm blood vessels. ( )
4. The moon is not considered as a light source. ( )

(B) Classify the following animals in the table below :

(Fishing cat – Dolphin – Owl – Bat)

Animals have super sight sense	Animals have super hearing sense
.....	.....
.....	.....

3 (A) Write the scientific term of each of the following :

1. An organ in the human digestive system that has tiny blood vessels to absorb the nutrients through its walls. (.....)
2. A feature in the bull shark, in which the upper surface of its body is darker than its lower surface. (.....)
3. The ability to do work or cause a change. (.....)
4. The organ used to differentiate between the taste of different types of food. (.....)

(B) Amir rides his bike and covers a distance of 150 meters in 5 seconds.  
Calculate the speed of the bike.

.....  
.....

### Model Exam 7

1 (A) Choose the correct answer :

1. Camouflage means that the animal .....
  - a. can be seen easily among its surrounding.
  - b. is hard to be seen among its surrounding.
  - c. is easily to be seen by its preys.
  - d. can be seen easily by its predators.
2. The five senses of humans and animals include .....
  - a. sight, hearing, touch, smell, and movement.
  - b. sight, movement, taste, touch, and smell.
  - c. taste, touch, movement, hearing, and smell.
  - d. sight, hearing, taste, smell, and touch.
3. When an object moves down a ramp, its stored energy .....
  - a. increases.
  - b. doesn't change.
  - c. changes to a less active form of energy.
  - d. changes to a more active form of energy.



4. The structural adaptation that helps the fishing cat to catch a prey at night, is that .....
- it can feel the heat of prey's body.
  - it can hide inside the forest.
  - it can digest its prey easily.
  - it has a mirror-like membrane at the back of its eyes.

**(B) What happens if ...?**

Friction occurs between the string and the other parts of Newton's cradle during collision. *(according to the change of energy)*

.....

**2 (A) Put (✓) or (X) :**

- Being exposed to air rich in dust for a long time harms the human respiratory system. ( )
- If two objects travel for equal periods of time, the object that travels a greater distance has a slower speed. ( )
- When an object moves faster, it gains larger amount of kinetic energy. ( )
- Camouflage helps animals adapt the extreme weather conditions in their ecosystems. ( )

**(B) Find the speed of a horse, if you know that it covers 250 meters in 5 seconds.**

.....

**3 (A) Write the scientific term of each of the following :**

- A process through which the body gets oxygen from the air and expels out carbon dioxide. (\_\_\_\_\_)
- An animal that has different bright colors to provide camouflage in its environment and has V-shaped feet. (\_\_\_\_\_)
- The energy of an object due to its motion. (\_\_\_\_\_)
- The energy that is stored in food and batteries. (\_\_\_\_\_)

**(B) Give a reason for the following :**

It is very dangerous to live in an ecosystem that has a high level of air pollution.

.....

.....

**Model Exam 8**

**1 (A) Put (✓) or (X) :**

- A moving object is not affected by friction force. ( )

2. Some animals prefer hunting during the night than hunting during the day. ( )
3. The object that travels down a ramp is affected by the force of gravity. ( )
4. Eyes are one of the five senses, on which humans and animals depend on to see the surroundings. ( )

**(B) Give a reason for the following :**

The measuring unit of speed is km/hr or m/sec.

.....

**2 (A) Choose the correct answer :**

1. If the angle of inclination of a ramp increases, the kinetic energy of an object moving down it will .....
  - a. decrease.      b. increase.      c. remain as it is.      d. be destroyed.
2. The mirror-like membrane present at the back of eyes of .....
  - a. humans only.      b. cats only.
  - c. both humans and cats.      d. neither humans nor cats.
3. Umbrella-shaped trees include .....
  - a. mangrove tree and acacia tree.      b. mangrove tree and kapok tree.
  - c. acacia tree and kapok tree.      d. barbary fig and water lilies.
4. Fennec foxes and arctic foxes live in burrows, this belongs to ..... adaptation.
  - a. only structural      b. only behavioral
  - c. both structural and behavioral      d. neither structural nor behavioral

**(B) A train travels from Cairo to Alexandria for a distance of 220 kilometers in 2 hours. Find its speed.**

.....

**3 (A) Correct the underlined words :**

1. As the mass of a car increases, the damage that occurs during its collision decreases. (.....)
2. Air enters the mouth of fish and then passes across its gills. (.....)
3. The sense of eyesight of owls is weaker than that in bats. (.....)
4. Groups of ants within a colony have similar roles. (.....)

**(B) What happens if ...?**

The amount of food in the ant's colony decreases.

.....

## Model Exam 9

### 1 (A) Complete the following sentences :

1. The sight sense can be performed through ..... and .....
2. When two cars move on the same road, car (A) moves at speed equals 10 m/sec., and car (B) moves at speed equals 20 m/sec, this means that car ..... moves longer distance than car ..... in the same time.
3. Humans, amphibians and reptiles have ..... to breath oxygen gas in air.
4. Among safety equipment used during collision of cars are ..... and .....

### (B) Give a reason for the following :

If you push two similar toy cars, one of them may travel for a longer distance than the other.

.....

### 2 (A) Put (✓) or (X) :

1. As human needs clean water to drink, fish needs clean air to breathe. ( )
2. Seatbelt is one of the safety equipment in cars. ( )
3. Animals communicate with each other by using different senses. ( )
4. The desert lizard blend in with large green trees, to hide from its enemies. ( )

### (B) Find the speed of a runner, if you know that he covers 400 meters in 20 seconds.

.....

.....

### 3 (A) Choose the correct answer :

1. All the following sentences about energy are correct, except .....
  - a. it can be stored in an object.
  - b. it can be transferred from an object to another one.
  - c. it can be transformed from one form into another one.
  - d. it can be destroyed and cannot be created.
2. The blind person's cane and ..... emit a high-pitched sound that bounces off objects forming an echo.
 

a. lizards	b. polar bears	c. bull sharks	d. bats
------------	----------------	----------------	---------
3. Speed is a measurment of how ..... something is moving.
 

a. long	b. tall	c. fast	d. heavy
---------	---------	---------	----------
4. A very big truck needs ..... to move.
 

a. very small engine	b. small engine
c. very big engine	d. no engine

(B) Write the senses that can be used in each of the following types of communication in the table below :

Types of communication	The used senses
1. Watching TV.	.....
2. Flashing lights of fireflies.	.....
3. Echolocation in dolphins.	.....
4. Using the cell phone.	.....

**Model Exam 10**

**1** (A) Choose the correct answer :

- Humans and cars are .....
  - not able to produce sound energy.
  - not able to produce kinetic energy.
  - similar in obtaining energy to move.
  - similar in adaptation to live and survive.
- Push or pull actions are considered as types of .....
  - force.
  - device.
  - energy.
  - adaptation.
- The nervous system can do all the following functions, except .....
  - gathering information.
  - processing information.
  - sending signals.
  - falling of rains.
- The speed of an object is measured in ..... or meters per second.
  - kilograms per hour
  - grams per second
  - kilometers per hour
  - kilograms per kilometers

(B) Give a reason for the following :

The spinal cord plays an important role in the nervous system to do its function.

.....

.....

**2** (A) Complete the following sentences :-

- When you push a table on the floor, the ..... transfers from your body to the table.
- Echolocation property is used by ..... and ..... animals to locate their preys.

3. Most of ..... energy in the Newton's cradle is transferred from the first ball to the rest of balls.
4. To increase the ..... energy of any moving object we must increase its speed.

**(B) A car moves forward a distance 100 kilometers in time equals 2 hours.  
Calculate the speed of the car.**

.....  
.....

**3 (A) Put (✓) or (X) :**

1. If two objects cover the same distance in the same time, so they have the same speed. ( )
2. In a complete dark room, you can use the senses of touching, tasting, smelling and hearing only. ( )
3. The moving objects only have energy, while the objects that don't move have no energy. ( )
4. We cannot create a new form of energy, and also we cannot destroy an existed form of energy. ( )

**(B) You have some pictures of different parts of the human body. Write down the organ number in front of the system to which it belongs in the following table :**



(1)



(2)



(3)



(4)

System name	Organ number
1. Digestive system :	.....
2. Respiratory system :	.....
3. Nervous system :	.....



# Final Examinations of some governorates

on the first term  
2023

1

## Cairo Governorate

New Cairo Educational Zone

### 1 (A) Complete the following :

1. Fireflies use the sense of ..... to communicate with each other.
2. .... and ..... are from sharp senses in owls.
3. In electric heater, ..... energy changes into ..... energy.
4. A ball at the top of a hill stores ..... energy.

### (B) Give a reason for the following :

Dolphin can hear all kinds of sound.

.....  
.....

### 2 (A) Write the scientific term :

1. One of the safety equipment in the car. (.....)
2. It is the visible form of energy. (.....)
3. It is a type of force that makes objects move away from you. (.....)
4. It is a tree that is found in snow and has a triangle shape. (.....)

### (B) Compare between :

Point of comparison	Polar bear	Forest bear
Fur color :	.....	.....

### 3 (A) Choose the correct answer :

1. Reading and writing are common types of communication in ..... world.  
a. humans                      b. animals                      c. birds
2. .... are animals that become active at night.  
a. Reptiles                      b. Amphibians                      c. Nocturnal animals
3. The friction force produces ..... energy.  
a. thermal                      b. chemical                      c. electrical
4. When a car stops suddenly, the passengers move .....  
a. forward.                      b. upward.                      c. downward.

### (B) What happens if ...?

Animals can't adapt in their environment.

.....

**2****Calro Governorate****East Nasr City Educational Zone****1 (A) Choose the correct answer :**

1. Reading and writing are common types of communication between .....  
a. animals.                      b. humans.                      c. plants.                      d. birds.
2. When an object is in motion, this means that its ..... changes.  
a. color                              b. shape                              c. position                              d. size
3. Which of the following can turn its head in all directions .  
a. lizards.                              b. owls.                              c. cats.                              d. cow.
4. When you move something toward you, this represents .....  
a. pulling force.                      b. light energy.                      c. pushing force.                      d. sound energy.

**(B) Write the scientific term :**

The objects which allow light to pass through them. (.....)

**2 (A) Put (✓) or (X) :**

1. Seatbelt is one of safety equipment in cars. ( )
2. The ears of arctic fox are longer than those of fennec fox. ( )
3. Exhaled air carries oxygen. ( )
4. Gravity pulls objects downward. ( )

**(B) What is the type of adaptation ... ?**

Panther chameleon puffs up its body with air for defense.

.....

**3 (A) Complete the following sentences using the words between brackets:**

1. Fish breathe oxygen gas dissolved in water by ..... (skin – gills)
2. The organ that is responsible for sight ..... (eye – ear)
3. If the speed of object decreases, this means that its kinetic energy .....  
(increases – decreases)
4. The form of energy that can be seen is ..... (light – sound)

**(B) What happen if firefly beetles want to communicate ?**

.....

.....

**1 (A) Choose the correct answer :**

- Animals that are active at night are called ..... animals.
  - diurnal
  - nocturnal
  - endangered
  - extinct
- The ability to rotate head in all directions is well-known in .....
  - owl.
  - jerboa.
  - snake.
  - dolphin.
- There is a ..... force between the car's tires and the road that decreases its speed gradually.
  - gravity
  - friction
  - push
  - pull
- ..... is the ability to do work or make a change.
  - Speed
  - Work
  - Energy
  - Displacement

**(B) Mention the type of adaptation of fennec fox during its panting.**

This type of adaptation is ..... adaptation.

**2 (A) Match :**

(A)	(B)
1. Kapok	a. is the covered distance in a unit of time.
2. Jerboa	b. grow in amazon rainforest.
3. Potential energy	c. it hops in zigzag path.
4. Speed	d. is the stored energy in the object due to its position.

1. .... 2. .... 3. .... 4. ....

**(B) Mention the importance of gills for fish.**

.....

**3 (A) Correct the underlined words :**

- The eye pupil in human open wider than that in the nocturnal animals. (.....)
- Stomach is the main control center in the human body. (.....)
- The kinetic energy increases by increasing the height of the moving object. (.....)
- Pushing force of gravity makes the ball falls down after throwing it in air. (.....)

**(B) Write a name of an animal that lives in water and communicate by songs.**

.....



4

Cairo Governorate

Al Salam Educational Zone

1 (A) Complete the following sentences using these words :

(acacia tree – energy – pushing – hearing)

1. Blind people can locate his friend by ..... sense.
2. It is the ability to do work and it can change from one form to another is called .....
3. From plants that have a long root that grows directly downward to search for water as deep as 35 meter below the soil surface .....
4. There are two forces that affect on a moving object which are ..... and pulling forces.

(B) Who am I ... ?

An insect that depends on smell sense when there is a shortage of food or if there is a danger nearby.

.....

2 (A) Put (✓) or (X) :

1. From the examples of kinetic energy, the bird which stays in its nest. ( )
2. We can determine the sound pitch by smelling sense. ( )
3. The moon is a source of light, as it reflects sunlight. ( )
4. The stopping object can't move until a force acts on it. ( )

(B) Write the scientific term of each of the following :

A reptile that its body is covered by colored scales and has v-shaped feet.

(.....)

3 (A) Choose from column (A) when suits it in column (B) :

(A)	(B)
1. Diaphragm	a. gravity force.
2. Kinetic energy	b. has a role in respiration.
3. The force that attracts bodies toward the Earth	c. airbag.
4. From safety equipment in cars	d. it can be transformed into potential energy.

1. .... 2. .... 3. .... 4. ....

(B) A train travels from Cairo to Alexandria in a distance of 200 kilometers in 2 hours. Find its speed.

.....

5

## Giza Governorate

Abou El Nomros Educational Zone

## 1 (A) Choose the correct answer :

- Animals that become active at night are called ..... animals.
  - nocturnal
  - diurnal
  - extinct
  - endangered
- When the force acting on a moving body increases, its speed will .....
  - increase.
  - decrease.
  - remain constant.
  - stop.
- Push or pull actions are considered as types of .....
  - force.
  - device.
  - energy.
  - adaptation.
- The energy that is stored in an object due to its position, is known as ..... energy.
  - kinetic
  - potential
  - sound
  - light

## (B) Classify the following into (structural and behavioral adaptation) :

- V-shaped feet of panther chameleon. (.....)
- Sending a smelly message from acacia tree to other trees. (.....)

## 2 (A) Put (✓) or (x) :

- Whales can communicate with each other by using songs. ( )
- Gravity is the force that pulls objects downward to the Earth. ( )
- Digestion process begins in stomach with the help of saliva. ( )
- Kilogram is the measuring unit of speed. ( )

## (B) Cross out the odd word :

Penguin – Fennec fox – Polar bear. (.....)

## 3 (A) Complete the following using the words between brackets :

(Glass – Energy – Car seatbelt – Brain)

- ..... is a safety equipment that is used to prevent car passengers from moving forward when the car stops suddenly.
- ..... is considered an example for transparent materials.
- ..... is an organ in the nervous system.
- ..... is the ability to do work.

## (B) Write the scientific term :

A body that appears lighted in the sky at night, but it is not considered as a source of light. (.....)



7

## Giza Governorate

Science Inspectorate

## 1 (A) Choose the correct answer :

- The potential energy of an object, depends on .....
  - its mass only.
  - its height from the Earth's surface only
  - its mass and its height from the Earth's surface.
  - its temperature.
- ..... is considered as a behavioral adaptation in the panther chameleon.
  - Puffing up its body during danger
  - Each eye can move independently
  - V-shaped feet.
  - Long sticky tongue.
- From the structural adaptation of water lily plant is that .....
  - it has long roots.
  - it has tiny leaves.
  - it has sharp spines.
  - it has wide leaves.
- All of the following are examples of motion, except .....
  - a running person.
  - a ball travelling through the air.
  - a flying bird.
  - a sleeping dog.

## (B) Write the scientific term :

The organ responsible for processing information transmitted to it, then send messages to the sensory organs. (.....)

## 2 (A) Correct the underlined words :

- The balanced forces cause the object to move. (.....)
- When you turn on a radio, the electrical energy changes into light energy. (.....)
- Moon is considered as a source of light. (.....)
- The system that breaks down food into a simpler form is the respiratory system. (.....)

## (B) Give a reason for the following :

Kapok tree has hand-shaped leaves

.....

## 3 (A) Put (✓) or (X) :

- Digestion process begins in stomach with the help of saliva. ( )
- Speaking, writing are ways to communicate with people. ( )
- Hitting a tennis ball needs a pulling force. ( )
- The bus that covers 60 kilometers in 1 hour has a speed = 60 m/sec. ( )

## (B) Cross the odd word out :

Eyes – Nose – Skin – Taste. (.....)

8

Alexandria Governorate

El-Montezah Educational Zone

**1 (A) Choose the correct answer :**

- ..... passes the food from pharynx to stomach.  
a. Esophagus      b. Stomach      c. Trachea      d. Alveoli
- Paper and wood are ..... materials.  
a. opaque      b. transparent      c. liquids      d. gaseous
- Penguin's feet have blood vessels that bring ..... from up to his feet.  
a. warm blood      b. cold blood      c. warm water      d. cold water
- ..... produce high pitched sound during winter  
a. Owls      b. Humpback whales  
c. Toads      d. Salamanders

**(B) Cross the odd word :**

Nose – Trachea – Stomach – Lungs. (.....)

**2 (A) Choose from column (B) what suits it in column (A) :**

(A)	(B)
1. Water lily	a. its habitat is salt water.
2. Kapok tree	b. its habitat is fresh water.
3. Pine tree	c. its habitat is Amazon rainforest.
4. Mangrove tree	d. its habitat is snow.

1. .... 2. .... 3. .... 4. ....

**(B) Write the scientific term :**

Ants send a smelly message to alert the ants where to find the food.

(.....)

**3 (A) Put (✓) or (X) :**

- In the electric fan, the electrical energy changes into kinetic energy. ( )
- The fennec fox has short ear. ( )
- Potential energy is the energy of moving body. ( )
- Light travels in straight lines. ( )

**(B) Give a reason for the following :**

The body of chameleon is covered with colored scales.

.....

1 (A) Complete the following sentences using the words below :

(Acacia tree – oxygen – mouth – sound)

1. In electric bell, electrical energy changes into ..... energy.
2. Digestion of food starts in the .....
3. Fish breathe ..... gas which dissolved in water.
4. .... has taproot to search for water.

(B) Give a reason for the following :

Wood is considered as an opaque material.

.....

2 (A) Put (✓) or (X) :

1. When a car crashes into a wall, it will not stop. ( )
2. We eat food to obtain energy. ( )
3. Amphibians include frogs and salamanders. ( )
4. Black bears have dark fur to hide among trees. ( )

(B) Cross the odd word out :

Taste – Smell – Hearing – Eyes. (.....)

3 (A) Choose the correct answer :

1. When an object moves down a ramp, its stored potential energy .....
  - a. increases.
  - b. doesn't change.
  - c. changes to a less active form of energy.
  - d. changes to a more active form of energy.
2. The form of energy that can be seen is .....energy.
  - a. thermal
  - b. electrical
  - c. sound
  - d. light
3. Which of the following can turn its head in all directions ? .....
  - a. Lizard.
  - b. Cat.
  - c. Owl.
  - d. Snake.
4. When an object is in motion, this means that its ..... changes.
  - a. position
  - b. shape
  - c. color
  - d. volume

(B) Write the scientific term :

The ability to do work. (.....)

10

Sharkia Governorate

Kafr Saqr Educational Zone

**1 (A) Choose the correct answer :**

- The body of arctic fox covered with .....  
a. skin.                      b. thick fur.                      c. feathers.                      d. scales.
- The ability to do work is .....  
a. energy.                      b. force.                      c. pull.                      d. push.
- Fish breathe oxygen dissolved in water by .....  
a. lungs.                      b. gills.                      c. skin.                      d. fins.
- By increasing the speed of moving object, the kinetic energy will .....  
a. increase.                      b. decrease.                      c. still constant.                      d. be slower.

**(B) What is the importance of sharp spines in the desert plants ?**

.....  
 .....

**2 (A) Put (✓) or (X) :**

- Both human and animal need light to see. ( )
- Respiratory system is the system responsible for entering air to the body. ( )
- Speed is the physical quantity measured by kilogram. ( )
- Objects fall down to the Earth due to friction force. ( )

**(B) In your opinion, which of the following has thick fur ? and why ?**

Dogs live in cold weather or dogs live in hot weather.

.....  
 .....

**3 (A) Complete the following sentences :**

- Eyes send message to ..... through nerves.
- The energy which is stored in a ball at the top of a hill is ..... potential energy.
- The force that causes falling objects toward the Earth is ..... force.
- When the fuel runs out, the car decreases it's speed due to ..... force.

**(B) Give a reason for the following :**

Bats can't see at night but it can hunt the prey.

.....

11

## Menofia Governorate

Sers El Layyan Official Language School

1 (A) Choose the correct answer :

1. Which of the following is a measuring unit of speed ? .....
  - a. hr/km.
  - b. sec/m.
  - c. kg/sec.
  - d. m/sec.
2. The ability to do work is .....
  - a. energy.
  - b. force.
  - c. push.
  - d. pull.
3. The chemical energy stored in batteries is considered a form of .....
  - a. potential energy.
  - b. kinetic energy.
  - c. heat energy.
  - d. light energy.
4. An animal that has the ability to turn its head in all directions is .....
  - a. snake.
  - b. jerboa.
  - c. dolphin.
  - d. owl.

(B) Calculate the speed of a train that covers 600 kilometers in a time of 6 hours.

.....

.....

2 (A) Put (✓) or (X) :

1. Wood is a transparent object that allows light to pass through it. ( )
2. The moon is a source of light. ( )
3. Some animals can see clearly at night. ( )
4. Exhaled air carries carbon dioxide. ( )

(B) Give a reason for the following :

Fennec fox has long ears.

.....

.....

3 (A) Complete the following sentences choosing the correct word in the brackets :

(Wood – gills – Eye – Mangrove)

1. .... is the organ that we can use to receive light.
2. .... is an opaque object.
3. Fish have ..... to breathe.
4. .... tree has long and strong roots to resist water waves.

(B) Give examples for :

Objects that are sources of light.

.....

.....



12

Suez Governorate

South Educational Zone

1 (A) Choose the correct answer :

- ..... has the ability to turn the head in all directions.  
a. Snake                      b. Jerboa                      c. Dolphin                      d. Owl
- All of the following are components of nervous system, except .....  
a. spinal cord.                      b. heart.                      c. nerves.                      d. brain.
- The form of energy that can be seen is ..... energy.  
a. thermal                      b. electrical                      c. light                      d. sound
- The force that is found between a moving car and the ground, which opposes its movement is known as .....  
a. pushing force.                      b. electrical energy.  
c. magnetic energy.                      d. friction force.

(B) Give a reason for the following :

The inhaled air is different from the exhaled air.

.....

2 (A) Put (✓) or (X) :

- We can see the movement of electricity through a wire. ( )
- Thick white fur is an adaptation in bears that live in polar regions. ( )
- As the height of an object from the Earth's surface increases, its potential energy decreases. ( )
- Hitting a tennis ball needs a pulling force. ( )

(B) What happens when the light falls on a smooth and shiny surface as mirror ?

.....

3 (A) Complete the following sentences using the words below :

(bats – increases – unbalanced – amphibians)

- When the speed of an object increases, its kinetic energy .....
- Echolocation is used by some animals as .....
- Any object moves from its place when the forces acting on it are .....
- Pollution of water causes a great problems for .....

(B) Give one example for :

1. A transparent material.

.....

2. An opaque material.

.....

13

## Minia Governorate

Samalout Educational Zone

1 (A) Put a sing (✓) or a sign (X) to the following statements :

1. The force that attracts objects down to the Earth is called pushing force. ( )
2. Unbalanced forces cause a change in the object position. ( )
3. Thermal energy is an example of kinetic energy. ( )
4. We can measure the covered distance in kilometer unit. ( )

(B) Circle the different word :

Fire – The moon – The Sun – The light bulb.

2 (A) Complete the following sentences with a suitable word :

1. When the mass of an object increases, so its kinetic energy .....
2. The long ears of the fennec fox are example of ..... adaptation.
3. The energy that is stored in an object is called ..... energy.
4. Humpback whales communicate with each other with their ..... senses.

(B) What happens when ...?

The diaphragm muscle contracts and moves down.

.....  
 .....

3 (A) Choose the correct Answer from the following :

1. One of the adaptations that helps the animal to protect itself from enemies .....  
 a. camouflage.                      b. extinction.                      c. reproduction.
2. All of the following is a component of the nervous system, except .....  
 a. brain.                                      b. spinal cord.                      c. heart.
3. Ability to do work is .....  
 a. energy.                                      b. pull.                                      c. push.
4. The speed of a car that travels 300 kilometer in 3 hours is ..... km/hr.  
 a. 150                                      b. 50                                      c. 100

(B) Give a reason for the following :

The polar bear has thick white fur.

.....  
 .....

14

Sohag Governorate

Sabry Abo Hussien Language School

## 1 (A) Choose the correct answer :

- When you move something toward you, this represents .....  
a. pushing force.      b. light energy.      c. pulling force.      d. sound energy.
- Collisions usually produce .....  
a. solar energy.      b. sound energy.  
c. gravitational potential energy.      d. chemical potential energy.
- In the electric lamp, electrical energy is changed into ..... energy.  
a. sound      b. chemical      c. light      d. potential
- The organ responsible for the sight sense is .....  
a. the ear.      b. the eye.  
c. the nose.      d. the tongue.

## (B) Look at the path of the light rays in picture (A) and (B), then determine which of the two objects is opaque and which is transparent :



Object (A) .....



Object (B) .....

## 2 (A) Put (✓) or (X) :

- Dolphins have strong sight sense. ( )
- Airbag absorbs the energy of the passengers during collision. ( )
- The ears of arctic fox are longer than those of fennec fox. ( )
- When a pen falls down from your hand, the acting force is the gravity. ( )

## (B) Answer the following :

Jarboa have long and strong hind legs that help them to Jump quickly and escape in dangerous times. Determine the type of adaptation.

.....

## 3 (A) Complete the following sentences :

- ..... is the ability to do work.
- Humpback whales communicate with each other through ..... sense.
- By increasing the speed of an object, its kinetic energy .....
- Fish respire ..... dissolves in water.

## (B) Cross out the odd word :

Penguin – Polar bear – Snake – Arctic Fox.

(.....)

15

Luxor Governorate

Abu Bakr Official Language School

1 (A) Choose the correct answer :

- How can we calculate the speed of an object ? .....
  - Speed = distance + time
  - Speed = distance × time
  - Speed = distance ÷ time
  - Speed = distance – time
- When you throw a ball in the air, the gravity will make it move .....
  - upward.
  - forward.
  - downward.
  - backward.
- The organ which stores solid wastes until it is released outside body is .....
  - stomach.
  - small intestine.
  - large intestine.
  - anus.
- The chemical energy stored in batteries is considered a form of .....
  - potential energy.
  - kinetic energy.
  - thermal energy.
  - light energy.

(B) A roller coaster moves from up to down (Explain the energy changes) :

.....

.....

2 (A) Match between column (A) and column (B) :

(A)	(B)
1. Motion	a. the ability to do work.
2. Work	b. the change in object position relative to a fixed point.
3. Energy	c. the force that causes object to move.
4. Gas oven	d. it converts chemical energy into thermal energy.

1. .... 2. .... 3. .... 4. ....

(B) What happens if ...?

Diaphragm moves up in respiration process.

.....

3 (A) Write the scientific term :

- Time taken by organism to respond to different information. (.....)
- A form of energy that the object has due to its movement. (.....)
- A heavy steel ball swings on a cable used in buildings destruction. (.....)
- It covers the body of some bears to keep warm and blend in snow. (.....)

(B) Give a reason for :

Airbag deflates after seconds of collision.

.....

## 1 Cairo - Official Language Schools

## Question (1)

## (A) Choose the correct answer:

- 1 When we turn on a television, \_\_\_\_\_ and \_\_\_\_\_ energies are produced.
  - a. sound - chemical
  - b. light - chemical
  - c. sound - light
  - d. solar - light
- 2 A very big truck needs \_\_\_\_\_ to move.
  - a. a very small engine
  - b. a small engine
  - c. a very big engine
  - d. no engine
- 3 A polar climate \_\_\_\_\_.
  - a. is the hottest place on Earth
  - b. is the coldest place on Earth
  - c. looks like the desert climate
  - d. looks like the forest climate
- 4 The speed of an object is measured in \_\_\_\_\_ or meters per second.
  - a. kilometers per hour
  - b. grams per second
  - c. hours per kilometer
  - d. kilometers per kilogram

## (B) Study the following table, then complete:

Cars	Car (A)	Car (B)	Car (C)
Speed	200 km/h	400 km/h	500 km/h

Car (\_\_\_\_\_) is the fastest one.

## (A) Put (✓) or (X):

## Question (2)

- 1 Bats use their sense of smell to avoid danger. ( )
- 2 Fennec foxes live in deserts, while caracals live in forests. ( )
- 3 The sharp spines protect barbary figs from hungry animals. ( )
- 4 The moon is considered a light source. ( )
- 5 Energy is the ability to do work. ( )

## (B) Cross out the odd word:

- 1 The Sun - The moon - Fire - Candle (\_\_\_\_\_)
- 2 Bats - Fireflies - A blind person's cane - Dolphins (\_\_\_\_\_)
- 3 Guitar - Flashlight - Radio - Alarm (\_\_\_\_\_)

### Question (3)

(A) Choose from column (A) what suits it in column (B):

#### Column (A)

- 1 Oxygen
- 2 An owl
- 3 Motion

#### Column (B)

- a. is an animal with a bowl-like face.
- b. is the change in the object's position.
- c. is a gas necessary for respiration.

- 1 \_\_\_\_\_                      2 \_\_\_\_\_                      3 \_\_\_\_\_

(B) Classify the following animals in the table below:

(Fishing cat - Dolphin - Bat)

Animals that have a super sight sense	Animals that have a super hearing sense
_____	_____
_____	_____

## 2 Cairo - Al-Azhar Al-Sharif

### Question (1)

- Choose the correct answer:

- 1 All the following are from the components of the nervous system, except the \_\_\_\_\_.  
 a. spinal cord      b. heart      c. nerves      d. brain
- 2 By increasing the mass of an object, its kinetic energy \_\_\_\_\_.  
 a. increases      b. decreases      c. doesn't change      d. is destroyed
- 3 \_\_\_\_\_ is considered a behavioral adaptation in panther chameleons.  
 a. The v-shaped feet      b. puffing its body in danger  
 c. Each eye moving independently      d. The colored scales of its skin
- 4 Chemical energy is stored in the \_\_\_\_\_.  
 a. food only      b. battery only  
 c. food and TV      d. food and battery

**Question (2)**

- Put (✓) or (X):

- 1 A water lily survives in salt water. ( )
- 2 Energy doesn't change from one form to another. ( )
- 3 The airbag is one of the safety equipment in cars. ( )
- 4 Gravity force slows down the speed of an object. ( )
- 5 the inhaled air contains oxygen gas. ( )

**Question (3)**

- Choose from column (A) what suits it in column (B):

**Column (A)**

- 1 Fennec foxes
- 2 Bats
- 3 Bull sharks
- 4 Fireflies

**Column (B)**

- a. produce light to warn off predators.
- b. pant like dogs.
- c. survive in fresh water and salt water.
- d. depend of the echo to locate the prey.

- 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_

**3 Giza - Al-Azhar Al-Sharif**

**Question (1)**

(A) Choose the correct answer:

- 1 The characteristic of the panther chameleon's eyes is considered \_\_\_\_\_ adaptation(s).  
(a structural - a behavioral - both structural and behavioral - neither structural nor behavioral)
- 2 The nervous system of \_\_\_\_\_ consists of brain, spinal cord and nerves, such as elephants and dogs.  
(rodents - birds - mammals - reptiles)
- 3 Which of the following organs work together to see different objects?  
(Nose and brain - Eyes and brain - Ears and brain - Tongue and brain)
- 4 What is the force used to kick a ball by foot?(Pull - Push - Sound - Light)

- 5 The force that exists between a moving car and the ground on which it moves and that is opposite to the motion of the car is known as the \_\_\_\_\_ . (push force - electrical energy - magnetic energy - friction force)

**(B) Write the scientific term:**

- 1 They're air sacs surrounded by blood vessels in the respiratory system.
- 2 It's the sense used to differentiate between smooth and rough surfaces.
- 3 It's a form of potential energy that causes objects to rush towards Earth's surface.

**Question (2)**

**(A) Put (✓) or (X):**

- 1 Agama lizards blend in with the green, huge trees to hide from their enemies. ( )
- 2 The hearing sense in dolphins is stronger than that in humans. ( )
- 3 Light reflection depends on the smoothness of the surfaces. ( )
- 4 Unbalanced forces cause a change in the position of an object. ( )
- 5 Speed = Time ÷ Distance ( )

**(B) Cross out the odd word:**

- 1 Saliva - Stomach - Esophagus - Small intestine
- 2 Spinal cord - Lungs - Nerves - Brain
- 3 Fishing cats - Owls - Dolphins
- 4 Bats - Fireflies - Dolphins
- 5 Sound energy - Light energy - Electrical energy - Thermal energy

**4**

**Al Qalyubia**

**Question (1)**

**(A) Choose the correct answer:**

- 1 When you move something towards you, this represents \_\_\_\_\_ .  
a. pushing force    b. light energy    c. pulling force    d. sound energy
- 2 When an object is in motion, this means that its \_\_\_\_\_ changes.  
a. color    b. size    c. position    d. shape



## Final Revision

- 3 The \_\_\_\_\_ help(s) the fish obtain dissolved oxygen in the water.  
a. gills                      b. lungs                      c. tail                      d. force

**(B) What happens if:** Your foot touches a nail on the ground?

### Question (2)

**(A) Put (✓) or (X):**

- 1 Any moving object has a form of energy known as light energy. ( )
- 2 Energy is the ability to do work. ( )
- 3 Nocturnal animals have eyes larger than humans. ( )
- 4 The wood is a transparent material used in making eyeglasses. ( )

**(B) Write the scientific term:**

- It's an object that allows light to pass through it.

### Question (3)

**(A) Complete the following sentences:**

- 1 The form of energy that can be seen is \_\_\_\_\_.
- 2 If the mass of an object decreases, this means that its kinetic energy \_\_\_\_\_.
- 3 A dolphin has a sharp sense of \_\_\_\_\_.
- 4 Fireflies communicate with each other by producing \_\_\_\_\_.

**(B) Cross out the odd word:**

Light energy - Sound energy - Thermal energy - Chemical energy

## 5 Alexandria - Montazah Zone 1

### Question (1)

**(A) Choose the correct answer:**

- 1 The \_\_\_\_\_ deliver(s) food from the pharynx to the stomach.  
a. esophagus      b. throat      c. trachea      d. alveoli
- 2 Carton and wood are \_\_\_\_\_ materials.  
a. opaque      b. transparent      c. liquid      d. gaseous
- 3 A penguin's feet have blood vessels that bring \_\_\_\_\_ up.  
a. warm blood      b. cold blood      c. warm water      d. cold water

- 4 \_\_\_\_\_ can sing underwater to communicate.
- a. Bull sharks
  - b. Humpback whales
  - c. Toads
  - d. Salamanders

(B) **Cross out the odd word:** Nose - Trachea - Stomach - Lungs

### Question (2)

(A) **Choose from column (A) what suits it in column (B):**

#### Column (A)

- 1 Water lily
- 2 Kapok tree
- 3 Pine tree
- 4 Mangrove tree

#### Column (B)

- a. Its habitat is salty water.
- b. Its habitat is fresh water
- c. Its habitat is Amazon rainforests.
- d. Its habitat is snow.

- 1 \_\_\_\_\_      2 \_\_\_\_\_      3 \_\_\_\_\_      4 \_\_\_\_\_

(B) **Write the scientific term:**

- They are ants that are responsible for finding food.

### Question (3)

(A) **Put (✓) or (X):**

- 1 In an electric fan, the electrical energy changes into kinetic energy. (    )
- 2 The fennec fox has short ears. (    )
- 3 Potential energy is the energy of a moving body. (    )
- 4 Light travels in straight lines. (    )

(B) **Give a reason for:** The body of a chameleon is covered with colored scales.

## 6 Alexandria - Montazah Zone 2

### Question (1)

(A) **Choose the correct answer:**

- 1 A/An \_\_\_\_\_ is an animal that has the ability to turn its head in all directions.
  - a. snake
  - b. owl
  - c. jerboa
  - d. dolphin
- 2 \_\_\_\_\_ energy affects the sensory receptors in the eyes causing vision.
  - a. Sound
  - b. Kinetic
  - c. Light
  - d. Magnetic



## 7

## Alexandria - East Zone

## Question (1)

(A) Choose the correct answer:

- 1 Digestion of food starts in the \_\_\_\_\_ .  
 a. esophagus      b. lungs      c. mouth      d. stomach
- 2 The extra large \_\_\_\_\_ of a fennec fox allow(s) heat to escape and cool(s) the fox.  
 a. fur      b. face      c. ears      d. eyes
- 3 A \_\_\_\_\_ protects the driver from moving forward in a collision.  
 a. glass window      b. dashboard      c. seatbelt      d. tire
- 4 When an object is moving faster, it has \_\_\_\_\_ energy.  
 a. the same      b. more      c. less      d. no

(B) Give a reason for: None of the light energy passes through the opaque objects.

## Question (2)

(A) Put (✓) or (X):

- 1 Exhausts from cars and factories don't affect people's health. ( )
- 2 The reflexes are fast messages you are barely aware of. ( )
- 3 A large vehicle causes more damage as it hits the small vehicle with the same speed. ( )
- 4 The force of gravity is the force that pulls the objects downward. ( )

(B) What happens if: The food in a colony is low?

## Question (3)

(A) Complete the following statements:

- 1 The white fur of the polar bear helps it \_\_\_\_\_ with the ice habitat.
- 2 The moving car is being slowed down by a force called \_\_\_\_\_ force.
- 3 The \_\_\_\_\_ energy is a stored energy or the energy of position.

(B) Cross out the odd word: Lungs - Alveoli - Gills - Diaphragm

## 8

## Darnhour Governorate

## Question (1)

## (A) Choose the correct answer:

- 1 A panther chameleon uses its \_\_\_\_\_ like a hand.  
a. eyes                      b. tail                      c. head                      d. ears
- 2 Motion is any change in the \_\_\_\_\_ relative to a fixed starting point.  
a. position                      b. weight                      c. mass                      d. volume
- 3 The speed of the train that covered 400 m in 2 seconds equals \_\_\_\_\_ m/sec.  
a. 400                      b. 100                      c. 200                      d. 2

(B) What happens if: The diaphragm contracts and moves downward?

## Question (2)

## (A) Put (✓) or (X):

- 1 A fennec fox feeds on fruits only. ( )
- 2 Potential energy is a form of stored energy. ( )
- 3 Thermal energy is a type of kinetic energy. ( )

## (B) Write the scientific term:

- The force that is exerted when objects rub against each other and it is a force that opposes motion.

## Question (3)

## (A) Complete the following sentences:

- 1 The nervous system of mammals consists of the brain, nerves and \_\_\_\_\_.
- 2 Fireflies produce \_\_\_\_\_ inside their bodies that allows them to communicate.
- 3 Batteries have potential energy in the form of stored \_\_\_\_\_.
- 4 Airbags inflate automatically when the \_\_\_\_\_ in cars detect a crash.

(B) Cross out odd word: Air - Water - Wood - Glass

## 9

## Menofia Governorate

## Question (1)

(A) Complete the following sentences:

- 1 Bats use the \_\_\_\_\_ property to find their food, but acacia trees warn the other nearby acacia trees from animals by sending \_\_\_\_\_ messages in the air.
- 2 Ants use their sense of \_\_\_\_\_ to communicate with each other.
- 3 Chemical energy is a form of \_\_\_\_\_ energy, but light energy is a form of \_\_\_\_\_ energy.
- 4 \_\_\_\_\_ and \_\_\_\_\_ are from the safety equipment of cars during collisions.

(B) What is the speed of a train that travels 400 kilometers in 2 hours?

## Question (2)

(A) Choose the correct answer:

- 1 Panting in fennec foxes belong to \_\_\_\_\_ adaptation(s).
 

a. structural	b. behavioral
c. both behavioral and structural	d. neither structural nor behavioral
- 2 The force that is used to kick a ball with your legs is a \_\_\_\_\_ force.
 

a. pull	b. push	c. sound	d. light
---------	---------	----------	----------
- 3 By increasing the speed of an object, its \_\_\_\_\_ energy increase(s).
 

a. potential	b. kinetic
c. potential and kinetic	d. chemical

(B) Give a reason for: You can see clearly through your lenses.

## Question (3)

(A) Put (✓) or (X):

- 1 The diaphragm contracts and moves upward during inhalation. ( )
- 2 Kapok trees have buttress roots. ( )
- 3 The battery stores chemical energy. ( )
- 4 A rocket is affected by balanced forces, so it can move away from Earth. ( )

(B) What happens if: The jerboas' legs are all short?

## 10 Kafr El-Sheikh Governorate

### Question (1)

**(A) Choose the correct answer:**

- 1 Both acacia trees and kapok trees have the same .....  
 a. habitat      b. shape      c. roots      d. trunk
- 2 ..... forces cause the movement of static objects.  
 a. Balanced      b. Unbalanced      c. Friction      d. Equal

**(B) What happens if:** A boy on a bike stops pedaling?

### Question (2)

**(A) Put (✓) or (X):**

- 1 The large intestine absorbs fat from waste. ( )
- 2 Penguins can stand on ice all day. ( )
- 3 A static object at the top of the ramp has no kinetic energy. ( )
- 4 Sound and light energies transfer in the air in the form of waves. ( )

**(B) Write the scientific term:**

- The time taken by an organism's body to respond to danger.

### Question (3)

**(A) Complete using the words between brackets:**

(light - sound - head - truck)

- 1 Gills are found on both sides of the fish's .....
- 2 The eye is the sensory organ that is affected by .....
- 3 A ..... has the biggest engine.
- 4 Collision between moving objects always produces ..... energy.

**(B) Cross out the odd word:** Brain - Lungs - Nerves - Spinal cord

# 11 Mansoura Governorate – Model (A)

## Question (1)

(A) Choose the correct answer:

- 1 Raising your thumb up or lowering it down is a kind of \_\_\_\_\_.  
(colors - codes - waves - lights)
- 2 You have the greatest potential energy when you are standing at a height of \_\_\_\_\_.  
(70cm - 90cm - 110cm - 150cm)
- 3 \_\_\_\_\_ is one of the behavioral adaptations that helps an animal protect itself from enemies. (Camouflage - Extinction - Immigration - Reproduction)
- 4 All the following are from the components of the nervous system, except the \_\_\_\_\_.  
(spinal cord - heart - brain - nerves)

(B) What is the kind of energy inside an object ready to do work?

## Question (2)

(A) Put (✓) or (X):

- 1 Adaptation does not help living organisms survive. ( )
- 2 Unbalanced forces cause the motion of objects. ( )
- 3 Nocturnal animals have bigger eyes than human's eyes. ( )
- 4 If you took a bus and stopped suddenly on the road, your body will move backward. ( )

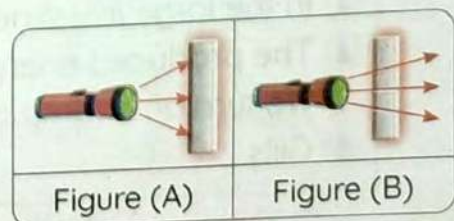
(B) Give a reason for: Fishing cats can hunt their prey in darkness.

## Question (3)

(A) Complete the following sentences:

- 1 On running and doing effort, the rate of your breath \_\_\_\_\_.
- 2 \_\_\_\_\_ is one of the safety means in a car.
- 3 \_\_\_\_\_ is the ability to do work.
- 4 Fireflies communicate by \_\_\_\_\_.

(B) Look at the light rays in figures A and B, which of them is an opaque object and which is a transparent one?





## 12 Mansoura Governorate - Model (B)

### Question (1)

- Complete the following sentences with words between brackets:

- 1 The \_\_\_\_\_ processes and interprets information. (spinal cord - brain)
- 2 Which of the following surfaces reflects light better? (Wood - Metals)
- 3 \_\_\_\_\_ force helps objects to fall towards the ground. (Friction - Gravity)
- 4 When the push force applied on an object on a flat road increases, \_\_\_\_\_ (potential energy of the object increases - kinetic energy of the object increases)
- 5 Bats can hunt insects at night depending on \_\_\_\_\_ . (their strong sense of vision - the echo)

### Question (2)

- Put (✓) or (X):

- 1 The diaphragm helps in the processes of inhalation and exhalation. ( )
- 2 Friction force acts in the same direction of motion of the object. ( )
- 3 When a collision happens between two objects, they exchange their energies. ( )
- 4 Communication and information transfer occur only in humans. ( )
- 5 Desert plants are characterized by their big leaves. ( )

### Question (3)

- Choose from column (A) what suits it in column (B):

#### Column (A)

- 1 The pencil falling towards the ground represents
- 2 Whales communicate by
- 3 In the large intestine,
- 4 The produced energies when we turn on a lamp are
- 5 Gills

#### Column (B)

- a. light and thermal energies.
- b. help fish to extract the dissolved oxygen in water.
- c. a pull force.
- d. singing.
- e. liquids are absorbed from the undigested food.

- 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_

13

Fayoum Governorate

Question (1)

(A) Choose the correct answer:

- 1 Raising your thumb up or lowering it down is a kind of \_\_\_\_\_  
 a. colors                      b. codes                      c. waves                      d. lights
- 2 A bat is a \_\_\_\_\_ animal.  
 a. nocturnal                      b. morning                      c. harmful                      d. non-flying
- 3 When a moving car stops suddenly, the passenger's body moves to the \_\_\_\_\_ direction.  
 a. right                      b. left                      c. forward                      d. backward
- 4 The speed of a car that travels 100 meters in 5 seconds is \_\_\_\_\_ m/s.  
 a. 20                      b. 40                      c. 100                      d. 200

(B) Complete:

- Fishing cats have the ability to see in the dark because of the presence of \_\_\_\_\_.

Question (2)

(A) Put (✓) or (X):

- 1 The ear is the sensory organ responsible for seeing objects. ( )
- 2 The respiratory system is responsible for the entry of air into the body. ( )
- 3 Because of the seatbelt, the driver cannot see the road clearly. ( )
- 4 The chemical potential energy in the car fuel is converted into kinetic energy. ( )

(B) Write the scientific term: It's the body's main control center.

Question (3)

(A) Choose from column (A) what suits it in column (B):

Column (A)

- 1 Kinetic energy
- 2 Gravity
- 3 An owl
- 4 Gills

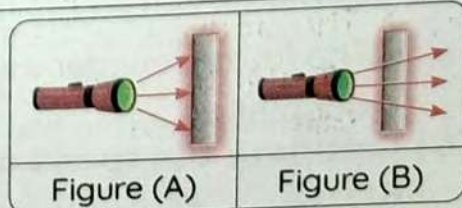
Column (B)

- a. is an animal with a bowl-like face.
- b. are structural adaptations whose function is similar to that of the lungs.
- c. is the gained energy during the motion of an object.
- d. is the force that pulls things down.

(B) Look at the path of the light rays in figures (A) and (B).

Determine which of the two objects is opaque and which is transparent.

(A): \_\_\_\_\_ (B): \_\_\_\_\_



14

Dakahlia Governorate

Question (1)

(A) Choose the correct answer:

- 1 Bats are \_\_\_\_\_ animals.  
a. nocturnal      b. morning      c. non-hearing      d. non-flying
- 2 \_\_\_\_\_ is the ability to do work.  
a. Energy      b. Force      c. Push      d. Pull
- 3 All the following are components of the nervous system, except \_\_\_\_\_.  
a. the spinal cord      b. the heart      c. the nerves      d. the brain
- 4 The chemical energy stored in batteries is considered a form of \_\_\_\_\_.  
a. potential energy      b. kinetic energy      c. heat energy      d. light energy

(B) Give a reason for:

- Some types of lizards that live in rocky areas have colorful scales.

Question (2)

(A) Put (✓) or (X):

- 1 In order for the code to be translated, the brain must identify it. ( )
- 2 When a pen falls down from your hand, the acting force is the gravity force. ( )
- 3 The respiratory system is responsible for the entry of air into the body. ( )
- 4 In Newton's cradle, the kinetic energy of the moving balls increases as time passes. ( )

(B) What happens if: Bats cannot use the echolocation property?

Question (3)

(A) Choose from column (A) what suits it in column (B):

Column (A)

- 1 Kinetic energy
- 2 Thermal energy
- 3 Sound energy

Column (B)

- a. is a form of energy that affects our ears.
- b. is produced due to the friction between the moving balls of Newton's cradle.
- c. is the gained energy during the motion of an object.

(B) Complete the following sentences from the two brackets:

- 1 The eyes send messages to the \_\_\_\_\_ through the nerves.  
(brain - spinal cord)
- 2 The fat layer under the animal's skin to warm it is considered a \_\_\_\_\_ adaptation.  
(structural - behavioral)

(C) Calculate the speed of a train that covers 500 kilometers in 5 hours.

## 15 Beni Suif Governorate

### Question (1)

(A) Choose the correct answer:

- 1 Oxygen gets into the lungs during the ..... process.  
(inhalation - exhalation - digestion - excretion)
- 2 You could determine how high the sound is by the ..... of the sound.  
(type - pitch - style - echo)
- 3 The ..... system is responsible for the digestion of food.  
(respiratory - digestive - nervous - circulatory)
- 4 The stored energy inside an object is called ..... energy.  
(kinetic - thermal - potential - sound)

(B) Determine the type of adaptation (structural) or (behavioral):

The panther chameleon puffs its body with air to appear bigger in size.

### Question (2)

(A) Complete using (brain - Carton - sharp spines - Gravity):

- 1 Acacia trees have ..... around their leaves to protect them if an animal tries to eat them.
- 2 ..... is an opaque object.
- 3 ..... force makes objects fall towards the Earth.
- 4 The ..... is considered the control center of the body.

(B) What happens if: Balanced forces act on a static object?

### Question (3)

(A) Put (✓) or (X):

- 1 The kinetic energy of an object decreases when its speed decreases. ( )
- 2 Writing is a way of communication between animals. ( )
- 3 Energy is not destroyed, but it changes from one form to another. ( )

(B) Cross out the odd word: Speed - Energy - Distance - Time

# 16 Port Said Governorate

## Question (1)

### (A) Choose the correct answer:

- The presence of thick white fur is an adaptation in .....  
 a. starred agama lizards                      b. polar bears  
 c. fennec foxes                                      d. forest bears
- Fish use their ..... to breathe in water.  
 a. tail                      b. eyes                      c. lungs                      d. gills
- When the objects collide with each other, ..... is transferred between them.  
 a. time                      b. distance                      c. energy                      d. nothing
- What force do you use to kick a ball with your leg?  
 a. Pull                      b. Push                      c. Sound                      d. Light

### (B) Write the scientific term:

- It's a property by which a bat can locate its prey insects through the sound reflected from them.

## Question (2)

### (A) Put (✓) or (X):

- Animals that are active during the daytime are called nocturnal animals. ( )
- Eyes are considered sensory organs of light, not as sources of light. ( )
- Gravity pulls objects upward. ( )
- Unbalanced forces cause a change in the object's position. ( )

### (B) Write the name of:

- An animal that can turn its head in all directions.

## Question (3)

### (A) Complete the following sentences:

- The leaves of ..... trees look like your hand.
- The human body uses the ..... system to get nutrients from food.
- ..... is one of the safety equipment which are used in cars.
- When the speed of a car increases, its ..... energy increases.

### (B) What is the type of adaptation? Tan-colored fur of fennec foxes

17

## Ismailia Governorate

## Question (1)

(A) Complete the following statements:

- 1 An Arctic fox has ..... ears to help it stay warm.
- 2 The spinal cord belongs to the ..... system.
- 3 The force that pulls things down to the ground is .....
- 4 The form of energy that can be seen is ..... energy.

(B) Give a reason for: A jerboa has long, hind legs.

## Question (2)

(A) Write the scientific term:

- 1 They're the materials that allow light to pass through.
- 2 It's the process in which two objects crash into each other.
- 3 They're the characteristics that help living organisms survive and reproduce.
- 4 It's the force exerted when objects rub against each other.

(B) What happens if:

You place an opaque object between a light source and a wall?

## Question (3)

(A) Choose the correct answer:

- 1 All the following are organs of the respiratory system, except the .....  
 a. nose                      b. lung                      c. trachea                      d. large intestine
- 2 The chemical energy stored in batteries is considered a form of ..... energy.  
 a. potential                      b. kinetic                      c. heat                      d. sound
- 3 By increasing the ....., kinetic energy increases.  
 a. speed                      b. height                      c. sound                      d. light
- 4 Raising a thumb up or lowering it down is a kind of .....  
 a. sound                      b. codes                      c. waves                      d. heat

(B) Cross out the odd word: Owls - Fishing cats - Bull sharks - Bats

# 18 Red Sea Governorate

## Question (1)

### (A) Choose the correct answer:

- 1 Fish breathe oxygen gas dissolved in water through their .....  
(skin - gills - lungs - tail)
- 2 ..... is one of the opaque objects that doesn't allow light to pass through.  
(Glass - Air - Water - Carton paper)
- 3 All the following from the components of the nervous system, except the .....  
(spinal cord - heart - nerves - brain)
- 4 Objects fall down towards the Earth's center by the force of .....  
(gravity - pushing - friction - pull and push)

### (B) Why are some animals able to see in the dark?

Because .....

## Question (2)

### (A) Complete from the brackets below:

- 1 The organ that is responsible for sight is the ..... (ear - eye)
- 2 When the speed of an object increases, its ..... energy increases.  
(kinetic - potential)
- 3 The ..... is a tube that has muscles to move the food down into the stomach.  
(trachea - esophagus)
- 4 When an electric lamp is turned on, ..... energy is produced.  
(light - chemical)

### (B) What happens if: Light falls on a shiny, smooth surface like a mirror?

## Question (3)

### (A) Put (✓) or (X):

- 1 A fennec fox live in a polar region. ( )
- 2 The sense of hearing of dolphins is stronger than that of humans.( )
- 3 Energy is the ability to do work. ( )
- 4 Static objects move when they are affected by balanced forces.( )

### (B) Acacia trees have very long roots to search for water.

Mention the type of adaptation.

## 19 Sohag - Al-Azhar Al-Sharif

### Question (1)

#### A) Choose the correct answer:

- The \_\_\_\_\_ system is responsible for supplying the body with oxygen and getting rid of carbon dioxide gas.  
 a. nervous      b. respiratory      c. digestive      d. motor
- Light rays scatter when they reflect from \_\_\_\_\_.  
 a. the lenses of glasses      b. a metallic surface  
 c. a mirror      d. a wooden board
- When a car moves down a hill, \_\_\_\_\_.  
 a. potential energy changes to kinetic energy  
 b. kinetic energy changes to potential energy  
 c. no energy change happens      d. the car doesn't have energy at all.

#### B) Put (✓) or (X):

- Speed transfers when collision occurs between a ball and a bat. ( )
- A part of the kinetic energy is converted into sound energy during collision. ( )
- Soldier ants communicate by sending smelly messages when in danger. ( )

### Question (2)

#### A) Complete using the words: structural - colored scales - whale - reflection

- A panther chameleon has \_\_\_\_\_ to hide and hunt.
- A \_\_\_\_\_ communicates by singing.
- The thin layer existing in the eyes of nocturnal animals is an example of \_\_\_\_\_ adaptation.

#### B) Correct the underlined words:

- The spinal cord is the main control organ in the body.
- Matter is the force which pulls objects down towards the Earth.
- Opaque objects allow light to pass through them.

### Question (3)

#### Choose from column (A) what suits it in cloumn (B):

#### Column (A)

- The small intestine
- Animals that live in cold regions have
- When you kick a ball, you are doing

#### Column (B)

- dense fur.
- work.
- digests food completely.



## Question (1)

**(A) Complete these sentences with words between brackets**

- 1 If a plant is living in desert, its roots are .....  
(long and thick - weak and short)
- 2 The system which is responsible for reflexes is the ..... system.  
(digestive - nervous)
- 3 Objects fall on the ground because of .....  
(gravity - friction)
- 4 Any static object lying at a height from Earth's surface has ..... energy.  
(thermal - potential)

**(B) Mention the type of adaptation in bird immigration.**

## Question (2)

**(A) Put (✓) or (X):**

- 1 All animals have the ability to see at night. ( )
- 2 If the brain cannot recognize a code, it can translate this code. ( )
- 3 The object moves at a great speed if it is pushed by a great force. ( )
- 4 When the car stops suddenly, your body moves backward. ( )

**(B) Write the scientific term:**

It's the object that allows light to pass through it.

## Question (3)

**(A) Complete using the words below:**

(collision - unbalanced - hearing - exhalation)

- 1 During ..... process, the diaphragm relaxes.
- 2 The forces that act on a static object and cause its motion are ..... forces.
- 3 Dolphins have a super sense of .....

**(B) Cross out the odd word:**

Penguin - Polar bear - Agama lizard - Arctic fox

# Government Exams Model Answers

## 1 Cairo - Official Language Schools

### Question 1

(A) 1 c    2 c    3 b    4 d

(B) Car (C)

### Question 2

(A) 1 X    2 X    3 ✓    4 X  
5 ✓

(B) 1 The moon    2 Fireflies  
3 Flashlight

### Question 3

(A) 1 c    2 a    3 b

(B) Animals have a super sight sense:

Fishing cat

Animals have a super hearing sense:

Dolphin and bat

## 2 Cairo - Al-Azhar Al-Sharif

### Question 1

1 b    2 a    3 b    4 d

### Question 2

1 X    2 X    3 ✓    4 X  
5 ✓

### Question 3

1 b    2 d    3 c    4 a

## 3 Giza - Al-Azhar Al-Sharif

### Question 1

(A) 1 a structural    2 mammals  
3 Eyes and brain    4 Push  
5 friction force

(B) 1 Alveoli    2 Touch  
3 Gravitational potential energy

### Question 2

(A) 1 X    2 ✓    3 ✓    4 ✓  
5 X

## Model Answers

- (B) 1 Saliva                      2 Lungs  
3 Dolphins                      4 Fireflies  
5 Light energy

### 4 Al Qalyubia

#### Question 1

- (A) 1 c    2 c    3 a  
(B) A reflex action occurs, and you move your feet away.

#### Question 2

- (A) 1 X    2 ✓    3 ✓    4 X  
(B) Transparent object

#### Question 3

- (A) 1 light energy    2 decreases  
3 hearing    4 flashes of light  
(B) Chemical energy

### 5 Alexandria - Montazah Zone 1

#### Question 1

- (A) 1 a    2 a    3 b    4 b  
(B) Stomach

#### Question 2

- (A) 1 b    2 c    3 d    4 a  
(B) Scout ants

#### Question 3

- (A) 1 ✓    2 X    3 X    4 ✓  
(B) To blend in with the green leaves and colorful flowers of trees in the rainforest, to hide from its prey or predators.

### 6 Alexandria - Montazah Zone 2

#### Question 1

- (A) 1 b    2 c    3 a    4 d  
(B) Camouflage

#### Question 2

- (A) 1 X    2 ✓    3 X    4 X  
(B) Diaphragm

#### Question 3

- (A) 1 b    2 a    3 d    4 c  
(B) 3

### 7 Alexandria - East Zone

#### Question 1

- (A) 1 c    2 c    3 c    4 b  
(B) Because opaque objects may reflect most of the falling light and absorb the some of it.

#### Question 2

- (A) 1 X    2 ✓    3 ✓    4 ✓  
(B) Nurse ants send a smelly message to scout ants to find food.

#### Question 3

- (A) 1 blend in    2 friction  
3 potential  
(B) Gills

### 8 Damnhour Governorate

#### Question 1

- (A) 1 b    2 a    3 c  
(B) The chest size increases, and oxygen gas enters the body. (Inhalation occurs.)

#### Question 2

- (A) 1 X    2 ✓    3 ✓  
(B) Friction force

#### Question 3

- (A) 1 spinal cord  
2 chemical reactions  
3 chemical energy    4 sensors  
(B) Wood

### 9 Menofia Governorate

#### Question 1

- (A) 1 echolocation, smelly  
2 smell    3 potential, kinetic  
4 Airbags, seatbelts

(B) Speed = Distance ÷ Time =  $400 \div 2$   
= 200 km/hr.

**Question 2**

- (A) 1 b 2 b 3 b

(B) Because the lenses are transparent materials that allow light to pass through.

**Question 3**

- (A) 1 X 2 ✓ 3 ✓ 4 X

(B) It can't hop for long distances, so it can't escape from its enemies.

**10 Kafr El-Sheikh Governorate**

**Question 1**

- (A) 1 b 2 b

(B) The bike's speed decreases till it stops.

**Question 2**

- (A) 1 X 2 X 3 ✓ 4 ✓

(B) Reaction time

**Question 3**

- (A) 1 head 2 producing light  
3 truck 4 sound

(B) Lungs

**11 Mansoura Governorate - Model (A)**

**Question 1**

- (A) 1 codes 2 150 cm  
3 Camouflage 4 heart

(B) Potential energy

**Question 2**

- (A) 1 X 2 ✓ 3 ✓ 4 X

(B) Because their eyes have a mirror-like membrane that reflects any light falling on them.

**Question 3**

- (A) 1 increases  
2 Airbag, (seatbelt)  
3 Energy 4 light

(B) Figure (A) is an opaque object.  
Figure (B) is a transparent object.

**12 Mansoura Governorate - Model (B)**

**Question 1**

- 1 brain 2 Metals  
3 Gravity  
4 kinetic energy of the object increases  
5 the echo

**Question 2**

- 1 ✓ 2 X 3 ✓ 4 X  
5 X

**Question 3**

- 1 c 2 d 3 e 4 a  
5 b

**13 Fayoum Governorate**

**Question 1**

- (A) 1 b 2 a 3 c 4 a

(B) a mirror-like membrane

**Question 2**

- (A) 1 X 2 ✓ 3 X 4 ✓

(B) Brain

**Question 3**

- (A) 1 c 2 d 3 a 4 b

(B) Figure (A) is an opaque object.  
Figure (B) is a transparent object.

**14 Dakahlia Governorate**

**Question 1**

- (A) 1 a 2 a 3 b 4 a

(B) To hide among the colorful rocks.

**Question 2**

- (A) 1 ✓ 2 ✓ 3 ✓ 4 X

(B) They can't locate their preys at dark.

**Question 3**

- (A) 1 c 2 b 3 a

(B) 1 brain 2 structural

(C) Speed = Distance ÷ Time =  $500 \div 5$   
= 100 km/hr.

**15 Beni Suif Governorate**

**Question 1**

- (A) 1 inhalation                      2 pitch  
       3 digestive                        4 potential  
 (B) Behavioral

**Question 2**

- (A) 1 sharp spines                    2 Carton  
       3 Gravity                            4 brain  
 (B) It will not move.

**Question 3**

- (A) 1 ✓    2 X    3 ✓  
 (E) Energy

**16 Port Said Governorate**

**Question 1**

- (A) 1 b    2 d    3 c    4 b  
 (B) Echolocation

**Question 2**

- (A) 1 X    2 ✓    3 X    4 ✓  
 (B) An owl

**Question 3**

- (A) 1 kapok                            2 digestive  
       3 Airbag                            4 kinetic  
 (B) Structural adaptation

**17 Ismailia Governorate**

**Question 1**

- (A) 1 short                            2 nervous  
       3 gravity                            4 light  
 (B) To jump for long distances to escape from its enemies.

**Question 2**

- (A) 1 Transparent materials  
       2 Collision                        3 Adaptations  
       4 Friction force  
 (B) A shadow is formed.

**Question 3**

- (A) 1 d    2 a    3 a    4 b  
 (B) Bull sharks

**18 Red Sea Governorate**

**Question 1**

- (A) 1 gills                                2 Carton paper  
       3 heart                                4 gravity  
 (B) Because they have a mirror-like membrane at the back of their eyes that reflects the light falling on it.

**Question 2**

- (A) 1 eye                                2 kinetic  
       3 esophagus                        4 light  
 (B) It is reflected in the same direction.

**Question 3**

- (A) 1 X    2 ✓    3 ✓    4 X  
 (B) Structural adaptation

**19 Sohag - Al-Azhar Al-Sharif**

**Question 1**

- (A) 1 b    2 d    3 a  
 (B) 1 X    2 ✓    3 ✓

**Question 2**

- (A) 1 colored scales    2 whale  
       3 structural  
 (B) 1 brain                            2 Gravity  
       3 Transparent

**Question 3**

- 1 c    2 a    3 b

**20 Assuit**

**Question 1**

- (A) 1 long and thick    2 nervous  
       3 gravity                            4 potential  
 (B) Behavioral adaptation

**Question 2**

- (A) 1 X    2 X    3 ✓    4 X  
 (B) Transparent object

**Question 3**

- (A) 1 exhalation                    2 unbalanced  
       3 hearing  
 (B) Agama lizard

## Model (1)

### 1 Choose the correct answer:

- 1 The leaves of most desert plants are .....
  - a. are large and broad
  - b. are small and have thorns
  - c. broad and have thorns
  - d. lose water easily
- 2 Which of the following examples of movement cannot be observed?
  - a. A train moving on rails.
  - b. The movement of the moon around Earth.
  - c. A ball moving in the air.
  - d. A pen falling down.
- 3 What happens to organisms that do not have methods that help them adapt to environmental conditions?
  - a. Their number increases.
  - b. They extinct.
  - c. They remain the same.
  - d. The biodiversity of the ecosystem increases.
- 4 The organ which is responsible for the sense of sight is the .....
  - a. ear
  - b. eye
  - c. nose
  - d. skin
- 5 Which of these materials reflects light better?
  - a. Wood
  - b. Mirror
  - c. Plastic
  - d. Cardboard.
- 6 Which of the following examples represents a pull force?
  - a. The attraction of the Earth to an object.
  - b. Pushing a box to move it.
  - c. The player kicks the ball.
  - d. The goalkeeper stops the ball.
- 7 The energy produced when the electric heater is turned on is the ..... energy.
  - a. electrical
  - b. sound
  - c. thermal
  - d. chemical
- 8 Fish breathe the dissolved oxygen in water through.....
  - a. skin
  - b. lungs
  - c. gills
  - d. stomach
- 9 To calculate the velocity of a body, we need to know.....
  - a. distance only
  - b. time only
  - c. energy and time
  - d. distance and time
- 10 What are the two organs that represent the central nervous system?
  - a. Cerebellum and the vertebral column.
  - b. Spinal cord and the brain.
  - c. The sensory and motor system.
  - d. The brain and medulla oblongata.

**2 Complete the following sentences using the given words:**

**(respiratory – balanced - digestive - movements - structural - behavioral - 4 - 100 - unbalanced)**

- 1 Bees are similar to humans in communicating through .....
- 2 A body that travels a distance of 20 meters in 5 seconds, so its speed is ..... m/s.
- 3 When ..... forces act on a static body, it will move.
- 4 Migration of birds to warm places is an example of ..... adaptation.
- 5 The system that digests food and obtains nutrients is ..... system.

**3 Put (✓) or (X) in front of each of the following sentences:**

- 1 Communication between ants is through their sense of smell. ( )
- 2 Human has tapetum lucidum in his eye to help him see at night. ( )
- 3 The energy stored in the battery is called chemical potential energy. ( )
- 4 When the speed of a body decreases, its kinetic energy increases. ( )
- 5 The nervous system works separately from the senses. ( )

**4 Write the scientific term for each of the following sentences using the given words:**

**(Friction - Kinetic energy - Energy - Adaptation - Response time)**

- 1 A distinctive feature of an organism that helps it to survive. (.....)
- 2 The time taken by a body to receive information from the environment, and then processes it and responds to it. (.....)
- 3 A force that arises between the surfaces of two bodies in contact and slows down their motion. (.....)
- 4 The ability to do work. (.....)
- 5 The energy possessed by the body due to its motion. (.....)

**5 Choose from column (B) what suits in column (A):**

(A)	(B)
1 The visible form of energy that is transmitted in the form of waves is ..... energy.	( ) Language.
2 ..... depends on sound bounce in locating the prey.	( ) light.
3 ..... energy is stored in food.	( ) unbalanced.
4 When a rocket is launched and is able to leave the planet, because it is affected by ..... forces.	( ) Chemical.
5 ..... is a code in the form of sounds to convey information.	( ) Bat.

## Model (2)

### 1 Choose the correct answer:

- 1 The eyes narrow involuntarily to avoid sudden bright light, what are the two organs responsible for this?
  - a. Nervous and muscular.
  - b. Nervous and respiratory.
  - c. Circulatory and muscular.
  - d. Circulatory and respiratory.
- 2 Digestion of food begins in the mouth and ends in the .....
  - a. anus
  - b. stomach
  - c. small intestine
  - d. large intestine
- 3 ..... helps the human being to maintain the ecological system.
  - a. eroding the soil
  - b. planting trees
  - c. cutting trees
  - d. building new urban communities
- 4 Which of the following cases represents the transmission of a message from the sense organs to the nervous system?
  - a. When you take your hands off a hot object.
  - b. When you scream after hitting the table.
  - c. When your finger bleeds after being injured.
  - d. When your finger touches the spines of an aloe vera plant.
- 5 A boat moves a distance of 30 meters in a time of 10 seconds, so its speed is ..... m/s.
  - a. 3
  - b. 10
  - c. 30
  - d. 300
- 6 Which statement explains why you see your reflection when you look in the mirror?
  - a. The light is refracted when it passes through the mirror.
  - b. The light is reflected back from the mirror.
  - c. The light is refracted and bounced off the mirror.
  - d. The light is reflected when it passes through the mirror.
- 7 The class students play tug-of-war in the courtyard, and there are ten students on both sides of the rope, what indicates that none of them moved?
  - a. One team has more energy than the other.
  - b. One team has half the energy of the other team.
  - c. Both sides have equal and opposite forces in direction.
  - d. Both teams have unequal and opposite forces in direction.
- 8 You can determine the roughness of a sound by .....
  - a. pitch
  - b. type of sound
  - c. echo
  - d. pattern and type of sound
- 9 Which of the following allows light to pass through?
  - a. Wood.
  - b. Glass.
  - c. Metal.
  - d. Wall.
- 10 Among the examples of behavioral adaptations that help an animal to protect itself from enemies are .....
  - a. extinction
  - b. migration
  - c. reproduction
  - d. camouflage



**2 Complete the following sentences using the given words:**

**(chemical - thermal - exhalation - inhalation - kinetic - position - echo - friction)**

- 1 The dolphin can locate objects through echolocation by .....
- 2 When objects fall downward, the energy stored in them is converted into..... energy.
- 3 The diaphragm muscle contracts and moves down during the process of .....
- 4 When you ride your bike, the ..... energy which is stored in food inside your body is converted into kinetic energy.
- 5 The force that reduces the speed of a body and affects in the direction opposite to its motion is .....

**3 Put (✓) or (X) in front of each of the following sentences:**

- 1 Plants need long roots that extend deep into the soil to survive in the water scarcity environment. ( )
- 2 The number of breathing times decreases when doing activities and making effort. ( )
- 3 As the force acting on a body increases, the distance it moves increases. ( )
- 4 Some insects can communicate by sending flashes of light. ( )
- 5 We can see things around us as a result of refraction of light. ( )

**4 Determine the type of adaptation whether "structural or "behavioral":**

- 1 The buttress roots of some plants. (.....)
- 2 The beaks of some birds are sharp and strong to tear the flesh of prey. (.....)
- 3 Some animals hide in burrows to avoid the intense summer heat. (.....)
- 4 The presence of gills in fish to help them breathe in water. (.....)
- 5 Frogs hibernate to avoid the extreme drop in temperatures. (.....)

**5 Give an example for each of the following:**

- 1 Transparent material.  
.....
- 2 Technological communication systems.  
.....
- 3 A device that converts electric energy into light and heat energy.  
.....
- 4 An animal has the ability to turn its head in all directions.  
.....
- 5 Pushing force.  
.....

## Model (3)

### 1 Choose the correct answer:

- 1 When gasoline is burned, the stored chemical energy is released in the form of .....
  - a. smokes
  - b. carbon dioxide gas
  - c. spark
  - d. heat
- 2 What kind of surfaces scatter the light randomly?
  - a. Shiny.
  - b. Rough.
  - c. Smooth.
  - d. Transparent.
- 3 The antelope that lives in the vast plains adapts by .....
  - a. thick fur that helps to keep warm in winter
  - b. long legs that help it to run quickly
  - c. bright colors help him to attract the other sex
  - d. a strong outer shell protects it
- 4 Humpback whales use singing for .....
  - a. warming
  - b. hiding from enemies
  - c. mating and feeding
  - d. having fun with whales
- 5 The organ that processes and interprets information similar to a computer is .....
  - a. spinal cord
  - b. skin
  - c. brain
  - d. nerves
- 6 The movement of a sailboat in the water by the action of the air is ..... force.
  - a. pull
  - b. push
  - c. friction
  - d. gravity
- 7 As the time taken to travel a certain distance increases, the speed of the body .....
  - a. increases
  - b. does not change
  - c. decreases
  - d. doubles
- 8 ..... is the sense that you use to identify the smell of a perfume.
  - a. Taste
  - b. Sight
  - c. Smell
  - d. Hearing
- 9 The juices of the liver and pancreas are poured into .....
  - a. the stomach
  - b. the small intestine
  - c. the large intestine
  - d. the mouth
- 10 The tapetum lucidum is one of the ..... adaptations that enable some animals to see in the dark.
  - a. structural
  - b. behavioral
  - c. (a and b)
  - d. no correct answer

**2 Complete the following sentences using the given brackets:**

- 1 The echo sound feature depends on the ..... sense. (smelling – hearing)
- 2 The time taken to receive information from the environment and respond to it is called ..... (reaction time - speed time)
- 3 Electric wires transmit ..... energy to homes and streets. (chemical - electric)
- 4 The force that causes the fruits to fall from the tree downwards is the ..... (pushing force - gravity)
- 5 Fish use ..... to extract dissolved oxygen in the water. (lungs - gills)

**3 Correct the underlined words:**

- 1 Cows have sharp teeth suitable for eating grass. (.....)
- 2 When the body reaches its maximum height, it stores maximum kinetic energy. (.....)
- 3 The bowl-like face of an owl is an example of behavioral adaptation. (.....)
- 4 Sound is the visual form of energy that is transmitted in the form of waves. (.....)
- 5 When the body speed increases, its kinetic energy decreases. (.....)

**4 Choose from column (B) what suits in column (A):**


(A)	(B)
1 When an unbalanced force is applied to a static body.	( ) Diaphragm.
2 When the wall opposes a moving car and stops it.	( ) Nerves.
3 Wood is an .....	( ) Opaque material.
4 Carry messages from the brain and spinal cord to the rest of the body.	( ) it starts to move.
5 A large muscle that helps in the inhalation and exhalation processes.	( ) it is a friction force.

**5 Determine the type of the energy in each of the following cases:**

- 1 Energy stored in batteries. (.....)
- 2 The energy produced when the electric heater is turned on. (.....)
- 3 Energy stored in a ball at the top of a ramp. (.....)
- 4 The energy of a player while running. (.....)
- 5 The energy generated when the radio is turned on. (.....)

## Model (4)

### 1 Choose the correct answer:

- 1 Which of the following is a source of light?  
a. The moon.                      b. The eyes.                      c. The fire.                      d. The mirror.
- 2 Ramy stopped suddenly while he was riding his bike because he heard the sound of a car speeding towards him. Which device received the external hearing signal that enabled Ramy to respond by stopping his bike?  
a. The circulatory system.                      b. The excretory system.  
c. The muscular system.                      d. The nervous system.
- 3 Fatima pushes a big box and Ezz comes to help her.  
How does this change the force and the distance moved by the box?  
a. It does not change the force or the distance.                        
b. The force increases and distance decreases.  
c. The force and distance increase.                      d. Its force decreases, its distance increases.
- 4 The system responsible for digesting food and supplying the body with nutrients is .....  
a. respiratory                      b. digestive                      c. excretory                      d. nervous
- 5 Bats use their sense of ..... to reach their prey and avoid hitting objects  
a. sight                      b. smell                      c. hearing                      d. taste
- 6 Which of the following helps reptiles, such as the panther chameleon, to hide among the leaves of trees?  
a. Colored scales.                      b. Brown fur.                      c. Short legs.                      d. Golden fur.
- 7 The energy stored in a compressed spring is considered ..... energy.  
a. chemical                      b. kinetic                      c. potential                      d. electric
- 8 The unit that measures speed is .....  
a. seconds/meter                      b. hour/kilometer                      c. meter/second                      d. meter/kilometer
- 9 What happens to the kinetic energy when you clap your hands?  
a. It converts to sound and heat energy                      b. It converts to solar and potential energy  
c. Some of the energy is lost and some of it turns into sound energy  
d. Some energy is lost and some energy turns into chemical energy
- 10 ..... is one of the common ways of communication between humans and animals.  
a. Mobile phone                      b. Paintings                      c. Flashes                      d. Writing

**2 Complete the following sentences using the given brackets:**

- 1 The ..... in the mouth moistens the food to facilitate its digestion and swallowing. (tongue – teeth)
- 2 The..... materials transmit light through them. (transparent – opaque)
- 3 The gravitational force is the force of ..... and its direction is always down towards the earth. (pull – push)
- 4 A car that travels 80 km in two hours is moving at a speed of ..... km / h. (40 – 20)
- 5 The alveoli in ..... are surrounded by a network of blood vessels through which gases are exchanged between blood and air. (trachea -two lungs)

**3 write True or False:**

- 1 When animals dig tunnels it is a form of structural adaptation. ( )
- 2 Meat-eaters animals have long digestive systems. ( )
- 3 The body's potential energy increases as it rises above the Earth's surface. ( )
- 4 Energy transformations don't occur when food is cooked. ( )
- 5 Objects move a great distance when pushed with great force. ( )

**4 Write the scientific terms using the given words:**

**(speed – potential energy - reflexes - communication system – structural adaptation)**

- 1 A change that occurs within the structure of the living organisms' bodies. (.....)
- 2 A group of devices work together to transfer information from one place to another. (.....)
- 3 The distance traveled per unit time. (.....)
- 4 The stored energy inside the body. (.....)
- 5 Messages that the nervous system sends quickly and you cannot control them. (.....)

**5 Choose from column (B) the sensory information that suits each sense organ in column (A):**

(A)	(B)
1 The hand	( ) Light coming from an open window.
2 The eyes	( ) The bad smell.
3 The tongue	( ) Heat from a hot stove.
4 The ears	( ) Sour lemon taste.
5 The nose	( ) Noise coming from the car loudspeaker.

## Model (5)

### 1 Choose the correct answer:

- 1 What is the energy transformation when riding a bike?
  - a. Thermal energy converts into potential energy.
  - b. Chemical energy converts into kinetic energy.
  - c. Solar energy converts into chemical energy.
  - d. Kinetic energy converts into nuclear energy.
- 2 Which of the following can store energy?
  - a. Battery.
  - b. Wire.
  - c. Plastic.
  - d. electric lamp.
- 3 What is the necessary mathematical relationship to calculate the velocity?
  - a. distance  $\div$  time
  - b. time  $\div$  distance
  - c. mass  $\div$  time
  - d. time  $\div$  mass
- 4 The ..... leaves help plants absorb sunlight.
  - a. small
  - b. broad
  - c. triangular
  - d. spiny
- 5 The diaphragm muscle contracts and moves downwards during the ..... process.
  - a. inhalation
  - b. exhalation
  - c. digestion
  - d. feeding
- 6 Table salt can be distinguished from sugar by the sense of .....
  - a. sight
  - b. smell
  - c. hearing
  - d. taste
- 7 Which of the following allows light to pass through it?
  - a. Wood.
  - b. Glass.
  - c. Metal.
  - d. Wall.
- 8 The opposite figure represents ..... force.
  - a. pushing
  - b. pulling
  - c. gravity
  - d. friction
- 9 Each of the following represents kinetic energy except .....
  - a. vibration of particles of the substance during heating
  - b. the movement of sound or light waves in the air
  - c. the movement of electrons inside a wire
  - d. a ball stuck to the top of a tree
- 10 Bees depend in communication on .....
  - a. light
  - b. sound
  - c. smell
  - d. movement



**2 Complete the following sentences using the given brackets:**

- 1 The velocity of a body increases when the time taken to cover a certain distance ..... .  
(increases - decreases)
- 2 The main source of light on the Earth's surface is the ..... . (sun - fire)
- 3 The blood transports ..... from the lungs to all the cells of the body.  
(oxygen gas - carbon dioxide gas)
- 4 The amount of energy required to move a body through the force acting on it is known as ..... . (work - force)
- 5 When you knock on the door, the ..... energy changes into ..... energy.  
(kinetic - sound / kinetic - potential)

**3 Correct the underlined words:**

- 1 The spinal cord is the main control center in the human body. (.....)
- 2 Fish breathe the dissolved oxygen in water through the skin. (.....)
- 3 One of the negative effects of water pollution on humans is chest disease. (.....)
- 4 A ball that rolls on a ramp gradually its potential energy increases as it falls. (.....)
- 5 When balanced forces act on a static body, it moves. (.....)

**4 Choose from column (B) what suits in column (A):**

(A)	(B)
1 A pattern has meaning	( ) The friction force
2 A force arises between two touching surfaces.	( ) Its speed increases
3 The light property helps us to see our image in mirror	( ) Chemical energy
4 The stored energy in gasoline	( ) Light reflection
5 When the applied force on object increases , .....	( ) The code

**5 Classify the following into (structural or behavioral) adaptation:**

- 1 The presence of sharp thorns in some desert plants. (.....)
- 2 The varied diet property in some animals. (.....)
- 3 The activity of bats at night to search for food. (.....)
- 4 Sharp teeth in predators. (.....)
- 5 The eyes of the panther chameleon move in different directions. (.....)

## Model answer (1)

### 1 Choose the correct answer:

- 1 The leaves of most desert plants are .....  
a. are large and broad  
b. are small and have thorns  
c. broad and have thorns  
d. lose water easily
- 2 Which of the following examples of movement cannot be observed?  
a. A train moving on rails.  
b. The movement of the moon around Earth.  
c. A ball moving in the air.  
d. A pen falling down.
- 3 What happens to organisms that do not have methods that help them adapt to environmental conditions?  
a. Their number increases.  
b. They extinct.  
c. They remain the same.  
d. The biodiversity of the ecosystem increases.
- 4 The organ which is responsible for the sense of sight is the .....  
a. ear  
b. eye  
c. nose  
d. skin
- 5 Which of these materials reflects light better?  
a. Wood.  
b. Mirror.  
c. Plastic.  
d. Cardboard.
- 6 Which of the following examples represents a pull force?  
a. The attraction of the Earth to an object.  
b. Pushing a box to move it.  
c. The player kicks the ball.  
d. The goalkeeper stops the ball.
- 7 The energy produced when the electric heater is turned on is the ..... energy.  
a. electrical  
b. sound  
c. thermal  
d. chemical
- 8 Fish breathe the dissolved oxygen in water through.....  
a. skin  
b. lungs  
c. gills  
d. stomach
- 9 To calculate the velocity of a body, we need to know.....  
a. distance only  
b. time only  
c. energy and time  
d. distance and time
- 10 What are the two organs that represent the central nervous system?  
a. Cerebellum and the vertebral column.  
b. Spinal cord and the brain.  
c. The sensory and motor system.  
d. The brain and medulla oblongata.



**2 Complete the following sentences using the given words:**

(respiratory – balanced - digestive - movements - structural - behavioral - 4 - 100 - unbalanced)

- 1 Bees are similar to humans in communicating through **movements** .
- 2 A body that travels a distance of 20 meters in 5 seconds, so its speed is **4** m/s.
- 3 When **unbalanced** forces act on a static body, it will move.
- 4 Migration of birds to warm places is an example of **behavioral** adaptation.
- 5 The system that digests food and obtains nutrients is **digestive** system.

**3 Put (✓) or (X) in front of each of the following sentences:**

- 1 Communication between ants is through their sense of smell. (✓)
- 2 Human has tapetum lucidum in his eye to help him see at night. (X)
- 3 The energy stored in the battery is called chemical potential energy. (✓)
- 4 When the speed of a body decreases, its kinetic energy increases. (X)
- 5 The nervous system works separately from the senses. (X)

**4 Write the scientific term for each of the following sentences using the given words:**

(Friction - Kinetic energy - Energy - Adaptation - Response time)

- 1 A distinctive feature of an organism that helps it to survive. (Adaptation)
- 2 The time taken by a body to receive information from the environment, and then processes it and responds to it. (Response time)
- 3 A force that arises between the surfaces of two bodies in contact and slows down their motion. (Friction)
- 4 The ability to do work. (Energy)
- 5 The energy possessed by the body due to its motion. (Kinetic energy)

**5 Choose from column (B) what suits in column (A):**

(A)	(B)
1 The visible form of energy that is transmitted in the form of waves is ..... energy.	(5) Language.
2 ..... depends on sound bounce in locating the prey.	(1) light.
3 ..... energy is stored in food.	(4) unbalanced.
4 When a rocket is launched and is able to leave the planet, because it is affected by ..... forces.	(3) Chemical.
5 ..... is a code in the form of sounds to convey information.	(2) Bat.

## Model answer (2)

### 1 Choose the correct answer:

- 1 The eyes narrow involuntarily to avoid sudden bright light, what are the two organs responsible for this?  
a. Nervous and muscular  
b. Nervous and respiratory  
c. Circulatory and muscular  
d. Circulatory and respiratory
- 2 Digestion of food begins in the mouth and ends in the .....  
a. anus  
b. stomach  
c. small intestine  
d. large intestine
- 3 ..... helps the human being to maintain the ecological system.  
a. eroding the soil  
b. planting trees  
c. cutting trees  
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- 4 Which of the following cases represents the transmission of a message from the sense organs to the nervous system?  
a. When you take your hands off a hot object.  
b. When you scream after hitting the table.  
c. When your finger bleeds after being injured.  
d. When your finger touches the spines of an aloe vera plant.
- 5 A boat moves a distance of 30 meters in a time of 10 seconds, so its speed is ..... m/s.  
a. 3  
b. 10  
c. 30  
d. 300
- 6 Which statement explains why you see your reflection when you look in the mirror?  
a. The light is refracted when it passes through the mirror.  
b. The light is reflected back from the mirror.  
c. The light is refracted and bounced off the mirror.  
d. The light is reflected when it passes through the mirror.
- 7 The class students play tug-of-war in the courtyard, and there are ten students on both sides of the rope, what indicates that none of them moved?  
a. One team has more energy than the other.  
b. One team has half the energy of the other team.  
c. Both sides have equal and opposite forces in direction.  
d. Both teams have unequal and opposite forces in direction.
- 8 You can determine the roughness of a sound by .....  
a. pitch  
b. type of sound  
c. echo  
d. pattern and type of sound
- 9 Which of the following allows light to pass through it?  
a. Wood.  
b. Glass.  
c. Metal.  
d. Wall.
- 10 Among the examples of behavioral adaptations that help an animal to protect itself from enemies are .....  
a. extinction  
b. migration  
c. reproduction  
d. camouflage

**2 Complete the following sentences using the given words:**

**(chemical - thermal - exhalation - inhalation - kinetic - position - echo - friction)**

- 1 The dolphin can locate objects through echolocation by **echo**.
- 2 When objects fall downward, the energy stored in them is converted into **kinetic** energy.
- 3 The diaphragm muscle contracts and moves down during the process of **inhalation**.
- 4 When you ride your bike, the **chemical** energy which is stored in food inside your body is converted into kinetic energy.
- 5 The force that reduces the speed of a body and affects in the direction opposite to its motion is **friction**.

**3 Put (✓) or (X) in front of each of the following sentences:**

- 1 Plants need long roots that extend deep into the soil to survive in the water scarcity environment. (✓)
- 2 The number of breathing times decreases when doing activities and making effort. (X)
- 3 As the force acting on a body increases, the distance it moves increases. (✓)
- 4 Some insects can communicate by sending flashes of light. (✓)
- 5 We can see things around us as a result of refraction of light. (X)

**4 Determine the type of adaptation whether "structural or "behavioral":**

- 1 The buttress roots of some plants. (Structural adaptation)
- 2 The beaks of some birds are sharp and strong to tear the flesh of prey. (Structural adaptation)
- 3 Some animals hide in burrows to avoid the intense summer heat. (Behavioral adaptation)
- 4 The presence of gills in fish to help them breathe in water. (Structural adaptation)
- 5 Frogs hibernate to avoid the extreme drop in temperatures. (Behavioral adaptation)

**5 Give an example for each of the following:**

- 1 Transparent material.  
**Glass**
- 2 Technological communication systems.  
**Cell phone**
- 3 A device that converts electric energy into light and heat energy.  
**Electric light bulb**
- 4 An animal has the ability to turn its head in all directions.  
**Owl**
- 5 Pushing force.  
**Kicking a ball**



**2 Complete the following sentences using the given brackets:**

- 1 The echo sound feature depends on the ..... sense. (smelling – hearing)
- 2 The time taken to receive information from the environment and respond to it is called ..... (reaction time - speed time)
- 3 Electric wires transmit ..... energy to homes and streets. (chemical - electric)
- 4 The force that causes the fruits to fall from the tree downwards is the ..... (pushing force - gravity)
- 5 Fish use ..... to extract dissolved oxygen in the water. (lungs - gills)

**3 Correct the underlined words:**

- 1 Cows have sharp teeth suitable for eating grass. (flat)
- 2 When the body reaches its maximum height, it stores maximum kinetic energy. (potential energy)
- 3 The bowl-like face of an owl is an example of behavioral adaptation. (structural)
- 4 Sound is the visual form of energy that is transmitted in the form of waves. (light)
- 5 When the body speed increases, its kinetic energy decreases. (increases)

**4 Choose from column (B) what suits in column (A):**

(A)	(B)
1 When an unbalanced force is applied to a static body.	(5) Diaphragm.
2 When the wall opposes a moving car and stops it.	(4) Nerves.
3 Wood is an .....	(3) Opaque material.
4 Carry messages from the brain and spinal cord to the rest of the body.	(1) it starts to move.
5 A large muscle that helps in the inhalation and exhalation processes.	(2) it is a friction force.

**5 Determine the type of the energy in each of the following cases:**

- 1 Energy stored in batteries. (chemical energy)
- 2 The energy produced when the electric heater is turned on. (heat energy)
- 3 Energy stored in a ball at the top of a ramp. (potential energy)
- 4 The energy of a player while running. (kinetic energy)
- 5 The energy generated when the radio is turned on. (Sound energy)

## Model answer (4)

### 1 Choose the correct answer:

- 1 Which of the following is a source of light?  
a. The moon.      b. The eyes.      c. The fire.      d. The mirror.
- 2 Ramy stopped suddenly while he was riding his bike because he heard the sound of a car speeding towards him. Which device received the external hearing signal that enabled Ramy to respond by stopping his bike?  
a. The circulatory system.      b. The excretory system.  
c. The muscular system.      d. The nervous system.
- 3 Fatima pushes a big box and Ezz comes to help her.  
How does this change the force and the distance moved by the box?  
a. It does not change the force or the distance.  
b. The force increases and distance decreases.  
c. The force and distance increase.      d. its force decreases, its distance increases.
- 4 The system responsible for digesting food and supplying the body with nutrients is .....  
a. respiratory      b. digestive      c. excretory      d. nervous
- 5 Bats use their sense of ..... to reach their prey and avoid hitting objects  
a. sight      b. smell      c. hearing      d. taste
- 6 Which of the following helps reptiles, such as the panther chameleon, to hide among the leaves of trees?  
a. Colored scales.      b. Brown fur.      c. Short legs.      d. Golden fur.
- 7 The energy stored in a compressed spring is considered ..... energy.  
a. chemical      b. kinetic      c. potential      d. electric
- 8 The unit that measures speed is .....  
a. seconds/meter      b. hour/kilometer      c. meter/second      d. meter/kilometer
- 9 What happens to the kinetic energy when you clap your hands?  
a. It converts to sound and heat energy      b. It converts to solar and potential energy  
c. Some of the energy is lost and some of it turns into sound energy  
d. Some energy is lost and some energy turns into chemical energy
- 10 ..... is one of the common ways of communication between humans and animals.  
a. Mobile phone      b. Paintings      c. Flashes      d. Writing



**2 Complete the following sentences using the given brackets:**

- 1 The ..... in the mouth moistens the food to facilitate its digestion and swallowing. (tongue – teeth)
- 2 The..... materials transmit light through them. (transparent – opaque)
- 3 The gravitational force is the force of ..... and its direction is always down towards the earth. (pull – push)
- 4 A car that travels 80 km in two hours is moving at a speed of ..... km / h. (40 – 20)
- 5 The alveoli in ..... are surrounded by a network of blood vessels through which gases are exchanged between blood and air. (trachea -two lungs)

**3 write True or False:**

- 1 When animals dig tunnels it is a form of structural adaptation. (False)
- 2 Meat-eaters animals have long digestive systems. (false)
- 3 The body's potential energy increases as it rises above the Earth's surface. (True)
- 4 Energy transformations don't occur when food is cooked. (False)
- 5 Objects move a great distance when pushed with great force. (True)

**4 Write the scientific terms using the given words:**

**(speed – potential energy - reflexes - communication system – structural adaptation)**

- 1 A change that occurs within the structure of the living organisms' bodies. (Structural adaptation)
- 2 A group of devices work together to transfer information from one place to another. (Communication system)
- 3 The distance traveled per unit time. (Speed)
- 4 The stored energy inside the body. (potential energy)
- 5 Messages that the nervous system sends quickly and you cannot control them. (Reflexes)

**5 Choose from column (B) the sensory information that suits each sense organ in column (A):**

(A)	(B)
1 The hand	(2) Light coming from an open window.
2 The eyes	(5) The bad smell.
3 The tongue	(1) Heat from a hot stove.
4 The ears	(3) Sour lemon taste.
5 The nose	(4) Noise coming from the car loudspeaker.

## Model answer (5)

### 1 Choose the correct answer:

- 1 What is the energy transformation when riding a bike?
- Thermal energy converts into potential energy.
  - Chemical energy converts into kinetic energy.**
  - Solar energy converts into chemical energy.
  - Kinetic energy converts into nuclear energy.
- 2 Which of the following can store energy?
- Battery.**
  - Wire.
  - Plastic.
  - electric lamp.
- 3 What is the necessary mathematical relationship to calculate the velocity?
- distance  $\div$  time**
  - time  $\div$  distance
  - mass  $\div$  time
  - time  $\div$  mass
- 4 The ..... leaves help plants absorb sunlight.
- small
  - broad**
  - triangular
  - spiny
- 5 The diaphragm muscle contracts and moves downwards during the ..... process.
- inhalation**
  - exhalation
  - digestion
  - feeding
- 6 Table salt can be distinguished from sugar by the sense of .....
- sight
  - smell**
  - hearing
  - taste
- 7 Which of the following allows light to pass through it?
- Wood.
  - Glass.**
  - Metal.
  - Wall.
- 8 The opposite figure represents ..... force.
- pushing**
  - pulling
  - gravity
  - friction
- 9 Each of the following represents kinetic energy except .....
- vibration of particles of the substance during heating
  - the movement of sound or light waves in the air
  - the movement of electrons inside a wire
  - a ball stuck to the top of a tree**
- 10 Bees depend in communication on .....
- light
  - sound
  - smell
  - movement**





**2 Complete the following sentences using the given brackets:**

- 1 The velocity of a body increases when the time taken to cover a certain distance .....  
(increases - **decreases**)
- 2 The main source of light on the Earth's surface is the ..... (sun – fire)
- 3 The blood transports ..... from the lungs to all the cells of the body.  
(**oxygen gas** - carbon dioxide gas)
- 4 The amount of energy required to move a body through the force acting on it is known as ..... (work - force)
- 5 When you knock on the door, the ..... energy changes into ..... energy.  
(**kinetic - sound** / kinetic - potential)

**3 Correct the underlined words:**

- 1 The spinal cord is the main control center in the human body. (brain)
- 2 Fish breathe the dissolved oxygen in water through the skin. (gills)
- 3 One of the negative effects of water pollution on humans is chest disease. (air)
- 4 A ball that rolls on a ramp gradually its potential energy increases as it falls. (kinetic)
- 5 When balanced forces act on a static body, it moves. (unbalanced)

**4 Choose from column (B) what suits in column (A):**

(A)	(B)
1 A pattern has meaning	(2) The friction force
2 A force arises between two touching surfaces.	(5) Its speed increases
3 The light property helps us to see our image in mirror	(4) Chemical energy
4 The stored energy in gasoline	(3) Light reflection
5 When the applied force on object increases , .....	(1) The code

**5 Classify the following into (structural or behavioral) adaptation:**

- 1 The presence of sharp thorns in some desert plants. (structural adaptation)
- 2 The varied diet property in some animals. (behavioral adaptation)
- 3 The activity of bats at night to search for food. (behavioral adaptation)
- 4 Sharp teeth in predators. (structural adaptation)
- 5 The eyes of the panther chameleon move in different directions. (structural adaptation)

## ① Cairo Governorate – (Exam 1)

### Question one: Choose the correct answer:

- ① An animal that has the ability to turn the head in all directions is .....
- a. Snake                      b. Jerboa                      c. dolphin                      d. owl
- ② The ability to do work is .....
- a. Energy                      b. Force                      c. Push                      d. Pull
- ③ Animals can communicate with each other through .....
- a. Sounds and lights      b. talking                      c. reading                      d. writing
- ④ One of the light reflecting materials is .....
- a. wood                      b. mirrors                      c. plastic                      d. paper
- ⑤ The force that allows down or decreases the speed of an object is .....
- a. push                      b. gravity                      c. friction                      d. pull

### 1. Put (✓) or (X):

- ① The food passes through the large intestine before it goes into the small intestine. ( )
- ② Energy is neither destroyed nor created from nothing. ( )
- ③ Wood is a transparent object that allows light to pass through it. ( )
- ④ The respiratory system is responsible for the entry of air into the body. ( )

### 3. Match

(A)	(B)
1) Camouflage	a) The force that pulls things downwards.
2) Sending smelly messages	b) A type of adaptation that helps an animal to hide.
3) Gravity	c) Carry messages to the brain via spinal cord.
4) Nerves	d) A way to communicate between some animals.

## Governorates Exams – Exam (2)

### Question one: Choose the correct answer:

- ① Raising the thumb up or lowering it down is a kind of .....
- a. colors                      b. codes                      c. waves                      d. lights
- ② One of the behavioral adaptations that help the animal protects itself from enemies is .....
- a. camouflage                      b. extinction                      c. immigration                      d. reproduction
- ③ ..... is covering the body of arctic fox.
- a. Heavy hair                      b. Thick fur                      c. heavy skin                      d. many feathers
- ④ The ability to do work is .....
- a. Energy                      b. Force                      c. Push                      d. Pull
- ⑤ The force that pulls the objects down toward the center of the Earth is .....
- ..... force
- a. pushing                      b. gravity                      c. pulling                      d. wind

### Question Two: Put (✓) or (X):

- ① The ear is the sense organ which is responsible for seeing objects. ( )
- ② The moon is a source of light. ( )
- ③ Exhaled air carries oxygen. ( )
- ④ When the static body is affected by balanced forces, the body moves. ( )
- ⑤ When you kick a ball, kinetic energy is produced. ( )

### Question Three: Match:

(A)	(B)
1) Motion	a) A muscle that has an important role in the respiration process.
2) Structural adaptation	b) The change in the position of an object with respect to a fixed point.
3) Diaphragm	c) A structural adaptation whose function is similar to the lung.
4) Gills	d) the flat teeth in some animals to feed a type of food like grass.

## Governorates Exams – Exam (3)

### Question one: Choose the correct answer:

- ① All of the following are components of the nervous system except.....  
a. Spinal cord                      b. Nerve s                      c. Brain                      d. Heart
- ② Animals can communicate with each other through.....  
a. Sounds and lights                      b. Talk                      c. Writing                      d. -Reading
- ③ ..... Is covering the body of arctic fox  
• Heavy hair                      b. Thick fur                      c. heavy skin                      d. many feathers
- ④ To communicate through the sense of sight we need.....  
a. Making sound                      b. Availability of light                      c-Hearing music                      d-Touching something
- ⑤ When you put your hand on a hot surface, the brain sends a message to the muscles and the action that comes from you immediately after it is to.....  
a. Keep placing your hand                      b. You will do nothing  
c. You feel pain                      d. Pull your hand away from a hot object

### Question Two: Put (✓) or (X):

- ① The food changes from complex form to simple form through digestion process. ( )
- ② Dolphins have strong sense of sight ( )
- ③ Tongue is an organ of sight. ( )
- ④ When balanced forces are applies on an object at rest, it will body move. ( )
- ⑤ The type of adaptation in the fishing cat's eyes is a behavioral adaptation. ( )

### 3.Match:

(A)	(B)
a. is a stored energy in an object due to its position.	1. Light
b. It depends on the echo of the sound in locating the prey	2. Owl
c. An animal with a bowl- like face and strong senses of hearing and vision.	3. potential energy
d. it is the visible form of energy that is transmitted in the form of waves/	4. Bat
e. A structural adaptation in the eye that provides some animals with better vision at night.	5.Mirror-like membrane

## Governorates Exams – Exam (4)

### Question one: Choose the correct answer:

- ① The organ responsible for the sight sense is .....  
a. Nose                      b. eyes                      c. heart                      d. mouth
- ② Which feature of the light help you see yourself in the mirror?  
a. Refraction              b. Reflection              c. Shortness of rays      d. Nothing
- ③ The measuring unit of speed is .....  
a. m/s              b. km/s              c. s/m              d. no correct answer
- ④ When a body moves forward, the change that occur is .....  
a. the position of the body   b. the size of body   c-the mass of body   d-The Earth's gravity
- ⑤ Fishing cat is a ..... animal  
a. morning                      b. nocturnal                      c. harmful                      d. flying

### Question Two: Put (✓) or (X):

- ① Penguins forming large group is a structural adaptation. ( )
- ② The skin is the sensory organ that makes you feel the smoothness of the cloth. ( )
- ③ The brain is responsible for processing information. ( )
- ④ The chemical potential energy in the car fuel is converted into kinetic when car starts moving. ( )
- ⑤ Mass doesn't affect the kinetic energy. ( )

### Question Three: A) Complete the following sentences from the two brackets:

- ① From the opaque objects ..... (Carton - Glass)
- ② Bats use ..... as a means of communication with each other. ( sound - light )
- ③ The diaphragm rises up during the ..... process. (Inhalation - exhalation)
- ④ the car slows down its speed when it turns out to fuel as a result of.. (friction - Tension)

(B) Calculate the speed of a train that covers 600 km in a time 6 hours.

.....  
.....

## Governorates Exams - Exam (5)

### Question One: Choose the correct answer:

- ① The chemical energy stored in batteries is considered a form of .....  
a. potential energy   b. heat energy   c. kinetic energy   d. Light energy
- ② bees can communicate with each other through.....  
a. Sounds                      b. Movement                      c. Waving                      d. -Reading
- ③ ..... Is covering the body of panther chameleon  
• Heavy hair                      b. Thick fur                      c. heavy skin                      d. colorful scales
- ④ One of the behavioral adaptation that help animals to hide from their enemies is.....  
a. reproduction                      b. extinction                      c-camouflage                      d-immigration
- ⑤ When light falls on wooden surface, it will .....  
a. refracts                      b. reflects evenly                      c. reflects unevenly                      d. pass through the surface

### Question Two: Put (✓) or (X):

- ① The brain is responsible for processing Information. ( )
- ② The Moon is a source of light. ( )
- ③ Gravitational force is an upward pulling force. ( )
- ④ Animals can use more than one sense to communicate with each other. ( )

### 3. (A) Match:

(A)	(B)
1) Motion	a) The ability to do work.
2) work	b) the change in the position of an object with respect to a fixed point
3) Energy	c) The force that causes the body to move.
4) Gas oven	d) It converts chemical energy into heat energy.

## (B) Answer the following:

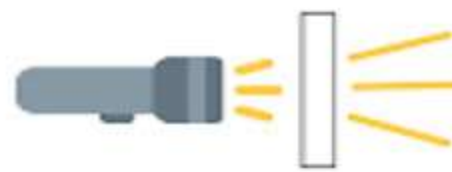
- Look at the path of the light rays in pictures (A) and (B). Determine which of the two objects is opaque and which is transparent.

(Object) (A) is .....

(Object) (B) is.....



(A)



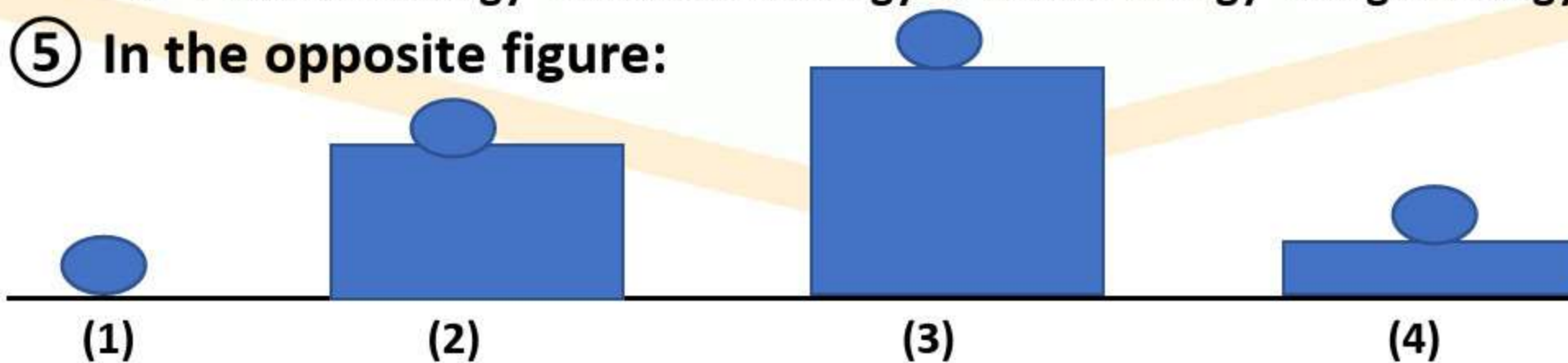
(B)

## Governorates Exams – Exam (6)

### 1. Choose the correct answer:

- ① ..... are panting to lower their body temperature.  
a. Bats      b. Lions      c. Whales      d. Foxes
- ② Humpback whales use singing for .....  
a. heating    b. reproduction and nutrition    c. hiding from enemies    d. having fun
- ③ Tapetum lucidum exists in all following excepts .....  
a. The Horse      b the human      c. the cat      d. the dog
- ④ The energy gained by a ball when it falls from above is:  
a. Potential energy    b chemical energy    c. kinetic energy    d. light energy

⑤ In the opposite figure:



Which ball has the greatest potential energy?

- a. 1      b. 2      c. ( 3 )      d. (4)

## 2. Put (✓) or (X):

- ① The snakes have the ability to rotate their heads in all directions. ( )
- ② Red and green lights are considered codes. ( )
- ③ Gravitational force is an upward pulling force. ( )

## 3. (A) Match:

(A)	(B)
1) The brain	( ) a- Not important in processing or receiving information
2) Nerves	( ) b- It is similar in its processing of information to a computer
	( ) c- Carry messages to brain via the spinal cord.

## 4. Answer the following:

(A). Butterflies that have same color of the tree they live on. This is called .....

(B). Write the reason that makes cats have excellent night vision and hunting successfully at night.....

## 5. Complete the following sentences from the two brackets:

- ① The different two languages are considered ..... (Codes - Lights)
- ② When light falls on an object and the light ..... So, We can see this object (Refracts - reflects )
- ③ The diaphragm rises down during the ..... process. (Inhalation - exhalation)
- ④ the body that has potential energy is in ..... state (motion -rest)



## Governorates Exams - Exam (7)

### 1. Choose the correct answer:

- ① The organ responsible for the sight sense is .....
- a. Nose                      b. eyes                      c. heart                      d. mouth
- ② The ability to turn the head in all directions .....
- a. Dolphin                  b. Snake                      c. Owl                      d. fennec fox
- ③ ..... energy affects sensory receptors in eyes causing vision.
- a. sound                      b. heat                      c. Chemical                      d. light
- ④ Your sensation of hot weather depends on sensory receptors in the.....
- a. eyes                      b. skin                      c-nose                      d-ears
- ⑤ Jerboa is a ..... animal.
- a. morning                      b. nocturnal                      c. harmful                      d. flying

### 2. Put (v) or (X):

- ① Sending bad smell by acacia tree is a behavioral adaptation. ( )
- ② Speed is a physical quantity. ( )
- ③ All different languages not considered as codes ( )
- ④ In electric fan, kinetic energy is converted into electric. ( )
- ⑤ Collision is crashing two objects each other. ( )

### 3. Match

(A)	(B)
1) the spinal cord	( ) a- Its similar in its processing of information to computer.
2) using the sense of sight	( ) b- when a foreign object is brought to your eyes
3) the brain	( ) c- when an object falls from your hands
4) the reflex actions	( ) d- the transmission of commands to the muscles to contract

## Exam (8)

### 1. Choose the correct answer:

- ① All the following sentences are correct about stomach, except .....
- It connects with anus.
  - It connects with esophagus and small intestine.
  - the food changes into soupy liquid inside it.
  - It has gastric juice and muscles work together.
- ② Sound and light are two types of energy where, .....
- The sound energy can be seen, while light energy can't be seen.
  - the light energy can't be seen and sound energy can't be seen.
  - Both can be seen.
  - Sound energy can't be seen, while light can be seen.
- ③ Antelope that live in wide, open plains must adapt by using.....
- Thick fur which helps to keep them warm in winter.
  - Long legs which help them run fast
  - bright colors to help them attract a mate
  - Their hard outer shell to protect them
- ④ When Light falls on a rough surface, it is .....
- |              |                         |
|--------------|-------------------------|
| a. Reflected | b. Diffused (Scattered) |
| c. Absorbed  | d. Transmitted          |
- ⑤ Which type of energy can travel through a vacuum (transparent bag).
- |             |              |
|-------------|--------------|
| a. Light    | b. Sound     |
| c. Chemical | d. Potential |

### 2. Put (✓) or (X):

- ① Humpback whales produce only one type of songs. ( )
- ② The bus that covers 60 kilometers in 1 hour has a speed =  $60\text{m}\backslash\text{sec}$ . ( )
- ③ Some of kinetic energy is changed during collision of balls in Newton's cradle. ( )
- ④ Digestion process begins in stomach with the help of salvia. ( )
- ⑤ Some animals have extra abilities that human do not have, and these extra abilities are called super sensory adaptations. ( )

### 3. Match

(A)	(B)
1. Airbag	a. is used for stopping both of the shockwave truck and rockets.
2. Jet engine	b. is used for knocking down
3. Wrecking ball	c. is used to reduce the speed of a person moving forward.
4 . Parachute	d. d. Is used for telling the blind person the direction when it vibrates.
5. Blind person's cane	e. is used for moving the shockwave truck.

### 4. Mention examples:

- ① Transparent material. (.....)
- ② Sources of light. (.....)
- ③ Patterns of codes (.....)
- ④ Forms of potential energy. (.....)
- ⑤ Rough materials. (.....)

### 5. Correct the underline:

- ① A ball's potential energy increases as it slides down on inclined surface. (.....)
- ② The spinal cord is responsible for processing information coming through eyes. (.....)
- ③ By increasing the number of fire extinguisher, the speed will decrease. (.....)
- ④ Humpback whales have similar sounds according to the season. (.....)
- ⑤ the ability to do force or cause a change is known as energy. (.....)

### 6. Write the scientific term:

- ① Bouncing of light when it falls on a reflecting surface. (.....)
- ② It is the change in position of an object relative to its starting point. (.....)

③ The change in the living organism's behavior allows it to survive in its habitat. (.....)

④ the waves that travel through air in a straight line causing vision. (.....)

## Governorates Exams 2021- 2022 – Exam (9)

### 1. Choose the correct answer:

① fish extracts oxygen out of water through .....

- a. skin                      b. gills                      c. lungs                      d. fins

② The ..... system helps us to translate messages that come from our surroundings, such as smells and sounds .....

- a. respiratory                      b. nervous                      c. digestive                      d. circulatory

③ The surface that regularly reflects light is .....

- a. dark and impurities                      b. smooth and shiny  
c. transparent                      d. rough and dark

④ What is the speed of a train that travels 800 meters in 4 seconds?

- a. 40 m/s                      b. 4 m/s                      c. 200 m/s                      d. 80 m/s

⑤ All the following represent the pushing force, except .....

- a. kicking a ball                      b. pressing on electrical switch  
c. closing the disk's drawer                      d. dragging the hook after catching a fish.

### 2. Put (✓) or (X):

① Red and green traffic are considered codes. ( )

② The eye is the sensory organ that makes you feel the smoothness of the cloth. ( )

③ The thick fur that some animals possess to protect from the cold is considered a behavioural adaptation. ( )

④ In the fan, the kinetic energy is converted into electric energy. ( )

⑤ Gravitational force is one of the kinetic energy forms. ( )

### 3. Write the scientific term:

1. A process through which diaphragm expands and moves up. (.....)

2. It is the energy transferred by a force that used to move the object. (.....)

3. It is a push or pull that is applying to an object causing it to change its position. (.....)

## **B) Explain:**

**1. There are some nocturnal animals that depend on their sense of heat to get their prey. Explain with an example.**

.....  
.....

## **Governorates Exams 2021- 2022 – Exam (10)**

### **1. Choose the correct answer:**

- ① Bats are ..... animals  
a. Nocturnal      b. moving      c. not hearing      d. not flying
- ② The ability to do work is .....  
a. Energy      b. Force      c. Push      d. Pull
- ③ All of the following are components of the nervous system except .....  
a. Spinal cord    b. heart      c. nerves      d. brain
- ④ The chemical energy stored in batteries is considered a form of .....  
a. potential energy    b. heat energy    c. kinetic energy    d. light energy

### **2. Put (✓) or (X):**

- ① In order to translate the code, the brain must identify it. ( )
- ② When a pen falls down from your hand, then the acting force is the gravity force. ( )
- ③ The respiratory system is responsible for the entry of air into the body. ( )

### **3. Match:**

(A)	(B)
1) Kinetic energy	a) A form of energy.
2) Sound energy	b) A part of the car that shows the change in speed.
	c) It is the produced energy during the motion of the objects

**4. Complete the following sentences using words between brackets:**

- 1. The eye sends messages to ..... through the nerves. (brain – Spinal cord)
- 2. The fatty layer under the animal’s skin which warms it is considered a ..... (structural– behavioral)
- 3. When a person pushes a car forward, his body begins to sweat heavily because his body ..... his stored energy. (consumes- increases)

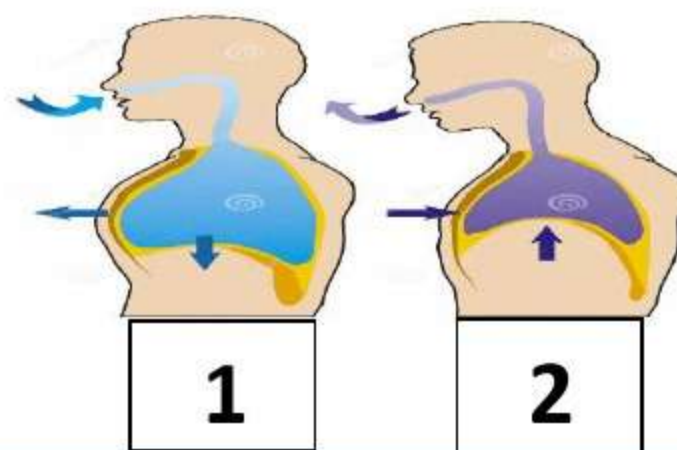
**5. Answer the following questions:**

1. Note the following two figures. Identify the name of each of the two processes in figures (1) and (2).

Process (1): ..... Process (2): .....

2. What happens to diaphragm in figure (1)?

.....



**Governorates Exams – Exam (11)**

**Choose the correct answer:**

- ① ..... Use panting to lower their bodies temperature.  
a. Foxes                      b. Cats                      c. Bats                      d. Whales
- ② All of the following are components of the respiratory system except .....  
a. lungs                      b. brain                      c. diaphragm                      d. nose
- ③ When you determine a sweet or bitter taste, you use .....  
a. The eye                      b. The tongue                      c. The human                      d. The nose
- ④ Which One of the following allows passing of the light through it?  
.....  
a. Wood                      b. Glass                      c. A rock                      d. Moon

**Put (✓) or (X):**

- ① Gravitational force is an upward pulling force. ( )
- ② scout Ants are responsible for locating food. ( )
- ③ Wall is an opaque object that doesn't allow light to pass through it. ( )
- ④ Plants have two types of adaptation. ( )
- ⑤ Respiration is a process of pushing air in and out of the body. ( )

**3. Complete the following sentences using words between brackets:**

- 1. The car slows down its speed when it runs out of fuel, as a result of ..... (tension – Friction)
- 2. A body that has potential energy is in ..... state. (rest – motion)
- 3. The eyes sends message to ..... through the nerves. (Brain – Spinal cord)
- 4. .... mix and grind food inside the mouth. (Teeth only – Teeth and tongue)
- 5. Bats use their sense of ..... to avoid danger. (Hearing – smell)

**4. Complete the following sentence:**

- ① If two cars moved at the same time for 20 seconds, car (A) covered a distance of 100 meters, while car (B) covered a distance of 300 meters. Which one of the two cars has a higher speed.....  
.....
- ② Two balls have put at different height, Ball (A) at height 2 meters, while ball (2) at height 4 meters. Which one of the two balls has a higher potential energy?  
.....  
.....

**Governorates Exams– Exam (12)**

**Choose the correct answer:**

- ① The measuring unit of the distance is .....  
a. km/s                      b. m/s                      c. km                      d. kg
- ② The force that pulls objects down toward to the center of the Earth is .....  
a. gravity                      b. pulling                      c. friction                      d. pushing
- ③ Writing is a kind of .....  
a. colors                      b. waves                      c. lights                      d. codes

**2. Put (✓) or (X):**

- ① Force is energy and there is a relationship between them. (     )
- ② The brain translates the code that it cannot identify . (     )
- ③ The mouth helps to push food into the stomach. (     )

- ④ Energy doesn't transform from one form to another. ( )
- ⑤ When you push a car and it doesn't move so there is a work done. ( )

### 3. Answer the following question:

(A) What are the factors on which the speed of a moving object depends?

1. .... 2. ....

(B) How can we calculate speed? Write the mathematical rule.

.....  
 .....

(C) Mention two examples of the structural adaptation of fennec fox?

1. ....  
 2. ....

## Governorates Exams – Exam (13)

### Choose the correct answer:

① Our eyes help us see what's around us. What is the responsible for perceiving what we can see with our eyes? .....

- a. The stomach      b. The nerve      c. The brain      d. The heart

② Eagle is a kind of prey bird (which eats meat). Its beak strong and sharp. This structural adaptation helps it to .....

- a. see      b. cut meat      c. find a shelter      d. fly faster

③ Which one of the following is an example of the conversion of kinetic into potential energy: .....

- a. a ball falls from the top of a hill  
 b. Raising a roller coaster to the top of a hill  
 c. pushing a ball on the ground  
 d. A roller coaster falls to the bottom of a hill

④ The ..... system helps us to translate messages that come from our surroundings such as smells and sounds.

- a. digestive      b. circulatory      c. nervous      d. respiratory

⑤ What happens when a driver presses the brakes and stop suddenly?



- a. The passenger moves backward      b. The passenger moves forward.  
 c. The passenger remains stable      d. No correct answer

**Put (✓) or (X):**

- ① The ear is the sense organ which is responsible for seeing objects. ( )
- ② A static ball moves on the ground if it is affected by a force. ( )
- ③ Speed is a physical quantity that indicates how fast an object is moving. ( )
- ④ If I can see my face clearly on a surface, this means that it is a smooth, and shiny. ( )
- ⑤ Some animals that live in cold have long ears; To help them to maintain the body temperature warm. ( )

**3.Match:**

(A)	(B)
1) Light	a) An animal with a bowl-like face.
2) Owl	b) It depends on the echo of the sound in locating the prey.
3) The bat	c) It is a visible form of energy that is transmitted in the form of waves.

**4. Complete the following sentences from the two brackets:**

- ① If several bodies covered equal distances in ..... time, Then these bodies move at different speeds. (equal – different)
- ② ..... helps owl to pick distant sounds and amplify them. (Head rotation – Specialized head feathers)
- ③ An animal that can escape from enemies because of the length its hind leg ..... (Arctic fox – Jerboa)

**5. Answer the following questions:**

- ① Some animals have thorns to defend themselves against enemies. What type of adaptation? .....
- ② The code can be expressed by using some patterns Give one example .....
- ③ Butterflies that have colour like the colour of the tree they live on this phenomenon called .....

## Governorates Exams 2021- 2022 – Exam (14)

### 1 Choose the correct answer from the following:

1 The smooth, flat and shiny surface of mirror ..... light waves energy.

- A. absorbs      B. refracts      C. reflects      D. transmits

2 Rami stopped his bike because he heard a car speeding towards. Which system received the external signal of hearing that enabled rami to respond by stopping his bike?

- A. Muscular system   B. Skeletal system   C. Digestive system   D. Nervous system

3 Which one is suitable when a living organisms develop their traits that help them to survive?

- A. Adaptation      B. Death      C. Production      D. Camouflage

4 The ability of fireflies to emit flashes of light or change their pattern is an example of .....

- A. Camouflage      B. Behavioural adaptation      C. structural adaptation      D. Hereditary

5 The force that causes the falling down ball when you are throwing it up.

- A. Pushing force      B. Friction force      C. Gravity force      D. No correct answer

### 2 Put (✓) or (x):

1. Penguins' feet freeze while walking on ice. ( )

2. Brown bear lives in forest and its brown fur helps it to hide among trees. ( )

3. The stopping object can't move until a force acts on it. ( )

4. Mirror is an example of smooth surface. ( )

5. Hitting a tennis ball needs a pulling force. ( )

6. If an object moves, it means that forces acting on it are unbalanced. ( )

7. When a roller coaster starts moving, the kinetic energy changes into ( )

potential energy. ( )

8. When a collision occurs, part of the kinetic energy is changed into other ( )

forms of energy. ( )

### 3 Complete the following

1. In the electric bell, ..... energy changes into ..... energy.

2. .... objects reflect most of light rays like mirror and aluminium foil.

3. Desert plants are distinguished by their ..... leaves, while rainforests are distinguished by ..... leaves.

4. Fireworks produce sound energy and ..... energy which are considered as forms of ..... energy.

6. When the train's speed decreases, its kinetic energy .....

7. A ball that rolls on a ramp, its speed .....

8. During a collision of cars, the airbag automatically ..... at high speed and fills with gas.

**4 Write the scientific term:**

1. An organ is the main control centre of the body. (.....)
2. Structures like balloons and they contain little sacs surrounded by blood vessels. (.....)
3. The force that acts in the opposite direction of the object's movement to stop it. (.....)
4. The energy that is stored in the food we eat. (.....)

**5 Matching**

(A)	(B)
1. Food	a. it can be transformed into potential energy.
2. Gasoline	b. it is the source of energy for humans.
3. Kinetic energy	c. it is the stored energy in an object.
4. Potential energy	d. it cannot transferred into another form of energy.
	e. its burning inside an engine produces mechanical energy.

1. .... 2. .... 3. .... 4. ....

**Model (1)**

**Q1.A - Choose the correct answer:**

**1-All the following living organisms have mirror like membrane except.....**

- a) snakes
- b) fishing cats
- c) Dogs
- d) horses

**2-The sensory organ of the dolphin helps It do all the following except ...**

- a. Surviving
- b. Searching for food
- c. Searching for water
- d. Protecting itself under water

**3-Human activities and ball habits, can pollute.....of an ecosystem**

- A-Air and soil only
- B-soil and waterways only
- C-air and waterways only
- D-air, soil and waterways

**4-The force that is exerted when objects rub against each other**

- a)weight
- b)gravitational
- c)friction
- d)pressure

**B-What is the type of adaptation in panther chameleon eyes?**



**Q2-put (true) or (false)**

- 1-Digestive system ends by anus (.....)
- 2-the ears of arctic fox are longer than those of fennec fox (.....)
- 3-The food gets broken down into nutrients in the small intestine (.....)
- 4-stomach connects esophagus with large intestine (.....)
- 5-food passes from mouth to stomach through a narrow tube known as small intestine (.....)

**Q3.A-write the scientific term:**

- 1-they are in the car airbags and allow them to deflate fast after collision (.....)
- 2-liquid used to move cars as it store chemical energy (.....)
- 3-a process where two objects or more crash in each other and energy transfer happen (.....)
- 4-a heavy steel ball swings on a cable and destruct buildings (.....)
- 5-safety equipment in cars prevent passengers from moving forward when car stop suddenly (.....)

**Q3.B-Cross the odd word :**

- Penguin – Polar bear – snake – arctic fox
- Sound energy – light energy – thermal energy - chemical energy



**Model (2)**

**Q1. A- Put (x) or (√):**

- 1-force is necessary to move or stop an object (.....)
- 2-the angle of the incline affects the speed of an object moving on it (.....)
- 3-the speed of the ball moving down change by changing the ramp height (.....)
- 4-all objects move at similar speed around us (.....)

**B- Give reason gills are a unique structural adaptation in fish**

**Q2.correct the underlined word:**

- 1-The moving balls of newton's cradle keeps their kinetic energy as time passes (.....)
- 2-When object move in a high speed it has a small amount of kinetic energy \_ (.....)
- 3-The larger density of an object the more fuel it consumes (.....)
- 4-The speed of an object affects its potential energy (.....)
- 5-Airbags are made of thick wooden materials (.....)

**Q3-A- choose the correct answer:**

- 1-bull shark can live in.....  
a) fresh water    b)salty water    c)both fresh and salty water
- 2-fennec fox has .....color fur  
a) white    b) black    c) sandy
- 3-panther chameleon has .....feet  
a) flat    b) U-shaped    c) V-shaped
- 4-fennec fox .....like dogs  
a) white    b) eat    c) pants
- 5-All the following are organs of digestive system except.  
a) Mouth    b) nose    c) stomach

**Q3-B- What happen if :**

- firefly wants to attract a mate to reproduce.

.....

**Model (3)**

**Q1) Complete**

- 1-The speed of a roller coaster starts to move it gets energy from.....electric motors.....found in its beginning car which is operated by.....
- 2-If you have ability to push a chair, so you have.....
- 3-Any object will move, if it has ..... energy
- 4-in gas oven, ..... energy changes into ..... energy

**B-Mention** the changes of energy when a skater begins to skate.

**Q2)A- Cross out the odd word**

- 1-Guitar- flashlight - radio - alarm bell
- 2-The sun - electric heater -match- radio
- 3-Electric mixer - electric fan -washing machine -alarm bell
- 4- Nose – mouth – small intestine – stomach

**B-Give reason**

1-Fuel Inside the car is similar to the food inside the human body

.....

2- The toy car moves after filling its spring, then let it to free.

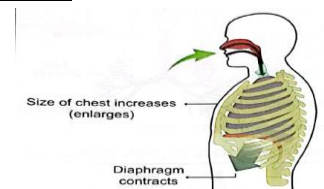
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**Q3)-Put (true) or (false)**

- 1- All types of sharks live in fresh water ( ... ...)
- 2- Radio is operated by sound energy, and produces electric energy (.....)
- 3- When a moving object is affected by two opposite equal forces it will stop(.....)
- 4- We eat food to obtain electric energy (.....)
- 5- Energy don't transfer from an object to another (.....)

**B- From the opposite fig. answer the following questions**

- 1- The figure refers to .....process
- 2- The diaphragm muscle will .....during this process



**Model (4)**

**Q1-choose the correct answer**

**1- A very big truck needs ..... to move**

- A-very small engine      b) small engine      c) very big engine      d)no engine

**2-both of human and fish...**

- A) Can breathe in air    b) Can breathe in water    c) Use oxygen gas to breathe    d) Use carbon dioxide to breathe

**3-Gills differs from lungs, in that gills.....**

- A) Take oxygen gas    b) Expel carbon dioxide gas    c) Extract oxygen from water    d) Extract oxygen from air

**4--reading and writing are common types of communication in .....**

- A) human      b) plants      c) animals      d) birds

**5. Which of the following choices explain how the body reacts to the smell of food in the correct order?**

- a. The brain the nose the nerves      b. The nose the brain - the nerves  
c. The nerves the brain the nose      d. The nose the nerves the brain

**6. The organ that processes the information collected through the sense of sight is**

- a. The spinal cord      b. The nerves      C. The brain      d. The eyes

**Q2)A- Complete the following:**

1. Some animals go out at night in their habitats to .....
2. ....is a sensory organ.
3. The .....transmit Information's from and to the brain.
4. to measure the speed of a moving car we need to divide the .....it travels over. ...Taken

**B- Give reason**

**1- The blood vessels in penguin feet wave around each other**

**Q3)A- put (true)or(false)**

- 1- To slow down the speed of the shockwave truck quickly, parachutes are used (.....)
- 2- Speaking is the only way of communication between people (.....)
- 3-The main difference between pulling and pushing forces in the direction of the force (...)
- 4-To open or close a door, we have to push or pull it (.....)

**B-Look at the following photos, then complete:**

**1. The sharpest senses that animal (1) has are ...**



Animal (1)



Animal (2)

**3. The sharpest sense that animal (2) has is .....**

## Model (5)

### Q1)-Complete

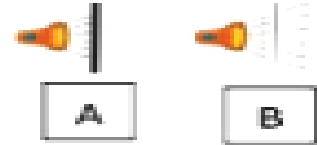
- 1-The bicycle cannot move without a .....acting on it
- 2- .....from the plants that can survive in habitats that have shortage of water
- 3- The wall of the small intestine absorbs the digested food into your bloodstream through .....
- 4-The chair stands on the floor due to the pulling force of .....
- 5-To move anything from one place to another, you need to ..... it or.....

### Q2)-Correct the underlined words

- 1-When you jump up, the force of friction pulls you back to the ground
- 2-If the car runs out of fuel, Its speed increases
- 3-The motion of a car is opposed by the gravity of air
- 4-Moving object stops when a force of the same amount is applied to it in the same direction

**B:1-Look at the** path of the light rays in pictures (A) - (B). Determine which of the two objects is opaque and which is transparent

(object) (A)..... (object) (B).....



### Q3-choose the correct answer: -

- 1-by increasing speed of a ball travelling down ward its kinetic energy ...
  - a)increase
  - b)decrease
  - c)doesn't change
  - d)become zero
- 2-a moving car travels a 100 meter distance in 5 seconds so its speed will be .....
  - a)10 m/sec
  - b)15 m/sec
  - c)20 m/sec
  - d)5m/sec
3. To describe the delicious taste of a pedal of chocolate, we should use the sense of
  - a. Sight
  - b. Smell
  - c. Taste
  - d. Touch
4. To describe the color of your school bag to your friend you should use the sense of
  - a. Sight
  - b. Smell
  - c. Taste
  - d. Touch
5. Which of the following senses we use during watching a film on the TV?
  - a. Sight and taste
  - b. Sight and smell
  - c. Hearing and touch
  - d. Sight and hearing
- 6-pressing the gas pedal of a car sends more .....to the engine
  - a)air
  - b)fuel
  - c)water
  - d) Juice

### B - Explain why :

-Leaves of plants that float above the surface of the water are so wide.

.....



**Model (6)****Q1:- Choose the correct Answer**

**1. To know if a cup of water is hot or cold, we need to use the sense of**

- a. Sight                      b. Smell                      c. Hearing                      d. Touch

**2. Some animals go out at night in their habitats to .....**

- a. Search for air    b. Search for predator    c. Search for a prey    d. Sleep In the open air

**3. All of the following are sensory organs except the**

- a. Eyes                      b. Nose                      c. Skin                      d. Lungs

**4. The nerves transmit Information's from and to the brain in the form of**

- a. Magnetic Impulse    b. Electrical Impulse    c. Light Impulse    d. Sound Impulse

**Q 2) Write the scientific term of each of the following**

**1- A reptile that can sense the body heat of its preys at night using a special part of its face ( .....**)

**2-A property by which a bat can locate its prey Insects through the sounds reflected from them (.....)**

**3-An animal that can turn its head backwards and has a bowl-shaped face and large eyes (.....)**

**4-A system that controls all the body functions and nerves are one of its parts(.....)**

**Q3)-Complete**

**1- when you push a table on the floor the .....transfer from your body to table**

**2- When two cars move on the same road car (A) its speed 10 m/s while car (B) its speed 30 m/s , this means that car .....move longer distance than car .....at same time**

**3- When you kick the ball standing in land, it starts to .....**

**4- .....objects allow light rays to pass through them**

**5- The fishing cat can hunt at night depending on the sense of .....while snake can hunt at night depending on its ability to sense .....which comes out from its .....body**

## Model (7)

### Q 1) Put (x) or (√)

1. The sensory receptors in the eyes receive the sounds produced by a radio and send it to the brain ( )
2. Animals that are active during the daytime are called the nocturnal animals ( )
3. Some animals prefers hunting during the night that can hunting during the day ( )

### B) What is structural adaption of Jerboa?

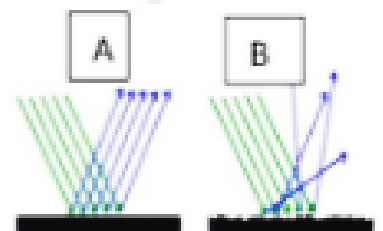
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 .....

### Q2.complete the following:

- 1- To describe the delicious piece of chocolate, we should use the sense of.....
- 2-the speed of a car on a highway is .....of the car in a traffic jam
- 3-If a truck moves in a high speed so it has more.....energy.
- 4-when objects collide with each other..... Is transferred between them

### Q3) Answer the following questions :

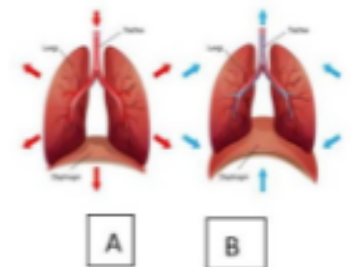
- 1- Which of the following surfaces represents the reflection of light rays from a wooden spoon - and what is the reason?



- 2- look at the following two figures. Identify the name of each of the two processes in Figures

A- .....

B- .....

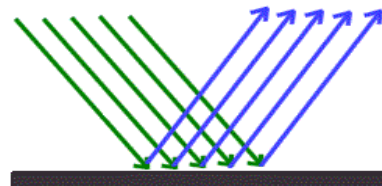


## Model (8)

### **Q 1) Put (x) or (√)**

- 1-The body senses and system work separately when animals run away from their enemies(...)
- 2-The Egyptian jerboa lives in forests. (.....)
- 3-A jerboa has large ears which help in sensing the snakes. (.....)
- 4-The Egyptian jerboa can jump for long distances depending on its long hind legs. (..... )
- 5-Hopping of the jerboa in zigzag pattern to run away from danger is considered as a structural(.....)
- 6-Amphibians includes frog, starred agama and salamanders (.....)
- 7-Arctic foxes and amphibians cannot found in the same habitat (.....)
- 8-Frogs have a small digestive system as they are small reptiles (.....)
- 9-Clean water and air are very important for digestion process in amphibians (.....)
- 10-seatbelt enable driver to see the road
- 11-fast moving objects can be exposed to less damage than slow ones (.....)
- 12-a small object on a low speed has a big amount of kinetic energy (.....)
- 13-when the mass of object increase in need less force to move (.....)
- 14--slower and smaller objects have more kinetic energy than that of larger faster (.....)

### **Q2) What is the type of reflection? Why?**



### **Q3)-Correct the underlined words**

- 1-When you jump up, the force of friction pulls you back to the ground (.....)
- 2-If the car runs out of fuel, Its speed increases (.....)
- 3-The motion of a car is opposed by the gravity of air(.....)
- 4-Moving object stops when a force of the same amount is applied to it in the same direction (....)
- 5-The rope in the tug-of-war game may not move towards any team, if both teams push with the same force (.....)



## Model (2)

### Q1. Put (x) or (√):

- 1-force is necessary to move or stop an object(√.)
- 2-the angle of the incline affects the speed of an object moving on it (√.)
- 3-the speed of the ball moving down change by changing the ramp height(√.....)
- 4-all objects move at similar speed around us (x)

**B- Give reason** because it allows fish to live and breath under water

### Q2.correct the underlined word:

- 1-the moving balls of newton's cradle keeps their kinetic energy as time passes(**mechanical**)
- 2-when object move in a high speed it has a small amount of kinetic energy (**P.E**)
- 3-the larger density of an object the more fuel it consumes (**mass - speed**)
- 4-the speed of an object affects its potential energy (**K.E**)
- 5-airbags are made of thick wooden materials (**THIN NYLON**)

### Q3-choose the correct answer:

1-bull shark can live in.....

- a)fresh water    b)salty water    c)both fresh and salty water

2-fennec fox has .....color fur

- a)white    b)black    c)sandy

3-panther chameleon has .....feet

- a)flat    b)U-shaped    c)V-shaped

4-fennec fox .....like dogs

- a)white    b) eat    c) pants

5-All the following are organs of digestive system except.

- a) Mouth    b) nose    c) stomach

### Q3-B- What happen

- firefly wants to attract a mate to reproduce.

They use their wings to form different flash pattern



Mr.Science  
Sherif Hawary

### Model (3)

#### Q1)A- Complete

- 1-The speed of a roller coaster starts to move, it gets energy from. **Motors**.....found in its beginning car which is operated by ....**ELECTRICITY**
  - 2-If you have ability to push a chair, so you have **Energy**
  - 3-Any object will move, if it has **.kinetic** energy
  - 4-in gas oven, **chemical** energy changes into **heat** energy
- B--When a skater begins to skate, his stored P.E changes into K.E energy**

#### Q2) Cross out the odd word

- 1-Guitar - **flashlight** - radio - alarm bell
- 2-The sun-electric heater-match-**radio**
- 3-Electric mixer- electric fan - washing machine-**alarm bell**
- 4- **Nose** - mouth - small intestine - stomach

#### Give reason

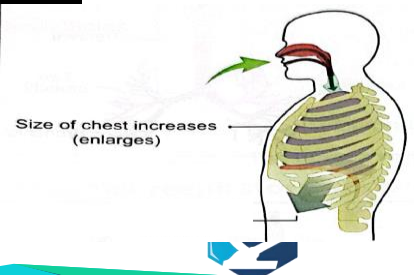
- 1-Fuel Inside the car is similar to the food inside the human body  
**BEC. Both of them burn produces heat and kinetic energy**
- 2- The toy car moves after filling its spring, then let it to free.  
**BEC. Potential energy stored change into kinetic energy**

#### Q3)-Put (true) or (false)

- 1- All types of sharks live in fresh water ( **F** )
- 2- Radio is operated by sound energy, and produces electric energy ( **F** )
- 3- When a moving object is affected by two opposite equal forces it will stop(...**T**..)
- 4- We eat food to obtain electric energy ( **F** )
- 5- Energy don't transfer from an object to another ( **F** )

#### B- From the opposite fig. answer the following questions

- 1- The figure refers to **Inhalation** process
- 2- The diaphragm muscle will **Contract** during this proces:



### Model (4)

**Q1-choose the correct answer**

**1- A very big truck needs ..... to move**

- A-very small engine    b) small engine    c) **very big engine**    d)no engine

**2-both of human and fish...**

- A) Can breathe in air    b) Can breathe in water    c) **Use oxygen gas in breathe**    d) Use carbon dioxide to breathe

**3-Gills differs from lungs, in that gills.....**

- A) Take in oxygen    b) Expel out carbon dioxide gas    c) **Extract oxygen from water**    d) Extract oxygen from air

**4-reading and writing are common types of communication in .....**

- A) **human**    b) plants    c) animals    d) birds

**5. Which of the following choices explain how the body reacts to the smell of food in the correct order?**

- a. The brain the nose the nerves    b. The nose the brain - the nerves  
c. The nerves the brain the nose    **d. The nose the nerves the brain**

**6. The organ that processes the information collected through the sense of sight is**

- a. The spinal cord    b. The nerves    **C. The brain**    d. The eyes

**Q2) Complete the following:**

1. Some animals go out at night in their habitats to **catch preys**
2. **nose** is a sensory organ.
3. The **nerve**s transmit information's from and to the brain.
4. to measure the speed of the moving car we need to divide the **Distance** it travels over the **time**.... Taken

**B- Give reason**

**-To warm each other for keeping its toes from freezing**

**Q3) put (true)or(false)**

- 1- To slow down the speed of the shockwave truck quickly, parachutes are used (**..T..**)
- 2-Speaking is the only way of communication between people (**F..**)
- 3-The main difference between pulling and pushing forces in the direction of the force (**.T**)
- 5-To open or close a door, we have to push or pull it (**...T..**)

**B-Look at the following photos, then complete:**

1. **Smell and hearing**

2. **hearing**



Animal (1)



Animal (2)

### Q1)-Complete

- 1-The bicycle cannot move without a **Force**. Acting on it
- 2- **Acacia** from the plants that can survive in habitats that have lackage of water
- 3- **Tiny blood vessels**
- 4-The chair stands on the floor due to the pulling force of **.gravity**
- 5-To move anything from one place to another, you need to **push** it or. **Pulling**

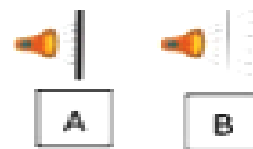
### Q2)-A - Correct the underlined words

- 1-When you jump up, the force of friction pulls you back to the ground (**gravity**)
- 2-If the car runs out of fuel, Its speed increases (**decrease** )
- 3-The motion of a car is opposed by the gravity of air (**friction** )
- 4-Moving object stops when a force of the same amount is applied to it in the same direction (**opposite** )

**B - Look at the** path of the light rays in pictures (A) - (B). Determine which of the two objects is opaque and which is transparent

(object) (A). **is opaque**

(object) (B) is **transparent**



### Q3-choose the correct answer:-

1-by increasing speed of a ball travelling down ward its kinetic energy ...

- a)increase                      b)decrease                      c)doesn't change                      d)become zero

2-a moving car travels a 100 meter distance in 5 seconds so its speed will be .....

- a)10 m/sec                      b)15 m/sec                      c)20 m/sec                      d)5m/sec

3. To describe the delicious taste of a pedal of chocolate, we should use the sense of

- a. Sight                      b. Smell                      c. Taste                      d. Touch

4. To describe the color of your school bag to your friend you should use the sense of

- a. Sight                      b. Smell                      c. Taste                      d. Touch

5. Which of the following senses we use during watching a film on the TV?

- a. Sight and taste                      b. Sight and smell                      c. Hearing and touch                      d. Sight and hearing

6-preesing the gas pedal of a car sends more .....to the engine

- a)air                      b)fuel                      c)water                      d) Juice

### B - Explain why :

-Leaves of plants that float above the surface of the water are so wide.

To absorb large amount of sun light

### Model (6)



### **Q1:- Choose the correct Answer**

**1. To know if a cup of water is hot or cold, we need to use the sense of**

- a. Sight      b. Smell      c. Hearing      d. **Touch**

**2. Some animals go out at night in their habitats to .....**

- a. Search for air    b. Search for predator    c. **Search for a prey**    d. Sleep In the open air

**3. All of the following are sensory organs except the**

- a. Eyes      b. Nose      c. Skin      d. **Lungs**

**4. The nerves transmit Information's from and to the brain in the form of**

- a. Magnetic Impulse    b. **Electrical Impulse**    c. Light Impulse    d. Sound Impulse
- 

### **Q 2) Write the scientific term of each of the following**

**1- A reptile that can sense the body heat of its preys at night using a special part of its face** ( **snake..**)

**2-A property by which a bat can locate its prey Insects through the sounds reflected from them** ( **echolocation** )

**3-An animal that can turn its head backwards and has a bowl-shaped face and large eyes** ( **owl** )

**4-A system that controls all the body functions** ( **nervous system**)

---

### **Q3)-Complete**

**1-when you push a table on the floor the energy transfer from your body to table**

**2- When two cars move on the same road car (A) its speed 10 m/s while car (B) its speed 30 m/s , this means that car B..move longer distance than car A at same time**

**3- When you kick the ball standing in land, it starts to Move**

**4- Transparent objects allow light rays to pass through them**

**5- The fishing cat can hunt at night depending on the sense of sight.while snake can hunt at night depending on its ability to sense heat.which comes out from its prey body**

## **Model (7)**

**Q 1) Put (x) or (√)**

1. The sensory receptors in the eyes receive the sounds produced by a radio and send it to the brain( x )
2. Animals that are active during the daytime are called the nocturnal animals ( x )
3. Some animals prefers hunting during the night that cannot hunting during day (√)

**B) What is structural adaption of Jerboa?**

It has large ears to listen predator

It has long hind legs to can jump long distance



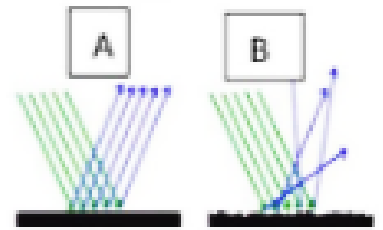
Mr.Science  
Sherif Hawary

**Q2.complete the following:**

- 1- To describe the delicious piece of chocolate, we should use the sense of **taste**
- 2-the speed of a car on a high way is **.more than** .. the car in a traffic jam
- 3-If a truck moves in a high speed so it has more **Kinetic** energy.
- 4-when objects collide with each other **energy** Is transferred between them

**Q3) Answer the following questions :**

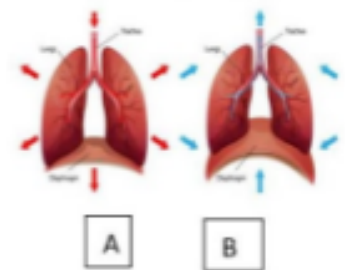
- 1- Which of the following surfaces represents the reflection of light rays from a wooden spoon - and what is the reason?



- 2- look at the following two figures. Identify the name of each of the two processes in Figures

A- .....

B- .....



**Model (8)**

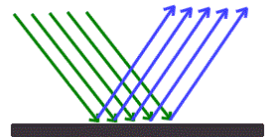
**Q 1) Put (x) or (√)**

- 1-The body senses and system work separately when animals run away from their enemies(x)
- 2-The Egyptian jerboa lives in forests. (x)
- 3-A jerboa has large ears which help in sensing the snakes. ( x)
- 4-The Egyptian jerboa can jump for long distances depending on its long hind legs. (√ )
- 5-Hopping of the jerboa in zigzag pattern to run away from danger is considered as a structural(x)
- 6-Amphibians includes frog, starred agama and salamanders (√.)
- 7-Arctic foxes and amphibians cannot found in the same habitat (√.)
- 8-Frogs have a small digestive system as they are small reptiles (x)
- 9-Clean water and air are very important for digestion process in amphibians (√)
- 10-seatbelt enable driver to see the road (x)
- 11-fast moving objects can be exposed to less damage than slow ones (x)
- 12-a small object on a low speed has a big amount of kinetic energy (x)
- 13-when the mass of object increase in need less force to move (x)
- 14--slower and smaller objects have more kinetic energy than that of larger faster (x)



**Q2) What is the type of reflection? Why?**

Regular reflection – because light rays are reflected in one direction from smooth surface



**Q3)-Correct the underlined words**

- 1-When you jump up, the force of friction pulls you back to the ground (**gravity**)
- 2-If the car runs out of fuel, Its speed increases (**decrease** )
- 3-The motion of a car is opposed by the gravity of air (**friction** )
- 4-Moving object stops when a force of the same amount is applied to it in the same direction (**opposite** )
- 5-The rope in the tug-of-war game may not move towards any team, if both teams push with the same force (**pull** )