PHOTON THAILAND 2026

Photon Science Competition (Thailand)

Science Primary G.1–2

Sunday, August 9, 2026

3:00 – 4:30 p.m. (90 minutes)

B

Instructions

1. This exam includes 30 questions, with 4 and 5 choices given (100 marks).
2. Use a 2B black pencil or darker one to fill in the circle.
3. Fill out your name, grade, school, test center, room, seat number, and identification number either in pen or in pencil.
4. If you want to change an answer that you have already marked, use a clean eraser to erase the incorrect answer and mark the new one.
5. It should be noted that figures in the exam are not drawn to scale.
6. Dictionaries, calculators, and electronic devices are not permitted in the test room.
7. Note taking can be done on the test paper only, with no extra sheet provided.
8. Do not write anything or make any symbols in the black barcode area along the edge of the paper except the answers on the answer sheet. Make sure the answersheet is not crumpled.
9. Submit the answer sheet to the proctor when the time is up.
10. Cheating in the exam may cause serious consequences including disqualification from receiving any award or joining the second round of the test held by PHOTON THAILAND.

Problems and Scoring

Part I : Number 1–25 are multiple-choice questions.
Each correct answer is worth 3 marks.

Part II : Number 26–30 are multiple-choice questions.
Each correct answer is worth 5 marks.

Should any disagreement arise, the judgment of the panel is deemed final.

Announcement of the results via
https://prod.miraah-education.com/student on September 14, 2026

: PhotonScienceCompetition.Thailand / Miraah.education

LINE
@miraah.edu

Part I : This is a multiple-choice test with 4 options. Students must choose only one best answer.

1. Mr. Monet is driving to work. He slows down when he sees a warning sign indicating that there is construction work near the road ahead. Which of the following signs did Mr. Monet most likely see?

1. 

2. 

3. 

4. 

2. Which statement most accurately compares the bones of infants and young children with those of adults?

1. Infants and young children have more separate bones because some bones have not yet fused together.

2. Infants and young children have fewer separate bones because new bones develop as the body grows.

3. Infants and young children have longer bones because bones gradually become shorter with increasing age.

4. Infants and young children have heavier bones because childhood bones contain more mass than adult bones.

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3. Annie plans to travel to another country where the temperature is between 2°C and 5°C. What type of clothing should Annie wear?

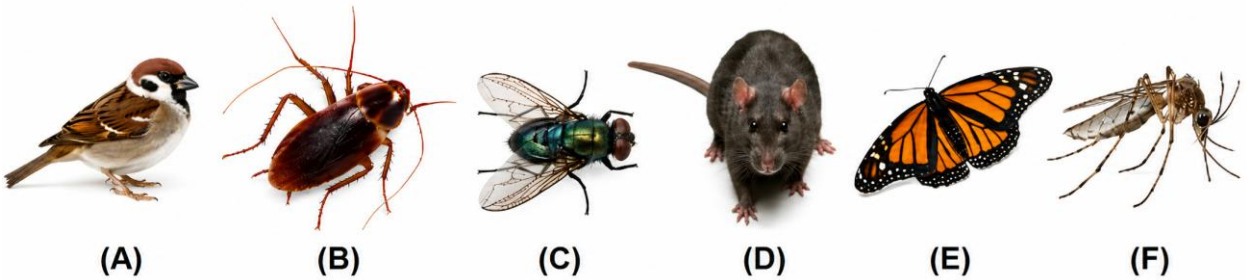
1. 

2. 

3. 

4. 

4. Based on the animals shown in the picture, which group consists entirely of animals that commonly act as disease carriers and may cause illness in humans?



1. (A), (B), and (C)
2. (B), (C), (D), and (F)
3. (B), (D), and (E)
4. (A), (B), (C), and (F)

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5. From each given letter string, remove the letters in the even-numbered positions, such as the 2nd, 4th, 6th, and 8th letters. Which letter string will then form a meaningful English word that means “a dog’s house”?

1. KRESNONPEGL
2. CGARVOEATEE
3. HAIGVOERTSE
4. NMEPSQTGELT

6. Based on the animals shown in the picture, what do all of these animals have in common?



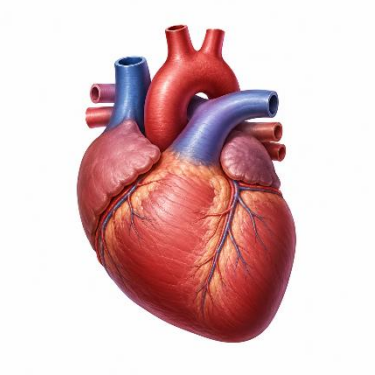
1. They can all move freely both on land and in water.
2. They all have fins that help them move from place to place.
3. They cannot produce their own food by themselves.
4. They all have legs that are used for movement.

7. Imagine you are building a healthy lunchbox for school.
Which combination is the BEST choice for a nutrient-dense, balanced meal?

1. Potato chips, a milk chocolate bar, and apple juice
2. A chicken and lettuce sandwich, an apple, and clean drinking water
3. French fries with tomato ketchup and a strawberry lollipop
4. A slice of pizza and a can of cola soda

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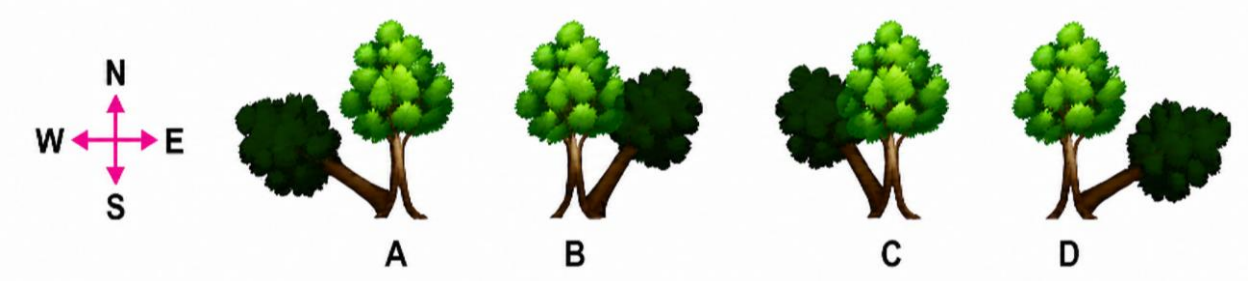
8. Based on the picture, which organ pumps blood to different parts of the body?

1. 
2. 
3. 
4. None of the above is correct.

9. Which of the following fabrics are made from plant fibres?

1. Jute fabric
2. Cotton fabric
3. Silk fabric
4. Both 1 and 2

10. The diagrams below show the directions of tree shadows at different times of the day. Which pair of diagrams represents the shadows formed in the evening?



1. A and B
2. A and D
3. B and C
4. B and D

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11. A scientist finds a new plant in the rainforest. It has wide, green leaves.

What is the primary purpose of these green leaves?

1. To look beautiful and attractive to birds
2. To absorb water directly from the air
3. To protect the plant from being stepped on by large animals
4. To absorb sunlight and make food through photosynthesis

12. Observe the group of animals below:



Earthworms



Snake



Snail

What common physical characteristics do these animals share?

1. They all have warm blood.
2. They all use lungs to breathe underwater.
3. They all lack legs to walk.
4. They all have hard shells on their backs.

13. Animals eat different kinds of food to get energy. Look at the menu for the three animals below:

Panda: Eat bamboo's leaves and stems.

Lion: Eats the meat of deer, zebras, and buffalo.

Bear: Eats sweet berries, green grass, and fresh fish.

Which word correctly describes the diet of a lion?

1. Herbivore
2. Carnivore
3. Omnivore
4. Producer

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14. As they develop, butterflies undergo a beautiful change called "metamorphosis." Which of the following shows the correct order of a butterfly's life cycle?

1. Egg ⟶ Pupa ⟶ Caterpillar ⟶ Adult butterfly
2. Egg ⟶ Caterpillar ⟶ Pupa ⟶ Adult butterfly
3. Pupa ⟶ Egg ⟶ Caterpillar ⟶ Adult butterfly
4. Adult butterfly ⟶ Pupa ⟶ Caterpillar ⟶ Egg

15. On a very hot summer day, a dog sticks out its tongue and pants before running to drink from a bowl of cold water. What is the benefit of water to animals?

1. It helps store reserve energy for the upcoming winter.
2. It helps cool down their body temperature and keeps them hydrated.
3. It increases their body weight to block external heat.
4. It stimulates their body to grow thicker fur to protect from the sun.

16. While playing in the park, Billy accidentally touches a hot metal bench. He pulls his hand away instantly because his brain receives a warning signal. Which organ on his hand felt the heat?

1. Tongue
2. Skin
3. Eyes
4. Nose

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17. If there are no bones inside your body, what would happen to the body structure?

1. Your skin would turn bright green.
2. You would stand up much taller.
3. Your body would become completely floppy like a jellyfish.
4. Your body would stay exactly the same.

18. To grow big and strong, children need a well-balanced diet for each meal. Which food group helps build your muscles and repair your body?



1. Fruits
2. Protein
3. Grains
4. Vegetables

19. In the Arctic, where it is extremely cold and covered in ice, traditional shelters called 'igloos' are built using compact blocks of snow. Why is snow used as a building material in this freezing environment?



1. Snow conducts heat quickly, making the interior cold.
2. Trapped air inside the packed snow acts as an insulator to trap heat.
3. Snow will melt instantly to provide drinking water indoors.
4. Snow absorbs sunlight to completely melt the shelter.

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20. While working in a school science laboratory, a student accidentally spilled a small amount of an unknown clear liquid onto the table. What is the first safety precaution the student should take?

1. Wipe the liquid quickly with bare hands.
2. Taste a drop of liquid to identify what it is.
3. Immediately inform the teacher or an examiner.
4. Ignore it and continue working on the test.

21. What is the name of the process when liquid water turns into water vapor due to heat from the sun?

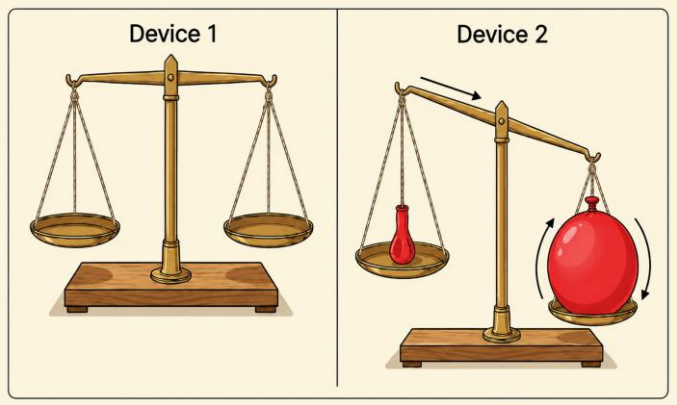
1. Condensation
2. Freezing
3. Evaporation
4. Melting

22. A student wants to accurately measure the exact volume of liquid medicine needed for a small bird. Which tool and unit of measurement are the most appropriate?

1. A long ruler measured in centimeters (cm)
2. A kitchen scale measured in kilograms (kg)
3. A small graduated syringe measured in milliliters (ml)
4. A thermometer measured in degrees Celsius (°C)

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23. Consider the two-pan balance shown below. Balloons A and B were initially identical and had the same mass. Balloon B was then inflated with air, while Balloon A remained deflated. When both balloons were placed on the balance, the pan holding Balloon B moved downward.



Which statement best explains this observation?

1. The added air has mass, so the total weight of Balloon B increases.
2. The added air provides lift, so Balloon B rises above the other balloon.
3. Balloon A contains water, so the left side of the balance becomes heavier.
4. The string holding Balloon A breaks, causing the balance to become uneven.

24. Polar bears have thick white fur and a thick layer of fat under their skin. Which non-living environment are these features perfectly suited for?

1. A hot, sandy desert
2. A deep, muddy swamp
3. A freezing, icy Arctic landscape
4. A dark, rocky underground cave

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25. Sarah uses a two-pan balance to compare the masses of an apple and a banana. She places the apple on the left pan and the banana on the right pan. The left pan moves lower than the right pan. What does this observation indicate?



1. The banana has a greater mass than the apple.
2. The apple has a greater mass than the banana.
3. The apple has a smaller mass than the banana.
4. The two fruits have exactly the same mass.

Part II : This is a multiple-choice test with 5 options. Students must choose only one best answer.

26. Look at the diagram of a simple volcano below:



[Volcano Peak]

The sides slope downward and outward from a single point at the top to a flat circular base at the bottom. What 3D geometric shape best describes the appearance of a classic volcano mountain?

1. Cylinder
2. Cone
3. Cube
4. Pyramid with a square base
5. Oval

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27. If all the water on Earth completely disappeared, what would be the most likely long-term effect on all living organisms?

1. All animals would adapt to survive without taking any water into their bodies.
2. All plants would grow faster and develop into much larger trees than before.
3. All living organisms would eventually be unable to survive and would die.
4. Earth's entire surface would automatically turn into dry sand within a short time.
5. Humans and animals would drink liquid air instead of water and survive normally.

28. Look at the pictures of these vehicles:



A Skateboard



A Bicycle



A Kick Scooter

What common geometric feature do all three of these transport tools need in order to move smoothly on the road?

1. They all need square boxes.
2. They all need sharp triangle sails.
3. They all need round wheels.
4. They all need long straight wings.
5. They all need heart-shaped seats.

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29. When plugging an electric fan into a wall socket, you must make sure your hands are completely dry. Why is it very dangerous to touch electrical switches or plugs with wet hands?

1. Because water will make the electric fan blow hot air.
2. Because electricity cannot pass through wet objects.
3. Because water is a conductor of electricity and you can get an electric shock.
4. Because wet hands will turn the plastic plug into wood.
5. Because the fan will start spinning backwards.

30. In very hot and sunny countries like Thailand, many traditional houses are built with high roofs and large open windows.



What is the scientific reason for this design?

1. To let heavy rocks blow into the house easily.
2. To allow hot air to rise up and escape, keeping the house cool.
3. To trap all the heat from the sun inside the bedrooms.
4. To make the house look like a giant triangle.
5. To prevent birds from sitting on the roof.

---------- End of Questions ----------

Please check your answers before submitting the answer sheet.

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Answers Keys : Science Primary - Grade 1 - 2

No.	Answers	No.	Answers
1.	1	21.	3
2.	1	22.	3
3.	2	23.	1
4.	2	24.	3
5.	1	25.	2
6.	3	26.	2
7.	2	27.	3
8.	3	28.	3
9.	4	29.	3
10.	4	30.	2
11.	4		
12.	3		
13.	2		
14.	2		
15.	2		
16.	2		
17.	3		
18.	2		
19.	2		
20.	3		

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