

### ALL QUESTIONS WORTH 4 POINTS

1. Benny lives in sunny Singapore where it is sunny and warm all year round. After just getting his driving licence, Benny decides to buy a car. However, he was unsure of what colour to choose. When driving on a sunny day, which car will be the least hot?

- A) White car
- B) Black car
- C) Blue car
- D) Red car



2. Ben enjoys eating broad beans and grows some in his garden. He sees that they look like the beans in the picture above. A few months later, he noticed some young bean plants growing near the old bean plants. What method of seed dispersal do you think the broad beans use?

- A) Wind dispersal
- B) Explosive action
- C) Animal dispersal
- D) Water dispersal



3. Global warming has been worsening over the years, and is partly due to increased greenhouse gas emissions which trap heat in the Earth's atmosphere. This is why more countries are trying to switch to renewable sources of energy to reduce such greenhouse gas emissions. Which of the following energy sources are non-renewable?

- A) Wind energy
- B) Solar energy
- C) Natural gas
- D) Hydroelectric power

4. SpongeBob SquarePants is working at the Krusty Krab restaurant when he accidentally spills some water on the floor. He notices that after a while, the water disappears even though he didn't wipe it up. What process is responsible for the water's disappearance?



- A) The water loses heat to the warmer surroundings and turns into the solid state
- B) The water loses heat from the colder surroundings and turns into the gaseous state
- C) The water gains heat from the colder surroundings and turns into the solid state
- D) The water gains heat from the warmer surroundings and turns into the gaseous state

5. The toys from Toy Story are exploring Andy's room. They notice that Woody's shadow looks like Buzz Light year when they shine a lamp behind him. What causes Woody's shadow to form?



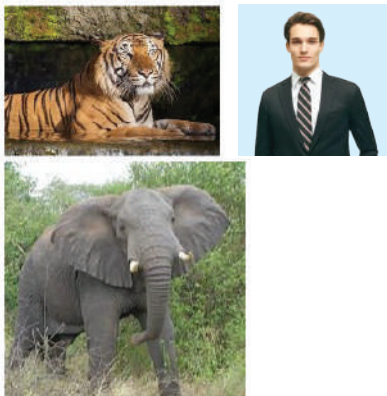
- A) Woody's body is transparent and blocks light from passing through, causing the shadow to form.
- B) Woody's body is opaque and blocks light from passing through, causing the shadow to form.
- C) Woody's body is opaque and allows light to pass through, causing the shadow to form.
- D) Woody's body is transparent and allows light to pass through, causing the shadow to form.

6. When a foetus is developing in the mother's body, it is supported by the placenta. The placenta is an organ in the mother's uterus and is connected to the baby. The placenta provides the baby with important nutrients such as oxygen and sugar, and remove waste products such as carbon dioxide. Which system in an adult has the same function as the placenta?



- A) Skeletal system
  - B) Respiratory system
  - C) Muscular system
  - D) Nervous system
7. Jacob is looking at different animals. The animals have been placed into Groups 1 and 2 based on how they reproduce:

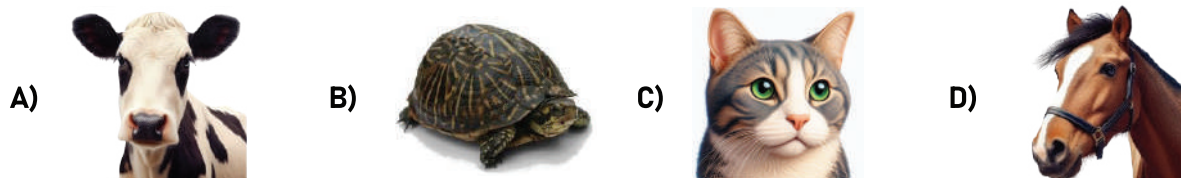
Group 1:



Group 2:



Which animal below belongs to Group 2?



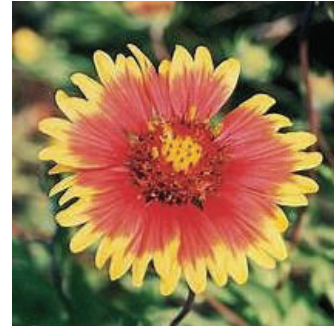
8. Joe has a medical condition where fungus grows on his feet. What can he do to reduce the growth of fungi on his feet?

- A) Dry his feet whenever they get wet
- B) Keep his feet in a warm place
- C) Put his feet in dark places
- D) Wear shoes and socks all the time



9. Plants, like all living things, need to reproduce. Plants reproduce with the help of flowers and fruits. They help to ensure that new seedlings will continue to grow every year. Which statement does **not** correctly describe plant reproduction?

- A) Germination occurs when flowers become fruits.
- B) Dispersal helps the plant reduce overcrowding.
- C) Pollination allows the plant to receive pollen to produce offspring.
- D) After a flower is pollinated, fertilisation occurs, then germination.



10. Bob bought a potted plant for his balcony. He learnt that plants need water to survive, so he decided to water his plant five times every day, with a whole bottle of water each time. Unfortunately, one week later, the plant died. Bob realized that giving the plant too much water caused it to die. What could explain this?

- A) Too much water displaces air spaces in the soil, thus the roots could not get enough carbon dioxide for photosynthesis.
- B) Too much water displaces air spaces in the soil, thus the roots could not get enough oxygen for photosynthesis.
- C) Too much water displaces air spaces in the soil, thus the roots could not get enough carbon dioxide for respiration.
- D) Too much water displaces air spaces in the soil, thus the roots could not get enough oxygen for respiration.

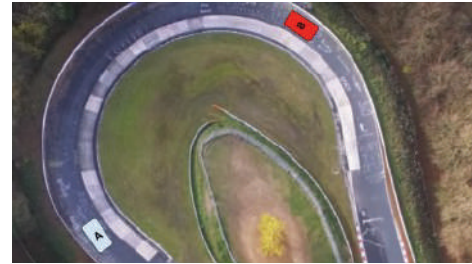
11. Fish are very special creatures! Besides living underwater, many things make the fish different from other animals such as the cat, turtle and horse. What makes a fish different from these other animals?

- A) It is covered in hair
- B) It lays eggs
- C) It has three body parts
- D) It uses gills to breathe





12. When driving, it is very important to be careful when turning and watch out for other cars. In the diagram, Car A must be very careful because it cannot see Car B when it turns the corner.



**Why can't car A see car B?**

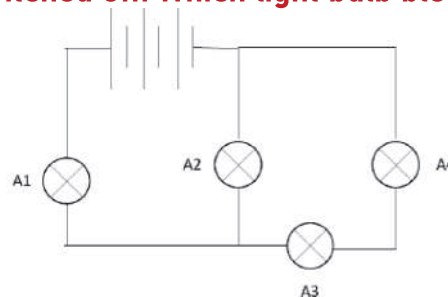
- A) The light that Car A produces does not reach Car B  
 B) Car B does not produce light  
 C) The light that reflects off Car B does not reach Car A  
 D) Car B does not reflect light
13. Mr. George is showing his class a plant he has found in the school garden. He says that this plant is a fern. Which statement below correctly describes the fern?



- A) The fern does not need water to survive.  
 B) The fern can reproduce by seeds.  
 C) The fern makes food at night.  
 D) The fern cannot bear flowers.
14. Jane has picked up four fruits as shown below. She wants to find out which fruit disperses by wind. In an experiment, she sets up a powerful fan as shown. She drops each fruit in front of the fan and aims to see how far the fruit travels before hitting the floor. Which fruit do you think travels the furthest?

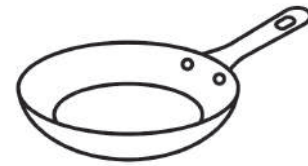


15. The circuit diagram below shows the arrangement of 4 light bulbs connected to a power source. Suddenly, one of the light bulbs blew. Sally noticed that all the light bulbs in the circuit switched off. Which light bulb blew?

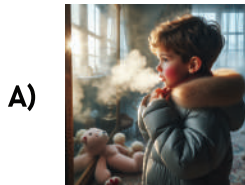


- A) A4                      B) A3                      C) A2                      D) A1

16. Candice is learning how to fry an egg for the first time and she is wary that the handle of the frying pan may be very hot. What material should Candice use to make the handle of the frying pan?



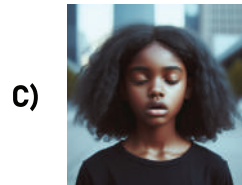
- A) Plastic, as it is a poor conductor of heat, thus it will not burn her hand when she is cooking.  
 B) Iron, as it is a good conductor of heat, thus it will be able to cook food quickly.  
 C) Iron, as it is a poor conductor of heat, thus it will not burn her hand when she is cooking.  
 D) Plastic, as it is a good conductor of heat, thus it will be able to cook food quickly.
17. We breathe in and out, in order to survive. We use up oxygen, and produce carbon dioxide and water vapour. The water vapour that we breathe out is invisible. How can we show that it exists?



Breathe out onto the mirror



Breathe into a warm room



Do not breathe for 1 minute



Breathe under water

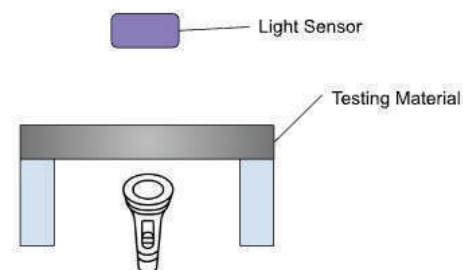
18. Apart from having leaves and roots, Organism N also has large traps. Insects that fall into these traps are digested by Organism N. Organisms can be classified based on the food they eat.

**Herbivores** - those who eat plants. A rabbit is a herbivore as it eats carrots.

**Carnivores** - those who eat meat. A fox is a carnivore as it eats rabbits. How can Organism N be classified?

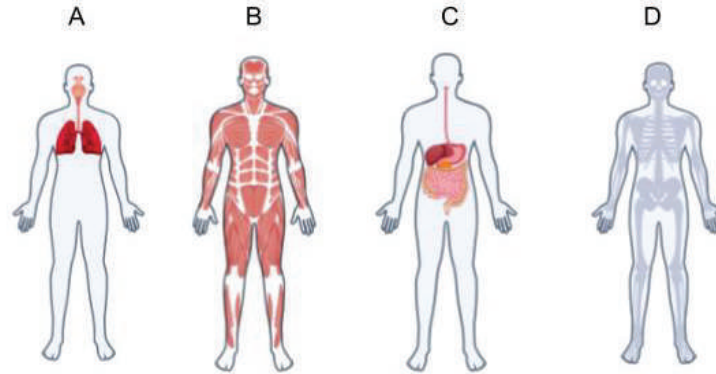


- A) Herbivorous plant                      B) Carnivorous animal  
 C) Carnivorous plant                    D) Herbivorous animal
19. David set up the experiment. He placed different testing materials on the stand. He switched on a light below the material, and recorded how much light was received by the light sensor.



- A) The type of material  
 B) Amount of light passing through the material  
 C) The thickness of material  
 D) The height of the stand

20. During the physical education lesson, Max's teacher taught the class that there are two systems in the body that work together to allow us to move. What are these two systems?



- A) A and C      B) A and D      C) B and C      D) B and D
21. Matthew is having a vacation with his family in Japan, experiencing winter for the first time. He realised when he breathed out, a white "cloud", X, appeared. Which of the following processes resulted in the formation of X?



- A) Boiling      B) Evaporation  
C) Condensation      D) Freezing
22. The Samoyed is a dog breed capable of thriving in extreme winter weather as low as  $-35^{\circ}\text{C}$  due to its double layer of fur. How does the fur help it survive in cold weather?



- A) The fur absorbs more heat from the Samoyed's body.  
B) The fur helps the Samoyed to gain more heat from the surroundings.  
C) The fur absorbs less heat from the Samoyed's body.  
D) The fur helps the Samoyed to lose less heat to the surroundings.
23. Sarah was playing in the park and observed different types of birds. She noticed that some birds were able to fly higher and longer than others. Which of the following characteristics most likely helps a bird to fly higher and for longer durations?



- A) Ability to sing      B) Brightly colored feathers  
C) Larger wings      D) Sharp beaks

24. In an experiment, Sarah observed that a plant in a pot was growing towards the sunlight coming from a window. She rotated the pot, but then noticed that after a few days, the plant started to lean towards the window again. Which of the following best explains why the plant grew sideways?



- A) The plant requires more water from the direction of the window  
B) The plant is growing towards the source of light for photosynthesis  
C) The plant is moving towards the source of heat  
D) The plant is growing towards the source of carbon dioxide
25. During a school excursion to a local park, students observed various animals and plants. Which of the following is a correct classification of these living things?



- A) A butterfly and a bird are both mammals  
B) A sunflower and a pine tree are both plants  
C) A fern and a mushroom are both plants  
D) A frog and a crab are both fish

26. Siti and Amir were playing in the park one sunny day. When Siti placed her hand on the wooden bench, it felt warm. However, when she touched the metal slide, it was so hot that she screamed in pain. Amir used a thermometer to measure the temperature of the wooden bench and metal slide. Surprisingly, both objects had the same temperature of 45°C. Which of the following best explains why the metal slide was hotter than the wooden bench?



- A) The metal slide reflected more sunlight than the wooden bench.  
B) The metal slide had more heat than the wooden bench.  
C) The metal slide absorbed more sunlight than the wooden bench.  
D) The metal slide conducted heat faster than the wooden bench.

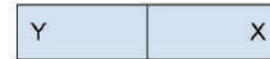
27. Sara rides her bicycle every night after dinner. Her bicycle has lights so drivers can see her coming from far away. The lights are not powered by batteries, but by an electric dynamo. Sara observed that her bicycle lights became brighter as she pedaled faster. Which of the following best explains how Sara's bicycle lights get brighter as she pedals faster?



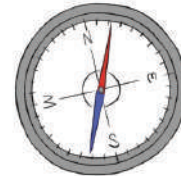


- A) More electrical energy is converted to heat energy.
- B) More kinetic energy is converted to heat energy.
- C) More heat energy is converted to electrical energy.
- D) More kinetic energy is converted to electrical energy.

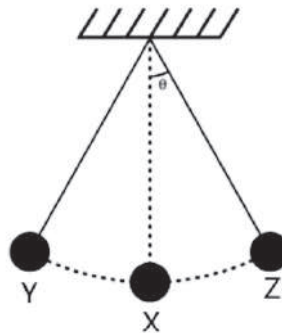
**28. Jane puts a compass near a bar magnet. Which poles are X and Y respectively?**



- A) X: South pole, Y: South pole
- B) X: South pole, Y: North pole
- C) X: North pole, Y: North pole
- D) X: North pole, Y: South pole

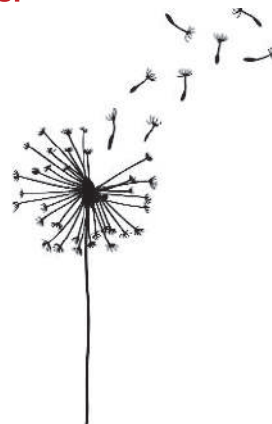


**29. Jonathan set up a simple pendulum by releasing the pendulum from position Z. The pendulum swung to position X then position Y. Which position(s) does the pendulum have the lowest amount of gravitational potential energy?**



- A) Point Y
- B) Point X
- C) Point Y and Z
- D) Point X and Z

**30. George was walking in the park when he saw many small plants growing. He immediately recognised it as plant L, whose fluffy seeds are used to make herbal soup. Plant L looks like this:**



**How might plant L disperse its seeds?**

- A) Disperse by wind
- B) Disperse by water
- C) Disperse by animal and birds
- D) Disperse by explosive action