



2nd Copernicus Olympiad
Natural Science Discipline, Category I,
Global Round Exam.

Name and Surname:

Country:

Date:

Grade:

Rules and Regulations:

- This exam has 25 multiple choice and classical type questions. Each question weighs 4 points. Maximum point student can get is 100. Four (4) incorrect answers will eliminate one correct answer.
- Time allocated for this exam is 70 minutes. You will start when proctor tells you to start and will stop when proctor tells you that time is over.
- Students are not allowed to use any kind of electronic device.
- This exam contains 10 pages. Before starting the exam please check and let your proctor know if any page is missing.
- Students can use both pen and pencil, but we recommend to use pencil, so it will be easier to clean when you make mistake.
- Each question has to have only one answer. Questions with more than one answer will be counted as incorrect.
- Students cannot consult the proctor as to the meaning of any question.
- Students must not give or receive assistance of any kind during the exam. Any cheating, any attempt to cheat, assisting others to cheat, or participating therein, or engaging in such improper conduct is a serious violation and will generally result in disqualifying.
- Students must sign each page of their exam paper. Candidates who fail to do so will have their exams disqualified.

End of rules and regulations. **Good luck!**

Q1: What is the term used to describe the explosion on the Sun's surface?

- A. flare
- B. plage
- C. prominence
- D. sunspot

Q2: Which animals breathe through gills?

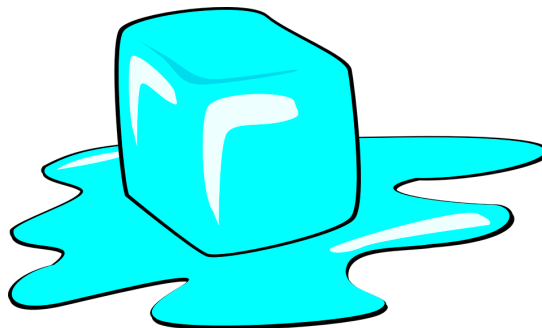
- 1 platypus
- 2 salmon
- 3 shark
- 4 turtle

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

Q3: Which of the following is **not** a mollusk?

- A. clam
- B. octopus
- C. snail
- D. turtle

Q4: What phase change is involved in the given illustration?



- A. condensation
- B. evaporation
- C. freezing
- D. melting

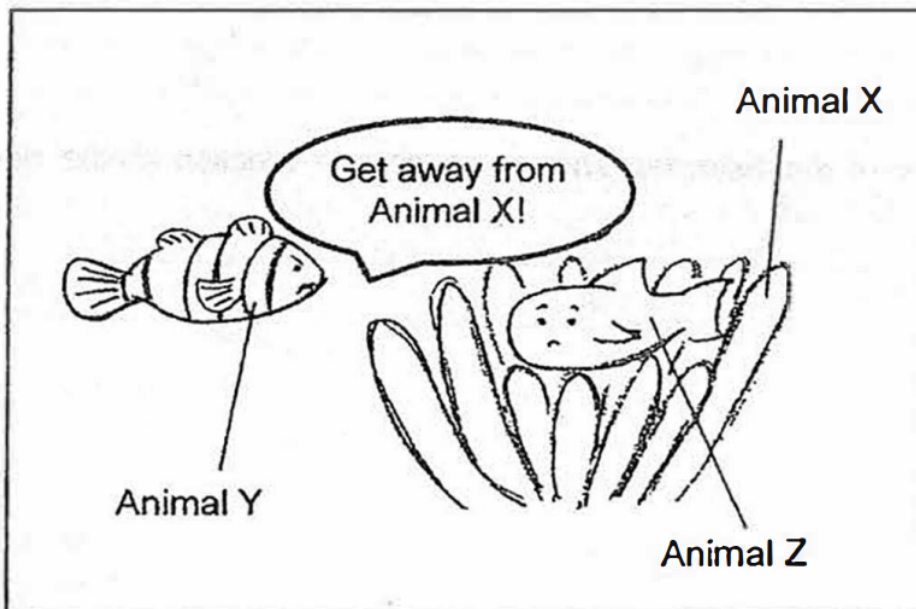
Q5: Which of the following is defined as the long-term interaction of organisms in an ecosystem where an organism may benefit, harmed, or unharmed as they interact with each other?

- A. competition
- B. parasitism
- C. predation
- D. symbiosis

Q6: What is the term used for an organism that is being harmed in a parasitic relationship?

- A. commensal
- B. host
- C. parasite
- D. vector

Q7: In the ocean, Animal Y is protected from its predator by the stinging tentacles of Animal X. Animal Z feeds on Animal X. Animal Y will chase away Animal Z to prevent it from eating Animal X as shown in the diagram below.



Which of the following statements correctly describe the relationship among Animal X, Animal Y and Animal Z?

- (1) Animal Z feeds on Animal X.
- (2) Animal X protects Animal Y from predators.
- (3) Animal Y helps protect Animal Z from Animal X.
- (4) Animal X and Y help each other to survive in the ocean.

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1, 2, and 4 only
- D. 1, 2, 3, and 4

Q8: Which of the followings is a simple machine?

- A. bicycle
- B. mechanical clock
- C. ramp
- D. scissors

Q9: Which of the following possesses chemical energy?

- (1) battery
 - (2) food
 - (3) gasoline
 - (4) wood
-
- A. 1 and 2 only
 - B. 2 and 3 only
 - C. 1, 3, and 4 only
 - D. 1, 2, 3, and 4

Q10: What theory best explains the birth of the solar system?

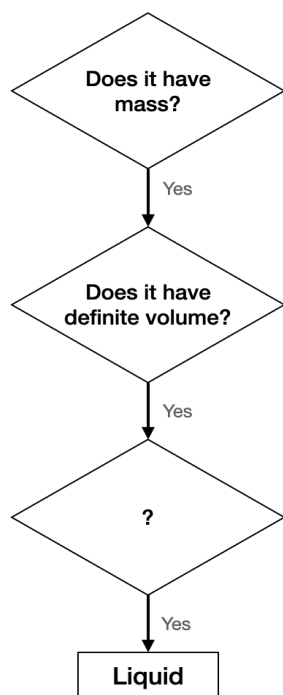
- A. Big Bang Theory
- B. Galaxy Theory
- C. Nebular Theory
- D. Tidal Theory

Q11: Which of the following characteristics make a grasshopper an arthropod?

- (1) having paired legs
- (2) presence of vertebra
- (3) presence of antenna
- (4) presence of wings

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

Q12: Study the flowchart below.



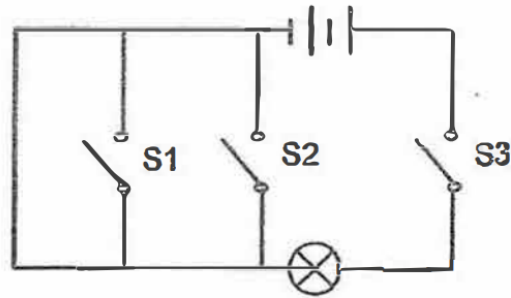
What question should be placed for the above flowchart to be accurate?

- A. Does it float?
- B. Can it be compressed?
- C. Does it have a definite shape?
- D. Does it take the shape of the container?

Q13: Which of the followings is **not** an element?

- A. carbon
- B. hydrogen
- C. methane
- D. oxygen

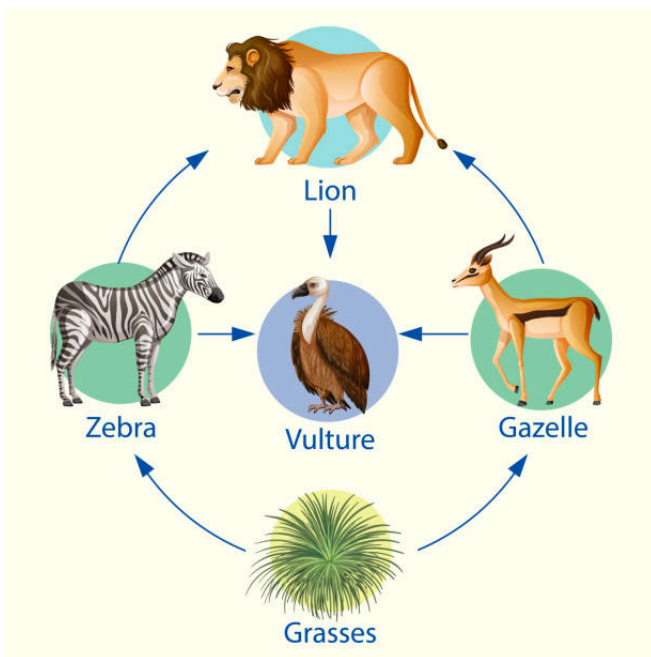
Q14: Below is a circuit diagram.



What is the minimum number of switches that needs to be closed for the bulb to light up?

- A. 0
- B. 1
- C. 2
- D. 3

Q15: Which is/are primary consumer(s) in the food chain below? Please write your answer.



Answer: _____

Q16: What are the two gases that mainly compose the Sun?



- (1) helium
- (2) hydrogen
- (3) methane
- (4) oxygen

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

Q17: What kind of animal has a body temperature that is dependent on the temperature of their surroundings?

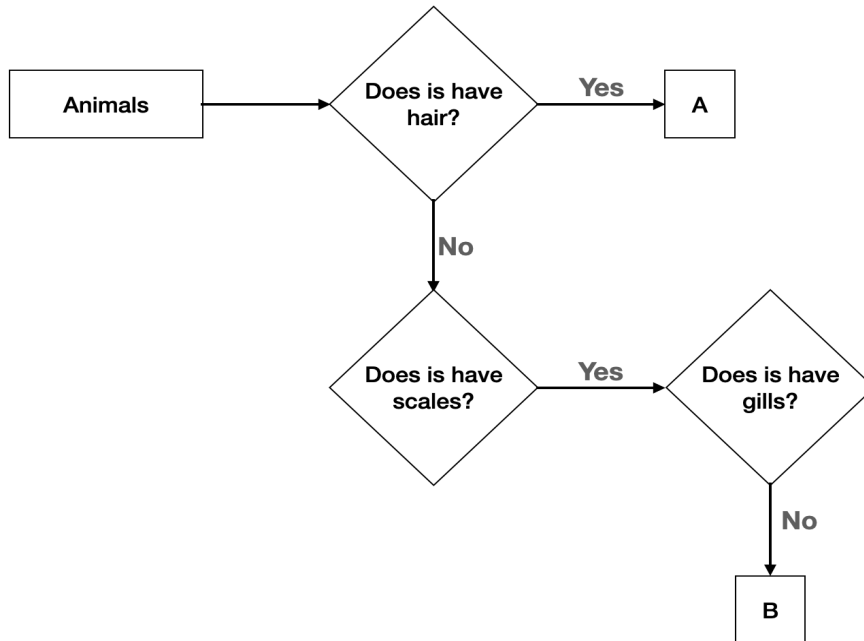
- A. aquatic
- B. cold-blooded
- C. warm-blooded
- D. terrestrial

Q18: Which statement is true about the following organisms?

	
fern	mushroom

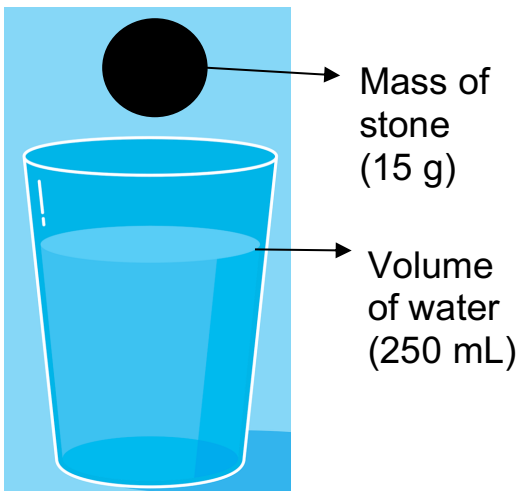
- A. Both grow on land only.
- B. Both can make their own food.
- C. Both are non-flowering plants.
- D. Both can reproduce through spores.

Q19: Study the flowchart below.



- A. A is insect, B is reptile
- B. A is mammal, B is fish
- C. A is insect, B is fish
- D. A is mammal, B is reptile

Q20: Analyze the given diagram below.



What will happen to the water level and the volume of water when a 15-g stone is dropped into the container with water?

- A. The water level increases but the volume of water remains the same.
- B. The volume of water increases but the water level remains the same
- C. Both the water level and volume of water increase
- D. Both the water level and volume of water remain the same

Q21: What usually happens to absorbed light?

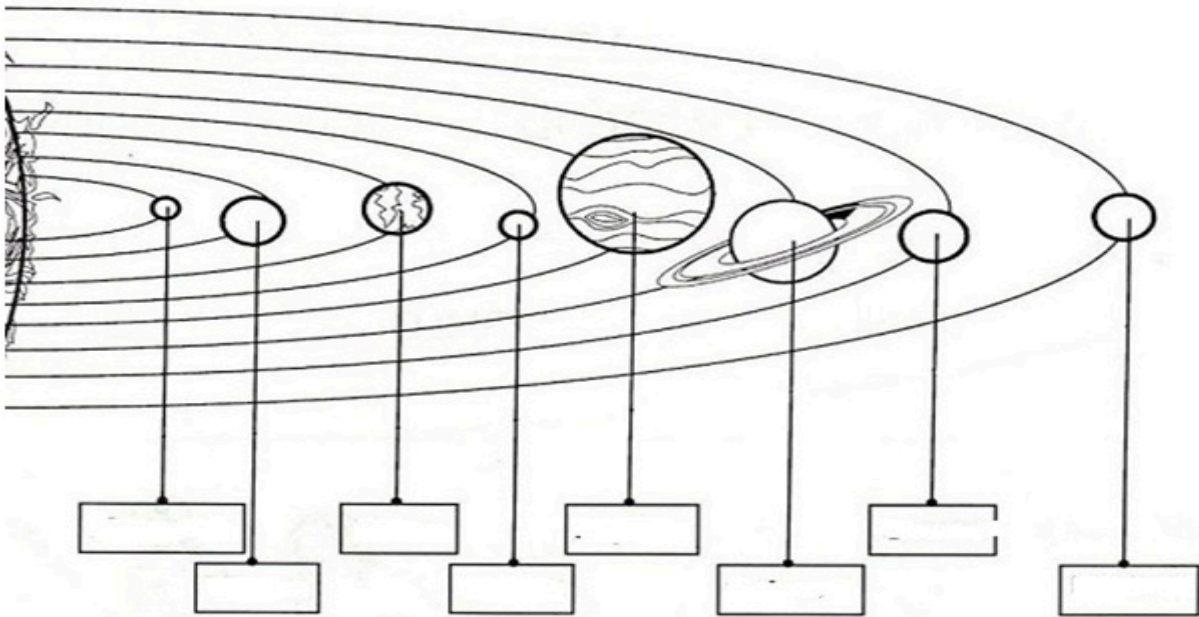
- A. It will bounce back.
- B. It will be converted to heat.
- C. It will pass through the object.
- D. It will bend away from the object.

Q22: Study the given figure of a roller coaster below. Which of the following statements best explains the energy transformation from point A to point B?



- A. Kinetic energy at point A transforms to potential energy at point B.
- B. Kinetic energy at point A transforms to potential energy as it goes down and transforms to potential energy again as it reaches point B.
- C. Potential energy at point A changes to kinetic energy as it goes down then becomes potential energy as it goes up to point B.
- D. Potential energy at point A transforms to kinetic energy as it goes down and up and then transforms to potential energy at point B.

Q23: Label the planets in the solar system.



Q24: Which of the followings is/are produced by green plants during photosynthesis?

- (1) glucose
- (2) oxygen
- (3) carbon dioxide

- A. 1 only
- B. 2 only
- C. 1 and 2
- D. 1 and 3

Q25: Which of the followings shows the correct pathway of food in the human digestive system?

- A. mouth → stomach → intestines → anus
- B. anus → intestines → stomach → mouth
- C. mouth → intestines → stomach → anus
- D. stomach → mouth → anus → intestines