

Total Questions: 50

Total Marks: 50

Time: 1hr S

Set: B

General Instructions for the Examinee

Opening Instructions:

Welcome to the world Maths Championship. Before we commence, please pay close attention to the following instructions:

- Electronic devices such as cell phones and MP3 players must be turned off.
- Do not share or exchange materials with other students.
- Unauthorized aids are strictly prohibited and its use can lead to disqualification.
- Calculators are not allowed for Grade 1-5
- Scientific Calculators are allowed for Grade 6-8
- Refrain from consulting notes, textbooks, teachers, or other students regarding the exam materials.

Instructions for Filling Student Details in OMR Sheet and Signing the Attendance sheet:

There will be a ten-minute break for students to fill in the details

Filling Student Details:

• Please refer to the instructions at the back of the OMR sheet for proper completion your Ensuret able darken circles completely. Questions

Signing Attendance sheet:

- Ensure you have signed the attendance sheet and OMR sheet provided.
- Invigilator should also sign your OMR sheet in the space provided.

Instruction for Taking Examination:

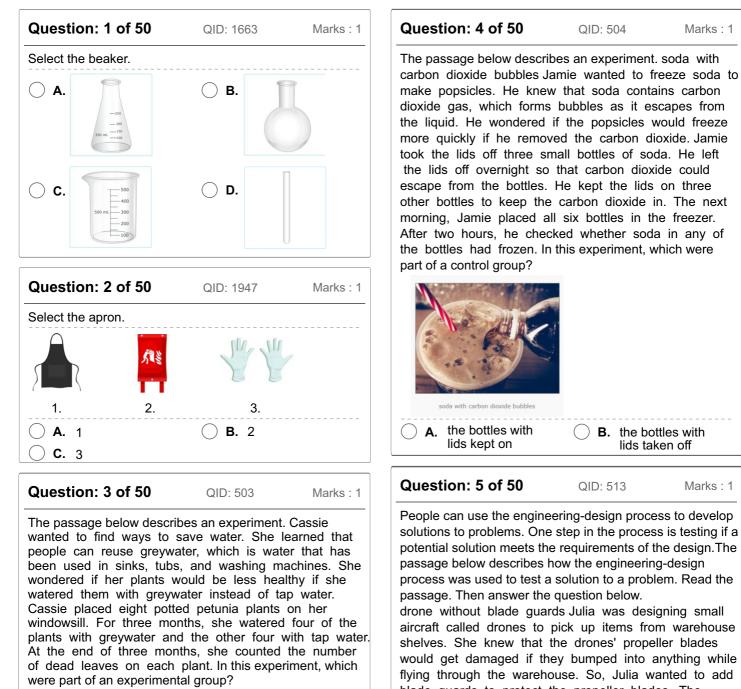
• The question paper has been sealed by a reverse

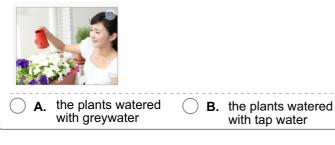
- jacket. You have to cut on the right side to open the paper at the time of commencement of the examination. Check whether all the pages of the question paper are intact.
 - This Examination is multiple-choice based, with either 4 options, 3 options or 2 options for each question.
 - Each grade level has specific question formats and durations:
- Grades 1 to 4: 35 questions of 1 mark each, there is no negative marking and if you
 - skip/leave a question no marks will be given but also no marks will be deducted as -ve

marks - Total 35 marks.

- Grades 5 to 8: 50 questions of 1 mark each, there is no negative marking and if you skip/leave a question no marks will be given but also no marks will be deducted as -ve marks - Total 50 marks.
- Darken the circle corresponding to your chosen
- answer on the OMR sheet.
- that do not have the darker circle are considered unanswered and will be counted wrong.
- You have 60 minutes to complete the exam.
- Note that you can choose only one answer if you mark another response, that question will be disgualified.
- If you finish before the time is up, raise your hand, and the invigilator will collect your sheet for scoring. When you are finished and your OMR Sheet is collected, please leave the room quietly.

Thank you for your attention, and best of luck with the World Maths Championship!

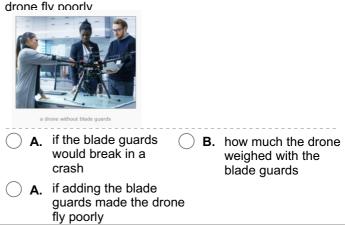


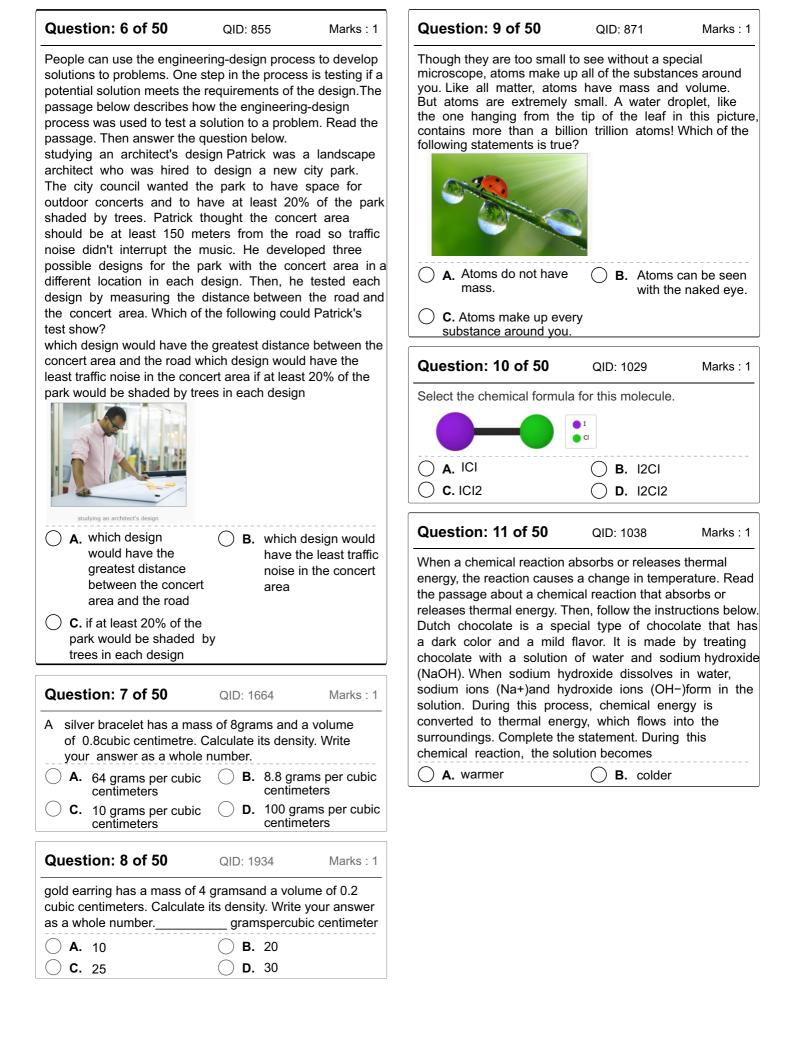


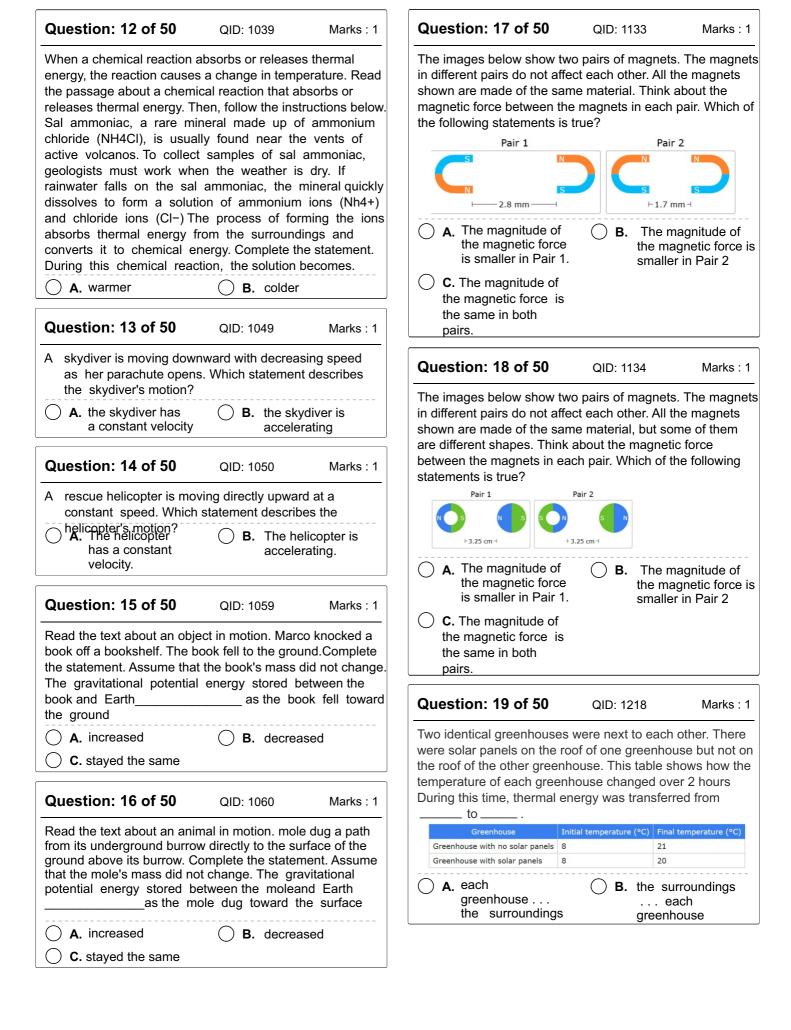
B. the bottles with lids taken off QID: 513 Marks: 1 People can use the engineering-design process to develop solutions to problems. One step in the process is testing if a potential solution meets the requirements of the design. The passage below describes how the engineering-design process was used to test a solution to a problem. Read the passage. Then answer the question below. drone without blade guards Julia was designing small aircraft called drones to pick up items from warehouse shelves. She knew that the drones' propeller blades would get damaged if they bumped into anything while flying through the warehouse. So, Julia wanted to add blade guards to protect the propeller blades. The

Marks: 1

guards had to be sturdy so they would not break in a crash. But she thought that if the guards weighed too much, the drones would not fly well. So, Julia put guards made of lightweight metal on one drone. Then she observed how well the drone flew with the guards. Which of the following could Julia's test show? if the blade guards would break in a crash how much the drone weighed with the blade guards if adding the blade guards made the



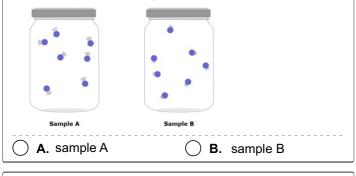






The diagrams below show two pure samples of gas in identical closed, rigid containers. Each colored ball represents one gas particle. Both samples have the same number of particles.

Sample A, Mass of each particle: 28u, Average particle speed: 1,300 m/s, Sample B, Mass of each particle: 28 u, Average particle speed: 1,100m/s, Compare the average kinetic energies of the particles in each sample. Which sample has the higher temperature?

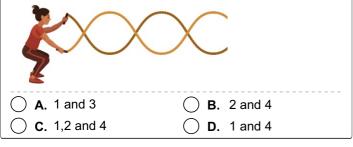


Question: 21 of 50

Marks: 1

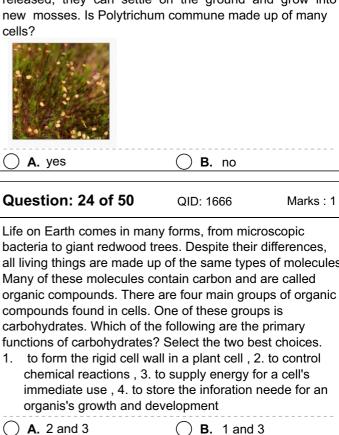
wave is a pattern of motion that carries energy. When a wave travels through a material, the material is called a medium. Maya is exercising with battle ropes. Energy from her arms is transferred to the ropes, creating waves. As a wave moves through each rope, the rope moves up and down. Select the true statements. 1. The waves carries energy., 2. Maya's arm is the medium through which the wave travels, 3. Each rope moves side to side as the wave moves through it, 4. Maya transfers energy to the rope.

QID: 1665



Question: 22 of 50	QID: 1220	Marks : 1
The diagram below is a mo ball represents one particle Solvent volume: 50 mL , So solution has a higher conce	of solute. Solven	t volume: 50 mL B Which

() **B.** solution B



Question: 25 of 50 QID: 1222 Marks: 1

Select the part whose main job is to send proteins and other substances to different parts of the cell.

A. chromosomes C. golgo

C. 3 and 4

B. mitochondria D. vacuole

D. 2 and 4

Question: 23 of 50 QID: 1221 Marks: 1

This organism is Polytrichum commune. It is a member of the plant kingdom. Polytrichum commune is also called the common haircap moss. This plant gets its common name from its brown, cap-like structures. Those structures contain spores. After the spores are released, they can settle on the ground and grow into new mosses. Is Polytrichum commune made up of many cells?

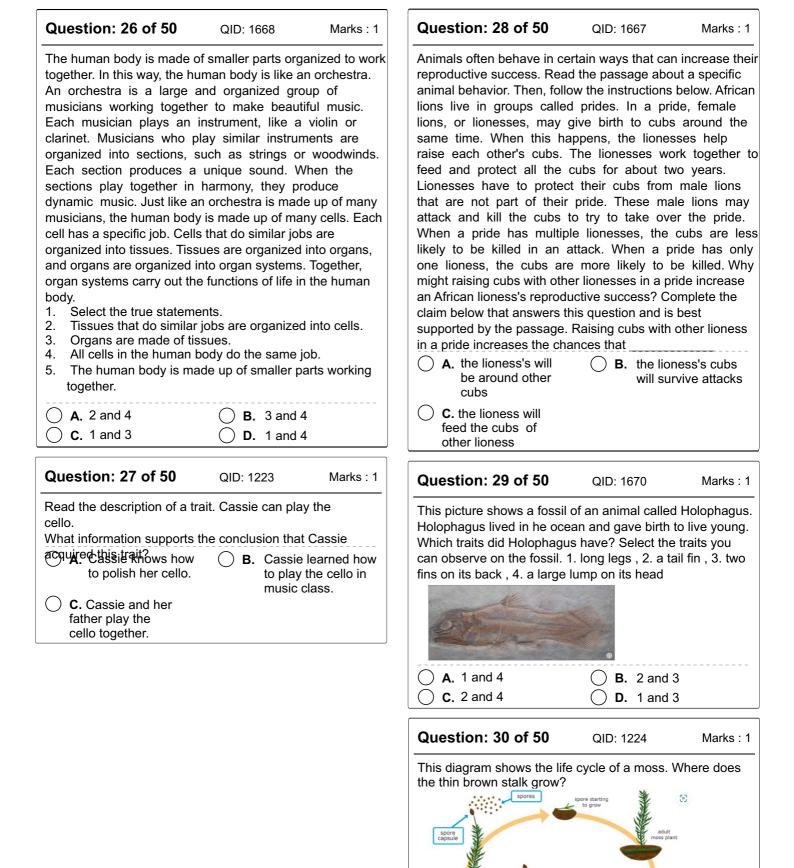
🔵 A. yes	B. no	
Question: 24 of 50	QID: 1666	Marks : 1

bacteria to giant redwood trees. Despite their differences, all living things are made up of the same types of molecules. Many of these molecules contain carbon and are called organic compounds. There are four main groups of organic compounds found in cells. One of these groups is carbohydrates. Which of the following are the primary

A. solution A

the same

C. neither; their concentrations are

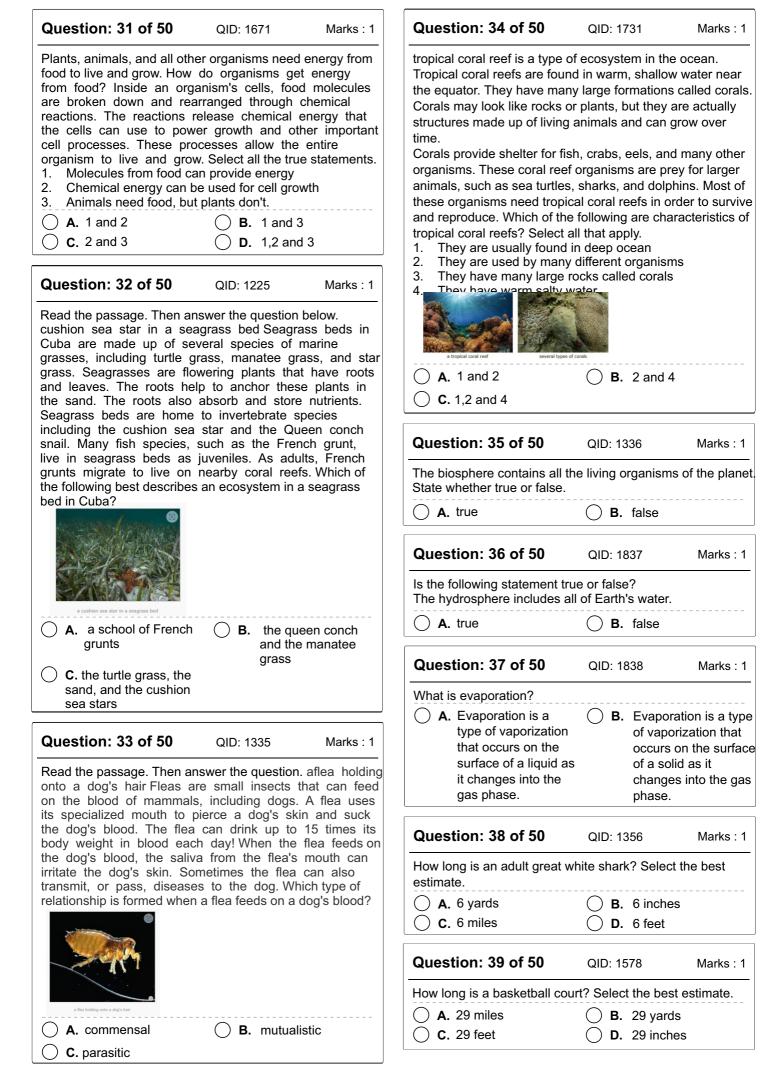


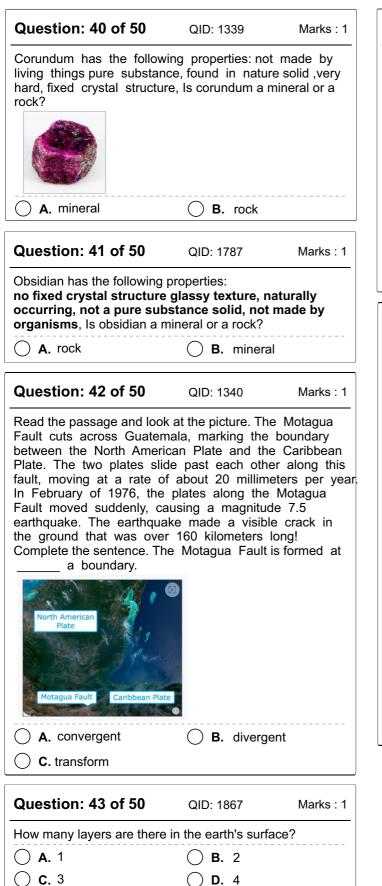
) **A.** on top of the female

part

B. on top of the male

part





Question: 44 of 50 QID: 1353

Marks : 1

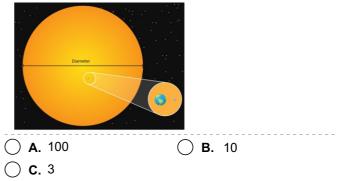
Use the data to answer the question below. Is the following statement about our solar system true or false? Of the four largest planets, three are made mainly of gas.

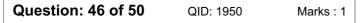
Planet	Volume (billions of km ³)	Primary composition
Mercury	60	rock
Venus	930	rock
Earth	1,090	rock
Mars	160	rock
Jupiter	1,431,280	gas
Saturn	827,130	gas
Uranus	68,330	ice
Neptune	62,530	ice

Question: 45 of 50 QID: 1588

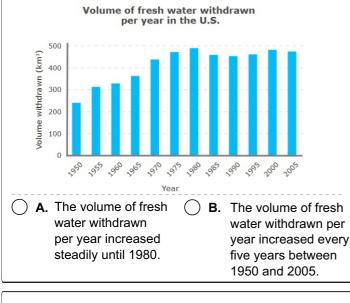
Marks : 1

Our solar system is made up of the Sun and all the objects that move around it. These objects include planets, moons, asteroids, and comets. The sizes of the objects in the solar system are difficult to imagine without the help of a model. Models make certain characteristics of a system easier to understand. A model can be a physical object, a graph, a diagram, or a simulation. The diagram below is a model that shows the relative sizes of the Sun, the Moon, and Earth. The two small dots represent the accurate sizes of Earth and the Moon compared to the Sun. A close-up view of Earth and the Moon is also shown. Complete the sentence to estimate the diameter of the Sun compared to Earth. The Sun's diameter is ______ times greater than the earth's diameter.





Fresh water is a natural resource that humans use every day. Fresh water has many uses, including drinking, cleaning, taking care of livestock, irrigating farms, and generating electricity. Since 1950, the United States Geological Survey (USGS) has tracked the volume of fresh water used in the United States. The graph below shows the volume of fresh water withdrawn, or taken by humans for any use, in a given year The data were collected every five years, starting in 1950 and ending in 2005. Select the statement that is supported by the data.

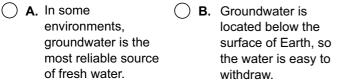


Question: 47 of 50

Marks : 1

People get fresh water from different sources. Two of the most common sources of fresh water are surface water and groundwater. Surface water is found on the surface of Earth in lakes, rivers, and streams. Groundwater is located deep underground in rock layers called aquifers. To withdraw groundwater from aquifers, people must pump it out of the ground through wells. Despite this challenge, groundwater is a more reliable source of water than surface water in some regions. For example, rivers, lakes, and other sources of surface water can dry up during a drought. But even during a drought, groundwater is often still available. Which statement correctly explains why people use groundwater as a source of fresh water?

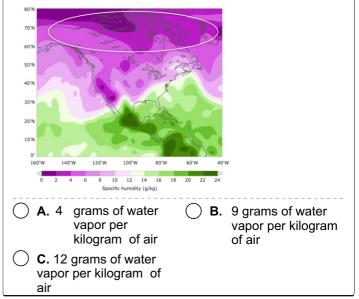
QID: 1952

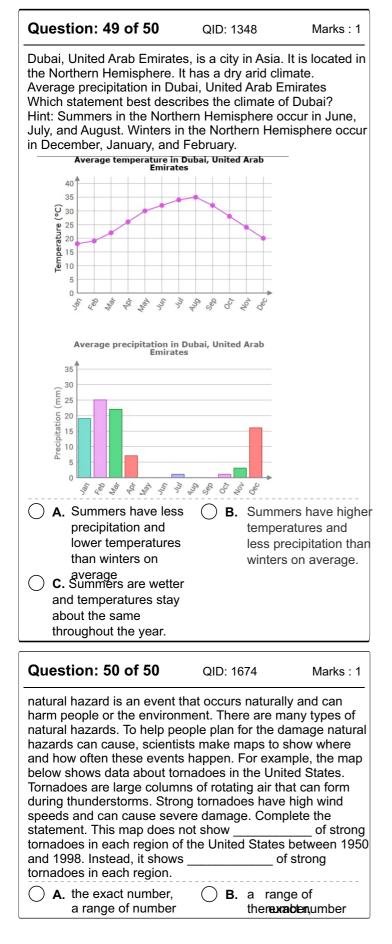


Question: 48 of 50 QID: 1345

Marks : 1

The map below shows humidity in the lower atmosphere on October 17, 2013. The map shows specific humidity, a measurement of the amount of water vapor in the air. The outlined area shows an air mass that influenced weather in North America on that day. Look at the map. Then, answer the question below. Data source: United States National Oceanic and Atmospheric Administration/Earth System Research Laboratory, Physical Sciences Division Which specific humidity level was measured within the outlined area shown?





--- END OF QUESTION PAPER ---