

BIOLOGY

Round 1

1. What is the most common non-contagious disease in the world? **Gum disease**
2. Cashmere is a silky luxurious textile. From which animal does it originate? **Goat**
3. A study has found that computer use may increase the risk of glaucoma. Which organ does this affect? **Eyes**
4. Who proposed the cohesion-tension theory which explains the process of water flow upwards against the force of gravity through the xylem of plants? **Henry Dixon & John Joly**
5. If you don't chew sweetcorn properly it will pass through the digestive system whole! Why? **Humans don't have the necessary enzymes**
6. 'The Silent Spring' was a book written by Rachel Carson which led to a ban on which insecticide? **DDT**

Round 2

1. Prof Luke O'Neill, an eminent scientist who works in TBSI, is the current Honorary President of ISTA. Which branch of Biology is his specialty? **Immunology**
2. The bursting of a host cell to release viruses is known as what? **Lysis/ cytolysis**
3. To defend themselves against bird predators, ladybird's bodies are full of a toxic chemical called precocinelline. What colour is it? **Red**
4. The two sides of the brain are connected by this nerve tract. What is it called? **Corpus callosum**
5. Bones are roasted and crushed to make bonemeal which is used to make food for roses. What is removed by roasting bones? **Organic matter**
6. Which muscle separates the thoracic cavity from the abdominal cavity? **Diaphragm**

Round 3

1. Who was a German-born British physician & biochemist who was a pioneer scientist in the study of cellular respiration? **Sir Hans Adolf Krebs**
2. This COVID-19 test detects genetic material of the virus using a lab technique called PCR. What does PCR stand for? **Polymerase Chain Reaction**
3. The main product of cyclic-photophosphorylation in the light dependent stage of photosynthesis is ATP. What does ATP stand for? **Adenosine TriPhosphate**
4. What type of germination is shown? **Epigeal**
5. Name the butterfly-shaped gland that is wrapped around the trachea. **Thyroid gland**
6. Overuse of antibiotics is a major cause of concern. Why? **Antibiotic resistance – i.e. bacteria can develop resistance to antibiotics**

Round 4

1. Which 17th-century English scientist made an important contribution to biology with his explanation of the circulatory system? **William Harvey**
2. What is the name of the protein found in muscles? **Myosin**
3. Which Austrian Biologist discovered ABO blood groups? **Karl Landsteiner**
4. mRNA vaccines - a new era in vaccinology. What does mRNA stand for? **Messenger RiboNucleic Acid**
5. Around the world many people eat insects. Of what food type are insects a good source? **Protein**
6. How far can an owl's head rotate? Give your answer in degrees. **270'**

Round 5

1. Dorothy Crowfoot Hodgkin was a British biochemist who discovered the structure of Vitamin B12 and insulin. For which instrumental technique did she win the Nobel Prize in Chemistry in 1964. **X-ray crystallography**
2. What is a DEXA Scan (Dual X-ray Absorptiometry) used to measure? **Bone density**
3. Moths are positively phototactic. What does this mean? **Attracted towards light**
4. Berries have a relatively low GI, which is a common way of identifying the potential impact of a food on our blood sugar level. What does GI stand for? **Glycemic Index**
5. What connects Darwin to the book 'to kill a mockingbird'? **Finches/ Mockingbirds**
6. What niche does a woodlouse have in a typical grassland or woodland habitat? **Decomposer**

Round 6

1. Frogs and Toads belong to which class of organisms? **Amphibians**
2. Tuberculosis (TB) is an infectious disease caused by which microorganism? **Bacteria**
3. It is believed that COVID-19 was spread from bats to humans. What term is used to describe this type of disease? **zoonotic disease (zoonoses)**
4. This bacterial infection is spread to human by infected ticks. Name the disease that results? **Lyme disease**
5. This hormone is known as the 'cuddle hormone'. Name it. **Oxytocin**
6. Pre- COVID-19, what might you have gotten under Viscum Alba at Christmas? **A Kiss**