Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**GCSE Science**

**10-minute quizzes**

**Higher**

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**Biology Paper 1**

**Quiz 1: Cell Biology**

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| 1. **True or False? “All plant cells lose the ability to differentiate at an early stage”.**

A – TrueB – False | 1. **Which of these organelles are not found in a bacterial cell?**

A – NucleusB – Cell membraneC – Cell wall |
| 1. **Diffusion is where particles spread out from…**

A - …an area of lower concentration to an area of higher concentration.B - …an area of higher concentration to an area of low concentration. | 1. **When using a light microscope to view a slide, which lens should be selected to start with?**

A – Lowest powered objective lensB – Highest powered objective lens |
| 1. **True or False? “In human body cells, chromosomes usually come in pairs”.**

A – TrueB - False | 1. **If the concentration of water inside a cell is lower than outside the cell, what will the net movement of water molecules be?**

A – Into the cell.B – Out of the cell. |
| 1. **Which of these characteristics makes the alveoli efficient at gas exchange?**

A – They have thick walls.B – They have a large surface area.C – They don’t have a good blood supply.  | 1. **What happens inside a cell before mitosis takes place?**

A – The number of subcellular structures it has increases.B – One set of chromosomes is pulled to each end of the cell.C – The cell membrane divides.  |

1. **Explain one way in which a nerve cell is adapted to carry out its specialised function. (1)**

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1. **What is a stem cell? (2)**

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1. **Complete the diagram of the animal cell. (4)**

**Describe the roles of the following parts of the cell:**

**Mitochondria: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Nucleus: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Quiz 2: Organisation**

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| 1. **What is a tissue?**

A – A collection of different types of cell that work together.B – A collection of similar cells that work together.  | 1. **What colour is iodine solution in the presence of starch?**

A – Blue-blackB – Brown-orangeC – Brick-red |
| 1. **Where is bile produced and stored?**

A – Produced in the liver and stored in the gall bladder.B – Produced in the gall bladder and stored in the stomach. C – Produced in the stomach and stored in the pancreas.  | 1. **True or False? “People who have problems with their immune system have an increase chance of summering from communicable diseases”.**

A – TrueB – False  |
| 1. **Which type of tumour is cancerous?**

A – BenignB - Malignant | 1. **Which of these is NOT a chamber of the heart?**

A – Left ventricleB – Right atrium.C- Vena Cava |
| 1. **Which of these aren’t features of arteries?**

A – Elastic fibresB – Thick walls.C – Valves.  | 1. **What is the function of palisade mesophyll tissue?**

A – It covers the surface of the plant.B – It’s where photosynthesis happens.C – It carries substances around a plant.  |

1. **What is the role of protease enzymes? (1)**

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1. **Describe the function of phloem tissue. (1)**

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1. **Give two components of the blood that are carried in the blood plasma. (2)**
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. **Describe what happens to an enzyme If the temperature is too high (3)**

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**Quiz 3: Organisation**

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| 1. **True or False? “Organ systems work together to form organs.”**

A – TrueB – False  | 1. **What artificial device can be used to keep arteries open and blood flowing?**

A – A ventilatorB – A valveC – A stent |
| 1. **When breathing in, which structure(s) does air enter first?**

A – AlveoliB – TracheaC – Bronchi  | 1. **What is the function of white blood cells?**

A – They deliver nutrients around the body.B – They transport deoxygenated blood around the body.C – They defend the body against microorganisms.  |
| 1. **Why is the shape of an enzyme important for its function?**

A – So it can squeeze through small gaps.B – So that it can enter the cells of the body.C – So that it fits the substance involved in the reaction it is catalysing.  | 1. **What is the name of the cells that control the opening and closing of the stomata?**

A – Palisade cellsB – Guard cellsC- Meristem cells  |
| 1. **True or False? “Blood flows to the organs through the veins.”**

A – TrueB – False  | 1. **Which of the following would you use to test for the presence of protein?**

A – Biuret solutionB – Benedict’s solutionC – Iodine solution.  |

1. **Give one advantage of using an artificial heart rather than transplanting a natural one. (1)**

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1. **Give one risk factor that can increase a person’s chance of developing liver disease. (1)**

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1. **Describe what a benign tumour is. (1)**

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1. **Explain how increasing air movement around a plant’s eaves would affect the rate of transpiration. (4)**

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**Quiz 4: Infection and Response**

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| 1. **What is the first stage of testing a new medicinal drug?**

A – The drug is tested on human cells and tissues in the lab.B – The drug is tested on human volunteers in a clinical trial.  | 1. **How does the stomach help to defend the body against pathogens?**

A – It secretes hydrochloric acid to kill pathogensB – It contains hairs to trap pathogensC – It secretes antibodies to kill pathogens |
| 1. **What’s a microorganism that causes disease called?**

A – An antibodyB – An antitoxinC – A pathogen | 1. **Which type of pathogen causes rose black spot on leaves?**

A – FungusB – BacteriumC - Virus  |
| 1. **Which drug was developed by Alexander Fleming?**

A – PenicillinB – DigitalisC - Aspirin | 1. **Gonorrhoea is a disease caused by…**

A – …protists.B - …viruses.C- …bacteria.  |
| 1. **True or False? “Antibiotics can kill viruses.”**

A – TrueB – False  | 1. **Which type of drugs are used to control HIV?**

A – AntibioticsB – AntiretroviralsC – Painkillers.  |

1. **Explain why the tobacco mosaic virus (TMV) affects the growth of plants. (2)**

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1. **Explain how mosquito nets help to prevent the spread of malaria. (2)**

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1. **Explain how vaccination can protect against a disease. (3)**

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**Quiz 5: Infection and Response**

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| 1. **What is penicillin?**

A – An antibioticB – An anti-viral drugC – A painkiller | 1. **True or False? “For a large outbreak of an infectious disease to be prevented, everyone must be vaccinated against it.”**

A – TrueB – False  |
| 1. **Which disease in humans can be partly controlled by vaccinating poultry against the pathogen?**

A – Salmonella food poisoningB – GonorrhoeaC - Measles | 1. **Which type of the following diseases is not spread by sexual contact?**

A – HIVB – GonorrhoeaC - Measles |
| 1. **What do white blood cells produce to help defend against pathogens?**

A – AntigensB – AntibioticsC - Antibodies | 1. **Which of the following diseases is caused by a protist?**

A – MeaslesB – MalariaC - HIV |
| 1. **Which of these statements about bacteria is false?**

A – Bacteria damage cells by living and replicating inside them.B – Some bacteria reproduce quickly in the body.C – Bacteria can produce toxins.  | 1. **True or False? “Preclinical trials help to find the optimum dose for a drug”.**

A – TrueB – False  |

1. **How do viruses make you feel ill? (2)**

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1. **How does the nose help to defend the body against disease? (2)**

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1. **What is a double-blind trial and why is it used for clinical trials? (3)**

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**Quiz 6: Bioenergetics**

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| 1. **During exercise, which of the following happens?**

A – Just your breathing rate increasesB – Just your breath volume increasesC – Your breathing rate and breath volume increases | 1. **Which of these is not a limiting factor of photosynthesis?**

A – LightB – TemperatureC - Oxygen  |
| 1. **True or False? “Aerobic respiration occurs in plants and animals all the time”.**

A – TrueB – False  | 1. **True or False? “The starch in plants that’s created from glucose is insoluble”.**

A – TrueB – False  |
| 1. **Which type of respiration transfers more energy?**

A – AerobicB – Anaerobic | 1. **Respiration is an…**

A – …exothermic reactionB- …endothermic reaction |
| 1. **Aerobic respiration produces…**

A – …glucoseB - …carbon dioxide only.C - …water and carbon dioxide.  | 1. **What would you expect to happen to the volume of oxygen produced by pondweed if light intensity increased, and it was a limiting factor?**

A – It would increaseB – It would stay the sameC – It would decrease  |

1. **Why do muscles start respiring anaerobically during vigorous exercise? (1)**

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1. **Name the supporting material that plants make using glucose. (2)**

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**Which part of the cell is made using this material?**

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1. **Complete the equation for photosynthesis. (2)**

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**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ + water \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ + oxygen**

1. **Describe how the body gets rid of lactic acid that builds up in the muscles. (2) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Quiz 7: Bioenergetics**

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| 1. **True or False? “Anaerobic respiration requires oxygen”.**

A – TrueB – False  | 1. **Alex walked to catch the bus, but Peter was late so had to run. Whose heart rate will be higher?**

A – AlexB – Peter  |
| 1. **Which of these things are not used by plants to make proteins?**

A – GlucoseB – Nitrate ionsC - Lipids | 1. **Other than oxygen, what does photosynthesis produce?**

A – Carbon dioxideB – WaterC - Glucose |
| 1. **True or False? “As the level of carbon dioxide increases, the rate of photosynthesis will always increase”.**

A – TrueB – False  | 1. **Which chemical symbol represents a product of aerobic respiration?**

A – C6H12O6B – O2C – CO2 |
| 1. **Which of the following is produced when yeast cells respire anaerobically?**

A – GlucoseB – EthanolC – Lactic acid  | 1. **What is a single lipid molecule made up of?**

A – One molecule of glycerol and three fatty acids.B – One fatty acid and three molecules of glycerol.C – Three molecules of glycerol and three fatty acids.  |

1. **What is meant by the term ‘metabolism’? (1)**

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1. **Explain what happens to the rate of photosynthesis if a plant is put in a dark place. (2)**

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1. **Describe what is meant by muscle fatigue and state when it occurs. (2) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
2. **Give two uses of the energy produced by respiration. (2)**
3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
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**Quiz 8: Biology 1 Mixed Topics**

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| 1. **True or False? “Increasing the temperature always causes the rate of photosynthesis to increase”.**

A – TrueB – False  | 1. **Which type of microscope has a higher magnification?**

A – Electron microscopeB – Light microscope |
| 1. **Stem cells from adult bone marrow can turn into…**

A – …any type of cell.B – …many types of cell.C - …blood cells only.  | 1. **Why is a new drug tested of live animals?**

A – Because its cheaper than testing on humans. B – To test how well the drug works compared to a placebo.C – To make sure its safe before testing on humans.  |
| 1. **If you place a slide of potato in a solution that has a higher sugar concentration than the fluid into the potato, the potato will…**

A – …release water and decrease in mass.B – …absorb water and increase in mass.  | 1. **True or False? “Severe physical illness can lead to the development of mental illness”.**

A – TrueB – False  |
| 1. **What is the function of cellulose?**

A – To strengthen the cell walls in plantsB – To make proteinsC – To help with respiration | 1. **Chromosomes are…**

A – …a type of organelle where photosynthesis occurs.B - …really long molecules of DNA, which contain genes.C - …a type of cell involved in reproduction.  |

1. **Give two ways that an exchange surface in animals may be specialised for its function (2)**
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. **How do plants make proteins? (2)**

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1. **Malignant tumours are more dangerous than benign tumours. Explain why. (3) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Quiz 9: Biology 1 Mixed Topics**

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| 1. **Which part of the blood is responsible for blood clotting?**

A – Red blood cellsB – White blood cellsC - Platelets | 1. **True or False? “Vaccinations involve injecting small amount of dead or inactive pathogens into the body”.**

A – TrueB – False  |
| 1. **True or False? “The DNA in plant cells is found within the nucleus”.**

A – TrueB – False  | 1. **How are root cells specialised for absorbing water and nutrients?**

A – They are roundB – They have bacteria on their surfaceC – The cells are shaped like long hairs.  |
| 1. **True or False? “Some types of cancer can be triggered by viral infection”**

A – TrueB – False  | 1. **What is a cell called when its differentiated?**

A – Unspecialised cellB – Specialised cellC – Stem cell |
| 1. **The leaf is an example of a plant…**

A – …tissue.B - …organ.C - …organ system. | 1. **What happens to enzymes at high temperatures?**

A – They divide, producing more enzymes.B – They start to attack the cells in the body.C – They denature.  |

1. **What is the function of xylem vessels? (2)**

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**Give one way in which they’re adapted for its function.**

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1. **A student investigated the effect of pH on the reaction rate of amylase on starch solution. Give one example of a variable that must be controlled in this investigation. (2) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**How could this variable be controlled?**

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1. **Describe what happens in the heart of someone with coronary heart disease. (3) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Quiz 10: Biology 1 Mixed Topics**

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| 1. **What is the function of cellulose?**

A – To strengthen the cell walls in plantsB – To make proteinsC – To help with respiration | 1. **True or False? “The DNA in plant cells is found within the nucleus”.**

A – TrueB – False  |
| 1. **The leaf is an example of a plant…**

A – …tissue.B - …organ.C - …organ system. | 1. **What happens to enzymes at high temperatures?**

A – They divide, producing more enzymes.B – They start to attack the cells in the body.C – They denature. |
| 1. **True or False? “An organ is a group of similar cells that work together to carry out a particular function”.**

A – TrueB – False  | 1. **The right ventricle pumps blood to…**

A – …the lungs.B – …the brain.C – …the muscles.  |
| 1. **Which of the following plant tissues can differentiate into lots of different types of cell?**

A – Epidermal tissueB – Mesophyll tissueC – Meristem tissue | 1. **Oxygen debt is the amount of extra oxygen…**

A – …taken in during exercise because the breathing rate increases.B – …needed to react with the build up of lactic acid and remove it from cells.  |

1. **Explain what is meant by the term ‘cell differentiation’. (1)**

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1. **Name a bacterial disease and give one symptom of this disease. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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1. **What is the function of xylem vessels? (2)**

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**Give one way in which they’re adapted for this function. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. **What is osmosis? (2)**

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**Quiz 11: Biology 1 Mixed Topics**

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| 1. **Palisade mesophyll cells are adapted for photosynthesis. Which of these characteristics would help them to carry out this specialised function?**

A – Having a thick cell wall. B – Containing lots of chloroplasts.C – Being situated at the bottom of the leaf.  | 1. **What happens at the end of mitosis?**

A – The cell grows and increases its number of sub-cellular structures.B – The cytoplasm and cell membrane divide to form two identical cells. C – DNA is replicated to form two copies of each chromosome.  |
| 1. **Where in a cell do most of the reactions involved in aerobic respiration take place?**

A – CytoplasmB - NucleusC - Mitochondria. | 1. **True or False? “Some drugs have been made from chemicals originally found in plants”.**

A – TrueB – False  |
| 1. **Some of the glucose from photosynthesis is used for…**

A – …transpiration.B – …respiration. | 1. **If you place a slice of potato in a solution that has a higher sugar concentration that the fluid inside the potato, the potato will…**

A – …release water and decrease in mass.B – …absorb water and increase in mass.  |
| 1. **The ‘lock and key’ model is used to describe…**

A – …the way cells divide in mitosis.B – …the rate of diffusion.C – …the action of enzymes. | 1. **True or False? “Respiration provides the energy needed for cell metabolism”.**

A – TrueB – False  |

1. **What happens when a heart valve becomes leaky? (1)**

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1. **Explain how having a large surface area affects the rate of diffusion across an exchange surface. (2) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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1. **Name the blood vessel that carries blood from the lungs to the heart. (2)**

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**Name the blood vessel that carries blood from the heart to the organs. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. **What is a hybridoma cell? (TRIPLE) (2)**

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**Quiz 12: Biology 1 Mixed Topics**

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| 1. **Which process allows glucose to move from a higher concentration in the gut to a lower concentration in the blood?**

A – Active transportB – OsmosisC - Diffusion  | 1. **True or False? “The inheritance of faulty genes is the only risk factor for cancer”.**

A – TrueB – False  |
| 1. **The human heart pumps blood around the body in a …**

A – …single circulatory systemB - …double circulatory systemC - …triple circulatory system | 1. **True or False? “Active transport means that cells can absorb minerals against the concentration gradient”.**

A – TrueB – False  |
| 1. **What is the correct equation for anaerobic respiration in muscles?**

A – glucose + oxygen 🡪 carbon dioxide + waterB – glucose 🡪 lactic acidC – glucose 🡪 ethanol + carbon dioxide | 1. **(TRIPLE) It is possible to detect a plant with nitrate deficiency because it will…**

A – …show stunted growth.B – …have patches of decay.C - …have abnormal growths.  |
| 1. **True or False? “Stems, roots and leaves are all plant organs”.**

A – TrueB – False  | 1. **Health is…**

A – …the state of physical well-being only.B – …the state of mental and emotional well-being only.C - …the state of physical and mental well-being.  |

1. **Complete the equation for magnification. (1)**

$magnification= \frac{\begin{array}{c}…………………………………………………..\\\\\end{array}}{\begin{array}{c}\\\\…………………………………………………\end{array}}$

1. **Give two examples of diseases that can be caused directly by smoking. (2)**
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
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4. **A student investigates the effect of pH on the reaction rate of amylase on starch solution. Give one example of a variable that must be controlled in this investigation. (2)**

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**How could this variable be controlled? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. **A bacterial cell undergoes binary fission every 20 minutes. If there was a single cell to begin with, how many cells will there be after 2 hours? (TRIPLE) (2)**

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**Quiz 13: Homeostasis and Response**

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| 1. **When a woman has a low level of FSH, her…**

A – …uterus lining is not maintained.B - …eggs do not mature.C - …mature eggs are not stimulated to release. | 1. **How many days does the menstrual cycle usually last for?**

A – 52 daysB – 7 daysC – 28 days |
| 1. **Reaction time is the time it takes for someone to…**

A – …detect a stimulusB – …respond to a stimulusC - …remember something.  | 1. **Which of the following is an example of a coordination centre?**

A – SkinB – PancreasC - Muscle  |
| 1. **Which of the following is a barrier method of contraception?**

A – DiaphragmB – Contraceptive patchC – Intrauterine device | 1. **The gland which releases thyroxine is…**

A - …the pituitary glandB - …the adrenal glandC - …the thyroid gland |
| 1. **Which is the central nervous system made up of?**

A – The brain and receptorsB – The brain and spinal cordC – The spinal cord and receptors  | 1. **Which is the correct pathway for stimuli along the reflex arc?**

A – Relay neurone 🡪 sensory neurone🡪 motor neurone.B – Sensory neurone 🡪motor neurone 🡪relay neurone.C- Sensory neurone🡪 relay neurone🡪 Motor neurone |

1. **Give two roles that thyroxine has in the body. (2)**
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
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4. **Explain what Type 1 diabetes is, and why is it dangerous. (2) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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1. **List three internal conditions that your body needs to keep constant to survive. (3)**
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**Quiz 14: Homeostasis and Response**

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| 1. **What is the hormone that controls the ‘fight or flight’ response?**

A – ThyroxineB – AdrenalineC - Glucagon | 1. **True or False? “Caffeine can affect a person’s reaction time”.**

A – TrueB - False |
| 1. **The contraceptive implant continuously releases progesterone, which…**

A – …stimulates the production of FSH.B – …stops the ovaries releasing eggs.C - …acts as a spermicidal agent.  | 1. **In the menstrual cycle, what effect does the release of oestrogen have on LH and FSH?**

A – It stimulates the release of LH and FSH.B – It inhibits the release of LH and stimulates the release of FSH.C – It stimulates the release of LH and inhibits the release of FSH.  |
| 1. **Where in the body would you find the adrenal gland?**

A – NeckB – BrainC – Just above the kidneys.  | 1. **True or False? “The blood sugar level of someone with Type 1 diabetes is always dangerously low”.**

A – TrueB - False |
| 1. **What is secreted by the pancreas when blood glucose levels fall?**

A – GlucoseB – InsulinC - Glucagon | 1. **True or False? “Hormones have longer-lasting effects than nervous impulses”.**

A – TrueB - False |

1. **What is the role of LH in the menstrual cycle? (1)**

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1. **What type of neurone transmits impulses to an effector in the nervous system? (3)**

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**Give an example of an effector and describe how it responds to a stimulus.**

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1. **What is meant by the term homeostasis? (3)**

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**Quiz 15: Inheritance, Variation and Evolution**

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| 1. **True or False? “Selective breeding can happen without human intervention”.**

A – TrueB - False | 1. **What effect do mutations have on variation?**

A – They decrease it.B – They increase it.C – There is no effect.  |
| 1. **When an individual has one dominant and one recessive allele…**

A – …the recessive allele is expressed. B – …both alleles are expressed.C - …the dominant allele is expressed.  | 1. **True or False? “Fossils can be formed from an organisms footprints and burrows that have been preserved over time”.**

A – TrueB - False |
| 1. **How many chromosomes does a human gamete have?**

A – 46B – 12C – 23  | 1. **What sex chromosomes does someone who is biologically male have?**

A – XYB – XXXC - XX |
| 1. **What is the main idea behind Darwin’s theory of evolution by natural selection?**

A – There is variation in a population. Those more suited to the environment will be more likely to survive and pass on their characteristics.B – individuals develop characteristics during their lifetimes, which make them more suited to their environment. They pass these onto their offspring.  | 1. **How are genes ‘cut out’ from chromosomes in genetic engineering?**

A – Using enzymesB – Using bacteriaC – Using a knife  |

1. **What is a fossil? (1)**

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1. **Give two pieces of evidence that support Darwin’s theory of evolution. (2)**
2. **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
3. **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
4. **Suggest two reasons why someone may be against embryonic screening. (2)**
5. **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
6. **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
7. **Briefly describe the role of a vector in genetic engineering and give one example of a vector used. (2) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Quiz 16: Inheritance, Variation and Evolution**

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| 1. **True or False? “The alleles for cystic fibrosis and polydactyly are both dominant”.**

A – TrueB - False | 1. **If a farmer wants to increase the meat yield of his cows, he would breed together…**

A – …the biggest cows.B - …those that produced the most milk.C - …those with a gentle temperament.  |
| 1. **What is an organism’s genotype?**

A – The characteristics that the organism has.B – The alleles that the organism has.  | 1. **How often do mutations result in a new phenotype?**

A – AlwaysB – OftenC – Very rarely.  |
| 1. **What do evolutionary trees show?**

A – Evolutionary relationshipsB – Parental relationshipsC – Genetic disorders  | 1. **What is a problem that could result from patients not finishing a course of antibiotics?**

A – Antibiotic resistance increases in bacteria.B – Antibiotic resistance increases in viruses.C – Immunity to disease increases in humans.  |
| 1. **How many cell divisions occur during meiosis?**

A – 1B – 2C - 4 | 1. **What is the correct order of classification groups?**

A – Kingdom, genus, class, order, family, phylum, species.B – Family, phylum, species, order, kingdom, genus, class.C – Kingdom, phylum, class, order, family, genus, species.  |

1. **A tall pea plant with two dominant ‘T’ alleles and a dwarf pea plant with two recessive ‘t’ alleles are crossed to produce a pea plant with the genotype Tt. What will the new plant’s phenotype be? Explain your answer. (2)**

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1. **The diagram shows a simple evolutionary tree. Use it to describe how the whale and shark are related in terms of distant and recent ancestors. (2)**

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1. **Explain how sexual reproduction produces variation. (3) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Quiz 17: Ecology**

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| 1. **What type of compost should people choose to avoid contributing to global warming?**

A – Peat-free compostB – Compost made using peat.  | 1. **True or False? “In the water cycle, water falls from clouds in the process called evaporation”.**

A – TrueB - False |
| 1. **Which is the best definition of an extremophile?**

A – An organism that can live in only one type of environment.B – An organism that is adapted to living in very extreme conditions.C – An organism that is adapted to living in safe conditions.  | 1. **What does a change in the distribution of an animal mean?**

A – A change in its numbers.B – A change in where it lives.C – A change in the food it eats.  |
| 1. **Which of the following factors do plants compete for?**

A – Light, space, water and mates.B – Water, mates, space and mineral ions.C – Space, water, mineral ions and light.  | 1. **True or False? “Global warming could reduce the Earth’s biodiversity”.**

A – TrueB - False |
| 1. **Biodiversity is…**

A – …all the organisms of one species living in a habitat.B – …the interaction of a community of living organisms with the abiotic parts of their environment.C – …the variety of different species on Earth.  | 1. **How do the population sizes of predators and prey change in a stable community?**

A – The size of the predator population continuously increases.B – The size of the prey population continuously decreases.C – The sizes of both populations rise and fall in cycles.  |

1. **What is meant by the term ‘adaptation’? (1)**

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1. **Give two reasons why large-scale deforestation has occurred in tropical areas. (2)**
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
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4. **Give two ways that land can be polluted by humans. (2)**
5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
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7. **Explain how draining peat bogs to produce compost contributes to global warming. (2)**

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**Quiz 18: Ecology**

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| 1. **How can you study the distribution of organisms in a way that will give reproducible results?**

A – Always take the sample from the same place.B – Use a small sample sizeC – Use a large sample size | 1. **What is global warming?**

A – An increase in the level of oxygen within the Earth’s atmosphere.B – A decrease in the level of carbon dioxide within the Earth’s atmosphere.C – An increase in the average global temperature.  |
| 1. **True or False? “To study the effect of an abiotic factor on the distribution of an organisms, you could use a transect”.**

A – TrueB - False | 1. **A species being outcompeted by another species is an example of…**

A – …a biotic factorB - … an abiotic factor |
| 1. **Which of the following is an abiotic factor?**

A – TemperatureB – New predators arrivingC – New pathogens arriving | 1. **A producer…**

A – …is eaten by secondary consumers.B - …makes glucose from photosynthesisC - …is also a primary consumer |
| 1. **True or False? “Sewage produced by humans can pollute lakes, rivers and oceans”.**

A – TrueB - False | 1. **If a new predator arrives in an area, will the size of the prey population increase or decrease?**

A – IncreaseB - Decrease  |

1. **What is interdependence? (1)**

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1. **How does respiration contribute to the carbon cycle? (1)**

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1. **Give two types of programme that people have set up to protect ecosystems and biodiversity. (2)**
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
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4. **Suggest three biotic factors that might cause a decrease in the population of a species. (3)**
5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
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**Quiz 19: Biology 2 Mixed Topics**

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| 1. **Which of the following may be used to control Type 2 diabetes?**

A – Taking injections of glucagonB – Avoiding all forms of exerciseC – Eating a carbohydrate-controlled diet | 1. **True or False? “An organism’s characteristics can only be determined by the genes it has inherited”.**

A – TrueB - False |
| 1. **Which of the following is the main reproduction hormone in men?**

A – OestrogenB – ProgesteroneC - Testosterone  | 1. **What is a gene?**

A – An amino acidB – A proteinC – A small section of DNA |
| 1. **Who developed the three-domain classification system?**

A – Carl LinnaeusB – Carl WoeseC – Charles Darwin | 1. **True or False? “Some gametes are genetically identical to each other”.**

A – TrueB - False |
| 1. **What is meant when a reflex arc is described as ‘automatic’?**

A – It only involves the brainB – It only involves the conscious part of the brainC – It doesn’t involve the conscious part of the brain  | 1. **An ecosystem is the interaction…**

A – …between the individuals of a species that live in a habitat.B - …between the community of living organismsC - …between the community of living organisms and the non-living parts of their environment.  |

1. **Why is it important for your body temperature to be maintained at a certain level? (1)**

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1. **Suggest two reasons why it is important to understand the human genome. (2)**
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. **Mary and Sam are about to have a child. Both carry the cystic fibrosis allele, but do not have the disease. Complete the genetic diagram to show the possible genotypes of the child.**

**What is the chance that their child will have cystic fibrosis? Explain your answer. (4)**

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**Quiz 20: Biology 2 Mixed Topics**

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| 1. **(TRIPLE) How many bases are needed to code for one amino acid?**

A – 1B – 3C - 6 | 1. **True or False? “An organism’s characteristics can only be determined by the genes it has inherited”.**

A – TrueB - False |
| 1. **Which of the following may be used to control Type 2 diabetes?**

A – Taking injections of glucagonB – Avoiding all forms of exerciseC – Eating a carbohydrate-controlled diet. | 1. **(TRIPLE) What is *Fusarium*?**

A – A fungusB – A bacteriumC – A plant |
| 1. **(TRIPLE) True or False? “Embryo transplants can be used to clone plants”.**

A – TrueB - False | 1. **(TRIPLE) Alfred Russel Wallace came up with the idea of…**

A – …classifying living things into groups.B - …the inheritance of ‘hereditary units’.C - …evolution by natural selection. |
| 1. **What is meant when a reflex arc is described as ‘automatic’?**

A – It only involves the brainB – It only involves the conscious part of the brainC – It doesn’t involve the conscious part of the brain  | 1. **An ecosystem is the interaction…**

A – …between the individuals of a species that live in a habitat.B - …between the community of living organismsC - …between the community of living organisms and the non-living parts of their environment.  |

1. **Which gas is biogas mainly made up of? (TRIPLE) (1)**

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1. **Complete the diagram of an eye. (TRIPLE) (2)**
2. **Give two examples of hormonal contraceptive. (2)**
3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
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5. **Explain why new, antibiotic-resistant strains of bacteria can quickly spread. (2)**

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**Quiz 21: Biology 2 Mixed Topics**

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| 1. **Which of these is a problem caused by rapid rise in the world’s population?**

A – Less carbon dioxide in the atmosphereB – More waste is being producedC – More diversity amongst people | 1. **True or False? “Surgical sterilisation in males involves cutting the sperm duct and so is a permanent method of contraception”.**

A – TrueB - False |
| 1. **Deforestation is…**

A – …growing crops in forests.B - …renaming forests.C - …cutting down trees. | 1. **What combination of hormones can be given to a woman to improve her fertility?**

A – Oestrogen and progesteroneB – FSH and LHC – Oestrogen and LH |
| 1. **True or False? “The pituitary gland secretes hormones that act on other glands to trigger the release of other hormones”.**

A – TrueB - False | 1. **Which of these things do animals not compete for in order to survive?**

A – FoodB – LightC - Space |
| 1. **The level of glucose in the blood is monitored by the …**

A – …pancreas.B - …thyroid gland.C - …pituitary gland. | 1. **What is the male gamete in plants called?**

A – EggB – StamenC - Pollen  |

1. **Give one use of genetically engineered bacteria in medicine. (1)**

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1. **Explain why new, antibiotic-resistant strains of bacteria can quickly spread (2)**

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1. **Describe the process of *in vitro* fertilisation (IVF). (4)**

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**Quiz 22: Biology 2 Mixed Topics**

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| 1. **True or False? “The theory of evolution says that all living species have evolved from simple life forms”.**

A – TrueB - False | 1. **Who developed the three-domain classification system?**

A – Carl LinnaeusB – Carl WoeseC – Charles Darwin |
| 1. **How could a farmer grow crops which are resistant to insect attacks and herbicides?**

A – By planting the crops in winterB – By putting a large fence around their field.C – By growing GM crops. | 1. **True or False? “Synapses connect receptors”.**

A – TrueB - False |
| 1. **What are alleles?**

A – Male sex chromosomesB – Two gametes fused togetherC – Different versions of the same gene | 1. **In what type of reproduction do gametes fuse together?**

A – AsexualB – Sexual |
| 1. **(TRIPLE) What do receptors in the thermoregulatory centre detect?**

A – Temperature of the skinB – Temperature of the blood.C – Temperature of the air.  | 1. **What is the male gamete in plants called?**

A – EggB – StamenC - Pollen  |

1. **What does an effector do? (1)**

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1. **Suggest two reasons why it is important to understand the human genome. (2)**
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3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. **Describe the process of *in vitro* fertilisation (IVF). (4)**

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