



Biology

Question 1:

- ATP synthesis & Electron Transport Chain
- Practical context included
- Investigation of dehydrogenase activity in yeast

Notes

- Experiment must perform under same temperature before mixing
"Place the test tube in a water bath for 5 minutes, to equilibrate to 30°C."
- This act as a control experiment

Question 2:

- Microbiology
- Microscopy calculator required
- Bacteria oxygen requirement
- Linked to classification
- Definition of "tentative" → Provide evidence of classification
- To calibrate a microscope, "**eyepiece graticule**" is required

Question 3:

- Photosynthesis
- *AS: Elements required for protein synthesis*
- Plotting bar chart → with error bar
- **Mineral deficient** for plant eg: Manganese and Iron

Question 4:

- Human impact on the environment
- Carbon cycle
- Role of photoautotrophs and saprotrophs in carbon cycle
- Food webs indicate energy transfer
- Explanation of why washing fruit and vegetables could affect the investigation of toxic level → context of question "synaptic transmission" (3.8 The nervous system)
- Immobilised enzyme and biosensor are used

Question 5:

- Respiration
- Calculate the yield of ATP from the molecule "triacetin"
→ data can be extracted from Kerbs Cycle
- The purpose of using buffer in enzyme experiments

**Question 6:**

- Human impact on the environment – Conservation
- Definition of endangered and extinction
- Calculation of a target population using provided formula (logarithms)

Factors affecting time taken to reach target population

- Immigration → Reduce time to taken to reach a target population
- Removing fences → Increase predation

Question 7: QER

- Mock 1 QER
- Succession

Part 1:

- Describe the process of primary succession
- Must use correct and specific terminology
- Primary Succession - The change in structure and species composition of a community over time in an area not previously colonised by a community.
- Succession is the change in structure and species composition over time

Part 2:

- Reason why biodiversity increase during succession

Part 3:

- How forest management can balance human demand for timber with the need for conservation

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