Natural Plant Cloning

1 2 3 4 5

_____ _____:

e.g.

Bulbs	Tubers	Rhizomes	Runners	Suckers
e.g.	e.g.	e.g.	e.g.	e.g.
→	→	→	→	→
		→	→	→
→	→	→	→	
				→

Artificial Plant Cloning

1 2 3 4 5

Cuttings

- e.g.
- e.g.
- e.g.

Tissue Culture

- e.g.
- e.g.

Cloning Animals

1 2 3 4 5

Enucleation & Somatic Cell Nuclear Transfer

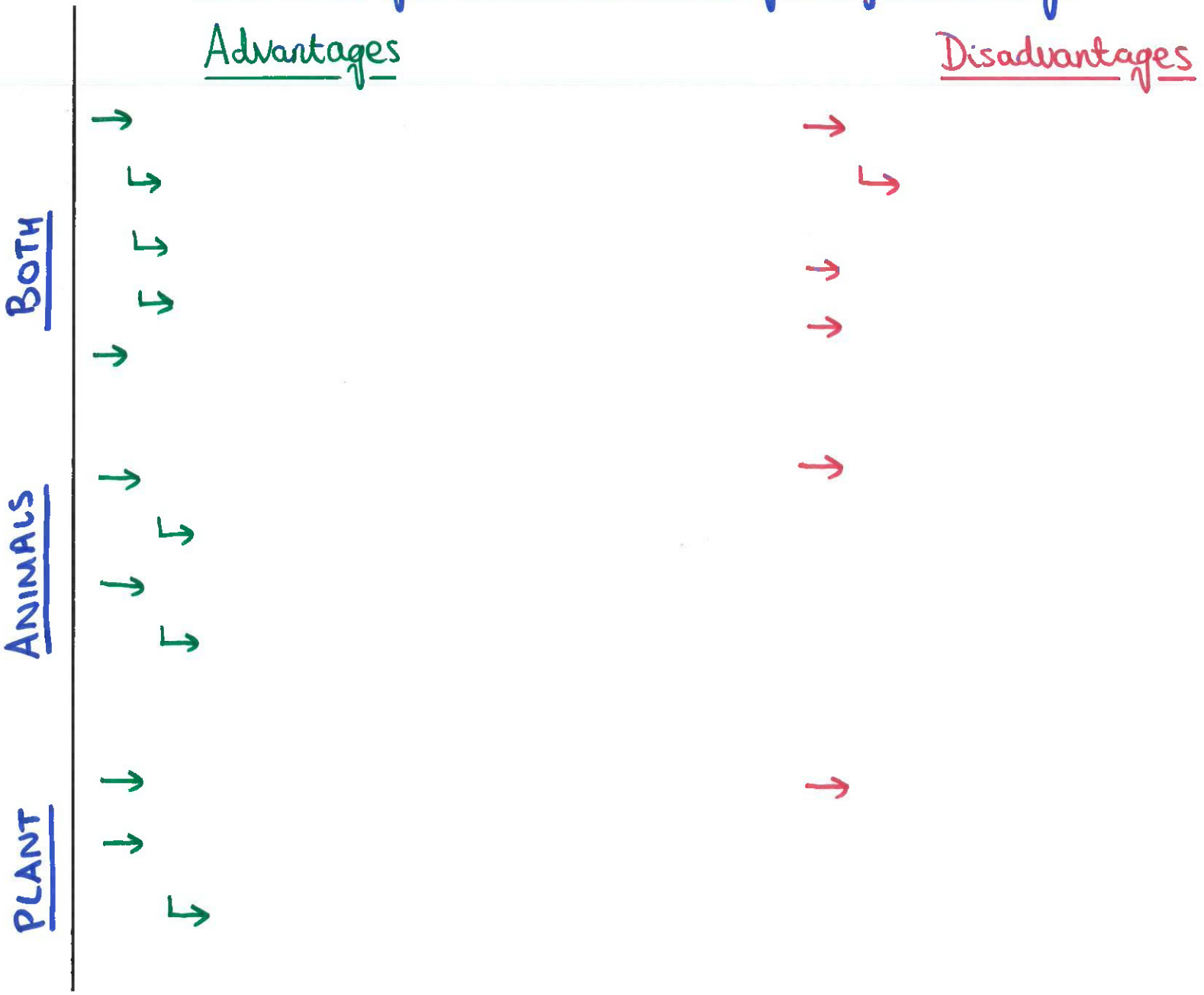
Artificial Embryo Twinning

Uses of Animal Cloning

Natural Clones

Advantages & Disadvantages of Cloning

1 2 3 4 5



Microorganisms & Biotechnology

1 2 3 4 5

Biotechnology

_____ :

Advantages

→
→
→
→
→
→

Disadvantages

→
↳
→
↳

Food

→
→
→
→

Drugs

→
→

Industry

→
→

Aseptic Technique

1 2 3 4 5

Aseptic Technique

_____ _____:

Importance of Aseptic Technique

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→

Example of Technique

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→

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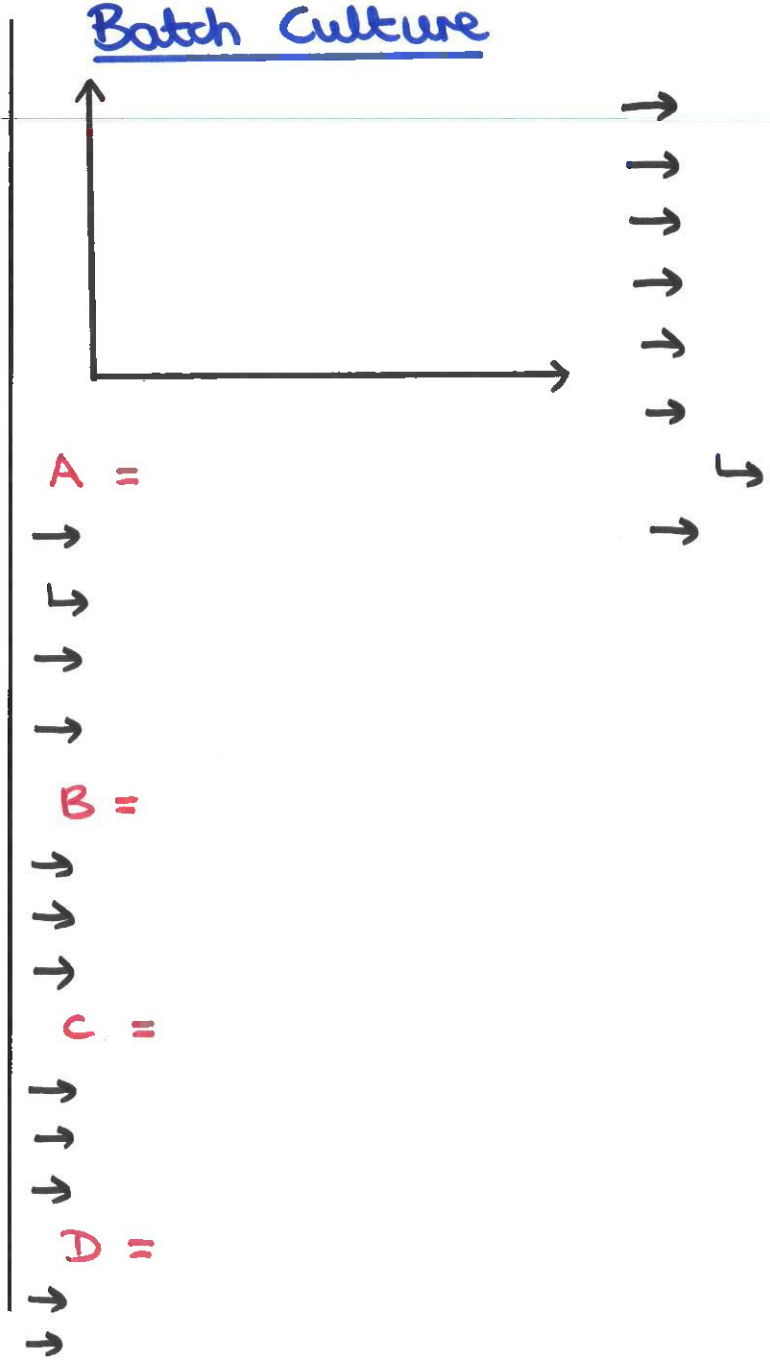
Batch & Continuous Culture

Batch Culture



Batch Culture Method

Continuous Culture Method

e.g.

e.g.

Immobilised Enzymes

1 2 3 4 5

Immobilised Enzymes

_____ _____:

Types

- e.g.
- e.g.
- e.g.
- e.g.
- e.g.
- e.g.
  - Lactose free milk
- e.g.
- e.g.

Advantages vs. 'free' enzymes