Practice Question Set For GCSE
Subject : Biology
Paper-1 Topic: B2 Organisation

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Name of the Student:_____
Max. Marks : 19 Marks **Time : 19 Minutes**

Mark Schemes

Q1.

(a) it is made up of (different) tissues (that perform specific functions)

1

(b) some blood would flow back into the ventricle / heart

allow not all the blood would leave the ventricle / heart allow blood clot (may form in the heart)

*do **not** accept blood would flow back into the right ventricle*

1

(so) less oxygenated blood would be pumped to the body

ignore references to glucose

1

cells require oxygen for respiration
or
less aerobic respiration

allow more anaerobic respiration

1

(so) person would become out of breath

(so) lactic acid will build up

or
(so) less energy transferred

allow the idea of lacking energy

*do **not** accept less energy produced / made / created*

or
(so) person would be tired

1

(c) any **four** from:

(advantages of biological valve):
- reduced risk of blood clots which could cause heart attack or stroke
- reduced risk of blood clots during pregnancy / birth
- reduced risk of bleeding during pregnancy / birth
- do not need to take anti (blood) clotting drugs

ignore do not need to take blood thinners

allow do not need to take drugs for life

- no risk to foetus / baby from drugs
- reduced risk of serious bleeds if in an accident
- do not need to carry (anti-blood clotting) drugs when travelling

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allow problems related to losing / obtaining drugs abroad

- low risk of rejection / immune reaction
  *do **not** credit reference to rejection twice*
  allow no risk of side effects from drugs

(disadvantages of biological valve):

- may be rejected
  *do **not** credit reference to rejection twice*

- may have to go through surgery more than once
  ignore risks from surgery unqualified

- may have to take immunosuppressant drugs
  allow an animal might be killed

- have to wait for (suitable) donor
  *max **three** marks if only advantages or disadvantages of biological valve given*

4

[9]

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Q2.

(a) releases energy (to the surroundings)

allow transfers (thermal) energy to the surroundings

ignore transfers energy unqualified

1

(b) to keep oxygen out

allow to keep air out

allow (because) fermentation is an anaerobic reaction

allow to prevent aerobic respiration

1

(c) to allow the mixture / yeast / cells to reach the temperature

allow to reach 2 °C

allow so yeast can equilibrate

allow idea that contraction of gas (on cooling) would hinder results collection

1

(d) (2 °C is) too cold for enzymes / yeast to work

allow (at 2 °C) few / no collisions (between sugar and enzymes)

1

(so) no carbon dioxide / gas produced
or
(so) fermentation did not occur
or
fermentation was very slow

*do **not** accept an incorrect gas*

1

enzymes become active at 35 °C so carbon dioxide / gas was produced

allow at 35 °C the enzymes started to work so carbon dioxide / gas was produced

1

(e) ideal / suitable temperature for enzymes / yeast to work

1

(so) carbon dioxide / gas produced (rapidly)

*do **not** accept an incorrect gas*

1

(after time / ≥ 15 minutes) rate / fermentation slowed

1

(because) sugar / glucose / food began to run out
or
(because) increased concentration of ethanol / alcohol started to kill the cells

allow (after time / ≥ 15 minutes) less gas produced per minute

1

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