Practice Question Set For A-Level
Subject : Biology
Paper-2 Topic:5 Energy Transfer In And Between Organisms

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Name of the Student:_____
Max. Marks : 21 Marks **Time : 21 Minutes**

Mark Schemes

Q1.

(a) electrons;
from chlorophyll / photolysis;
2

(b) (i) RuBP combines with carbon dioxide to produce 2 x GP;
1

(ii) less used to combine with carbon dioxide /
less used to form glycerate 3-phosphate;
1

(c) (i) used in photosynthesis allows detection of products;
1

(ii) ATP and reduced NADP not formed;
GP is not being used to form RuBP / is being formed from RuBP;
2

(iii) used in respiration / formation of starch / cellulose;
1

[8]

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Q2.

(a) lactate / lactic acid / pyruvate; ATP;

2

(b) (i) energy demand is very high / high respiration rate;
unable to supply enough oxygen to muscles / tissues / cells /
insufficient time for oxygen to reach muscles / tissues / cells /
insufficient oxygen in muscles / tissues / cells;

2

(ii) break down with oxygen / oxidise lactate into pyruvate / glucose / glycogen / CO_2 + water;
by aerobic respiration;

2

[6]

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Q3.

(a) prevents disease / pest organisms from reaching crop plants / prevents herbicides from reaching hedgerow / enables machinery to manoeuvre without damaging crop / hedgerow;

1

(b) some weeds provide habitats / niche for (beneficial) insects / animals:
allow (insect) pest predators to survive;
conserve (common) weed plants;
weeds are producers in food chains / food source;

2 max

(c) decomposers / saprophyte / bacteria / fungi / micro organisms (organisms) excrete / produce nitrogenous waste / e.g.; bacteria convert to nitrate / nitrifying bacteria;
(increased) nitrates(in soil) taken up / used by plants;
release of phosphate / potassium;
organisms respire and produce carbon dioxide which is used by plants in photosynthesis;

4

[7]

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