

Name of the Student: _____

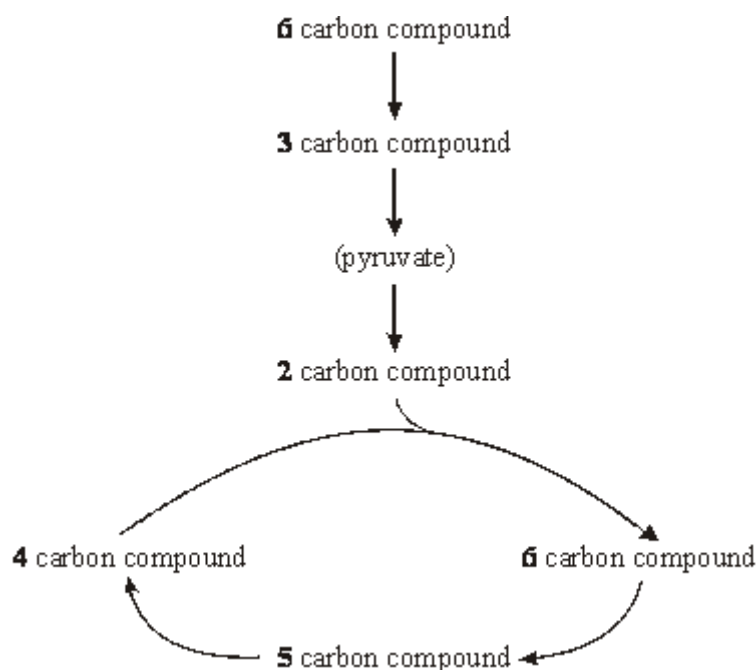
Max. Marks : 24 Marks

Time : 24 Minutes

Mark Schemes

Q1.

(a)



(1 mark for three correct answers)
(2 marks for six correct answers)

2

- (b) reduced NAD / NADH / NADH₂;
reduced FAD / FADH / FADH₂;
ATP;

3

[5]

Q2.

- (i) excessive use of fertilisers;
run-off / leaching;

2 max

- (ii) 1. growth of algae / plants stimulated / increased;
2. death of algae / plants;
3. more bacteria / decomposers / decomposition;
4. respiration;
5. decomposers / bacteria remove oxygen;
6. animals die (because of lack of oxygen);

5 max

[7]

Q3.

- (a) source of pests / animals, and effect on crop;
source of weeds / no longer taking nutrients, hence competition /
reduced yield; creation of larger fields / leaving room,
hence more efficient use of machinery / grow more crops;
hedgerows have to be maintained, so removal saves time / money;
- (b) allows beetles to remain / survive / over winter in the middle of the
field / strip of grass;
effect on distribution, e.g. do not normally reach the centre of the field
/ can reach all parts;
- (c) increases biodiversity;
source of food for animals;
habitat / nest for animals;
reduce need for insecticides / attracts insects away from crop;
windbreaks / prevent erosion / run-off / leaching;
migratory corridors;

2 max

2

2 max

[6]

Q4.

- (a) transmission / reflected / misses chlorophyll / chloroplasts / wrong wavelength;

1

- (b) (larger area) to absorb light;
(larger surface area) to absorb carbon dioxide;
short diffusion pathway for gases / oxygen / CO₂;
light able to penetrate to all cells;

2 max

- (c) effect;
detail;
effect on photosynthesis;
some effects are less light / light absorbed by water
different wavelength of light
temperature
availability of carbon dioxide
availability of water

(more than one effect award 1 mark only)

3

[6]