



CHEMISTRY ONLINE
— **TUITION** —

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BIOLOGY

ORGANISMS RESPOND TO CHANGES IN ENVIRONMENTS

Level & Board	AQA (A-LEVEL)
TOPIC:	SURVIVAL& RESPONSE
PAPER TYPE:	SOLUTION - 1
TOTAL QUESTIONS	5
TOTAL MARKS	25

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Survival and Response - 1

1.

(a)

Tip produces IAA

IAA diffuses into shoot

More elongation of cells on one side than other

(b)

- Size of shoot
- Number of shoot tips
- Size of agar block
- Shoots at same stage of growth
- Time period tips kept on agar
- Temperature
- Repeat several times and calculate a mean
- Compare degrees of curvature on calibration curve to determine iaa concentration

2.

(a)

IAA is not broken down by light

IAA moves away from light

3.

(a)

Behavior - positive photo taxis

Advantage - to avoid competition

(b)

- No stats test so do not know if change in movement away from light is significant

- Between 35c and 36.5c more than half of beetles are still found on the light side
- At higher temperatures beetles might be flying not walking
- Slowing of movement happens before 35c
- Slowing of movement could be due to beetles preparing to fly
- Speed of movement not recorded above 35c
- Mean speed could still mean some might walk very quickly and others stay still

4.

(a)

Tip produces IAA

Affects concentration of IAA

(b)

For respiration

Provide ATP for growth

(c) To prevent evaporation which alters concentration of IAA and glucose solution

5.

(a)

Increase in IAA concentration the higher the mean change in length

High IAA stimulates cell elongation

In roots growth less

(b) 0.4 and 39.6

I am Sorry !!!!!



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- Founder & CEO of Chemistry Online Tuition Ltd.
- Completed Medicine (M.B.B.S) in 2007
- Tutoring students in UK and worldwide since 2008
- CIE & EDEXCEL Examiner since 2015
- Chemistry, Physics, Math's and Biology Tutor

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