

1. The statements below describe the response to light by a rod cell in the retina.

Which of the following statements is / are correct?

**Statement 1:** The plasma membrane becomes hyperpolarised.

**Statement 2:** Rhodopsin is broken down.

**Statement 3:** Glutamate is released from a rod cell, causing depolarisation of a connecting bipolar cell.

A 1, 2 and 3 are correct

B Only 1 and 2 are correct

C Only 2 and 3 are correct

D Only 1 is correct

Your answer

[1]

2. The statements below relate to photoreceptor cells in the retina.

Which of the following statements is / are correct?

1 The inner segment of a photoreceptor cell contains many mitochondria.

2 Rod cells are absent in the fovea.

3 A cone cell contains three photosensitive pigments, each sensitive to a different wavelength of light.

A 1, 2 and 3 are correct

B Only 1 and 2 are correct

C Only 2 and 3 are correct

D Only 1 is correct

Your answer

[1]

3. Which of the options, A to D, is a molecule that requires vitamin C for its synthesis?

A collagen

B deoxyribonucleic acid

C haemoglobin

D rhodopsin

Your answer

[1]

**END OF QUESTION PAPER**

### Mark Scheme

Question			Answer/Indicative content	Marks	Guidance
1			B	1	
			Total	1	
2			B ✓	1	<p><b>Examiner's Comments</b>  Candidates did not perform well on this question. The most common incorrect answer was option A suggesting that candidates had not read the options carefully. Statement 3 incorrectly stated that <b>each</b> cone cell contains three photosensitive pigments, not that there are three types of cone cells.</p>
			Total	1	
3			A	1	
			Total	1	