

# BIOLOGY

**Paper 1522/22**  
**Multiple Choice (Extended) 22**

Question Number	Key	Question Number	Key	Question Number	Key	Question Number	Key
1	B	11	B	21	A	31	C
2	D	12	D	22	C	32	C
3	C	13	B	23	D	33	C
4	C	14	C	24	C	34	A
5	D	15	D	25	B	35	A
6	A	16	B	26	D	36	B
7	C	17	B	27	B	37	A
8	D	18	D	28	D	38	C
9	B	19	C	29	B	39	D
10	C	20	A	30	C	40	B

## General comments

While many questions were well-answered by most candidates, there were some areas of difficulty. Sex-linkage in genetics was not widely understood. It is important for candidates to work methodically through information given.

## Comments on specific questions

Questions 1, 2, 6, 7, 8, 9, 10, 12, 13, 14, 17, 19, 20, 22, 24, 28, 30, 33, 36 and 37 were answered correctly by most candidates.

### Question 15

Most candidates appreciated that the small intestine is the part of the alimentary canal where most water is absorbed. Some candidates incorrectly opted for the large intestine.

### Question 18

Many candidates appreciated that the cell shown was a phagocyte, whose function was phagocytosis. Some candidates incorrectly believed that the cell produced antibodies.

### Question 21

While most candidates understood that the brain is the organ that detects the changes in the carbon dioxide concentration of the blood, some candidates incorrectly opted for the lungs.

**Question 23**

Most candidates correctly opted for protein as the food type that when eaten in excess, will cause a rise in the urea content of urine. Some candidates incorrectly opted for mineral salts.

**Question 25**

On the whole, candidates were able to derive the correct answer, appreciating what the appearance of the eye would be when focusing on a near object in bright daylight.

**Question 26**

Many candidates understood that when the rotating platform stops, the shoot will grow towards the light. Some candidates incorrectly believed that the shoot will continue to grow upwards.

**Question 27**

Some candidates knew that alcohol is a depressant. A common misconception was that alcohol reduces reaction times.

**Question 29**

Many candidates knew the roles of the hormones that control the menstrual cycle.

**Question 31**

Few were able to derive the correct answer for this sex-linked problem.

**Question 32**

Some candidates understood what is meant by a test cross (bb X BB or bb X Bb).

**Question 35**

Some candidates knew the sequence of events that occur in the nitrogen cycle, but many opted for an incorrect distractor.

**Question 38**

Although many candidates understood that a restriction enzyme is used to create complementary sticky ends in genetic engineering, DNA ligase was a common incorrect response.