



---

**BIOLOGY**

**6884/01**

PAPER 1

**October/November 2020**

---

***Confidential***

***MARK SCHEME***

***{6884/01}***

***MARKS: 40***

## MARKING

1. Mark crossed out answers when nothing else has been written.
2. If the candidate has left an answer blank, record this as NR (no response) in the marks column.
3. Apply the agreed final mark scheme, making professional informed judgements about what the candidate has written. You need to decide if the point made is equivalent to the point in the mark scheme, or if it is not, based on your knowledge of the subject and understanding of the mark scheme.

## GENERAL NOTES

Mark Schemes will use these abbreviations:

- ; separates marking points
- / separates alternatives for a marking point
- R reject
- A accept (for answers correctly cued by the question) or
- AW alternative wording (where responses vary more than usual)
- MP mark point- used in guidance notes when referring to numbered marking points
- ORA or reverse argument/reasoning
- OWTTE or words to that effect
- I ignore/irrelevant – this response gains no mark, but any following correct answers can gain marks
- ( ) the word/ phrase in brackets is not required to gain marks but sets context of response for credit. e.g. (waxy) cuticle. Waxy not needed but if it was described as cellulose cuticle then no mark.
- small underlined words- this word only (grammatical variants excepted)
- D, L, T, Q quality of drawing/ labelling/ table / writing as indicated by mark scheme
- max indicates the maximum number of marks that can be given

**INSTRUCTIONS FOR EXAMINERS****Correct Biology**

Always credit correct statements even if they follow incorrect statements. Usually apply this to sentences, but use judgement if candidate writes lengthy sentences.

**Marking questions where a specified number of responses is indicated**

Mark first answer on each row unless considered neutral.

If several answers on first line and no answers on subsequent lines, mark all answers on first line up to the number specified in the question.

Do not mark answers in excess of number indicated by the question.

**Calculations**

Award full marks for correct answer with units even if no working shown.

If units not given, then award one mark for numerical answer.

If no answer or incorrect answer award one mark for correct working.

**Errors carried forward**

Examples:

If structure is identified incorrectly, then apply error carried forward (ecf / transfer error (TE)) rule for subsequent answers.

If first answer using information provided is incorrect allow ecf / TE for next question.

**Vague answers**

Do not allow 'particles' in place of molecules

**Crossed out work**

Mark crossed out work if there is no second attempt at the answer. Otherwise ignore it;

**Watch for:**

- context and scientific correctness (don't just spot key words / treat separate sentences independently)
- spellings that matter (e.g. mitosis / meiosis, glucagon/ glycogen, ureter / uterus / urethra);
- spellings / grammatical constructions that don't matter (for many candidates, English is their 2<sup>nd</sup> or 3<sup>rd</sup> language);
- lists that include wrong points (e.g. if 3 points are needed and 5 given, mark the first 3 only);
- Only one mark should be awarded per numbered line, unless some of the lines are left blank, in which case the 2<sup>nd</sup> or 3<sup>rd</sup> idea on the first line can be marked as well;
- Mark all the candidate's answers wherever they have written them.

- 1 sensitivity / irritability / response to stimuli; [1]
- 2 add a few drops of orange juice to DCPIP;  
DCPIP changes from blue to colourless; [2]
- 3 (a) negative gravitropism/ geotropism; [1]  
(b) auxins concentrated on lower side;  
due to the pull of gravity;  
ref to growth rate in shoots stimulated growth on lower side/ differential growth;  
any 2 [2]
- 4 animal;  
red/colourful to attract animals; [2]
- 5 the glans penis becomes hard/dry/ less bruises;  
reduces chances of entry of the virus;  
the virus can enter the surface of the foreskin and this is removed in circumcision/OWTTE; [2]
- 6 A - T; [2]  
C - G;
- 7 (a) accommodation; [1]  
(b) ciliary muscles contract;  
suspensory ligaments slacken; [2]
- 8 label line to the phloem; [1]
- 9 pulmonary vein; [2]  
semi-lunar valve;
- 10 secretes digestive enzymes/named; [2]  
secretes hormones/named;
- 11 amino acids/glucose/oxygen/vitamins/mineral salts/ hormones; any 2 [1]
- 12
- |              |  |
|--------------|--|
| FSH          | Maintains the lining of the uterus                   |
| LH           | Thickens and repairs the lining of the uterus        |
| Progesterone | Causes the mature ovum to be released from the ovary |
| Oestrogen    | Causes an ovum to mature in the ovary                |
|              | Stimulate the secretion of FSH                       |
- [3]
- 13 asexual reproduction; [2]  
spores formed/ small bud develops and falls off;

- 14** (a) pituitary gland; [1]  
(b) coordination of muscular movements / maintenance of equilibrium and balance; [1]
- 15** hepatic portal vein; [1]
- 16** diaphragm;  
contract;  
decreases; [3]
- 17** prevention of extinction;  
maintain biodiversity;  
benefits associated with ecological importance/ medicinal use of the species; [max. 2]
- 18** (a) **V** is denitrification;  
**W** nitrification; [2]  
(b) humans are second trophic level when eating legumes + third when eating beef/ beef  
longer food chain;  
less energy in beef;  
as energy is lost between trophic levels; [3]
- 19** sulfur dioxide/correct formula;  
nitrous oxides/correct formula;  
carbon dioxide/ correct formula; [max. 1]