

ASSESSMENT and QUALIFICATIONS ALLIANCE

# GCSE

# Science A (4461) / Biology (4411)

Specification A

# **BLY1BP, BL1BSF & BL1BSH**

# **Mark Scheme**

2010 Examination – November Series

The blank answer sheet for this component can be found at the end of this document.

This component is an objective test for which the following list indicates the correct answers used in marking the candidates' responses.

Further copies of this Mark Scheme are available to download from the AQA Website: www.aqa.org.uk

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#### GCSE

#### SCIENCE A (4461) / BIOLOGY (4411)

Objective Test Answer Key

### **BLY1B (Evolution and Environment)**

#### November 2010

#### Foundation Tier

| Question | Кеу                                  |  |                        |           |  |  |
|----------|--------------------------------------|--|------------------------|-----------|--|--|
|          | A causes aci                         | d rain   |                        | 2         |  |  |
| One      | B causes les                         | s carbon dioxide to be   | e taken out of the atm | osphere 1 |  |  |
| One      | c may pollute                        | e farmland with poisor   | nous chemicals         | 3         |  |  |
|          | D produces r                         | nethane  |                        | 4         |  |  |
|          | A A skin cell is taken from a donor. |  |                        |           |  |  |
|          |                                      |  |                        | 1<br>3    |  |  |
| Two      |                                      | The new cell divides to make a group of similar cells.<br>Different types of body cell are produced. |                        |           |  |  |
|          |                                      | us is removed, leaving   |                        | 4<br>2    |  |  |
|          |                                      |  |                        | L         |  |  |
|          | A extinction                         |  |                        | 4         |  |  |
| Three    | B mutation                           |  |                        | 1         |  |  |
| Thee     | C natural sel                        | natural selection  |                        |           |  |  |
|          | <b>D</b> variation                   | variation  |                        |           |  |  |
|          | A chromosor                          | nes  |                        | 4         |  |  |
|          |                                      | clones   |                        |           |  |  |
| Four     |                                      | gametes  |                        |           |  |  |
|          | D genes                              | -  |                        |           |  |  |
|          |                                      |  |                        |           |  |  |
|          | A the wind b                         | ows sand around  |                        | 3         |  |  |
| Five     | B very cold r                        | very cold nights   |                        |           |  |  |
|          | <b>C</b> soft ground                 | soft ground  |                        |           |  |  |
|          | D dry condition                      | dry conditions   |                        |           |  |  |
|          | Α                                    | В  | С                      | D         |  |  |
| Six      | 4 4 3                                |  | 2                      |           |  |  |
| Seven    | 3                                    | 4  |                        |           |  |  |
| Eight    | 2                                    | 4  |                        |           |  |  |
| Nine     | 1                                    | 1  |                        |           |  |  |

#### GCSE

#### SCIENCE A (4461) / BIOLOGY (4411)

Objective Test Answer Key

#### **BLY1B (Evolution and Environment)**

#### November 2010

#### Higher Tier

| Question |         |                        | Key |   |  |  |
|----------|---------|------------------------|-----|---|--|--|
|          | A the   | wind blows sand around |     | 3 |  |  |
| One      | B very  | cold nights            |     | 4 |  |  |
| One      | C soft  | ground                 |     | 2 |  |  |
|          | D dry   | conditions             | 1   |   |  |  |
|          |         |                        |     |   |  |  |
|          | A adul  | t cell cloning         |     | 4 |  |  |
| Two      | B takir | ng cuttings            |     | 1 |  |  |
| TWO      | C emb   | ryo transplants        |     | 3 |  |  |
|          | D tissu | ie culture             |     | 2 |  |  |
|          | 1       |                        |     |   |  |  |
|          | Α       | В                      | С   | D |  |  |
| Three    | 2       | 3                      | 2   | 4 |  |  |
| Four     | 1       | 3                      | 3   | 1 |  |  |
| Five     | 2       | 3                      | 4   | 1 |  |  |
| Six      | 2       | 3                      | 4   | 1 |  |  |
| Seven    | 3       | 2                      | 4   | 3 |  |  |
| Eight    | 3       | 3                      | 4   | 2 |  |  |
| Nine     | 3       | 4                      | 2   | 3 |  |  |

#### GCSE SCIENCE Unit : BLY1BP **BIOLOGY UNIT 1B** Centre : **Candidate Number:** Series : BG10 UCI: **Candidate Name :** For completion by the Examination Invigilator. Please fill this circle if the candidate is absent: O HIGHER TIER Instructions on how to complete this answer sheet are given on the question paper. Please make sure you follow them carefully. Questions ONE to NINE Choose one response 1 - 4 for each of the parts A - D QUESTION ONE 1 2 3 4 0 0 0 0 1A the wind blows sand around 1B $\bigcirc$ $\bigcirc$ very cold nights $\bigcirc$ $\bigcirc$ 1C soft ground 0 0 0 0 1D 0 $\bigcirc$ 0 dry conditions Ο QUESTION TWO 1 2 3 4 2A adult cell cloning 0 0 0 0 2B $\bigcirc$ $\bigcirc$ $\bigcirc$ $\bigcirc$ taking cuttings 2C embryo transplants 0 0 0 $\bigcirc$ 2D 0 $\bigcirc$ $\bigcirc$ 0 tissue culture . QUESTION THREE QUESTION FOUR 1 2 3 4 1 2 4 3 0 0 0 0 0 Ο 0 0 4A 0 Q $\bigcirc$ $\bigcirc$ 0 0 0 $\bigcirc$ **4B** 0 0 0 0 Ο 0 0 $\bigcirc$ 4C 0 0 $\bigcirc$ $\bigcirc$ Ο 0 $\bigcirc$ $\bigcirc$ 4D

|    | QUES | TION | SIX |   |
|----|------|------|-----|---|
|    | 1    | 2    | 3   | 4 |
| 6A | 0    | . O  | 0   | 0 |
| 6B | 0    | 0    | 0   | 0 |
| 6C | 0    | 0    | 0   | 0 |
| 6D | 0    | 0    | 0   | 0 |

3A

3B

3C

3D

| QUESTION SEVEN |   |     |   |   |  |
|----------------|---|-----|---|---|--|
|                | 1 | 2   | 3 | 4 |  |
| 7A             | O | 0   | 0 | 0 |  |
| 7B             | 0 | 0   | 0 | 0 |  |
| 7C             | 0 | . O | 0 | 0 |  |
| 7D             | 0 | 0   | 0 |   |  |

| Q  | UEST | ION | NINE |    |
|----|------|-----|------|----|
|    | 1    | 2   | 3    | 4  |
| 9A | 0    | 0   | 0    | 0  |
| 9B | Ο.   | 0   | 0    | 0  |
| 9C | 0    | 0   | 0    | 0  |
| 9D | 0    | 0   | 0    | ο, |

|    | QUEST | ION     | FIVE |   |
|----|-------|---------|------|---|
|    | 1     | 2       | 3    | 4 |
| 5A | 0     | : 1. O. | 0    | 0 |
| 5B | 0     | 0       | 0    | 0 |
| 5C | 0     | 0 -     | 0    | 0 |
| 5D | 0     | 0       | 0    | 0 |

|    | QUESTION EIGHT |     |    |    |  |  |
|----|----------------|-----|----|----|--|--|
|    | 1              | 2   | 3  | 4  |  |  |
| 8A | 0              | 0   | O, | O, |  |  |
| 8B | 0              | . 0 | 0  | 0  |  |  |
| 8C | 0              | 0   | 0  | 0  |  |  |
| 8D | 0              | 0   | 0  | 0  |  |  |

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### **FOUNDATION TIER**

Instructions on how to complete this answer sheet are given on the question paper. Please make sure you follow them carefully.

ONE & NINE Change and some  $\sim$ -1 4 C. 1 - 6 41

|                      |                        | QUESTION ONE                           | 1     | 2  | 3  | 4        |        |
|----------------------|------------------------|--|-------|----|----|----------|--------|
|                      | 1A causes acid rain    |  | 0     | 0  | 0  | •        |        |
|                      |                        | on dioxide to be taken from atmosphere | 0     | 0  | 0  | •        |        |
|                      |                        | land with poisonous chemicals          | 0     | 0  | 0  | •        |        |
|                      | 1D produces methar     |  | 0     | 0  | 0  | •)•      |        |
|                      | 2A A skin cell is take | QUESTION TWO                           | 1     | 2  | 3  | 4        |        |
|                      |                        | des to make a group of similar cells   | 0     | 0  | 0  | 0.       |        |
|                      |                        | f body cell are produced               | 0     | 0  | 0  | 0        |        |
|                      |                        | moved, leaving cytoplasm               | 0     | 0  | 0  | 0.       |        |
|                      |                        |  | 0     | 0  | 0  | <u> </u> |        |
|                      | 3A extinction          | QUESTION THREE                         | 1     | 2  | 3  | 4        |        |
|                      |                        |  | 0     | 0  | 0  | 0.       |        |
|                      |                        |  | 0     | 0  | 0  | 0.       |        |
|                      | 3C natural selection   |  | 0     | 0  | 0  | 0.       |        |
|                      | <b>3D</b> variation    |  | 0     | 0  | 0  | • •      |        |
|                      |                        | QUESTION FOUR                          | 1     | 2  | 3  | 4        |        |
|                      | 4A chromosomes         |  | 0     | 0  | 0  | 0.       |        |
|                      | 4B clones              |  | 0     | 0  | 0  | 0.       |        |
|                      | 4C gametes             |  | 0     | 0  | 0  | 0.       |        |
|                      | 4D genes               |  | 0     | 0  | 0  | 0).      |        |
|                      | (                      | QUESTION FIVE                          | 1     | 2  | 3  | 4        |        |
|                      | 5A the wind blows sa   | and around                             | 0     | 0  | 0  | 0.       |        |
|                      | 5B very cold nights    |  | 0     | 0  | 0  | 0.       |        |
|                      | 5C soft ground         |  | 0     | 0  | 0  | 0 ·      |        |
|                      | 5D dry conditions      |  | 0     | 0  | 0  | o ).     |        |
| QUI                  | ESTION SIX             | QUESTION SEVEN                         | (     |    | QU | ESTIC    | N EIGH |
| Contemplation in the | 1 2 3 4                | 1 2 3 4                                |       |    |    | 1        | 2 3    |
|                      | 0 0 0 0                | <b>7A</b> 0 0 0 0                      |       | 3A |    |          | ् ै    |
|                      | 0 0 0 0                | <b>7B</b> 0 0 0 0                      |       | BB |    |          | 0 0    |
|                      | 0 0 0 0                |  |       | BC |    |          | 0 0    |
| 6 <b>D</b>           | 0 0 0 0                | 7D 0 0 0 0                             | 8     | BD |    | 0        | 0 0    |
|                      |                        | QUESTION NINE                          |       |    |    |          |        |
|                      |                        | <b>1 2 3 4</b><br>9A 0 0 0 0           |       |    |    |          |        |
|                      |                        | 9B 0 0 0 0                             |       |    |    |          |        |
|                      |                        | 90 0 0 0                               |       |    |    |          |        |
|                      |                        |  |       |    |    |          |        |
|                      |                        | (9D 0 0 0 0).                          |       |    |    |          |        |
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|                      | -                      |  |       |    |    |          |        |
|                      | 2                      | 207                                    |       |    |    |          |        |
|                      |                        |  | 2207  | 7  |    |          |        |
|                      |                        |  | . U ک |    |    |          |        |

6A

6B

6C

6D

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0

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 $\bigcirc$