 Province of the

EASTERN CAPE

EDUCATION

**DIRECTORATE SENIOR CURRICULUM MANAGEMENT**

**(SEN-FET)**

**HOME SCHOOLING SELF-STUDY WORKSHEET ANSWER SHEET**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **SUBJECT** | LIFE SCIENCES | **GRADE** | 12 | **DATE** | 07 April 2020 |
| **TOPIC** | INHERITANCE OF BLOOD GROUPS (MULTIPLE ALLELES)Drop Talking Stock Illustrations – 327 Drop Talking Stock ... | **TERM 1****REVISION** |  | **TERM 2 CONTENT** | 🗸 |

WORKSHEET : INHERITANCE OF BLOOD GROUPS

|  |  |  |
| --- | --- | --- |
| 1.1 | IBIB🗸  | (1) |
| 1.2 | IA i🗸 | (1) |
| 1.3 | ii🗸 | (1) |
| 1.4 | IA i🗸 | (1) |
| 1.5 | IAIB🗸 | (1)**(5)** |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2. |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| P1 | Phenotype | Group B | x | Group O🗸 |
|  | Genotype |  IBi | x | ii🗸 |
| *Meiosis* |  |  |  |  |
|  | G/gametes | IB , i | x |  i, i🗸 |
| *Fertilisation* |  |  |  |  |
| F1 | Genotype |  IBi ; IBi ; ii ; ii🗸 |
|  | Genotypic ratio |  1 IBi : 1 ii🗸\* |
|  | Phenotype |  1Group B : 1 Group O🗸\*  |
| P1 and F1🗸 |  |  |  |
| Meiosis and fertilisation🗸 | 2 Compulsory + Any 4 |

**OR**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| P1 | Phenotype | Group B | x | Group O🗸 |
|  | Genotype | V | x | ii🗸 |
|  |  |  |
| *Meiosis* |  |

|  |  |  |
| --- | --- | --- |
| Gametes | IB | i |
| i | IBi  | ii |
| i | IBi | ii |

1 mark for correct gametes1 mark for correct genotypes\* |
|  |  |
| *Fertilisation* |  |
|  |  |
|  | Genotypic ratio |  1 IBi : 1 ii🗸\* |
| F1 | Phenotype |  1Group B : 1 Group O🗸\*  |
| P1 and F1🗸 |  |  |  |
| Meiosis and fertilisation🗸 | 2 Compulsory + Any 4 |
|  |

 | (6) |

|  |  |  |  |
| --- | --- | --- | --- |
| 3.1 | One🗸/1  |   | (1) |
| 3.2 | Mrs Thomas🗸 |  | (1) |
| 3.3 | - The child has the genotype ii🗸/ is homozygous and- if both the parents are heterozygous🗸/ have the genotypes IAi or IBi- she inherits one recessive allele from each parent🗸 |  | (3)**(5)** |

|  |  |  |
| --- | --- | --- |
|  |  | [16] |