 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** | 29 May 2020 |
| **TOPIC** | RESPONDING TO THE ENVIRONMENT: THE HUMAN EYE –  (**EYE DEFECTS**) | **TERM 1**  **REVISION** |  | **TERM 2 CONTENT** | 🗸 |

**QUESTION 1**

* 1. D🗸🗸
  2. A🗸🗸
  3. C🗸🗸
  4. B🗸🗸 (4 × 2) = 8

**QUESTION 2**

2.1 (a) A 🗸 (1)

(b) B 🗸 (1)

|  |
| --- |
|  |
| **2.2 Compare short-sightedness and long-sightedness by completing the table below. (8)** |
| |  |  |  | | --- | --- | --- | |  | **Short sightedness** | **Long sightedness** | | **Shape of eyeball** | Longer than usual 🗸 | Shorter than usual 🗸 | | **Focal point on retina for nearby objects** | Clear focal point on retina🗸 | Focus point lies behind retina 🗸 | | **Corrective type of lens** | Concave lens 🗸 | Convex lens 🗸 | | **Corrective corneal laser surgery** | Cornea is made flatter (less convex) 🗸 | Cornea is thickened to make it rounder (more convex) 🗸 | |

2.3 (a) Convex lens (1)

(b) Concave lens (1)

**QUESTION 3**

3.1 Short sightedness 🗸 (1)

3.2 Wearing prescription glasses with concave lens 🗸 OR laser surgery 🗸 (2)

3.3 Mark allocation: (6)

Heading (both variables mentioned) 🗸

Correct type of graph 🗸

X axis and Y axis labeled correctly 🗸

Correct scale Y axis and X axis (equal width and spacing of bars)🗸

All bars plotted 🗸🗸🗸

(4-6 bars correct 🗸🗸)

(1-3 bars correct 🗸)

🗸🗸🗸 (P) 🗸T

3.4 Clouding of the eye’s lens due to the clumping of proteins making up the lens. 🗸 This prevents sufficient light from passing through the retina thereby making it difficult to see. 🗸 (2)

3.5 Water 🗸 and Protein 🗸 (2)

3.6 The learners are still young🗸 and cataracts are usually associated with increasing age 🗸. (The older one gets the greater the chances of having cataracts.) (2)

**QUESTION 4**

4.1 Corneal Astigmatism 🗸 and Lenticular Astigmatism🗸 (2)

**(NOTE: TYPES OF ASTIGMATISM- NOT FOR EXAMS, you only have to know astigmatism as an eye defect)**

4.2 Scaring from Injury 🗸

Scaring from eye surgery gone wrong 🗸

Hereditary 🗸

Keratoconus (disease causing the gradual thinning of the cornea)🗸 **(ANY 3)** (3)

4.3 Wearing of spectacles🗸 OR refractive laser surgery🗸 (2)

**QUESTION 5**

5.1 Short – sightedness means that a person can see near objects clearly🗸 but objects that are far away are out of focus (blurred)🗸. (2)

5.2 He would not be able to see other cars clearly or read traffic road signs 🗸.

This might result in a road traffic accident 🗸. (2)

5.3 Cornea is too curved🗸; eyeball shape is too long🗸 (2)

5.4 Concave lenses🗸 (1)

**TOTAL: 50 MARKS**