 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** | 21 May 2020 |
| **TOPIC** | RESPONDING TO THE ENVIRONMENT: CNS & REFLEX ACTION | **TERM 1**  **REVISION** |  | **TERM 2**  **CONTENT** | 🗸 |

1.1 C✓✓

1.2 B✓✓

1.3 B✓✓

1.4 C✓✓ 4x2

2.1

|  |  |  |
| --- | --- | --- |
|  | **Name** | **Function** |
| **1** | **Cerebrum**✓ | * Controls all voluntary actions✓ * Interpret nerve impulses from the sense organs so that the sensation of sight, sound, smell, taste and touch can arise✓ * Seat of higher mental functions such as memory, intelligence etc. ✓ |
| **2** | **Corpus callosum**✓ | * Allows for communication between the left and right side of the brain✓ |
| **3** | **Cerebellum**✓ | * It **co-ordinates and controls** the actions of all **voluntary muscles**✓to make smooth and precise movement possible e.g. walking and running * It controls the **tension** in the muscles (muscle tone) to maintain **balance** and **posture**✓ |
| **4** | **Medulla Oblongata**✓ | * It **transmits nerve** impulses between the **spinal cord** and the higher parts of the brain✓ * It controls **autonomic functions** ✓i.e. rate and depth of breathing, heartbeat, narrowing and widening of the blood vessels |
| **5** | **Spinal cord**✓ | * Pathway for impulses to and from the brain and from receptors and effectors✓ * Serves as a reflex centre for certain actions✓ |

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2.2 (a) D✓ - Medulla oblongata✓

(b) A✓ - Cerebrum✓

(c) F✓ - Cerebellum✓

(d) D✓ - Medulla oblongata✓

(e) B✓ - Corpus callosum✓

(f) D✓ - medulla oblongata✓ 6 x 2

3.1 A – Dorsal root✓

B – Dorsal root ganglion✓

C – spinal nerve✓

D – Ventral root✓

E- Central canal✓

F – Grey matter✓

G – White matter✓ 7

3.2.1 A - Interneuron✓

B – Sensory neuron✓

C – Motor neuron✓ 3

3.2.2 Synapse✓ 1

3.2.3 X to Y✓ 1

4 ` 1.5m ✓ = 0.02✓ s✓ 3

75 m.s-1

**TOTAL: 50 MARKS**