 Province of the

EASTERN CAPE

EDUCATION

**DIRECTORATE SENIOR CURRICULUM MANAGEMENT (SEN-FET)**

**HOME SCHOOLING SELF-STUDY WORKSHEET**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **SUBJECT** | LIFE SCIENCES | **GRADE** | 12 | **DATE** | 21 May 2020 |
| **TOPIC** | RESPONDING TO THE ENVIRONMENT: CENTRAL NERVOUS SYSTEM | **TERM 1****REVISION** |  | **TERM 2 CONTENT** | 🗸 |
| **TIME ALLOCATION** | 50 minutes | **TIPS TO KEEP HEALTHY**1. **WASH YOUR HANDS** thoroughly with soap and water for at least 20 seconds. Alternatively, use hand sanitizer with an alcohol content of at least 60%.2. **PRACTICE SOCIAL DISTANCING** – keep a distance of 1m away from other people.3. **PRACTISE GOOD RESPIRATORY HYGIENE**: cough or sneeze into your elbow or tissue and dispose of the tissue immediately after use.4. **TRY NOT TO TOUCH YOUR FACE.** The virus can be transferred from your hands to your nose, mouth and eyes. It can then enter your body and make you sick. 5. **STAY AT HOME.**  |
| **INSTRUCTIONS** | Use Mind The Gap Study Guide and read:Study the notes provided with this lessonAnswer the questions on the Worksheets below |

1.1 **Multiple Choice**

Choose the most correct answer.

* 1. The parts that make up the Central Nervous system are the …

A cerebrum and Cerebellum

B spinal and cranial nerves and spinal cord

C brain and spinal cord

D brain, spinal cord and all nerves (2)

1.2 Which ONE of the following represents the correct functions of the cerebrum and medulla oblongata?



 (2)

1.3 Which of the following pairs of body functions are normally involuntary actions but can be controlled voluntarily for short periods of time?

A Heartbeat and blood pressure

B Blinking of the eye and the mechanism of breathing

C Contraction of skeletal muscles and pupil size

D Control of body temperature and shivering (2)

1.4 A person can feel pain in his leg but cannot move his legs.

 This is a result of damage to the…

 A sensory neuron

 B sensory and motor neuron

 C motor neuron

 D sensory and interneuron (2)  **[8]**

**2.1** Complete the table below with the NAME and FUNCTION of the parts of the brain.

****

|  |  |  |
| --- | --- | --- |
|  | **Name** | **Function** |
| **1** |  |  |
| **2** |  |  |
| **3** |  |  |
| **4** |  |  |
| **5** |  |  |

 **[15]**

**2.2 The diagram below shows a longitudinal section of the human brain.**

 Give the LETTER and the NAME of the part responsible for each of the following:

1. Regulation of heart beat (2)
2. Origin of voluntary actions (2)
3. Maintenance of balance and equilibrium (2)
4. Part that is stimulated if carbon dioxide is too high (2)
5. Co-ordinates information between left and right side of the brain (2)
6. Area where nerves from left side of body cross over to right side of brain (2)

 **[12]**

**3.1 Label all the parts in the diagram below: [7]**

 **B**

 **A**

 **F**

 **E**

 **D**

 **C**

 **G**

**3.2 The diagram below represents an action that takes place in the human body**

****

**X**

**Y**

 3.2.1 Identify neurons **A**, **B** and **C**.(3)

 3.2.2 Name the microscopic gap between neuron **A** and neuron **C**. (1)

 3.2.3 Which direction will the impulse travel? (**X to Y or Y to X**) (1)

 **[5]**

4. The nerve pathway in the above response is about 1,5 meters in length.

A nerve impulse travels at 75 m.s-1.

Use this information to calculate the time taken for this reflex action to occur.

**Show all working**. **[3]**

**TOTAL: 50 MARKS**