**LIFE SCIENCES GRADE 10**

|  |  |
| --- | --- |
| **Total** |  |
|  | **30** |

**Practical Task Term 3: 31 July 2024: Mitosis and Plant Tissues**

**Date:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Name:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Duration:** 60 minutes

|  |  |  |
| --- | --- | --- |
|  | INSTRUCTIONS AND INFORMATION |  |
|  |  |  |
|  | **Read the following instructions carefully before answering the questions.** |  |
| 1. | This is a formal SBA task and must be done under supervised conditions in the classroom. |  |
| 2. | Each learner completes this task on his/her own (Under test conditions). |  |
| 3. | Present the answers according to the instructions of each question. |  |
| 4. | Draw all diagrams in pencil and label in ink. |  |
| 5. | The diagrams in the question may NOT be drawn to scale. |  |
|  |  |  |
|  |  |  |
|  | **Question 1: Mitosis in an Animal Cell** |  |
|  | Study the diagrams below and answer the questions that follow. |  |
|  | Diagram **A** |  |
|  | Diagram **B**  Diagram **C** |  |
|  |  |  |
| 1.1 | Arrange the diagrams above in the correct sequence of the correct phases of mitosis. Use the **LETTERS** provided. | (2) |
|  |  |  |
| 1.2 | Give a visible reason for your answer for each phase identified. | (3) |
|  |  |  |
| 1.3 | Draw a fully labelled diagram of the last phase of mitosis of a cell with 4 chromosomes. | (5) |
|  |  | **(10)** |
|  | **QUESTION 2: Plant Tissues** |  |
|  | The diagrams below represent plant tissues **A, B** and **C.** |  |
|  |  |  |
| 2.1 | Provide the names of tissue:  i) **A**  ii) **C** | (1)  (1) |
|  |  |  |
| 2.2 | Tabulate **TWO** visibledifferences between tissue **A** and tissue **C.** | (3) |
|  |  |  |
| 2.3 | Give **TWO** functions of tissue **B.** | (2) |
|  |  | **(7)** |
|  |  |  |
|  | **QUESTION 3: Cancer Case Study and Statistics** |  |
|  | **Study the passage and the graph below and answer the questions that follow.**  Cancer is a disease that causes unnatural lumps of tissue in the body called tumours. Researchers believe smoking causes lung cancer by damaging the cells that line the lungs. Cigarette smoke is full of carcinogens. When you inhale cigarette smoke, the carcinogens cause changes in the lung tissue almost immediately.  More than two-thirds of lung cancer patients are diagnosed at a late stage. By that time, the cancer, in most cases , has spread to other parts of the body. These patients may have surgery , radiation therapy or chemotherapy, however, the survival rate of lung cancer patients is very low. Source:https://www. Lung Cancer Statistics in South Africa |  |
|  |  |  |
|  | An investigation was conducted to determine the number of men that die from lung cancer in different age groups in South Africa every year. |  |
|  | The results of the investigation are displayed in the graph below. |  |
|  |  |  |
|  |  |  |
|  |  |  |
| 3.1 | Explain how tumours are formed. | (2) |
|  |  |  |
| 3.2 | State **TWO** different types of treatment for cancer. | (2) |
|  |  |  |
| 3.3 | Identify the following variables from the investigation: |  |
|  | 1. Independent | (1) |
|  | (b) Dependent | (1) |
|  |  |  |
| 3.4 | State the age group with the highest number of deaths from cancer. | (1) |
|  |  |  |
| 3.5 | Calculate the difference between the number of cancer related deaths between the **70-79** and the **30-39** age group. | (3) |
|  |  |  |
| 3.6 | Describe the trend of the graph. | (3) |
|  |  | **(13)** |
|  | **TOTAL:** | **(30)** |