**GENERAL HUMAN BIOLOGICAL SCIENCE**

**TASK 8 – MICRO-ORGANISMS GROWTH INVESTIGATION**

**MARKING KEY**

***PART A – RESEARCH AND INVESTIGATION DEVELOPMENT (16 MARKS)***

|  |  |  |
| --- | --- | --- |
| **Description** | **Mark** | |
| **A- Grade**   * Descriptive * All facts included * Accurate information * Used own words | 5 |
| **B-Grade**   * Same as above but one area not so good | 4 |
| **C-Grade**   * Attempted question * Accurate | 3 |
| **D-Grade**   * Some attempt to answer * Vague attempt/surface knowledge | 2 |
| **E-Grade**   * No attempt * Wrong | 0 |
| **Total** | **5** |

1. Experiment Design

|  |  |  |
| --- | --- | --- |
| **Description** | **Mark** | |
| **Title** | /1 |
| **Materials**   * Specific values * All materials | /1  /1 |
| **Method**   * Step-by-step * Exact measurements | /1  /1 |
| **Way to record observations**   * Clear * Easy to use * Headings | /1  /1  /1 |
|  |  |
| **Total** | **11** |

***PART B – INVESTIGATION (31 MARKS)***

***ANALYSIS: (13 Marks)***

1. In the space below, draw your petri dishes and the class untouched petri dish (Be sure to use scientific drawings). (3 Marks)

|  |  |
| --- | --- |
| **Behaviour** | **Mark** |
| A – Scientific, pencil, outline, clear | 3 |
| B – as per above, some error | 2 |
| C – attempted/artistic (shading) | 1 |
| D/E – NO attempt/no idea | 0 |

1. Complete the table below describing the appearance of your bacterial colonies using you bacterial colony morphology information. (3 Marks)

|  |  |
| --- | --- |
| **Behaviour** | **Mark** |
| A – Scientific, accurate description, clear, all | 3 |
| B – as per above, some error, all complete | 2 |
| C – attempted, ¾ complete | 1 |
| D/E – NO attempt/no idea | 0 |

1. What was the purpose of including an untouched petri dish? (1 Mark)

Control (1) / to see if there is a difference between (1)

1. Where any of your results surprising? Such as, did any that you thought would be clean turn out to grow more bacteria than expected. (3 Marks)

|  |  |
| --- | --- |
| **Behaviour** | **Mark** |
| A – Scientific, accurate description, clear | 3 |
| B – as per above, some error, all complete | 2 |
| C – attempted | 1 |
| D/E – NO attempt/no idea | 0 |

***CONCLUSION: (11 Marks)***

1. List your locations from most colonies/bacteria to least. (1 Mark)

Lists from most to least (1)

1. If you were successful in culturing any micro-organisms, do you think they could be harmful? Why or why not? (3 Marks)

Yes / No (1)

Explanation – Scientific, accurate, link to content (2)

- Attempted / mention content from class (1)

1. What can you conclude from this experiment? (2 Marks)

Conclusion (1)

Data (1)

1. List the various defences the body has to protect itself from micro-organism invasions AND describe how each one works? (4 Marks)

* Just states 1st , 2nd and 3rd line defence / Physical barriers, White Blood Cells, Immune Response (1)

|  |  |
| --- | --- |
| **Behaviour** | **Mark** |
| A – Scientific, accurate description, clear | 4 |
| B – as per above, some error, all complete | 3 |
| C – attempted | 2 |
| D/E – NO attempt/no idea | 0 |