**GENERAL HUMAN BIOLOGY UNIT 4**

**TASK 10 – Vaccines & Community Health Test Marking key**

**Multiple Choice Section (10 marks)**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** |
| **B** | **D** | **B** | **D** | **D** | **C** | **A** | **D** | **A** | **C** |

**Short Answer Section (14 marks)**

1. Name the two types of antibiotic and explain how they work.

|  |  |
| --- | --- |
| **Description** | **Marks** |
| Bacteriostatic and Bactericidal | 1 |
| Bacteriostatic – disrupt protein synthesis/cellular respiration/cell processes | 1 |
| Bactericidal – break apart the cell membrane | 1 |
| **TOTAL** | **3** |

1. Explain why it is important that a person takes all of their prescribed antibiotics.

|  |  |
| --- | --- |
| **Description** | **Marks** |
| * Not completing prescribed antibiotics means not all bacteria will die * Those that survive may have immunity against the antibiotic * Surviving bacteria are cloned to make new bacteria that also have immunity * Surviving bacteria can share immunity using plasmids with other bacteria * This can lead to the creation of superbugs | 1-3 |
| **TOTAL** | **3** |

1. Describe the difference between antivirals and antiseptics

|  |  |
| --- | --- |
| **Description** | **Marks** |
| Antivirals – medication that kill viruses only | 1 |
| Antiseptics - substance that kill bacteria externally to reduce chance of infection | 1 |
| **TOTAL** | **2** |

1. Explain why antibiotics are ineffective against viruses

|  |  |
| --- | --- |
| **Description** | **Marks** |
| * Viruses aren’t technically living * Antibiotics work by destroying cell wall or interrupting cellular processes – viruses do/have neither * Antibiotics are unable to identify viral DNA in host cells | 1-2 |
| **TOTAL** | **2** |

1. State one advantage and one disadvantage of live attenuated vaccines.

|  |  |
| --- | --- |
| **Description** | **Marks** |
| Advantage – provide many memory cells and antibodies/evoke a strong immune reaction, any valid point. | 1 |
| Disadvantage – potential to become infected if immunocompromised, any valid point | 1 |
| **TOTAL** | **2** |

1. Explain why memory cells are not made against a pathogen when passive immunity is acquired

|  |  |
| --- | --- |
| **Description** | **Marks** |
| Memory cells only made when immune response initiated/ only made with active immunity | 1 |
| Passive immunity does not involve injection of a pathogen to respond to | 1 |
| **TOTAL** | **2** |

**Extended Response Section**

1. Discuss the arguments for and against compulsory vaccinations for Australians. Present a concluding paragraph for whether you believe vaccinations should be compulsory for all Australians.

|  |  |
| --- | --- |
| **Description** | **Marks** |
| **Arguments for compulsory vaccinations**   * 4 marks if – Analyses issues and presents clear and logical arguments or reasons which are supported by evidence. * 3 marks if – Analyses issues and presents arguments or statements that are sometimes well supported by evidence. * 2 marks if – Discusses issues and presents general statements supported by limited evidence. * 1 mark if - Discusses issues and presents general statements that may include incomplete or incorrect information. | 1-4 |
| **Arguments against compulsory vaccination:**   * 4 marks if – Analyses issues and presents clear and logical arguments or reasons which are supported by evidence. * 3 marks if – Analyses issues and presents arguments or statements that are sometimes well supported by evidence. * 2 marks if – Discusses issues and presents general statements supported by limited evidence. * 1 mark if - Discusses issues and presents general statements that may include incomplete or incorrect information. | 1-4 |
| **Conclusion**   * Has clearly stated which argument they believe has the most merit * Has more arguments presented that support their belief | 1-2 |
| **TOTAL** | **10** |