**Surviving (answers)**

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| Instructions to students  • You have 50 minutes to complete the test.  • Please answer all questions in the spaces provided.  • There is to be no talking during the test. | Marks  Section I: Multiple-choice questions: 5 marks  Section II: Short-answer questions: 13 marks  Section III: Extended-response questions: 7 marks  Total: 25 marks |

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| Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Class: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Score: /25  Grade: % |
| Comments: | |

Section I: Multiple-choice questions

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| For each question, circle or highlight the correct answer.  1 The tubular muscle that forces food down to the stomach is called the: | |  |
| A | oesophagus. |
| B | tongue. |
| C | liver. |
| D | pancreas. |
| 2 The gastric juices in your stomach are made of: | | |
| A | acids. | |
| B | chyme. | |
| C | acids and enzymes. | |
| D | enzymes and peristalsis. | |
| 3 The function of the xylem in a plant is to: | | |
| A | transport glucose from the leave to the rest of the plant. | |
| B | control gas exchange in the leaves. | |
| C | transport water from the roots to the rest of the plant. | |
| D | absorb water from the soil. | |

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| 4 Asthma and emphysema are both problems in the: | |
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| A | digestive system. |
| B | nervous system. |
| C | excretory system. |
| D | respiratory system. |
| 5 The organ responsible for the metabolism of waste substances is called the: | |
| A | stomach. |
| B | liver. |
| C | alveoli. |
| D | diaphragm. |

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|  | Section I  Total marks:  /5 marks |

Section II: Short-answer questions

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| 6 What is the function of the excretory system? List three organs involved in the excretory system. | | |
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| The excretory system removes waste from our bodies (1 mark). The main organs involved in this process are (1 mark for each correct response for a maximum of 3 marks) kidneys, liver, lungs and skin. | | |
|  | | /4 marks |
| 7 Explain how guard cells control the exchange of gases in plants. | | |
| Guard cells create stomata which are tiny pores found in leaves (1 mark). Guard cells open and close to allow gases to enter and exit the stomata (1 mark). | | |
|  | /2 marks | |
| 8 Compare arteries, veins and capillaries. | | |
| Arteries are large, have thick walls and carry blood away from the heart (1 mark).  Veins are almost as large as arteries, but have thin walls and carry blood back towards the heart (1 mark).  Capillaries are the smallest blood vessels. They are one cell thick, and allow substances to pass in and out of the blood (1 mark). | | |
|  | /3 marks | |
| 9 Explain the difference between chemical and physical digestion of food and give an example where each occurs in your body. | | |
| Physical digestion is the physical breakup of food into smaller pieces (1 mark) and takes place in your mouth by your teeth (1 mark). Chemical digestion involves chemical reactions that break food down into nutrients that can be absorbed by the body (1 mark). Chemical digestion takes place (only one appropriate response is required for 1 mark) in the mouth with saliva and in the stomach with gastric juices. | | |
|  | /4 marks | |
|  | Section II  Total marks:  /13 marks | |

Section III: Extended-response questions

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| 10 Explain how the circulatory system is involved in every other system of the body. Use specific examples where possible. | |
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| The circulatory system carries oxygen and nutrients to all cells in the body and carries away the wastes produced by the cells; this includes the cells of other systems (1 mark). The circulatory system is closely interlinked with the digestive, respiratory and excretory systems (1 mark). In all three cases, capillaries are closely intertwined with organs of the system and facilitate the movement of substances (1 mark). For example, capillaries surround the alveoli in the lungs to help with gas exchange; capillaries are found in the Bowman’s capsule and loop of Henle in the kidneys and help reabsorb water while removing urea from the blood; capillaries surround the small and large intestines, absorbing nutrients and water (1 mark for an appropriate example). | |
|  | /4 marks |

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| 11 Choose one significant human health problem that you have studied from this chapter that was solved or treated by scientific intervention. Explain what the problem was, how it came about and how science was used to provide a solution. | |
| Students’ answers will vary but will most likely cover one of the following topics: stomach ulcers, asthma, pneumonia or pericarditis. Ensure students make the connection between scientific understanding and the treatment for the disease. | |
|  | /3 marks |
|  | Section III  Total marks:  /7 marks |