**Cells**

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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: 12 marks  Section III: Extended-response questions: 8 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 part of a microscope labelled A on the diagram is called the: | |  |
| A | the objective lens. |
| B | the stage. |
| C | the mirror. |
| D | the base. |
| 2 The part of the cell that controls the entry and exit of substances is: | | |
| A | the nucleus. | |
| B | the ribosomes. | |
| C | the cell membrane. | |
| D | the mitochondria. | |
| 3 A pathogen is: | | |
| A | a specialised plant cell. | |
| B | an organelle found in many protists. | |
| C | a microorganism that can potentially cause disease. | |
| D | a type of multicellular organism. | |

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| 4 Which organelle in a plant cell absorbs light for photosynthesis? | |
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| A | Ribosomes |
| B | Vacuoles |
| C | Mitochondria |
| D | Chloroplasts |
| 5 Which one of the following statements about cell theory is incorrect? | |
| A | Cells are the basic units of life. |
| B | A virus is a type of cell. |
| C | New cells are created from existing cells. |
| D | All living things are composed of cells. |

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|  | Section I  Total marks:  /5 marks |

Section II: Short-answer questions

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| 6 Label parts A–D on the animal cell shown below. | | |
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|  | | /4 marks |
| 7 You are viewing a specimen through a compound light microscope with a × 5 eyepiece magnification and a × 20 objective lens magnification. What is the total magnification of your view? | | |
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|  | /1 mark | |
| 8 What are antibiotics? Where do they usually originate in nature? | | |
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|  | /2 marks | |
| 9 What is natural flora, and why do our bodies need it? | | |
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|  | /2 marks | |
| 10 Evaluate the following statement: ‘Chloroplasts are like microscopic solar panels’. | | |
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|  | /3 marks | |
|  | Section II  Total marks:  /12 marks | |

Section III: Extended-response questions

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| 11 You are looking at the cells below through a compound light microscope. They have been stained with a blue dye. Determine the cell type (animal, plant, fungal or bacterial). Justify your choice by describing the features that are present and / or absent in these cells. | | | |
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|  | | | /4 marks |
| 12 Compare and contrast a compound light microscope with a stereomicroscope. | | | |
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|  | Section III  Total marks:  /8 marks | | |