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| Fill in the blanks to complete the following statements. ​ |

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| 1. ​The reproductive process through which a cell divides into two equal parts is \_\_\_\_\_\_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | ​mitosis | |

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| 2. The dilatation of blood vessels allowing the passage of fluid, antibodies, and WBCs into the infected ​body area is known as \_\_\_\_\_\_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | inflammation​ | |

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| 3. Cells involved in the body’s immune response utilize a process called \_\_\_\_\_\_\_\_\_\_\_\_\_\_ to ingest microorganisms. ​   |  |  | | --- | --- | | *ANSWER:* | phagocytosis​ | |

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| 4. ​The severity of disease produced by a pathogen is referred to as \_\_\_\_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | virulence​ | |

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| 5. \_\_\_\_\_\_\_\_\_\_\_ are tiny hair-like projections that help expel foreign particles from the respiratory tract.​   |  |  | | --- | --- | | *ANSWER:* | Cilia​ | |

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| Identify all answer choices that best complete the question. |

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| 6. \_\_\_\_\_\_\_\_\_\_\_\_\_\_ include cells from humans, animals, plants, protozoa, fungi, and most algae.   |  |  | | --- | --- | | *ANSWER:* | Eukaryotes​ | |

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| Fill in the blanks to complete the following statements. ​ |

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| 7. \_\_\_\_\_\_\_\_\_\_\_\_\_\_ recognize antigens located on the pathogens’ cell walls.   |  |  | | --- | --- | | *ANSWER:* | Antibodies​ | |

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| Select the best response to the question. |

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| 8. ​Which of the following patients is at high risk of becoming ill from a pathogen with low virulence?   |  |  |  | | --- | --- | --- | |  | a. | A patient with cancer undergoing chemotherapy. | |  | b. | ​A patient with otitis media (ear infection). | |  | c. | ​A patient who has had very few illnesses. | |  | d. | ​A patient with a laceration. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 9. Which of the following is characteristic of a virus?   |  |  |  | | --- | --- | --- | |  | a. | ​Cannot exist outside of a living host. | |  | b. | ​Does not contain a nucleus. | |  | c. | ​Uses the host cell’s reproductive system. | |  | d. | Has both beneficial and harmful forms. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 10. ​You are reviewing a patient’s sputum culture results that have tested positive for *Staphylococcus epidermidis*. How do you interpret these findings?   |  |  |  | | --- | --- | --- | |  | a. | ​The patient has a respiratory infection. | |  | b. | ​The patient’s sputum is no longer sterile. | |  | c. | ​This is part of the patient’s normal flora. | |  | d. | ​The results are inconclusive. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 11. What should be considered when a patient’s urine culture result is positive for *Escherichia coli*?   |  |  |  | | --- | --- | --- | |  | a. | ​This is an example of a pathogen that has invaded the body. | |  | b. | ​This is a normal finding; no treatment is needed. | |  | c. | Normal flora is causing infection in a part of the body where it doesn’t belong. | |  | d. | ​The urine culture must be repeated to validate the findings. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 12. All of the following are functions of the cell membrane EXCEPT:   |  |  |  | | --- | --- | --- | |  | a. | ​maintaining cell shape. | |  | b. | ​allowing waste removal from the cell. | |  | c. | allowing nutrients into the cell. | |  | d. | ​protecting the cell from the environment. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 13. ​The nucleus of a cell is responsible for which of the following functions?   |  |  |  | | --- | --- | --- | |  | a. | ​maintaining the shape of the cell | |  | b. | ​protecting the integrity of the cell | |  | c. | ​controlling the cell’s activities | |  | d. | ​production and storage of energy |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 14. Thoroughly cleaning a patient’s room after discharge helps limit the spread of disease by:   |  |  |  | | --- | --- | --- | |  | a. | ​common vehicle transmission. | |  | b. | ​airborne transmission. | |  | c. | ​indirect contact. | |  | d. | ​direct contact. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| ​Match the mode of transmission with their description.   |  |  | | --- | --- | | a. | ​contact transmission | | b. | ​common vehicle transmission | | c. | ​vector borne transmission | | d. | ​airborne transmission | |

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| 15. ​Touching the TV remote after an ill person has used it.   |  |  | | --- | --- | | *ANSWER:* | a | |

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| 16. Eating meat that is contaminated with bacteria.   |  |  | | --- | --- | | *ANSWER:* | b | |

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| 17. ​Sitting close to a friend with the flu who is coughing frequently.   |  |  | | --- | --- | | *ANSWER:* | d | |

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| 18. ​Being bitten by an animal infected with rabies.   |  |  | | --- | --- | | *ANSWER:* | c | |

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| ​Select True or False. |

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| 19. Previous exposure to a disease is necessary to trigger the body’s innate immune response.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | |

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| 20. Most microorganisms in the body have the potential to cause illness.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | |

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| 21. Some bacteria form a capsule or slime layer around their cell wall in order to promote motility.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | |

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| 22. ​Phagocytes are both mobile and found in fixed locations throughout the body.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | |

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| Identify all answer choices that best complete the question. |

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| 23. Which of the following are “kingdoms” used for classification of living organisms?​   |  |  |  | | --- | --- | --- | |  | a. | ​plant | |  | b. | ​microbes | |  | c. | ​protista | |  | d. | ​animal |  |  |  | | --- | --- | | *ANSWER:* | a, c, d | |

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| 24. ​The adaptive immune response includes:   |  |  |  | | --- | --- | --- | |  | a. | ​humoral immune response. | |  | b. | ​innate immune response. | |  | c. | ​antigen immune response. | |  | d. | ​cell-mediated immune response. |  |  |  | | --- | --- | | *ANSWER:* | a, d | |

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| 25. ​Which of the following are examples of protective barriers in the body?   |  |  |  | | --- | --- | --- | |  | a. | ​phagocytes | |  | b. | white blood cells | |  | c. | ​normal digestive flora | |  | d. | ​oil and sweat on skin |  |  |  | | --- | --- | | *ANSWER:* | c, d | |

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| 26. Which of the following statements are true regarding cell-mediated immune response?​   |  |  |  | | --- | --- | --- | |  | a. | ​Protects against bacteria and toxins. | |  | b. | ​T-cells play a key role in this process. | |  | c. | ​B-cells play a key role in this process. | |  | d. | ​Protects against viruses and fungi. |  |  |  | | --- | --- | | *ANSWER:* | b, d | |

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| 27. ​The ability of an organism to cause infection is determined by:   |  |  |  | | --- | --- | --- | |  | a. | ​the number of organisms. | |  | b. | ​the organism’s virulence. | |  | c. | ​the status of the host’s immune system. | |  | d. | ​the portal of entry. |  |  |  | | --- | --- | | *ANSWER:* | a, b, c, d | |

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| 28. Which of the following are necessary for energy production within the mitochondria of a cell?​   |  |  |  | | --- | --- | --- | |  | a. | ​glucose | |  | b. | lysosomes | |  | c. | ​proteins | |  | d. | ​oxygen |  |  |  | | --- | --- | | *ANSWER:* | a, d | |

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| 29. ​Which of the following are found in prokaryotic cells?   |  |  |  | | --- | --- | --- | |  | a. | ​cell membrane | |  | b. | ​DNA | |  | c. | ​cell wall | |  | d. | ​nucleus |  |  |  | | --- | --- | | *ANSWER:* | a, b, c | |