

Hohete Tibeb S.C. / Ethio-Parents' Schools
Second Semester Centralized Biology Worksheet for Grade 9
April, 2020

I. FILL IN THE BLANK QUESTIONS

1. The process of weakening a pathogen is called _____.
2. The first vaccine was developed by a scientist called _____.
3. The term for the animal that a parasite lives on or in is known as _____.
4. A culture medium for growing microorganisms in laboratories is known as _____.
5. The technique burning substances at high temperatures in the air is called _____.
6. The process of introduction of weakened pathogens into human body is known as _____.
7. Substances which kill or inactivate bacteria, but have no effect against viruses are called _____.
8. An organism that transmits disease-forming micro-organisms from one host to another is called _____.
9. A technique used to classify bacteria according to their ability to lose or retain the color of a gentian violet stain is said to be _____.
10. In autoclave, the application of pressure to _____ is increased to allow the steam to achieve temperatures above the boiling point of water.

II. MULTIPLE CHOICE QUESTIONS

11. Among the following which one is the most effective method of killing micro-organisms?
 - A. High temperature
 - B. Low temperature
 - C. High temperature, high moisture
 - D. Low temperature, high moisture
12. Which of the following apparatus is used to provide steam under regulated pressure?
 - A. Hot oven
 - B. Incubator
 - C. Autoclave
 - D. Heat conditioner
13. What is the general pressure at which the autoclave operating?
 - A. 5 pounds per square inch of pressure (Psi)
 - B. 15 pounds per square inch of pressure (Psi)
 - C. 20 pounds per square inch of pressure (Psi)
 - D. 50 pounds per square inch of pressure (Psi)
14. Which of the following methods is used for killing micro-organisms of only certain types and not all micro-organisms?
 - A. Distillation
 - B. Incineration
 - C. Boiling water
 - D. Pasteurization
15. Which of the following actions occur due to low temperature?
 - A. Denatures proteins
 - B. Coagulates proteins
 - C. Kills micro-organisms
 - D. Reduces rate of metabolism
16. Which of the following is considered to be the most effective sterilization procedure using heat?
 - A. Boiling water at 100 °C for one hour
 - B. Pasteurization at 62.8 °C for 30 minutes
 - C. Moist heat at 60 to 70 °C for 5 to 10 minutes
 - D. Steam under pressure at 121 °C for 15 minutes

17. Destruction of vegetative cells on instruments and containers by using water at 100 °C is known as
- A. Autoclaving
 - B. Incineration
 - C. Boiling water
 - D. Hot-air-oven
18. Identify the correct definition of an antiseptic.
- A. Chemicals that kill or prevent infection and damage living tissues.
 - B. Chemicals that can only kill or prevent infection on animal housing.
 - C. Chemicals that can only kill or prevent infection on non-living tissues.
 - D. Chemicals that kill or prevent infection without damaging living tissues.
19. Identify the correct definition of a disinfectant.
- A. Chemicals that can kill or prevent infection on non-living tissues.
 - B. Chemicals that can only kill or prevent infection on animal housing.
 - C. Chemicals that kill or prevent infection and applied on living tissues.
 - D. Chemicals that kill or prevent infection without damaging living tissues.
20. Identify the term that is used to ensure surgical instruments are free from micro-organisms.
- A. Boiling
 - B. Cleaning
 - C. Disinfection
 - D. Sterilization
21. Which of the following does NOT kill endospores?
- A. Autoclaving
 - B. Incineration
 - C. Pasteurization
 - D. Ultra high temperature
22. Autoclave is NOT useful for sterilization of
- A. liquid paraffin.
 - B. surgical dressings.
 - C. metallic instruments.
 - D. disposable plastics and Petri-dishes.
23. The most widely used disinfectant for HIV infected material is
- A. lysol.
 - B. iodine.
 - C. phenol.
 - D. hypochlorite solution.
24. Which microbial control method is used to kill all micro-organisms at temperatures of 171 °C for an hour?
- A. Boiling water
 - B. Pasteurization
 - C. Moist heat oven
 - D. Dry heat sterilization
25. Which technique is used when you sterilise your inoculation loops in your practical work with bacteria?
- A. Incineration
 - B. Vaccination
 - C. Immunization
 - D. Pasteurization
26. Naturally acquired active immunity would be most likely acquired through which of the following processes?
- A. Vaccination
 - B. Natural birth
 - C. Drinking colostrum
 - D. Infection with germs followed by recovery
27. Which one of the following conveys the longest lasting immunity to an infectious agent? (*There could be more than one answer*)
- A. Naturally acquired active immunity
 - B. Artificially acquired active immunity
 - C. Naturally acquired passive immunity
 - D. Artificially acquired passive immunity

28. What is active immunity? Immunity
- without antibodies.
 - from receiving antibodies.
 - acquired through physical activity.
 - acquired through creation of antibodies.
29. Immunity refers to being _____ to a disease.
- prone
 - resistant
 - attracted
 - susceptible
30. What is the term for immunity that results from being exposed to a disease?
- Natural active immunity
 - Artificial active immunity
 - Natural passive immunity
 - Artificial passive immunity
31. Passive immunization does NOT include
- transfer of lymphocytes directly.
 - introduction of antibodies directly.
 - introduction of live attenuated pathogen.
 - transfer of maternal antibodies across placenta.
32. Which of the following statement is true regarding vaccination?
- Vaccination is a method of active immunization.
 - Vaccination is a method of passive immunization.
 - Vaccination is a method of natural passive immunization.
 - Vaccination is a method of artificial passive immunization.
33. Which of the following is a combined vaccine?
- TT vaccine
 - HB vaccine
 - DPT vaccine
 - BCG vaccine
34. Passive immunity is acquired through
- vaccination.
 - latent infection.
 - readymade antibodies.
 - activating body's immune system.
35. Passive immunity is obtained through injecting
- Antigens.
 - Vaccines.
 - Antibodies.
 - Antibiotics.
36. Active artificially acquired immunity is a result of
- vaccination.
 - contact with a pathogen.
 - antibodies passed on from mother to baby through breast milk.
 - antibodies passed on from mother to baby through the placenta.
37. Which scientists finally proved the germ theory of disease?
- Joseph Lister
 - Robert Koch
 - Louis Pasteur
 - Edward Jenner
38. The BCG vaccine is given for the immunity against
- polio.
 - malaria.
 - tetanus.
 - tuberculosis.

39. Plasmodium is an example of
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|-----------|--------------|
| A. virus. | C. bacteria. |
| B. worm. | D. protozoa. |
40. HIV attacks one of the following cells in our body.
- | | |
|----------------|---------------------|
| A. Liver cell | C. Red blood cell |
| B. Muscle cell | D. White blood cell |
41. Which type of immunity is acquired by administering a tetanus shot?
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|----------------------|-----------------------|
| A. Natural active | C. Natural passive |
| B. Artificial active | D. Artificial passive |
42. Identify the correct definition of the term parasite.
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| A. An organism that lives in or on another living body to benefit itself. |
| B. A micro-organism that invades host cells and replicates inside them. |
| C. An organism that lives in or on another living body to benefit the host. |
| D. A micro-organism that invades host cells and replicates outside of them. |
43. How a tapeworm infection in humans is usually treated?
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| A. By drinking vinegar | C. With herbal ointment |
| B. With oral medication | D. With intravenous medication. |
44. Rounded head of the tapeworm is called
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|-----------|----------------|
| A. joint. | C. scolex. |
| B. neck. | D. proglottid. |
45. Which one of the following is an intermediate host for *Taenia saginata*?
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| A. Pig | C. Dog |
| B. Cat | D. Cattle |

III. SHORT ANSWER QUESTIONS

46. What is meant by a biological control?
47. What is the importance of Mantoux skin test?
48. What are the causative organisms for gastroenteritis?
49. What is the difference between active and passive immunity?
50. Which is more effective at killing microbes: autoclaving or freezing? Explain