

Animal Immunity and Biotechnology

Biology · Answer Key · 29 Questions

1. What bodily fluid in the nose and throat helps prevent pathogens from entering the body?

- A) Tears
- B) Mucus**
- C) Hydrochloric acid
- D) Skin

2. What are the small hair-like structures lining the nasal passages and trachea that help clear them of pathogens?

- A) Cilia**
- B) Mucus
- C) White blood cells
- D) Conjunctiva

3. Which part of the eye produces tears that help protect against pathogens?

- A) Nasal passages
- B) Stomach
- C) Eye**
- D) Throat

4. What substance in the stomach helps to kill ingested microorganisms?

- A) Mucus
- B) Cilia
- C) Hydrochloric acid**
- D) Skin

5. Which of the following is a physical barrier that prevents pathogens from entering the body?

- A) White blood cells
- B) Hydrochloric acid
- C) Tears
- D) Unbroken Skin**

6. What type of blood cells are involved in the immune response against infecting microorganisms?

- A) Red blood cells
- B) White blood cells**
- C) Platelets
- D) Plasma

7. What is the definition of vaccinations?

- A) A type of antibiotic
- B) A method of growing microorganisms
- C) The administration of a weakened or inactive form of a pathogen to stimulate immunity**
- D) A traditional fermentation process

8. What is a primary importance of vaccinations?

- A) To produce cheese
- B) To prevent diseases**
- C) To make wine
- D) To grow bread mould

9. Antibiotics primarily affect which type of organism?

- A) Viruses
- B) Bacteria**
- C) Fungi
- D) Protists

10. Which of the following is an example of using microorganisms to produce medicines?

- A) Beer production
- B) Wine production
- C) Insulin production**
- D) Cheese production

11. Which traditional technology involves the fermentation of sugars by yeast?

- A) Cheese production
- B) Bread production
- C) Beer production**
- D) Antibiotic production

12. What is the process of growing microorganisms on a nutrient-rich gel called?

- A) Fermentation
- B) Vaccination
- C) Culturing on agar plates**
- D) Digestion

13. What type of organism is commonly found growing on bread?

- A) Bacteria
- B) Yeast
- C) Mould**
- D) Viruses

14. The conjunctiva is part of which protective system?

- A) Digestive system
- B) Respiratory system
- C) Immune system of the eye**
- D) Circulatory system

15. The acidic environment of the stomach is a defense mechanism against:

- A) Dehydration
- B) Pathogens**
- C) Lack of oxygen
- D) Nutrient deficiency

16. Which of the following is NOT a direct defense mechanism against pathogen entry mentioned in the text?

- A) Mucus
- B) Cilia
- C) White blood cells**
- D) Unbroken Skin

17. What is the term for the body's defense system against illness?

- A) Digestion
- B) Immunity**
- C) Respiration
- D) Circulation

18. What is the main goal of a vaccination?

- A) To cause illness
- B) To strengthen the immune system**
- C) To produce antibiotics
- D) To ferment beverages

19. Which substance is used to treat bacterial infections?

- A) Vaccine
- B) Antibiotic**
- C) Insulin
- D) Yeast

20. Which of these is a product of traditional technology that involves fermentation?

- A) Insulin
- B) Antibiotics
- C) Wine**
- D) Bread mould

21. Growing cultures on agar plates is a method used for:

A) Producing vaccines

B) Investigating microorganisms

C) Making antibiotics

D) Fermenting wine

22. The text mentions the use of microorganisms to produce which essential human hormone?

A) Adrenaline

B) Thyroxine

C) Insulin

D) Growth hormone

23. What is the primary role of cilia in the respiratory tract?

A) To produce mucus

B) To trap pathogens

C) To move mucus and trapped particles away from the lungs

D) To absorb oxygen

24. Which of the following is a key component of the innate immune system that acts as a physical barrier?

A) White blood cells

B) Antibiotics

C) Unbroken skin

D) Vaccines

25. The presence of hydrochloric acid in the stomach is an example of which type of defense?

A) Mechanical defense

B) Chemical defense

C) Biological defense

D) Passive defense

26. What is the conjunctiva's role in immunity?

A) Filtering air

B) Lubricating the eye and trapping debris

C) Producing digestive enzymes

D) Transporting oxygen

27. Which of these is a biotechnological application mentioned?

- A) Cheese production
- B) Beer production
- C) Vaccination**
- D) Bread mould observation

28. The use of drugs like antibiotics to combat microorganisms falls under which category?

- A) Traditional technology
- B) Investigations
- C) Animal immunity
- D) Biotechnology**

29. What is a common method for studying bacteria and fungi in a laboratory setting?

- A) Drinking wine
- B) Eating cheese
- C) Growing cultures on agar plates**
- D) Getting vaccinated