**Final exam microbiology 2022- 2023**

1. **Which of the following antibody is an important host defense in primary immune response?**  
   a. IgA  
   b. IgG  
   c. IgM  
   d. IgE
2. **Which of the following antibody is an important host defense in allergic reactions?**  
   a. IgA  
   b. IgG  
   c. IgM  
   d. IgE
3. **Which of the following antibody is an important host defense in secondary immune response?**  
   a. IgA  
   b. IgG  
   c. IgM  
   d. IgE
4. **Which of the following antibody is an important host defense in mucosal surfaces?**  
   a. IgA  
   b. IgG  
   c. IgM  
   d. IgE
5. **Specific immunity can be acquired either naturally or artificially and involves**  
   A)  macrophages.  
   B)  [antibodies.](https://microbeonline.com/function-of-antibodies/)  
   C)  [antigens.](https://microbeonline.com/antigen-structure-types-factors-affecting-immunogenicity/)  
   D)  the [classical complement pathway.](https://microbeonline.com/complement-system-pathways-functions-regulation/)
6. **An immunoglobulin is a**  
   A) carbohydrate.  
   B)  fatty acid.  
   C)  glycoprotein.  
   D)  protein.
7. **[Isotypes](https://microbeonline.com/isotypes-allotypes-idiotypes/) refers to variations in the:**  
   A)  heavy chain constant region.  
   B)  heavy chain variable region.  
   C)  light chain constant region.  
   D)  light chain variable region.
8. **Which of the following is the major immunoglobulin in human serum, accounting for 80% of the immunoglobulin pool?**  
   A)    [IgA](https://microbeonline.com/immunoglobulin-iga-structure-functions/)  
   B)      IgD  
   C)    [IgG](https://microbeonline.com/igg-antibody-structure-subclasses-functions-and-clinical-significance/)  
   D)     [IgM](https://microbeonline.com/igm-antibody-structure-properties-functions-clinical-significance/)
9. **All of the following are true concerning IgE molecules, EXCEPT which one?**

A.   They are involved in mediating anti-parasitic immune responses.  
B.    They are the least abundant immunoglobulin in the serum.  
C.    They are the principal immunoglobulin class involved in allergic reactions.  
E.    They will cross the placenta and fix the complement.

1. **Which immunoglobulins are generally present in plasma at the highest concentration?**

A.   [IgA](https://microbeonline.com/immunoglobulin-iga-structure-functions/)  
B.    IgD  
C.    IgE  
D.   [IgG](https://microbeonline.com/igg-antibody-structure-subclasses-functions-and-clinical-significance/)

1. **What is a cluster of polar flagella called?**
   1. Petritrichous
   2. Monotrichous
   3. Amphitrichous
   4. Lophotrichous
2. **Which of these is a cocci occurring in pairs?**
3. Diplococci
4. Streptococci
5. Tetracocci
6. coccobacilli
7. **Which of the following about cell wall of gram-positive bacteria is true?**
8. cell wall comprises of 10 layers
9. the cell wall is thicker than the associated gram-negative bacteria
10. Cell wall comprises of endotoxin
11. cell wall is thin
12. **The portion of the growth curve where rapid growth of bacteria is observed is known as**  
    a) Lag phase  
    b) Logarithmic phase  
    c) Stationary phase  
    d) Decline phase
13. **Lag phase is also known as**   
    a) first period of initial adjustment  
    b) second period  
    c) generation time  
    d) period of rapid growth
14. **The generation time for E.coli is**   
    a) 20 minutes  
    b) 35 minutes  
    c) 2 minutes  
    d) 13 minutes

17. All of the following are the common physical agents used for the sterilization process in hospitals Except.

a) Dry heat

b) Radiation

c) Steam heat

d) moist heat

18.Which of the following are the recommended heat temperature and time periods for the moist heat sterilization method used in an autoclave?

a) 180 c for 5 minutes

b) 121 c for 15 minutes

c) 126 c for 3 minutes

d) 160 c for 45 minutes

19. Which of the following best describes the process of 'Disinfection'?

a) The elimination تقليل عدد of all forms of microorganisms and bacterial spores

b) The elimination of all forms of bacterial spores

c) The elimination of microorganisms but not bacterial spores

d) The reduction or elimination of many microorganisms and some bacterial spores

20. Name the sterilization agent that is most frequently used in hospitals

a) Dry heat

b) Radiation

c) Filtration

d) Autoclav

21. All of the following chemical disinfectants used in laboratories and healthcare industries have been found to be effective against many bacteria, fungi, and viruses, **Except**?

a) Alcohols

c) Formaldehyde

d) Chlorine

e) Steam heat

22. The three parameters of steam sterilization are:

A. Steam pressure, time, and temperature

B. Time, temperature, and concentration

C. Temperature, time, and humidity

d. time, temperature, and volume

23. The most important structure in Gram positive cell wall is:

a) Peptidoglycan

b) Lipoteichoic acid

c) Proteins

d) Phospholipids

24-The magnification power of Eye lens is:

a) 10X

b) 40X

c) 70X

d) 100X

25-Bacterial Plasmid is :

a) Chromosomal DNA

b) Extrachromosomal DNA

c) Ribosomal RNA

d) Transfer RNA

26-Bacterial spores can be destroyed by:

a) Boiling water

b) Pasteurization

c) Autoclave

d) Heavy metals

27-Bacterial cell membrane’s main function is:

a) controlling permeability of nutrients and ions

b) motility

c) endotoxic activity

d) adhesion to human cells

**28.sterilization of surgical instruments means:**

killing of vegetative bacteria and viruses

killing of vegetative bacteria, viruses and parasites

killing of fungi, vegetative bacteria and viruses

killing of all living forms even spores

29. **The temperature used in autoclave for sterilization is:**

70 0C

100 0C

121 0C

200 0C

**30-Which of these is a main parameter for autoclaves?**

1. Steam
2. Radiation
3. Filteration
4. Chemicals