

Questions of Practical immunology

Q1 / Define the following words: 1. Immune System 2. Rheumatoid factors (RF) 3. C-reactive protein
4. Brucellosis 5. hCG test

Q2 / Give the reasons

1. CRP is a more reliable and sensitive indicator of acute inflammation than the ESR.
2. Individuals with the same blood type can safely donate blood to each other.

Q3 / Put (T) for true and (F) for false sentences

1. CRP acts somewhat like an antibody, as it is capable of opsonization which promote phagocytosis.
2. Diagnosis of rheumatoid arthritis depend on medical history and physical examination, imaging studies and blood test.
3. Biochemical reactions used for species that cannot be classified into the Lancefield classification. They are called groupable streptococci.
4. The primary cause of ABO mismatched transfusion reactions results from destruction of recipient red cells by the donor's antibodies
5. The bactericidal power of normal serum decreases with time when mixed with the pathogenic bacteria.
6. Precipitation test is a type of reactions which done between insoluble Ag and its specific Ab.
7. Typhoid fever also called (Malta fever, Mediterranean fever, Gibraltar fever and undulant fever).
8. In widal test vaccination moderate does not rise Ab titer.
9. ASOT is not the test for antibodies to any other Streptococcal exotoxins.
10. Patient on therapy of penicillin or other antibiotics may rise in ASO titer.

Q4 / Multiple choices: (20 marks)

1. A mother is blood type A, Rh+, her newborn child is AB, Rh-. The newborn's blood is likely to contain large levels of antibodies to:
a) anti-A b) anti-B c) anti-A and anti-B d) anti-Rh e) none of the above
2. Complement can be destroyed if the serum heated at:
a) 56 °C for 30 min. b) 65 °C for 30 min. c) 56 °C for 60 min. d) 56 °C for 75 min
3. Antigen-antibody reactions can result in the following:
a) Agglutination b) virus neutralization c) Complement fixation
d) allergic reactions e) all of the above
4. Test detects and measures the amount of antibodies in blood that work against your own body is
a) C-reactive protein test b) Anti-streptolysin O Test

8. Examples of carriers in agglutination tests are -----, ----- and -----.

Q6 /A- Compare between the followings.

1. Natural and Acquired immunity.
2. Streptolysin S and Streptolysin O.
3. Plasma and serum.
4. CRP and ESR.
5. Universal recipients and universal donors.

Q7 /B- Answer the followings.

1. Classify streptococci according to hemolysis on blood agar and describe them with example.
2. Classify brucellae and types of Antigen.
3. Methods of brucellae diagnosis.
4. Factors interfere with positive results of RF
5. Conditions of abnormal results of HCG test

Q8 / Answer the followings.

1. Functions of CRP.
2. Antigen and Antibody reactions can be identified by different tests. These include:
3. What is Rh factor?

Q9 / Answer the followings

1. Classify streptococci according to hemolysis on blood agar and describe them.
2. Pathogenesis of Brucellosis.

Q10 / Answer the followings

1. Blood function
2. Factors interfere with positive results of RF:

Q11 / Write the principle of these two tests:

1. Rose-Bengal test
2. Widal-test

Q12 /Explain all methods used to detect RF?

Q13 /Classify Brucellae and mention antigenic types?

Q14 / Explain antigenic structure of *Salmonella sp*

Q15 / Classify Streptococci according to serology?

Q16 /Give the reasons of abnormal HCG results?

Q17 / Answer only five of the followings.

1. Method for serum preservation
2. Why hCG test is performed
3. Mechanisms of Agglutination
4. Rheumatoid factors (RF).
5. Classify brucellae and types of Antigen.

Q18 /Put (T) for true and (F) for false sentences.

1. Vaccination moderate decline Ab titer in the widal test.
2. The genus Salmonella has Flagellar (H) Antigens are heat-labile proteins.
3. Typhoid fever (Enteric fever) which caused by either *S. enteritidis* or *S. typhimurium*.
4. HCG level rises rapidly during the second trimester of pregnancy and then slightly declines.
5. Immunoglobulins are glycoprotein molecules that are produced by activated T cell after converted to plasma cells in response to an immunogen and which function as antibodies.
6. CRP is one of the acute phase proteins, CRP originally thought to be an antibody to the C-polysaccharide of Pneumococci.

Q19 /Fill the following blanks:

1. Complement can be destroyed if the serum heated at-----.
2. Test detects and measures the amount of antibodies in blood that work against your own body is-----.
3. Type of reactions which done between soluble antibody coated on carrier particles binds to antigen and results in agglutination which is called-----.
4. When a similar antigen enters the host for the second and subsequent times the immune response induced are called -----.