ASSIGNMENT V

Subject: Applied Medical Microbiology and Advanced Technique

Subject: Medical Microbiology II

Topics: Coomb's test; Complement fixation test; Nosocomial infection

Q1. Multiple choice question/ Fill in the blanks/ True & False.

i) Indirect Coombs tests are used to check blood before a person undergoes a(n) _____.

- a. blood transfusion
- b. EKG
- c. CT scan
- d. colonoscopy

ii) The most likely agents to cause a nosocomial infection include.....,,and

iii) Emily is on her way to visit a friend in a hospital. She's healthy, but as she's walking towards the hospital she trips, opening a small wound in her leg. Does she have a high likelihood of getting a nosocomial infection? Why or why not?

a. She does have a high likelihood, because the wound provides an opening for invading microbes to enter her body.

b. She does have a high likelihood, because the wound is a sign of a weakened immune system.

c. She does not have a high likelihood, because her immune system is not compromised by a disease

d. She does not have a high likelihood, because her immune system is not compromised by the wound.

iv) Direct Coombs tests check which part of the blood for antibodies?

- a. Plasma
- b. Surface of red blood cells
- c, Inside of white blood cells
- d. Surface of platelets

v) A Coombs test is used to check blood for antibodies that are associated with the disease

vi) The direct coomb's test detects maternal IgM on fetal cells

a True

b. False

vii) Lysis of sheep red blood cells indicates the patient has the antibody being tested for.

a. True

b. False

viii) The complement fixation test looks for the presence of specific antigens in the patient's blood.

a. True

b. False

ix) In the complement fixation test

a. red blood cells lyse if the patient has antigen being tested for

b. red blood cells lyse if the patient has antibody being tested for

c. red blood cells settle to the bottom if the patient has antibody being tested for

d. red blood cells settle to the bottom if the patient has antigen being tested for

Q2. Very-short question answers:

i) Do IgG Ab cause visible agglutination of RBCs?

ii) If RBC agglutination does not occur with RBCs what must be done? What is its specific mechanism? What is the name of this test?

iii) There are 2 types of anti globulin tests, what are they?

iv) Why are the red cells washed?

v) What are complements? Can IgM bind with complements?

vi) What are the two systems used in complement fixation test?

vii)What are the three main factors responsible for nosocomial infection?

Q3. Short answer questions:

i) Explain why hemolysis in the complement fixation test is a negative test for infection.

ii) Why would a doctor order a direct Coombs' test when a baby is born with jaundice?

iii) Write in detail which major microorganisms responsible for nosocomial infection.