1. B. Anti-C & Anti-E

2. If an individual has the antigen that individual will not have the antibody.

3. D. All of the above

4. B. *Dolichos biflorus*

5. A. True
   
   B. True
   
   C. False, donor hemoglobins must be at least 12.5
   
   D. False, donors must have a temperature of less than 99.5°F
   
   E. False, donors must weigh at least 110 lbs.

6. Advantages of autologous blood donation include no disease transmittance, no alloantibodies will be formed, and no transfusion reactions; whereas disadvantages include a high waste amount, surgery can possible be postponed, adverse donor reactions, and increased cost.

7. A. Yellow

8. D. *Haemophilus influenza*

9. C. Both A & B

10. C. L-pyroglutamyl aminopeptidase
11. A. Chromatid Bars – rod-shaped, RNA-containing structures found in the cytoplasm of an amoeba
   
   B. Definitive Host – the type of host required for adult or sexual phase of a parasitic infection
   
   C. Sporogony – Sexual phase of the Plasmodium spp. That occurs within the intestinal tract of the mosquito
12. A. *Cryptococcus neoformans*
13. Herpes viruses include Herpes Simplex Virus 1, Herpes Simplex Virus 2, Varicella-Zoster Virus, Cytomegalovirus, Epstein Barr Virus, Human Herpesvirus Type 6.
14. The 5 classes of immunoglobulins are IgG, IgM, IgA, IgE, IgD
15. A. Immunogen – a substance capable of producing an immune response
   
   B. Epitope – the part of a molecule that the body recognizes as an antigen
   
   C. Haptens – a molecule with a low molecular weight that is capable of combining with another molecule to produce an antibody response
   
   D. Adjuvants – compounds that increase or enhance an immune response, but are not capable of eliciting an immunological response themselves
16. D. 85%
17. B. Spirochete
18. D. R. Rickettsii
19. C. Alpha Granules
20. C. Glycoprotein Ib
22. A. Fat
23. Tube 1 – Chemistry & Serology, Tube 2 – Microbiology, Tube 3 – Hematology
24. A. Too Red: buffer/stain is below a pH of 6.4, too much buffer, not enough staining time, too thin of smear, expired stain, increased washing time
   B. Too Blue: buffer/stain is above a pH of 6.7, too little buffer, too little staining time, too thick of smear, increased protein, heparinized blood specimens

25. A. AP stain differentiates between T-cell & B-cell Lymphocytic Leukemia (T-cells are positive, B-cells are negative)
   B. Peroxidase stain azurophilic granules which are found in Neutrophils
   C. LAP stains differentiate granulocytic leukemias (positive) from leukemoid reactions (negative)
   D. Tartrate-resistant Acid Phosphatase stain are used to diagnose hairy cell leukemia
   E. PAS stains are used to diagnose Erythroleukemia, Gaucher's disease, and Acute Lymphocytic Leukemia
   F. Sudan Black B stains differentiate Lymphocytic Leukemias (Negative) and Myeloid/Monocytic Leukemias (Positive)
   G. Alpha-naphthyl Acetate Esterase Stain are used to differentiate Granulocytic Leukemias (Negative) and Monocytic Leukemias (Positive)

26. Hemoglobin A, Hemoglobin S, Hemoglobin C
27. C. 45-50%
28. C. Hgb F
29. B. Decreased ESR
30. 139-(100+32) = 7
31. C. 8 Hours
32. True
33. B. Decrease
34. Rerun QC, Change the reagent, Calibrate
35. D. Theophylline
36. The LDL is unable to be calculated if the triglycerides are greater than 500.