

1. ABO system is the most important blood group system because
  - a. It is the first system to be described by Karl Landsteiner in 1901
  - b. Antibodies to ABO antigens are IgG type
  - c. ABO antibodies are alloantibodies produced after exposure to respective antigens
  - d. ABO antibodies are naturally occurring  $37^0$  reactive and complement fixing antibodies
  
2. The glycosyltransferase produced by H gene is
  - a.  $\alpha$ -2-L- fucosyltransferase
  - b. N-acetyl-D-galactosaminyltransferase
  - c. D-galactosyltransferase
  - d. None
  
3. The fucosyltransferase produced by Se gene acts predominantly on disaccharide chains of
  - a. type 1
  - b. type 2
  - c. type 3
  - d. type 4
  
4. The glycosyltransferase produced by A gene is
  - a.  $\alpha$ -2-L- fucosyltransferase
  - b. N-acetyl-D-galactosaminyltransferase
  - c. D-galactosyltransferase
  - d. None
  
5. Anti A<sub>1</sub> as an alloantibody is seen in serum of A<sub>2</sub>B individuals with a frequency of
  - a. 1-2%
  - b. 5%
  - c. 10-15%
  - d. 25%
  
6. Which of the statements are true about anti-A and anti-B?
  - a. generally detectable by 3 to 6 months of life
  - b. anti-A and anti-B in cord blood are of maternal origin
  - c. adults levels of anti-A and anti-B are reached by 5-10 years of age
  - d. All of the above are true
  - e. Only a and c are true
  
7. Anti-H activity is present in the lectin from
  - a. *Dolichos biflorus*
  - b. *Ulex europaeus*
  - c. *Glycin soja*
  - d. None

8. In a B group individuals, which sugar is present at the site marked with the “?” mark (see Image 1 on website):
- Galactose
  - N acetyl galactosamine
  - Fucose
  - Sucrose
9. In the proband marked with arrow (see Image 2 on website) safe blood to transfuse is
- Type ‘O’ PRBC
  - Washed type ‘O’ PRBC
  - Washed Type ‘A<sub>1</sub>B’ PRBC
  - Bombay phenotype
10. Which of the following statement is/are true about anti-Le antibodies
- majority of these antibodies are IgM
  - these are of little concern for HDN because newborn red cells are Le(a-b-)
  - in most cases Le antigen negative units are not required for the transfusion
  - All of the above are correct
  - Only statement a and c are correct
11. Anti- I is
- fairly common autoantibody which best react at 37<sup>0</sup>C
  - seen with infectious mononucleosis
  - Seen with Mycoplasma pneumoniae infection and can cause cold agglutinin disease
  - fairly common alloantibody which reacts at 4<sup>0</sup>C
12. Anti-P<sub>1</sub> can be neutralized with
- Saliva
  - Hydatid fluid
  - Human milk
  - Plasma
13. Which of the following statement is true about anti-PP1Pk
- is an alloantibody
  - seen in individuals with rare p phenotype
  - is cold reactive antibody
  - is not capable of hemolysis or hemolytic disease of newborn

14. Antibody associated with paroxysmal cold hemoglobinuria (PCH)
  - a. is an alloantibody
  - b. is an biphasic hemolysin
  - c. is anti-Le<sup>a</sup>
  - d. is anti-PP<sub>1</sub>P<sup>k</sup> (anti-Tj<sup>a</sup>)
  
15. Antigens of the P system have a receptor for which of the following pathogens
  - a. Uropathogenic E. Coli
  - b. Toxin of enterohemorrhagic E.Coli
  - c. Parvovirus B19
  - d. All of the above
  - e. Only b and c are correct