TEST QUESTIONS

1. Who was responsible for greatly improving the knowledge and understanding of DNA over 60 years ago?
   - a. James P. Allison
   - b. Friedrich Miecher
   - c. Watson and Crick
   - d. Karl Landsteiner

2. The part of the gene that codes for amino acids responsible for protein structure that is on the cell surface or in the plasma is called the
   - a. exon.
   - b. intron.
   - c. promoter.
   - d. chromosome.

3. Protein products on the cell surface or in the plasma can indicate normal or abnormal cellular function.
   - a. True
   - b. False

4. Who was the first scientist to demonstrate phenotypic differences of the ABO blood group system?
   - a. Karl Landsteiner
   - b. Watson and Crick
   - c. Levine and Stetson
   - d. Gehrie

5. Which precursor gene is the ABO system
   - a. A
   - b. B
   - c. O
   - d. H

6. Some studies have demonstrated a relationship between the ABO blood group system and other carbohydrate blood group systems with
   - a. certain infectious diseases.
   - b. malignancy.
   - c. bacterial adhesion.
   - d. all of the above

7. The blood group systems of clinical significance after the ABO system are
   - a. Rh and Duffy.
   - b. Duffy and Kidd.
   - c. Rh and Kell.
   - d. Kell and Duffy.

8. The phenotype is the true expression of the genes which were inherited by the individual and the genotype is the observed characteristics of the gene.
   - a. True
   - b. False

9. In the immunohematology lab, the patient's... is tested and reported in terms of antigen expression.
   - a. genotype
   - b. phenotype
   - c. exon
   - d. intron

10. What are the occurrence rates of alloimmunization in patients dependent on transfusion therapy?
    - a. 5.3-85 percent
    - b. 10-25 percent
    - c. 40.0-78 percent
    - d. 4.4-76 percent

11. What is/are the top risk factor(s) in the development of red cell alloimmunization?
    - a. age
    - b. gender
    - c. number of transfusions
    - d. all of the above

12. Blood group genotyping eliminates all of the limitations that exist with blood group phenotyping.
    - a. True
    - b. False

13. Which project tests for whole-genome blood group sequencing in blood disorder patients in order to improve transfusion testing and outcomes?
    - a. MedSeq
    - b. SeqMed
    - c. GenomeTX
    - d. BloodGen

14. Besides transfusion therapy, which other area of immunohematology is being studied for the use of patient genotyping?
    - a. specimen collection containers
    - b. determination of RhIG therapy
    - c. transfusion reactions
    - d. none of the above

15. When a patient is determined to be phenotypically weak D, the Rh status is managed as a D-positive individual.
    - a. True
    - b. False

16. According to Sandler et al., genotyping of a patient’s D status will eliminate at least _ante- and postpartum RhIG injections and save at least _units of RhD negative blood.
    - a. 10,300; 58,000
    - b. 14,700; 48,000
    - c. 24,700; 48,000
    - d. 39,200; 58,000

17. Blood group genotyping can aid in the elimination of expensive and time-consuming laboratory techniques such as DTT and neutralizing substances to anti-CD38 in patients with
    - a. thalassemia.
    - b. multiple myeloma.
    - c. sickle cell disease.
    - d. iron deficiency anemia.

18. Which red cell genotyping assay predicts 36 red cell antigen phenotypes?
    - a. ID CORE XT
    - b. Precise Type HEA Molecular Bead Chip
    - c. Precise Type Core XT
    - d. all of the above

19. Which molecular test is used to determine red cell genotypes and predict the allele genotype and antigen phenotypes of many blood group systems?
    - a. ID CORE XT
    - b. Precise Type HEA Molecular Bead Chip
    - c. Precise Type Core XT
    - d. all of the above

20. What clinically significant antigen—which has high frequency in parts of Asia—is not found in the PreciseType test, but is determined in the ID CORE XT test?
    - a. Jsa and Jsb
    - b. Doa and Dob
    - c. Dia and Dib
    - d. Mur and Mia

Tests can be taken online or by mail. Easy registration and payment options are available through NIU by following the links found at www.mlo-online.com/ce.

Send your $20 check payable to Northern Illinois University with this form to: University Outreach Services, Northern Illinois University, DeKalb, IL 60115-2860 Phone: 815-753-0031

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P = Poor; E = Excellent

1. To what extent did the article focus on or clarify the objectives?
   - P 1 2 3 4 5 E

2. To what extent was the article well-organized and readable?
   - P 1 2 3 4 5 E

3. How will you use the CE units?
   - a. state license
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