TEST and TEACH PROGRAM
2010-1 QUESTIONS

The following questions were taken from various sources and designed to not only test and teach but also encourage laboratory staff to further their knowledge in the field of immunohaematology.

It is recommended that all staff actively working in the blood bank laboratory perform this exercise, initially without the benefit of the answers. Use the table to record your answers and score. Most answers are referenced so participants may read further if interested. The completed document should be filed as evidence of on-going education.

THIS IS AN EDUCATIONAL EXERCISE - PLEASE DO NOT RETURN RESULTS

Answers Guide - Select 1 answer option only i.e. only one of the options given will be correct.

1. The frequency of anti-D production in critically ill (not haematology-oncology) D- patients who have received at least 1 unit of D+ red cells might be expected to be:
   a. 22%
   b. 52%
   c. 82%

2. TRALI (Transfusion Related Acute Lung Injury) is one of the leading causes of transfusion associated mortality. The event may be caused by the transfusion of a unit of:
   a. Red cells
   b. Plasma
   c. Platelets
   d. All of the above

3. A condition with an X-linked mode of inheritance often associated with CGD (Chronic Granulomatous Disease), haemolytic anaemia (often compensated) and characteristic red cell acanthocytosis.
   a. Guillain-Barre Syndrome
   b. Rh Null phenotype
   c. McLeod phenotype

4. 8 yr. old female presented with marked anaemia (Hb.61 g/L) and dark urine following her most recent transfusion. She had received a transplant for AML 6 months prior and due to on-going graft versus host complications has been receiving weekly red cell and single donor platelet transfusions post discharge. The transplant was a major ABO mismatch with the donor A and recipient O. The DAT was weakly positive and the eluate was positive against A1 cells at 37 deg.C by IAHG. Microspherocytes were present in the blood film. There were no mixed field reactions in the patient’s blood group. What is the most likely cause of the patient’s dark urine?
   a. Haemolysis due to anti-A in donor red cells
   b. Haemolysis due to anti-A in donor platelets
   c. Haemolysis due to malaria
   d. Haemolysis associated with graft versus host disease

5. Cryoprecipitate is not indicated in the treatment of:
   a. Fibrinogen deficiency or dysfibrinogenaemia when there is clinical bleeding, an invasive procedure or trauma?
   b. Disseminated intravascular coagulation
   c. Haemophilia A
6. A patient has chronic myeloproliferative disease with a haemoglobin of 70 g/L requiring a blood transfusion. A red cell unit is removed from storage and transfused?
   a. Within 30 minutes of removal from cold storage
   b. Within 2 hours or when the unit has come to room temperature
   c. After warming to 37 deg.C

7. The same unit must then be completely transfused within:
   a. 30 minutes
   b. 4 hours
   c. 8 hours

8. You are faced with a positive antibody screen in which all panel cells are positive and subsequent extended panels used to identify the antibody gave positive reactions with all cells. The possible cause(s) of this are:
   a. Presence of an autoantibody
   b. Alloantibody against a high frequency antigen
   c. Presence of multiple allo-antibodies
   d. All of the above

9. The Duffy blood group system is functionally associated with:
   a. Invasion by P.falciparum
   b. Red cell urea transporter
   c. Maintenance of red cell membrane integrity
   d. Invasion by P.vivax

10. Routine blood grouping produced the following reactions

<table>
<thead>
<tr>
<th>Anti-A</th>
<th>Anti-B</th>
<th>Anti-A,B</th>
<th>Anti-D</th>
<th>A1 Cells</th>
<th>A2 Cells</th>
<th>B Cells</th>
<th>O Cells</th>
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Select the most likely blood group?
   a. A\text{Rh(D)} Positive
   b. A\text{3 Rh(D)} Positive
   c. A\text{a Rh(D)} Positive
   d. A\text{m Rh(D)} Positive

**ANSWER TABLE AND ASSESSMENT**

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<tr>
<th>Question</th>
<th>Your Answer</th>
<th>Correct Answer</th>
<th>Your Score</th>
<th>Allocated Score</th>
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