



QUALIFICATION IN APHERESIS (QIA) Topic Outline

The Qualification in Apheresis examination questions encompass different topics or subtests within the area of Apheresis: Basic Science, Clinical Applications, Donor/Patient Care, Instrumentation, Operational Considerations, and Standards, Guidelines, and Regulations (ASFA, AABB, CAP, FDA, FACT, HIPAA, TJC, etc.). Each of these subtests comprises a specific percentage of the overall 50-question qualification examination. The subtests for the examination are outlined below:

I. Basic Science (5-10%)

- A. Hematology/Coagulation
- B. Immunohematology/Genetics
 - 1. Blood component therapy
 - 2. HLA
 - 3. ABO
- C. Immunology
 - 1. Antibodies
 - 2. Immune complexes
- D. Laboratory Testing

II. Clinical Applications (10-20%)

- A. Donor Apheresis
 - 1. Platelets
 - 2. Red blood cells
 - 3. Plasma
 - 4. White blood cells (e.g., granulocytes)
- B. Therapeutic Apheresis
 - 1. Plasma exchange
 - 2. Red cell exchange
 - 3. Cell depletion
 - 4. Selective adsorption/filtration procedures
- C. Cellular Therapy
 - 1. Hematopoietic progenitor cells
 - 2. Extracorporeal photopheresis (ECP)
 - 3. Mononuclear cell collections (e.g., lymphocytes, monocytes)
- D. Diseases Treated with Apheresis

III. Donor/Patient Care (30-40%)

- A. Assessment/Monitoring
- B. Replacement Fluids
- C. Anticoagulation
- D. Medications (e.g., calcium, antihistamine) and Drug Interactions
- E. Venous Access
- F. Fluid Balance
- G. Age-Related Considerations
- H. Adverse Reactions

IV. Instrumentation (10-20%)

- A. Theories and Techniques of Separation
 - 1. Centrifugation (e.g., intermittent and continuous flow)
 - 2. Membrane
 - 3. Columns
- B. General Principles of Automated Instruments*
 - 1. Anticoagulation of extracorporeal circuit
 - 2. Extracorporeal blood volume
 - 3. Efficiencies of separation and/or collection
 - 4. Clinical applications (see II.A.—D.)

*The majority of instrument questions will address general processes and procedures applicable to most instruments (e.g. alarm codes for specific instruments will NOT be tested). The troubleshooting questions will address day to day problems encountered on any instrument; they will not be instrument specific.

V. Operational Considerations (10-20%)

- A. Quality Assurance (e.g., cGMP, cGTP, validation)
- B. Quality Control
 - 1. Product yield
 - 2. Instrument efficiencies
- C. Equipment Maintenance
- D. Safety (e.g., OSHA, CDC)
- E. Infection Control

VI. Standards, Guidelines, and Regulations (ASFA, AABB, CAP, FDA, FACT, HIPAA, TJC, etc.) (10-20%)

- A. Informed Consent
- B. Confidentiality
- C. Donor Selection
- D. Facility Licensure and Accreditation
- E. Training and Competency

All Board of Certification examinations use conventional and SI units for results and reference ranges.

END OF TOPIC OUTLINE