SAUDI DIPLOMA TRAINING PROGRAM

BLOOD BANK DIPLOMA

Final Written Examination

Examination Format:

The Saudi subspecialty fellowship and diplomas final written examination shall consist of one paper with 80-120 multiple-choice questions (single best answer out of four options). Up to 10% unscored items can be added for pretesting purposes.

Passing Score:

The passing score is 70%. However, if the percentage of candidates passing the examination before final approval is less than 70%, the passing score must be lowered by one mark at a time aiming at achieving 70% passing rate or 65% passing score whichever comes first. Under no circumstances can the passing score be reduced below 65%.

Blueprint Outlines:

No.	Sections	Percentage (%)
1	Blood Donor Management	15%
2	Aphaeresis	10%
3	Blood Components	15%
4	Transfusion-transmitted diseases (TTD)	10%
5	Basic and Advanced Immunohematology	25%
6	Special Transfusion Preparation and Management	15%
7	Organization and Management of Transfusion Services	5%
8	Continuous Quality Management	5%
Total		**100%**

Note:

- Blueprint distributions of the examination may differ up to +/-3% in each category.
- Percentages and content are subject to change at any time. See the SCFHS website for the most up-to-date information

1- Blood Donor Management

- Selection of Allogeneic Blood Donors
- Autologous and directed donation
- Whole Blood Collection
- Adverse donor reactions
- Donor deferral and counseling

2- Aphaeresis

- Apheresis donor selection and monitoring
- Instruments and systems for donor apheresis collections
- Indications and management of therapeutic aphaeresis
- Principles and indications of hematopoietic stem cell transplantation
- Collection, processing, and storage of hematopoietic stem cell

3- Blood Components

- Blood component preparation
- Blood component handling, storage, and modification
- Blood component quality control

4- Transfusion-transmitted diseases (TTD)

- Principle of testing procedures (serology & NAT)
- Implications of reactive results (donor deferral, re-entry, and lookback)
- Transfusion-transmitted infectious viral and parasitic agents
- Bacterial contamination of blood components

5- Basic and Advanced Immunohematology

- Basic immunology
- Antigen-antibody reaction
- Blood group genetics
- Blood group systems
- Pre-transfusion testing
- Antibody detection and identification
- Direct antiglobulin test (DAT)
- Platelet, HLA, and Granulocyte Antigens and antibodies

6- Special Transfusion Preparation and Management

- Clinical indications of blood components transfusion
- Administration of blood components
- Components modification (e.g., irradiation, washing, freezing, and pathogen reduction)
- Hemostatic and thrombotic disorders
- Transfusion in Hemoglobinopathies
- Management of transfusion adverse reactions
- Massive transfusion

- Haemolytic disease of foetus and newborn (HDFN)
- Transfusion Support for Hematopoietic Stem Cell Transplant Recipients

7- Organization and Management of Transfusion Services

- Management of blood banks and transfusion services
- Blood components Inventory management
- Blood Utilization Auditing
- Hemovigilance
- Management of facilities, work environment, and safety in blood bank
- Patient blood management (PBM)

8- Continuous Quality Management

- Quality concepts (QC, QA, QM, and GMP)
- Quality Management System Essentials
- Process Improvement and the Quality
- Management System

Suggested References:

1. Harmening, D.M. (2012). Modern Blood Banking and Transfusion Practices (6th ed.). Philadelphia, PA: F.A.Davis Company.
2. Fung MK, Eder AF, Spitalnik SL, Westhoff CM (eds). Technical Manual. 19th. Bethesda, MD: AABB Press

Note:
This list is intended for use as a study aid only. SCFHS does not intend the list to imply endorsement of these specific references, nor are the exam questions necessarily taken solely from these sources.

Example Questions

EXAMPLE OF K1

Question 1

Which of the following is the most likely reason of a positive direct antiglobulin test?

A. Neonatal alloimmune thrombocytopenia
B. Antibodies to human leukocyte antigens
C. ABO blood group discrepancy
D. Autoantibodies on red cells surface

EXAMPLE OF K2 QUESTIONS

Question 2

A 35-year-old woman presented to Emergency Department with a history of bleeding and severe anemia. The treating physician requested a transfusion of 2 units of red cells. Her ABO typing results are shown in the following blood bank tests:

Blood Bank Test-1:

ABO Results			
Forward grouping (Patient Cells)		Reverse grouping (Patient Plasma)	
Anti-A	Anti-B	A1 cells	B cells
4+	0	1+	4+

Blood Bank Test-2:

Anti-A1 Lectin test		
Anti-A	Anti-A1 Lectin	Control
4+	0	0

What would be the most likely cause of this ABO discrepancy?

A. A1 subgroup
B. A2 subgroup
C. Bombay phenotype
D. Cold-reactive autoantibodies