



SAUDI DIPLOMA TRAINING PROGRAM

CARDIAC PERFUSION

Promotion Examination

Written Examination:

Exam Format:

- A written examination shall consist of one paper with not less than 100 MCQs with a single best answer (one correct answer out of four options).
- The examination shall contain type K2 questions (interpretation, analysis, reasoning and decision making) and type K1 questions (recall and comprehension).
- The examination shall include basic concepts and clinical topics relevant to the specialty.
- Clinical presentation questions include history, clinical finding and patient approach. Diagnosis and investigation questions; include the possible diagnosis and diagnostic methods. Management questions; including treatment and clinical management, either therapeutic or nontherapeutic, and complications of management. Materials and Instruments questions; including material properties, usage, and selection of instruments and equipment used. Health maintenance questions; include health promotion, disease prevention, risk factors assessment, and prognosis.





Passing Score:

The trainee's performance is assessed in each of the evaluation formulas according to the following scoring system:

Score	Less than 50%	50% – 59.4%	60% - 69.4%	More than 70%
Description	Clear Fail	Borderline Fail	Borderline Pass	Clear Pass

1. To upgrade the trainee from a training level to the next level, She/he must obtain at least a **Borderline Pass** in each evaluation form.
2. The program director may recommend to the local supervision committee to request the promotion of the trainee who did not meet the previous promotion requirement according to the following:
 - A. In case that the trainee gets a **borderline Fail** result in **one** of the evaluation forms, the remaining evaluation forms must be passed with **Clear Pass** in at least **one** of them.
 - B. In case that the trainee gets a **borderline Fail** result in **two** of the evaluation forms to a maximum, provided they do not fall under the same theme (Knowledge, Attitude, Skills). The remaining evaluation forms must be passed with **Clear Pass** in at least **two** of them.
 - C. The promotion must be approved in this case by the scientific council for the specialization.





Suggested References:

1. Hensley F, Martin D, Gravlee G. A Practical Approach to Cardiac Anesthesia. 6th Ed. Wolters Kluwer, 2018.
2. Mongero L, Beck J. On-Bypass: Learning the Art of Perfusion. 2nd Ed. Humana, 2024.
3. Ghosh S, Falter F, Cook D. Cardiopulmonary Bypass (Cambridge Clinical Guides). 2nd Ed. Cambridge University Press, 2015.
4. Gravlee G, Davis E, Hammon J, Kussman B. Cardiopulmonary Bypass: Principles and Practice. 4th Ed. Lippincott Williams & Wilkins, 2015.
5. Reed C, Clark D. Cardiopulmonary Bypass: Basic Concepts and Practice. 1st Ed. Medical Education and Development, 2015.
6. ELSO. The ELSO Red Book: On Extracorporeal Life Support. 6th Ed. Extracorporeal Life Support Organization, 2022.
7. Kay J, Munson S. The Manual of Clinical Perfusion. 2nd Ed revised. Perfusion.com, Inc., 2020.
8. SCFHS. General Regulations for Training and Examination. Current Edition.

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.





Blueprint Outlines:

No.	Sections	Percentage
1	Anatomy, Physiology, and Pathophysiology	12%
2	Pharmacology & Anticoagulation (Heparin/Protamine)	12%
3	Perfusion Equipment, Circuits, and Biocompatibility	15%
4	Conduct of CPB: Priming, Initiation, and Maintenance	15%
5	Monitoring, Blood Gas Interpretation, and Hemodynamics	10%
6	Myocardial Protection (Cardioplegia) and Hypothermia	10%
7	Blood Management, Ultrafiltration, and Autotransfusion	8%
8	Introduction to ECMO and IABP Fundamentals	8%
9	Professionalism, Patient Safety, and Documentation	5%
10	Basic CPB Troubleshooting and Emergencies	5%
Total		100%

Notes:

- Blueprint distributions of the examination may differ up to +/-5% in each section.
- Percentages and content are subject to change at any time. See the SCFHS website for the most up-to-date information.
- Research, Ethics, Professionalism, and Patient Safety are incorporated within various domains.

