

Master of Medicine (Anaesthesiology) Part C Examination

Part C Syllabus

The Master of Medicine (Anaesthesiology) Part C Examination is the final part to the Master of Medicine (Anaesthesiology) Examination. The 3 parts of the Examination serves to verify that candidate has achieved the 6 ACGME-I core competencies of the Residency program.

To match training with assessment, this syllabus has been written in accordance with the 6 core competencies.

Medical Knowledge:

The candidate should demonstrate:

1. An investigative and analytical approach to clinical problem solving and knowledge acquisition, and an ability to apply medical knowledge to clinical situation:
 - a. Through the clinical case viva discussion in the part C examination covering the topics in Part A and Part B examination but in greater depth.
2. An ability to teach others:
 - a. Through participation of teaching activities as documented on the Logbook (verified during the logbook review).

Patient Care and Procedural Skills

The candidate should demonstrate:

1. Ability to gather essential and accurate information about the patient, make informed diagnostic and therapeutic decisions, prescribe, and perform essential medical procedures.
 - a. Through the case logs and reflections documented on the Logbook (verified during the logbook review).
 - b. Through the clinical case viva discussion in the part C examination covering topics Part A and B examination but in greater depth.

Professionalism

The candidate should demonstrate:

1. Professional Conduct and Accountability, and Humanism and Cultural Proficiency during the case discussion in the part C examination by showing:
 - a. An understanding and appreciation of the principles of medical ethics in accordance with the Singapore Medical Council's Ethical code and guidelines.
 - b. An awareness and knowledge of the laws and regulations that are relevant to the practice of anaesthesia and current legal guidelines such as providing medical advice, taking or giving consent and duty of care etc.

- c. An awareness and appropriate sensitivity to the different ethnic groups and cultures present locally.
- 2. Ability to maintaining emotional, physical, and mental health, and pursuing continual personal and professional growth during the case discussion in the part C examination by showing:
 - a. Strategies for personal health.
 - b. Knowledge necessary to ensure personal and staff safety at the workplace from hazards such as:
 - i. Biohazards: Infection Control and Prevention in contagious diseases (eg. COVID), and contact infections (E.g., EBOLA) e.g.:
 - 1. Personal protection – PPE, use, processes
 - 2. Protecting others – process, training juniors, non-clinical areas
 - 3. OT / ICU processes, e.g., air exchange vs washing out of aerosol, Aerosol generating procedures, high risk processes, preventive measures, organization.
 - ii. Electrical; Radiological; Fire, Explosions, LASERs etc (*Reference to Part A Syllabus Equipment and Safety and Part B Syllabus S15 Non-Operating Room Anaesthesia (Remote)*)
 - c. Knowledge of the signs and symptoms of mental health issues and management strategies in self and colleagues, e.g., conditions such as depression, anxiety, substance abuse, burn-out.
 - d. Understanding of basic concepts on adult learning and teaching.

Interpersonal and Communication Skills

The candidate should demonstrate:

- 1. Ability to create and sustain a therapeutic relationship with patients and families and work effectively as a member or leader of a health care team, through:
 - a. Workplace-based assessment: reviewed and verified by the Clinical Competency Committee before recommendation for the Part C Exam.
 - b. Documentation any administrative or leadership roles during residency in the Logbook.
 - c. Demonstrating ability to formulate strategies, during case discussion in the Part C exam, in managing staff with issues such as:
 - i. Poor performance or undesirable behaviour including impairment in colleague, disruptive behaviour, bully and harassment, sexual misconduct, adjustment or coping issues.
 - ii. Support or counselling in stressful conditions such as critical incidents or adverse events support, mentoring and coaching.
 - iii. Mental issues such as depression, anxiety, substance abuse, burn-out etc.

Practice-Based Learning and Improvement

The candidate should demonstrate the ability to appraise and assimilate scientific evidence at the Paper Critique discussion in the Part C examination. They should be able to:

- a. Apply the biostatistical knowledge covered in the Part A syllabus
- b. Critically appraise and apply evidence from published papers to daily clinical practice.
- c. Discuss the stages involved in the design of a clinical study, including ethical or legal aspects of research (e.g., Human Biomedical Research Act).
- d. Discuss what constitute a good study design and identify study design flaws. Understand commonly used statistical tests in clinical studies and their application.
- e. Discuss findings of presented paper and considerations for applying study findings in clinical practice.

Systems-Based Practice

1. As an advocate for quality patient care and optimal patient care systems, the candidate should demonstrate the knowledge and ability to apply principles of the 3 aspects of clinical governance during the case discussion in Part C exam:
 - A. Safety/ Risk Management:
 - a. Based on events or cause:
 - i. Risk identification - System for events reporting: Sentinel events, Incident or near-misses; morbidity and mortality; complaints.
 - ii. Tools for detecting and quantifying events risks e.g., Healthcare Failure Mode & Effect Analysis
 - iii. Response & Mitigation Plans: adverse events management; patient relations/ complaints management; documentations; root cause analysis; medicolegal management; follow-up remedial actions and system/ staff improvement.
 - b. Staff management:
 - i. Training (Clinical/Non-clinical, e.g., communications, adverse events management; staff self-management); orientation of new staff; accreditation/ credentialing; registration.
 - ii. Health (Including mental health) of self and team members: stress management; fatigue; burnout; second victim; counselling and psychological management(*Cross reference to Personal and Staff wellbeing and Management*) .
 - iii. Fitness for practice: time off work; health/mental health issues; physiological aging etc.
 - iv. Levels of supervision
 - v. System and workflow issues that predispose to errors.
 - c. Service, Institutional, Healthcare System level: Contingency planning/ Crisis Preparedness:
 - i. Service/ Hospital level: Mass causality incidents.

- ii. System wide failure or catastrophic events: malfunctioning electronic medical records; security breaches; terrorists attacks; cyber-attacks.
 - iii. Hospital/ Healthcare system/ National level: infection control (e.g. SARS; COVID etc)
 - iv. Communications of plans
 - B. Effectiveness of Healthcare service
 - a. Quality Improvement Process:
 - i. Model for improvement
 - ii. Planning tools: process mapping; cause and effect [fishbone], affinity diagram, pareto chart
 - iii. Data collection methodology (qualitative, quantitative data)
 - iv. Interventions (change concepts, hierarchy of interventions)
 - v. PDSA (Plan-Do-Study-Act)
 - vi. Measurement and analysis (types of measures, run charts)
 - vii. Performance improvement plan (spread and sustainability)
 - viii. Quality improvement outcomes and initiatives e.g., Value driven quality care/ outcomes initiatives
 - b. Guidelines and Protocols: Review of evidence; drawing of guidelines; implementations process.
 - C. Patient and Family Communications, Experience, Feedback and Complaints:
 - a. Consent taking and documentation.
 - b. Communications and follow-up actions: Difficult topics/ situations/ communications: poor prognosis; poor outcome or unexpected adverse outcomes or complications; risks and complaints mitigation
 - c. Complaints; Communications/ Comments, request for waiver of charges etc.
 - d. Support system within the healthcare systems: patient relations, experience or liaison department.
2. To work effectively in current Singapore and world environment, the candidate should, during the case discussion at the Part C exams, show an understanding:
- a. Of the laws and regulations that are relevant to the practice of anaesthesia and current legal guidelines such as providing medical advice, taking or giving consent and duty of care etc.
 - b. Of the healthcare funding model in Singapore, including but not limited to the various subsidies provided by MOH, Medisave, Medishield, life and integrated shield plans, Medifund, CareShield, Life/ ElderShield, private insurance and Corporate Healthcare Benefits and Insurance.
 - c. Of the challenges of providing healthcare in the evolving socioeconomic and demographic landscape in Singapore.
 - d. Of the environmental impact of the anaesthetic practice including but not limited to the environmental impact of various pharmacological agents, equipment, and process of administering medical care, and the evolving solutions for these problems.