Examiners' Report
Master of Medicine (Anaesthesiology) Part B SAQ Examination
- 22 & 23 September 2026

General Comments

This report summarises the areas examined in the 2026 Master of Medicine (Anaesthesiology) [MMed(Anaes)] Part B Short Answer Question (SAQ) Examination conducted on 22 & 23 September 2026. The report is designed to aid residents and faculty in preparing for future examinations.

Candidates should note that all aspects of the syllabus are examinable. The examination syllabus is available from the Division of Graduate Medical Studies (DGMS) website. Candidates are advised to use the document to guide them and cover the breadth of the syllabus to maximise their chance of success at the examination.

The 16 SAQ are divided into Paper One and Two, each 8 questions to be completed over 2 hours, held on 2 different days.

Candidates should note that the weightage of all the questions is equal, and all the questions need to be answered. Some questions have multiple parts with allocated percentages (%). The percentages serve to guide the candidates with time allocation and may not reflect the exact mark allocation. Candidates are advised to plan and manage their time accordingly.

Candidates are reminded to read the questions carefully. The SAQ examination is designed to examine the candidates' ability to apply their knowledge in specific clinical situations. If a specific clinical situation with history or physical findings is provided, the candidates are expected to tailor their answers to that situation. Generic answers that are not specific to the clinical scenario tend to be awarded lower marks leading to poor performance overall.

Candidates should also note that unless it would assist them answering the questions, there is no need to waste time restating the question in their answers, as it would not yield them any additional credit.

Marking and Passing Criteria

All the SAQs are reviewed and criteria for passing each question are determined by the examination committee prior to the examinations.

Score	**Interpretation of Score**
8	An excellent performance
7	A performance significantly better than a pass
6	A definite pass
5	A reasonable performance but not up to a pass
4	A poor performance but not an absolute failure
3	An absolute failure which cannot be compensated

Note that a score of 6 is a pass, while a score of 5 is considered a "borderline fail".

The sum of the scores for all 16 questions is added for each candidate. The candidate passes the examination if the total score is greater than or equal to 90. This score is an approximative equivalent to having a clear pass in 10 out of the 16 questions and a borderline performance in the remaining 6 questions.

Results for the September 2026 MMed (Anaes) Part B SAQ Examination:

Total number of candidates who registered: 33
Number of candidates who withdrew or were absent: 1
Number of candidates who completed the examination: 32
Number of candidates who passed the examination: 22 (69%)

Paper One, Question One:

A 45-year-old woman with end-stage renal failure from IgA nephropathy presents for creation of a right brachiobasilic arteriovenous fistula. The surgeon requests that a regional block be performed to ensure vasodilation as her veins are noted to be small.

A: List the regional block options that could be performed. (15%)

B: Describe how you would perform an ultrasound guided lateral infraclavicular brachial plexus block. What are the advantages and disadvantages of this approach. (70%)

C: How would you ensure coverage for the medial side of the arm without requiring the surgeon to give additional infiltration of local anaesthetic? (15%)

Pass Rate: 59%

Candidates demonstrated variable understanding of the anatomy and techniques of brachial plexus blockade, with 59% achieving a pass.

Better-performing candidates provided a clear and accurate description of the ultrasound-guided lateral infraclavicular approach, including identification of the relevant anatomical landmarks, relationship of the brachial plexus cords to the axillary artery, and appropriate site of local anaesthetic deposition. They were also able to discuss the advantages and limitations of this approach and strategies to ensure adequate anaesthesia of the medial arm.

The focus of the question is on the specific anatomical and technical aspects of the infraclavicular block. Many candidates devoted considerable time to generic aspects of regional anaesthesia, such as consent, patient preparation and monitoring, rather than describing the requested block technique. Some candidates described an incorrect block or demonstrated inaccurate knowledge of the relevant anatomy. Discussion of the advantages and disadvantages was frequently incomplete with some candidates failing to appreciate that the advantages and disadvantages are relative compared to other approaches.

Candidates should strengthen their understanding of brachial plexus anatomy, ultrasound sonoanatomy and the sensory distribution of individual nerves. They should also be familiar with the relative advantages and limitations of different brachial plexus approaches and techniques for supplementing incomplete sensory coverage. Greater attention to the specific requirements and weighting of each question component would improve examination performance.

Paper One, Question Two:

A 45-year-old man presents for elective awake craniotomy under sedation for excision of a left frontal tumour.

A: Discuss the options of anaesthetic agents for the surgery. (50%)

B: Halfway through the surgery, you notice repetitive jerking movements of the limbs and the patient is no longer responsive. Describe your immediate next steps in management (50%)

Pass Rate: 88%

This question was generally well answered, with 88% of candidates achieving a pass. Most candidates demonstrated familiarity with commonly used sedative agents for awake craniotomy and recognised intraoperative seizures as a potential complication.

Better-performing candidates discussed the goals of sedation during awake craniotomy, including maintaining patient cooperation, airway patency, adequate ventilation and haemodynamic stability while facilitating cortical mapping. They compared the pharmacological properties, advantages and limitations of agents such as propofol, dexmedetomidine, remifentanil and midazolam, and described a systematic approach to managing intraoperative seizures.

Weaker answers tended to be superficial, listing anaesthetic agents without adequately discussing their rationale, advantages or limitations. Some candidates incorrectly stated that dexmedetomidine does NOT cause respiratory depression (at all), rather than recognising this is relative when compared to other agents, is dose dependant and could be potentiated when combined with other sedatives. In Part B, some candidates provided only generic airway and resuscitation measures without addressing specific seizure management, including cessation of surgical stimulation, cortical irrigation with cold saline, administration of appropriate anticonvulsant agents and investigation of precipitating causes. A few candidates also demonstrated misconceptions regarding the use of anaesthetic agents and their effects on neurophysiological monitoring.

Candidates are encouraged to develop a more comprehensive understanding of the pharmacology and practical application for sedation as well as recognition and stepwise management of intraoperative seizures, including communication with the surgical team, immediate seizure termination, airway management and evaluation of underlying causes.

Paper One, Question Three:

A 4-year-old boy is brought to the Emergency Department (ED) following an explosion at home. He was rescued from an enclosed room and presents with soot on his face, a hoarse voice, and burns on the chest, abdomen, and all four limbs. He is conscious and crying. The ED consultant requests your assistance, and the burns specialist wishes to bring the child to the operating theatre as soon as possible for wound debridement and dressing.

A: Outline your initial assessment and management in the ED (60%)

B: Outline your intraoperative anaesthetic management. (40%)

Pass Rate: 97%

This question was well answered, with 97% of candidates achieving a pass. Most candidates demonstrated satisfactory knowledge of the initial assessment and anaesthetic management of a child with extensive burns and suspected inhalational injury.

Candidates generally demonstrated an understanding of the need for a systematic approach to resuscitation and the importance of early airway management in patients at risk of progressive airway oedema. Better answers incorporated a comprehensive assessment of burn severity, recognition of associated inhalational injury and toxic gas exposure, appropriate fluid resuscitation, and perioperative management tailored to the physiological needs of a young child.

Although the pass rate was high, many answers lacked sufficient breadth and detail to demonstrate comprehensive management. Areas requiring improvement included obtaining a focused history and estimating body weight, assessing burn depth and total body surface area, selecting appropriate investigations, and documenting neurological status. In particular, candidates should appreciate the importance of paediatric-specific fluid management, including maintenance glucose requirements and titration of resuscitation fluids to physiological endpoints such as urine output.

Intraoperative management was also incompletely addressed in some answers, particularly regarding haemodynamic monitoring, ongoing fluid resuscitation, multimodal analgesia and prevention of hypothermia.

Paper One, Question Four:

There is increasing use of dynamic indices of fluid responsiveness such as pulse pressure variation (PPV) to guide fluid therapy at the bedside.

A: Explain the physiological basis of PPV as a dynamic index of fluid responsiveness. (60%)

B: List and explain the rationale for the preconditions required for PPV measurements to be reliable. (40%)

Pass Rate: 16%

This question was poorly answered, with only 16% of candidates achieving a pass. The performance highlighted significant deficiencies in the understanding of the physiological principles underlying pulse pressure variation (PPV), despite its relevance to routine anaesthetic practice.

Most candidates were able to identify some of the preconditions necessary for reliable PPV measurement, such as controlled mechanical ventilation, adequate tidal volume, regular cardiac rhythm and the absence of spontaneous respiratory effort. However, many were unable to explain the physiological rationale for these requirements.

The most significant deficiency was the inability to accurately describe the cardiopulmonary interactions occurring during positive pressure ventilation. Many candidates demonstrated only a superficial understanding of the effects of increased intrathoracic pressure on right ventricular preload and afterload, and the subsequent changes in left ventricular filling and stroke volume. Some incorrectly explained PPV using the physiological principles of spontaneous rather than positive pressure ventilation. Few candidates

adequately described the temporal relationship between right and left ventricular stroke volume changes or linked these changes to the Frank-Starling relationship and fluid responsiveness.

Candidates should develop a sound understanding of heart-lung interactions during mechanical ventilation, rather than relying on memorisation of the conditions required for PPV measurement. Residency teaching should emphasise the physiological basis, assumptions and limitations of dynamic indices of fluid responsiveness, including the ability to explain why these indices may become unreliable in different clinical situations.

Paper One, Question Five:

A 65-year-old man is scheduled for elective arthroscopic rotator cuff repair in the beach-chair position. He had a myocardial infarction 2 years ago that required percutaneous coronary intervention and insertion of drug-eluting stents.

His preoperative electrocardiogram shows a new left bundle branch block (LBBB). He is asymptomatic with functional capacity of approximately 4 metabolic equivalents (METs) and takes aspirin, atorvastatin, bisoprolol and enalapril regularly.

A: Outline the key preoperative concerns specific to this patient's cardiac condition. (40%)

B: Discuss the potential hazards of the beach chair position and your strategies to mitigate for them in this patient. (60%)

Pass Rate: 50%

This question was moderately well answered, with 50% of candidates achieving a pass. Better-performing candidates recognised cerebral hypoperfusion as the principal hazard associated with the beach-chair position and were able to discuss appropriate strategies to minimise this risk.

In Part A, weaker answers did not sufficiently consider the significance of a new left bundle branch block in a patient with established ischaemic heart disease, including the need for further cardiac evaluation, perioperative risk stratification and appropriate medication management.

A recurring weakness was the tendency to provide brief lists of complications without explaining their underlying physiology or linking them to specific management strategies for Part B. Candidates should recognise that questions requiring discussion demand more than identification of relevant points. They should demonstrate an understanding of the mechanisms involved, their clinical implications and appropriate preventive or corrective measures, tailored to the patient's comorbidities and the proposed surgical procedure.

A common deficiency was the failure to adequately explain the physiological consequences of upright positioning, particularly the effects of venous pooling on cardiac output and the hydrostatic pressure gradient between the site of blood pressure measurement and the brain. Some candidates failed to recognise cerebral hypoperfusion as the primary concern or discuss appropriate preventive measures, including maintaining adequate cerebral perfusion pressure, correct positioning of the arterial pressure transducer, and avoidance of hypotension. Other potential complications, including myocardial ischaemia, hypotension-bradycardia episodes, venous air embolism and positioning-related injuries, were also incompletely addressed.

Paper One, Question Six:

A 74-year-old man presents with sudden severe abdominal and back pain and transient collapse. He is pale and clammy; BP 82/50 mmHg and HR 118 bpm.

CT angiography confirms a leaking suprarenal abdominal aortic aneurysm. He is transferred directly to theatre for emergency open repair.

A. Outline the preoperative preparation required to safely receive this patient (50%).

B: Describe the physiological effects of suprarenal aortic cross-clamping and the mitigating measures you would take. (50%)

Pass Rate: 72%

This question was reasonably well answered, with 72% of candidates achieving a pass. Most candidates demonstrated a satisfactory approach to preparing for emergency open repair of a leaking abdominal aortic aneurysm and some understanding of the physiological consequences of suprarenal aortic cross-clamping.

Better-performing candidates provided a structured and comprehensive approach to theatre preparation, including multidisciplinary coordination, activation of massive transfusion protocols, appropriate vascular access, invasive monitoring, haemostatic resuscitation and preparation for haemodynamic instability during induction and surgery.

Weaker answers were often incomplete or poorly organised, with excessive emphasis on generic preoperative assessment or isolated aspects of blood product preparation, rather than the broader requirements of managing a time-critical major haemorrhage.

In Part B, a common deficiency was the superficial description of physiological effects without adequate explanation of the underlying mechanisms or clinical consequences. Candidates frequently mentioned ischaemia of various organs without explaining its effects on renal function, spinal cord perfusion, splanchnic circulation or metabolic homeostasis. Some focused predominantly on cardiovascular effects while neglecting other organ systems. Strategies to mitigate these complications were particularly poorly addressed. Notably, only approximately half of the candidates mentioned minimising aortic cross-clamp duration.

Paper One, Question Seven:

A 48-year-old man presents with a rapidly progressive odontogenic infection. He has drooling, a muffled voice and mild inspiratory stridor. Mouth opening is 2 cm with marked floor-of-mouth swelling. Flexible nasoendoscopy demonstrates supraglottic oedema, although the glottic opening remains visible. Urgent surgical drainage is required.

A. Explain the factors that make airway management particularly hazardous in this patient. Justify your planned approach and route of choice to securing the airway. (50%)

B. Describe how you would perform awake tracheal intubation, including airway local anaesthetic topicalisation and management if intubation is unsuccessful. (50%)

Pass Rate: 72%

This question was reasonably well answered, with 72% of candidates achieving a pass. Better-performing candidates recognised the rapidly progressive nature of the airway obstruction, justified awake flexible bronchoscopic intubation and demonstrated an understanding of the preparation and techniques required to safely secure the airway.

Most candidates appreciated the need for awake intubation and demonstrated awareness of local anaesthetic toxicity and safe dosing limits. However, weaker answers did not adequately explain the specific airway hazards, including the risk of complete airway obstruction following sedation or induction of general anaesthesia, difficulties with conventional laryngoscopy and rescue ventilation, aspiration risk, and the challenges of emergency front-of-neck access.

Some candidates failed to justify their choice of intubation route in the context of restricted mouth opening and floor-of-mouth swelling. Important practical considerations were also omitted, including maintaining an upright or semi-recumbent position, selecting an appropriately smaller endotracheal tube, and ensuring immediate availability of an experienced surgical team for emergency airway access.

In Part B, descriptions of awake bronchoscopic intubation were sometimes incomplete, particularly regarding airway topicalisation, the technical steps of intubation, confirmation of tracheal tube placement and management of unsuccessful attempts. Some candidates did not appreciate the importance of limiting repeated instrumentation to avoid worsening airway oedema.

Paper One, Question Eight:

A 32-year-old woman (G2P1) at 28 weeks gestation is admitted to the intensive care unit with a four-day history of fever, productive cough and progressive breathlessness. She is now drowsy and tachypnoeic. On examination, her temperature is 39.2°C, respiratory rate 34 breaths/min, SpO_2 88% on 10L/min O_2 via a facemask, heart rate 124 bpm, blood pressure 94/52 mmHg. There is bronchial breathing and coarse crepitations over the right lung base, and her chest radiograph shows right lower and middle zone consolidations. A provisional diagnosis of right lung pneumonia is made.

A: Outline the physiological changes in pregnancy that are relevant in the management of this patient (20%)

B: Outline your considerations for the management of this patient in the intensive care unit (80%)

Pass Rate: 50%

This question was moderately well answered, with 50% of candidates achieving a pass. Although the pregnancy and sepsis are not uncommon clinical conditions, many candidates provided incomplete answers that lacked sufficient breadth and consideration of pregnancy-specific physiological and management issues.

In Part A, candidates were expected to recognise physiological changes relevant to respiratory failure and critical illness in pregnancy. Important considerations included reduced functional residual capacity, increased oxygen consumption, pregnancy-related respiratory alkalosis, airway oedema, increased

aspiration risk and aortocaval compression. Some candidates omitted these important physiological adaptations and their implications for management.

In Part B, weaker answers frequently lacked a comprehensive approach to managing severe pneumonia with respiratory failure and possible sepsis in a pregnant patient. Important areas included timely escalation of respiratory support, anticipation of difficult airway management, appropriate oxygenation and ventilation targets, early antimicrobial therapy, cautious fluid resuscitation and haemodynamic support. Some candidates omitted haemodynamic management altogether.

Candidates should also appreciate the importance of multidisciplinary care, foetal monitoring, preservation of uteroplacental perfusion and planning for possible preterm delivery, while prioritising maternal stabilisation.

The predominant weakness was insufficient coverage of the major management domains rather than a single recurring factual misconception. Candidates should adopt a systematic approach encompassing maternal respiratory and haemodynamic support, sepsis management, pregnancy-specific physiological considerations and foetal wellbeing. Residency teaching should reinforce the integration of obstetric physiology with contemporary critical care principles, particularly in the management of severe maternal respiratory failure and sepsis.

Paper Two, Question One:

A 35-year-old, 70kg male construction worker is admitted to the high dependency unit following a fall from a tractor where he sustained fractures to his left 3rd to 6th ribs. He complains of severe chest pain and is being referred to the acute pain service. He has no known past medical history or drug allergies. He speaks minimal English. He is noted to be tachypnoeic (RR 28 bpm) on review.

A: List the differentials for his chest pain and how you would assess him to determine the diagnosis. [50%]

B: Outline your management plan for him. (Do not include assessment in your plan) [50%]

Pass Rate: 53%

This question was moderately well answered, with 53% of candidates achieving a pass. Better-performing candidates demonstrated a systematic approach to assessing chest pain following trauma, identifying relevant differential diagnoses and linking these to appropriate clinical findings and investigations.

A common deficiency was an incomplete assessment of chest pain, with candidates focusing predominantly on pain arising from rib fractures without adequately considering other potentially serious causes, including pneumothorax, haemothorax, pulmonary contusion, flail chest and cardiac injury. Some candidates listed differential diagnoses without describing how these could be distinguished through focused history, physical examination and appropriate investigations.

In Part B, weaker answers frequently lacked a comprehensive management plan. Important components included early multimodal analgesia, appropriate use of systemic and regional analgesic techniques, respiratory support, chest physiotherapy and prevention of pulmonary complications. Some candidates did not adequately address the importance of effective analgesia in facilitating deep breathing, coughing and mobilisation.

Candidates should also recognise the importance of a biopsychosocial approach to acute pain management. In this patient, language barriers may affect pain assessment, communication and patient participation in treatment. Appropriate interpreter services, patient education and consideration of psychosocial needs should form part of a comprehensive management plan.

Candidates are encouraged to adopt a structured approach that integrates differential diagnosis, targeted assessment and multimodal pain management. Residency training should emphasise the management of traumatic chest pain beyond analgesic prescribing, including recognition of associated injuries, prevention of respiratory complications and individualisation of care.

Paper Two, Question Two:

A 75-year-old man presents 10 hours after acute onset of left lower limb pain caused by acute thrombosis of his left femoral artery. He undergoes successful emergency surgical thrombectomy under general anaesthesia, and following extubation is sent to the intensive care unit.

An hour later, his heart rate is 110 bpm, blood pressure 85/50 mmHg and the electrocardiogram shows widened QRS complexes and tall peaked T-waves. A stat arterial blood gas shows - pH 7.18, K^+ 7.1 mmol/L and lactate 8 mmol/L

A: Explain the pathogenesis of these findings. (30%)

B: Describe your immediate management. (40%)

C: Outline 3 complications likely to occur in the next 24 hours. (30%)

Pass Rate: 59%

This question was moderately well answered, with 59% of candidates achieving a pass. Most candidates demonstrated reasonable familiarity with the immediate management of severe hyperkalaemia and haemodynamic instability following surgical revascularisation.

Better-performing candidates recognised the clinical features of reperfusion injury and were able to explain how prolonged limb ischaemia leads to anaerobic metabolism, cellular energy depletion, rhabdomyolysis and accumulation of potassium and metabolic by-products. They subsequently linked reperfusion to the systemic release of these substances, resulting in severe hyperkalaemia, metabolic acidosis and cardiovascular instability.

A common weakness was the inability to adequately explain the underlying pathophysiology despite recognising the clinical abnormalities. Although most candidates were familiar with emergency treatment of hyperkalaemia, including myocardial stabilisation, intracellular potassium redistribution and measures to remove potassium, some answers lacked sufficient detail regarding ongoing haemodynamic support, renal protection and monitoring.

Part C was also incompletely addressed by several candidates. Important complications included acute kidney injury secondary to rhabdomyolysis, recurrent hyperkalaemia and cardiac arrhythmias, compartment syndrome, coagulopathy and systemic inflammatory complications. Candidates frequently failed to include the mechanisms or clinical significance of these complications.

Paper Two, Question Three:

A morbidly obese parturient requires general anaesthesia for an elective caesarean delivery at term gestation.

A: Describe the role and physiological basis of preoxygenation in anaesthesia (30%).

B: Describe strategies to avoid desaturation during induction of anaesthesia for this patient. (70%)

Pass Rate: 72%

This question was reasonably well answered, with 72% of candidates achieving a pass. Most candidates demonstrated an understanding of the importance of preoxygenation and recognised denitrogenation and increased oxygen stores within the functional residual capacity (FRC) as key physiological principles.

However, explanations of the physiological basis of preoxygenation were frequently incomplete. Few candidates confused increasing the oxygen content within the FRC with increasing FRC itself, while others described apnoeic oxygenation rather than the process of denitrogenation. Few candidates failed to describe the role of preoxygenation before emergence and extubation.

In Part B, candidates generally identified several strategies to reduce desaturation during induction, but descriptions often lacked sufficient detail or contained inaccuracies. Common deficiencies included confusion between tidal breathing and vital capacity techniques, inadequate discussion of end-tidal oxygen targets, and failure to distinguish preoxygenation from apnoeic oxygenation when using high-flow nasal oxygen. Other frequently omitted considerations included positive airway pressure techniques, optimal ramped positioning, avoidance of aortocaval compression, aspiration precautions and preparation for difficult airway management.

Some candidates devoted unnecessary attention to generic anaesthetic induction techniques or interventions (regional anaesthesia, weight loss and smoking cessation) not relevant to a parturient at term, rather than addressing the specific question.

Paper Two, Question Four:

A 58-year-old man with a 20-year history of poorly controlled type 2 diabetes mellitus presents with nausea and vomiting. Acute bowel obstruction is diagnosed, and emergency laparotomy is planned. His heart rate is 104 bpm and blood pressure 150/92 mmHg when supine and 108/70 mmHg when sitting.

His blood glucose is 22.4 mmol/L and HbA1c 11.2%.

A: List the findings on history, physical examination and investigation which support the presence of clinically significant diabetic autonomic neuropathy. (50%)

B. Outline the perioperative problems which may arise during emergency laparotomy as a result of the autonomic neuropathy, and how they could be mitigated. (50%)

Pass Rate: 44%

This question was poorly answered, with only 44% of candidates achieving a pass. Overall performance suggested an inadequate understanding of diabetic autonomic neuropathy as a multisystem disorder and its implications for anaesthetic management.

In Part A, many candidates failed to provide a systematic assessment incorporating relevant history, physical examination and investigations. Some answers merely repeated findings already provided in the question without identifying additional clinical features suggestive of autonomic dysfunction. Candidates were frequently unfamiliar with autonomic function testing, including heart rate variability, cardiovascular reflex tests and orthostatic responses. Important manifestations involving the gastrointestinal, genitourinary and sudomotor systems were also commonly omitted.

In Part B, most candidates recognised haemodynamic instability and aspiration risk as potential complications. However, weaker answers were limited to these two problems, often without explaining the underlying autonomic dysfunction or appropriate mitigation strategies. Other relevant complications, including silent myocardial ischaemia, impaired thermoregulation, hypoglycaemia unawareness, altered ventilatory responses and urinary retention, were inadequately addressed.

Some candidates focused excessively on general diabetic management or the surgical pathology rather than the specific consequences of autonomic neuropathy.

Paper Two, Question Five:

A 38-year-old male motorcyclist involved in a high-speed collision sustains blunt injuries to the chest with multiple right rib fractures and a right haemopneumothorax requiring an intercostal drain. He is intubated and sent to the intensive care unit (ICU) and is now suspected to have a right bronchopleural fistula. The surgeon wants to perform an emergency thoracotomy. His cervical spine has not been cleared.

A: Discuss the available methods to achieve lung isolation during the thoracotomy in this patient. (60%)

B: Outline your stepwise management of hypoxaemia during One-Lung Ventilation (OLV), including appropriate lung-protective ventilation strategies and considerations specific to this patient. (40%)

Pass Rate: 100%

This question was very well answered, with all candidates achieving a pass and approximately one-third attaining an excellent grade. Most candidates demonstrated good knowledge of lung isolation techniques and the management of hypoxaemia during one-lung ventilation (OLV).

Better-performing candidates provided well-organised answers that were appropriately contextualised to the patient's existing tracheal intubation, suspected bronchopleural fistula and uncleared cervical spine. They compared the advantages and limitations of double-lumen tubes, bronchial blockers and selective mainstem intubation, while considering the risks of airway exchange and cervical spine manipulation.

Although most candidates could identify the available lung isolation devices, very few adequately described their characteristics or technical application. Some answers were generic and failed to consider the specific clinical circumstances, including occasional suggestions of awake intubation despite the patient already being intubated.

Part B was generally less comprehensively answered. Common omissions included immediate rescue measures for hypoxaemia, lung-protective ventilation strategies for the dependent lung, and management options involving the non-dependent lung. In particular, candidates did not consistently recognise the potential hazards of applying positive airway pressure to a lung with an active bronchopleural fistula. Strategies for managing refractory hypoxaemia were also frequently incomplete.

Paper Two, Question Six:

A 68-year-old man presents for emergency laparotomy for a perforated duodenal ulcer.

He has a 45 pack-year smoking history and severe chronic obstructive pulmonary disease (Global Initiative for Chronic Obstructive Lung Disease stage III, Group E). He had three hospital admissions in the last 12 months for acute exacerbations, and received non-invasive ventilation.

An arterial blood gas taken on oxygen 2 L/min via nasal cannulae shows:

pH	7.33
pCO_2	61 mmHg
pO_2	59 mmHg
$HCO_3\ 2^-$	31 mmol/L

A: Interpret these arterial blood gas results and explain their perioperative significance. (20%)

B: Outline the factors that place him at increased risks of postoperative pulmonary complications. (30%)

C: Outline your perioperative anaesthetic management to reduce postoperative pulmonary complications. (50%)

Pass Rate: 75%

This question was reasonably well answered, with 75% of candidates achieving a pass. Most candidates demonstrated satisfactory knowledge of the perioperative risks associated with severe chronic obstructive pulmonary disease (COPD).

Better-performing candidates correctly interpreted the arterial blood gas findings as hypercapnic respiratory failure with metabolic compensation and recognised the patient's markedly reduced respiratory reserve. They identified relevant risk factors for postoperative pulmonary complications, including severe airflow obstruction, recurrent exacerbations, smoking history, emergency upper abdominal surgery and the potential effects of postoperative pain on respiratory function.

The main deficiencies were in the formulation of a comprehensive perioperative management plan. Some candidates did not adequately describe appropriate intraoperative ventilation strategies, particularly the need for prolonged expiratory time to minimise dynamic hyperinflation and intrinsic positive end-expiratory pressure. Other important considerations included individualised tidal volume and PEEP settings, avoidance of excessive ventilation, and recognition of the patient's baseline hypercapnia.

Postoperative pain management was another frequently omitted component. Candidates should appreciate the importance of opioid-sparing multimodal analgesia, including suitable regional techniques, in facilitating effective coughing, deep breathing and early mobilisation while minimising respiratory depression.

Paper Two, Question Seven:

A 72-year-old man undergoes Endoscopic Retrograde Cholangiopancreatography (ERCP) under general anaesthesia with tracheal intubation in the semi-prone position. Forty minutes into the procedure, his $ETCO_2$ falls abruptly from 38 to 20 mmHg, SpO_2 decreases from 99% to 88%, and blood pressure falls from 125/70 to 70/40 mmHg. Airway pressures are unchanged.

A: What are the key differential diagnoses for this acute deterioration, and what features would help distinguish among them? (50%)

B: Outline your immediate management. (50%)

Pass Rate: 66%

This question was moderately well answered, with 66% of candidates achieving a pass. Better-performing candidates demonstrated appropriate diagnostic reasoning, recognising the significance of an abrupt reduction in end-tidal carbon dioxide accompanied by hypoxaemia and hypotension, and linking these findings to relevant differential diagnoses.

A common deficiency was the failure to interpret the unchanged airway pressures as an important diagnostic clue suggesting a sudden reduction in pulmonary blood flow or cardiac output rather than a primary ventilatory problem. Some candidates did not recognise venous gas embolism as a potentially life-threatening complication specific to ERCP. Other important differential diagnoses, including massive pulmonary thromboembolism, acute myocardial dysfunction, anaphylaxis and haemorrhage, were either omitted or inadequately differentiated.

In Part B, most candidates described general resuscitation measures, including calling for assistance, administering 100% oxygen and providing haemodynamic support. However, many failed to address practical challenges associated with the semi-prone position and remote procedural location, including the need to reposition the patient safely for resuscitation.

Targeted investigations and management were frequently incomplete. Candidates did not consistently identify the role of bedside echocardiography in distinguishing embolic and cardiovascular causes or describe specific interventions appropriate to the suspected diagnosis. Very few mentioned Durant's manoeuvre for suspected venous gas embolism.

Candidates should strengthen their ability to integrate clinical findings into a prioritised differential diagnosis and translate this into targeted emergency management. Residency training should emphasise crisis management in non-operating theatre locations and recognition of procedure-specific complications.

Paper Two, Question Eight:

A 25-year-old woman is scheduled for elective surgical fixation of a closed left fibula fracture and has requested for general anaesthesia. She has no significant medical history and is a non-smoker. She had a laparoscopic appendectomy 5 years ago under general anaesthesia and had severe postoperative nausea and vomiting (PONV).

A: List the risk factors for PONV. How would you objectively assess her risks for PONV? (50%)

B: You consider an opioid-free general anaesthesia for her. Outline the principles, rationale and options available for an “opioid-free” general anaesthesia. (50%)

Pass Rate: 84%

This question was generally well answered, with 84% of candidates achieving a pass. Most candidates demonstrated good awareness of postoperative nausea and vomiting (PONV) as an important perioperative complication and recognised the patient's increased risk.

Part A was better answered than Part B. Better-performing candidates identified relevant patient-, anaesthetic- and surgery-related risk factors and applied an objective risk assessment tool, such as the simplified Apfel score, to stratify the patient's PONV risk. Weaker answers provided incomplete lists of risk factors or failed to describe a validated scoring system.

In Part B, some candidates demonstrated an incomplete understanding of the principles and practical application of opioid-free general anaesthesia. Although several non-opioid analgesic options were identified, weaker answers did not adequately describe how these could be combined into a comprehensive general anaesthetic technique. Some focused predominantly on regional anaesthesia or postoperative PONV treatment rather than addressing the requested opioid-free general anaesthetic approach.

Candidates are encouraged to read the question carefully and ensure their proposed management respects the patient's stated preference for general anaesthesia.

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Master of Medicine (Anaesthesiology) Examination Committee
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