

Examiners' Report

Master of Medicine (Anaesthesiology) Part B SAQ Examination

- 14 & 15 April 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 14 & 15 April 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.

<u>Score</u>	<u>Interpretation of Score</u>
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 April 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: 14 (44%)

Paper One, Question One:

A 30-year-old man is in the post-anaesthesia care unit following an uneventful elective adenoidectomy and bilateral tonsillectomy. He has morbid obesity (BMI 40 kg/m²) and obstructive sleep apnoea on nocturnal continuous positive airway pressure (CPAP) therapy. He starts to cough out fresh blood and the surgeon wants to bring him back to the operating theatre for haemostasis. On examination, he is pale and lethargic with heart rate at 120 bpm, blood pressure at 110/85 mmHg and SpO₂ at 94% on room air.

A: Outline your key anaesthetic considerations for this unplanned return to the operating theatre. (60%)

B: Describe how you would secure his airway. (40%)

Pass Rate: 88%

Overall, candidates performed well on this question, with a pass rate of 88%. Most identified the key issues of a bleeding airway, aspiration risk, difficult airway management, urgency of surgery, and likely hypovolaemia.

Better answers recognised the added challenges from morbid obesity, obstructive sleep apnoea, recent airway surgery, and recent general anaesthesia. These candidates described appropriate preparation for rapid sequence induction, use of experienced assistance, and readiness with suction, difficult airway equipment, and emergency airway plans. Many also selected appropriate induction agents for an obese patient with possible hypovolaemia.

The main area of weakness noted was the failure to review the previous anaesthetic record, particularly the assessment and management of airway as well as the anaesthesia drugs used.

Overall, this question was answered well by the majority of candidates. Better responses were structured, practical, and reflected clinical familiarity with emergency airway management.

Paper One, Question Two:

A 50-year-old man with severe mitral and tricuspid regurgitation undergoes an elective surgery to repair his mitral and tricuspid valves. Invasive monitoring with arterial and central venous catheters is planned.

A: Describe the components of a normal central venous pressure (CVP) waveform and their relationship to the cardiac cycle and electrocardiogram. (25%)

B: Describe the key features of the CVP waveform you would expect to see in this patient, given his valvular pathologies. (10%)

An arterial catheter is inserted in the right radial artery with a good arterial waveform tracing obtained. An 8.5Fr quadruple lumen central venous catheter is placed in the right internal jugular vein under ultrasound guidance. When transduced, the CVP - waveform is observed to display the same waveform as the radial artery tracing.

C: What complication has most likely occurred? (10%)

D: List the potential consequences arising from this complication. (20%)

E: Outline your management of this complication. (35%)

Pass Rate: 31%

Overall, candidate performance on this question was disappointing, with a pass rate of 31%. Performance was highly variable, and only a small number of candidates demonstrated a structured understanding of CVP waveform interpretation, valvular pathology, and safe management of inadvertent arterial cannulation.

Most candidates were able to identify the basic components of the normal CVP waveform. However, many did not clearly relate these waveform components to the cardiac cycle and ECG timing, which resulted in loss of marks. Fewer candidates correctly described the abnormal waveform expected in severe tricuspid regurgitation, including loss of the x descent and fusion of the c and v waves producing a giant v wave.

Candidates generally recognised inadvertent arterial cannulation as the likely complication when the CVP tracing matched the arterial waveform, and many identified major complications such as haemorrhage, stroke, haemothorax, haematoma, and airway compromise. Some candidates also correctly stated that the catheter should be left in situ and that drugs should not be administered through it.

The main areas for improvement were in explanation and management. Many answers lacked physiological reasoning, particularly in linking waveform abnormalities to the underlying valvular lesion. Some management plans were incomplete or unsafe, with some candidates suggesting immediate removal of the large-bore catheter. Better answers included confirmation of arterial placement, leaving the catheter in situ, informing the surgical team, not proceeding with elective surgery, early vascular surgery consultation, consideration of CT angiography, and definitive repair by endovascular or open surgical means. Disclosure to the patient and family was also commonly omitted.

Overall, stronger responses were structured, clinically reasoned, and prioritised patient safety. Weaker responses relied on isolated memorised points without adequate integration or sequencing.

Paper One, Question Three:

A 92-year-old man sustained a fracture of his right hip following a fall and requires hip arthroplasty surgery. He has medical history of Alzheimer's disease with behavioural and psychological symptoms of dementia (BPSD), bilateral hearing impairment and needs assistance for basic activities of daily living. His medications include Donepezil, Mirtazapine and Quetiapine.

A: Briefly describe your pre-operative evaluation, highlighting key perioperative concerns. (50%)

B: Identify the risk factors for post operative delirium in this patient and outline your mitigation measures for each of them. (50%)

Pass Rate: 59%

Candidates performed satisfactorily on this question, with a pass rate of 59%. Most did better in the pre-operative assessment section than in the section on postoperative delirium risk factors and mitigation.

Stronger answers recognised this as a time-sensitive geriatric hip fracture requiring focused pre-operative assessment, limited optimisation, and attention to dementia, behavioural symptoms, communication difficulties, hearing impairment, cardiorespiratory status, anaesthetic technique, and relevant medication issues. Candidates generally performed better in this section.

The main area of weakness was Section B. Many candidates did not give equal attention to identifying delirium risk factors and outlining practical mitigation measures. Weaker answers tended to list risk factors without clearly pairing them with practical mitigation measures such as hydration, adequate pain control, minimising deliriogenic drugs, sensory aids, correction of metabolic abnormalities, constipation prevention, early mobilisation, multidisciplinary input, and family presence.

Failure to recognise the urgency of surgery, the need for an adequate but focused work-up, and the importance of effective pain management also contributed to poorer performance in some candidates.

Overall, this question was answered reasonably well, but many candidates did not give equal attention to both parts. Better responses were practical, balanced, and showed clearer perioperative planning for an elderly patient with dementia undergoing urgent surgery.

Paper One, Question Four:

A 36-year-old woman with gestational diabetes managed with diet control has persistent right foot drop following vaginal delivery.

You provided labour epidural analgesia two days earlier. The epidural was inserted using a midline approach at the L3–4 interspace. The procedure was uneventful with no paraesthesia reported during insertion. There was no history of coagulopathy, and the platelet count was normal on admission for labour.

A: Describe your approach to the assessment and initial management of this patient. (75%)

B: Outline the investigations that may be useful in this scenario and the rationale for each. (25%)

Pass Rate: 31%

Overall, candidate performance on this question was disappointing, with a pass rate of 31%. While most candidates recognised the major red flags and the need to exclude serious neuraxial complications, many answers lacked structure, sufficient differential diagnosis, and a complete management plan.

Stronger answers approached the case systematically, with focused history and neurological examination, consideration of obstetric and epidural factors, localisation of the lesion, and early exclusion of time-critical complications such as epidural haematoma and epidural abscess. Better candidates also recognised that common peroneal nerve palsy is the most common cause of postpartum foot drop, while still considering other relevant differentials such as lumbosacral plexopathy, femoral neuropathy, sciatic neuropathy, nerve root trauma, and local anaesthetic-related injury.

A key weakness was incomplete assessment and overly broad statements without enough clinical detail. Many candidates failed to provide a clear differential diagnosis or omitted lumbosacral plexopathy as an important possibility, particularly in the obstetric context. Management plans were often insufficient, with weaker answers failing to mention multidisciplinary involvement, documentation, physiotherapy, orthotic support, fall precautions, or pain management where needed.

Investigation plans also required improvement. Many candidates did not mention MRI of the lumbar spine to exclude epidural haematoma or abscess, and none identified MRI of the lumbosacral plexus to assess possible plexopathy. Blood tests for infection, such as full blood count and inflammatory markers, were also commonly omitted. Few candidates made clear that urgent investigation of suspected neuraxial complications is time-critical because early decompression may improve neurological outcome.

Overall, better answers were structured, practical, and demonstrated sound reasoning across assessment, differential diagnosis, investigations, and multidisciplinary management. Weaker responses were incomplete, repetitive, and too nonspecific to score well.

Paper One, Question Five:

A 25-year-old woman with myasthenia gravis is scheduled for elective thymectomy to help manage her symptoms.

The surgeon plans to perform the procedure endoscopically and has requested right lung isolation with a double-lumen endotracheal tube. The patient will be positioned supine.

A: At the preoperative assessment, list the key issues to be obtained from the history and medical records, and explain how these findings may influence the conduct of anaesthesia. (65%)

The surgeon subsequently considers performing the procedure with the patient in the left lateral position instead of the supine position.

B: Compare the physiological implications of one-lung ventilation in the supine versus left lateral position. (35%)

Pass Rate: 75%

Overall, candidates performed reasonably well on this question, with a pass rate of 75%. Most demonstrated an adequate understanding of the preoperative assessment of myasthenia gravis and its implications for anaesthetic management.

Stronger answers identified disease severity, bulbar and respiratory involvement, previous myasthenic crisis, current treatment, and predictors of postoperative ventilation, and explained how these findings would influence anaesthetic conduct. Many candidates also appropriately discussed altered responses to neuromuscular blockers, the need for careful reversal and monitoring, and postoperative respiratory planning.

For Part B, most candidates were able to compare one-lung ventilation in the supine and left lateral positions. Better answers recognised that the left lateral position provides better ventilation–perfusion matching and lower risk of hypoxaemia than the supine position.

Majority of candidates discussed compressive symptoms from thymoma. Some credit was given for this broader consideration. However, in the scenario provided, the indication for elective thymectomy was symptom control for myasthenia gravis, and there was no suggestion of an enlarged thymus or thymoma causing anterior mediastinal compression. Management of compressive effects was not the main focus of the question, and excessive discussion of this area may have led to inefficient use of time.

Overall, this question was answered satisfactorily, and better responses were broader, more integrated, and physiologically sound.

Paper One, Question Six:

A 4-year-old boy presents with acute deterioration in his mental alertness. He has an indwelling ventriculoperitoneal shunt which the neurosurgeon suspects may be blocked. He has ordered an urgent magnetic resonance imaging (MRI) scan of the brain under general anaesthesia.

A: Describe the potential challenges and hazards of providing anaesthesia support for this patient in the MRI suite. (50%)

The patient is intubated for the MRI scan.

B: During the scan, the pulse oximetry reading suddenly falls from 99% to 78% and the capnograph tracing goes flat. Describe your step-by-step management. (50%)

Pass Rate: 72%

Overall, candidates performed satisfactorily on this question, with a pass rate of 72%. Most demonstrated a reasonable understanding of the challenges of providing anaesthesia in the MRI suite and the need for a structured response to sudden deterioration during scanning.

Stronger answers identified the key MRI-specific hazards, including the remote location, magnetic field risks, limited access to the patient, the need for MRI-compatible equipment, and the requirement to move the patient out of the scanner room if resuscitation or reintubation is needed. Better candidates also recognised the additional considerations of paediatric anaesthesia and possible raised intracranial pressure from VP shunt obstruction (leading to the change in mental status and indication for MRI scan).

For the crisis scenario, better responses described a systematic approach: stopping the scan, removing the patient from the scanner, assessing airway, breathing and circulation, confirming that the desaturation and flat capnograph were genuine, and then looking for likely causes such as circuit disconnection, accidental extubation, endobronchial intubation, ventilator failure, monitor malfunction, or cardiopulmonary compromise.

Overall, the performance was satisfactory. Better responses were practical, organised, and safety-focused. Weaker answers were often too vague or insufficiently structured, and some did not emphasise the importance of immediate patient removal from the scanner room or the practical limitations of managing emergencies within the MRI environment.

Paper One, Question Seven:

A healthy 15-year-old girl (weight 55kg, height 1.62m) with idiopathic scoliosis is scheduled for posterior spinal fusion and instrumentation surgery. She is evaluated at the pre-anaesthesia clinic one month before the planned surgery.

A: Describe your perioperative management to minimise the need for homologous blood transfusion during the surgery. (40%)

The patient loses 1.5L of blood during the surgery and one unit of homologous blood is started during skin closure. Upon turning the patient supine, you notice a few large patches of erythematous rash over her chest. Her vital signs are blood pressure 70/40 mmHg, heart rate 140 bpm and SpO₂ 87%.

B: Outline, providing the rationale for, your next steps in management. (60%)

Pass Rate: 88%

Overall, candidates performed well on this question, with a pass rate of 88%. Most demonstrated a reasonable approach to perioperative blood conservation and to the intraoperative crisis following transfusion.

Stronger answers for Part A described practical measures to reduce homologous transfusion, including optimisation of haemoglobin, autologous techniques, cell salvage, haemodilution, tranexamic acid, maintenance of normothermia and perfusion, and measures to minimise surgical blood loss.

For Part B, many candidates recognised the need to stop the transfusion, give 100% oxygen, assess airway, breathing and circulation, treat hypotension, and consider major differentials such as hypovolaemia, anaphylaxis, and transfusion reaction. Better responses were systematic and prioritised resuscitation while assessing the likely cause.

The main weakness was failure to explain the rationale behind management steps, despite this being specifically asked.

Overall, better responses were structured, clinically reasoned, and linked treatment clearly to the underlying physiology.

Paper One, Question Eight:

A 62-year-old man with poorly controlled type 2 diabetes mellitus presents with abdominal pain and vomiting. He is diagnosed with small bowel obstruction complicated by perforation and is scheduled for emergency laparotomy.

His medications include metformin and empagliflozin. He has had minimal oral intake for 3 days.

On assessment, he appears unwell:

- HR 118 bpm
- BP 92/54 mmHg
- Temperature 38.7°C
- RR 28/min

He is drowsy but arousable and clinically dehydrated.

An arterial blood gas (ABG) on room air shows:

Parameter	Value	Reference Range
pH	7.21	7.35 – 7.45
PaCO ₂	31 mmHg	35 – 45 mmHg
PaO ₂	85 mmHg	80 – 100 mmHg (room air)
HCO ₃ ⁻	12 mmol/L	22 – 26 mmol/L
Lactate	4.2 mmol/L	0.5 – 2.0 mmol/L
Na ⁺	138 mmol/L	135 – 145 mmol/L
Cl ⁻	100 mmol/L	98 – 106 mmol/L

A: Outline your key anaesthetic concerns for this patient (40%)

B: List the possible causes of acidosis in this patient. Outline how you would differentiate the causes. (35%)

C: Outline your perioperative metabolic and glycaemic management. (25%)

Pass Rate: 66%

Overall, candidates performed satisfactorily on this question, with a pass rate of 66%. Most identified the major perioperative concerns, including sepsis, hypovolaemia, metabolic acidosis, aspiration risk, and the urgency of surgery.

Stronger answers recognised the likely high anion gap metabolic acidosis and considered important causes such as lactic acidosis, euglycaemic DKA, starvation ketosis, metformin-associated lactic acidosis, and uraemia. Better responses also outlined how these could be differentiated using ketones, glucose, lactate, renal function, and clinical context.

For perioperative management, better candidates identified the need for fluid resuscitation, cessation of empagliflozin and metformin, treatment as possible euglycaemic DKA, insulin with glucose infusion, potassium monitoring, serial blood tests, antibiotics, urgent source control, and postoperative ICU care.

The main weakness was incomplete explanation of the differential diagnosis of acidosis and omission of key elements of metabolic management.

Overall, better responses were structured, practical, and clinically integrated.

Paper Two, Question One:

A previously healthy 23-year-old man involved in a high-speed motor vehicle collision is evacuated to a nearby general hospital. On arrival, he is awake and responsive with the following vital signs - blood pressure 78/42 mmHg, heart rate 52 bpm, respiratory rate 10 breaths/minute, SpO₂ 94% on O₂ 10 L/min via a facemask, and tympanic temperature 35.4 °C. Imaging done reveals an unstable fracture–dislocation at T4 with spinal cord compression and bilateral lung contusions. An urgent surgical stabilisation of the spine through a posterior approach is planned.

A: Explain the difference between neurogenic shock and spinal shock. (15%)

B: List your differential diagnosis for this hypotension. How would you differentiate these causes of hypotension from neurogenic shock? (50%)

C: Describe your management of the hypotension in this patient. (35%)

Pass Rate: 66%

Overall, candidates performed satisfactorily on this question, with a pass rate of 66%. This question discriminated well between stronger and weaker candidates, particularly through their understanding of the distinction between neurogenic shock and spinal shock.

Stronger answers clearly differentiated neurogenic shock as a haemodynamic syndrome from spinal shock as a neurological phenomenon, and were then able to apply this distinction to the clinical scenario. Candidates who could not answer Part A well were generally borderline or failed overall.

For Part B, better responses considered important alternative causes of hypotension in major trauma, including haemorrhagic, obstructive, and cardiogenic shock, and explained how these could be distinguished from neurogenic shock using clinical findings, imaging, and point-of-care ultrasound. Stronger answers were systematic and trauma-focused.

For Part C, better candidates outlined appropriate management of hypotension due to acute spinal cord injury, including monitoring, cautious fluid resuscitation, vasopressor support, management of bradycardia, temperature control, and ongoing reassessment. Good answers also reflected an ATLS-based approach to the overall trauma patient.

Overall, this question was answered reasonably well. Better responses were structured, clinically integrated, and demonstrated clear understanding of both trauma differentials and the haemodynamic consequences of acute spinal cord injury.

Paper Two, Question Two:

A 28-year-old man has been referred to the acute pain service for pain from a proximal neck of femur fracture sustained during a motor vehicle accident. He is scheduled for an intramedullary nailing operation in the emergency operating theatre tomorrow.

He has a history of intravenous heroin use and non-specific chronic lower back pain for which he had sought pethidine and tramadol prescriptions from various hospitals.

When reviewed, he is in visible distress, scoring his pain as 10/10 over his fracture site and demanding 'stronger intravenous medications'. Complications of the fracture have been excluded.

A: List the factors in this patient's history that indicate that management of his pain will be challenging. (25%)

B: Outline your perioperative analgesic management plan (pain assessment is not required). (75%)

Your answer should specifically address:

- a. Selection of appropriate systemic analgesics and their dosing strategies.
- b. The role of regional anaesthesia in this context.
- c. Strategies to minimize drug-seeking behaviour and ensure staff safety.

Pass Rate: 3%

Overall, candidate performance on this question was poor, with a pass rate of 3%. While many candidates were able to discuss systemic analgesics and some aspects of regional anaesthesia, few provided a sufficiently complete and structured answer across all parts of the question.

Stronger answers recognised that pain management would be challenging because of opioid tolerance, dependence, possible withdrawal, drug-seeking behaviour, chronic pain, psychosocial factors, and the severity of the acute injury. Better candidates outlined a balanced multimodal analgesic plan, including continuation of baseline opioid requirements, use of appropriate strong opioids for acute fracture pain, adjuvant analgesics, and consideration of ketamine in opioid-tolerant patients.

For regional anaesthesia, better responses recognised its important opioid-sparing role, while also acknowledging its limitations and practical considerations. Appropriate block options and the need to exclude contraindications were expected.

The weakest area was strategies to minimise drug-seeking behaviour and ensure staff safety. Many candidates did not address this adequately or appeared to miss this part of the question altogether. Better responses described the need for clear and consistent team messaging, firm boundaries, supervised and protocol-based analgesia, careful documentation, multidisciplinary involvement, and escalation for staff safety where required.

Overall, better responses were practical, balanced, and demonstrated awareness that acute severe pain in a patient with substance use disorder still requires appropriate analgesia, alongside clear behavioural limits and safe team-based management. Candidates are reminded to scroll to the end of the question to ensure that no parts of the question were missed out when writing their responses.

Paper Two, Question Three:

A 28-year-old woman (G1P0) at 33 weeks' gestation, scheduled for an elective lower segment caesarean section (LSCS) in one week, is seen at the pre-anaesthesia clinic. She has medical history of a tetralogy of Fallot which was surgically repaired in childhood with placement of a right ventricular outflow tract (RVOT) patch. An echocardiogram examination one year ago revealed moderate pulmonary regurgitation and residual RVOT obstruction.

A: Outline your anaesthetic concerns for this planned LSCS. (50%)

B: Justify your choice of anaesthesia for the LSCS. (50%)

Pass Rate: 50%

Overall, candidate performance on this question was fair, with a pass rate of 50%. This question differentiated candidates who could apply haemodynamic principles to the stated cardiac lesions in pregnancy from those who gave more general obstetric anaesthesia answers.

Stronger answers identified the key concerns related to repaired tetralogy of Fallot, particularly moderate pulmonary regurgitation and residual RVOT obstruction stated in the question, as well as the related risk of right ventricular dysfunction, arrhythmias, possible pulmonary hypertension, aggravated by the haemodynamic changes of pregnancy and the postpartum period.

Better responses also outlined appropriate haemodynamic goals, including maintenance of preload and sinus rhythm, avoidance of abrupt falls in SVR, avoidance of increases in PVR, and minimisation of myocardial depression.

For Part B, better candidates justified a clear anaesthetic choice rather than describing both general and regional anaesthesia without committing to any particular option. Stronger answers explained the advantages and disadvantages of each technique in this specific patient and linked their preferred approach to the underlying physiology and anticipated haemodynamic effects.

The main weakness was insufficient haemodynamic detail and a failure to tailor the anaesthetic plan to the patient's stated cardiac lesion. Weaker answers often remained descriptive and did not clearly commit to an anaesthetic strategy.

Overall, better responses were focused, physiologically reasoned, and demonstrated a clearer understanding of the interaction between the heart lesion, pregnancy, and caesarean delivery.

Paper Two, Question Four:

A 65-year-old man undergoes radiofrequency ablation (RFA) for atrial fibrillation in the cardiac catheterisation laboratory under total intravenous anaesthesia (TIVA).

At the end of the procedure, the anaesthetic infusions are discontinued, neuromuscular blockade is reversed, and he is extubated after resumption of spontaneous ventilation.

He is transferred to the post-anaesthesia care unit (PACU).

Twenty minutes later, he remains unresponsive to voice or painful stimuli. His SpO₂ is 98% on 6 L/min oxygen via facemask, respiratory rate is 8 breaths/min, and blood pressure is 92/45 mmHg with a heart rate of 55 beats/min.

A: List four important differential diagnoses for failure to awaken in this patient, with explanation. (40%)

B: Outline your immediate assessment and initial management in PACU. (60%)

Pass Rate: 59%

Overall, candidate performance on this question was satisfactory, with a pass rate of 59%. Most candidates were able to identify delayed emergence as an important postoperative problem, but performance varied depending on how systematically they approached the differential diagnosis and immediate management.

Stronger answers prioritised the most important causes of failure to awaken, particularly residual drug effect, residual neuromuscular blockade, peri-procedural cerebral or cardiac complications, and hypoventilation with hypercapnia. Better candidates did not simply list causes but explained why each was relevant in this clinical context. Omission of the explanation in Part A resulted in substantial loss of marks in some candidates.

For Part B, better responses used a structured PACU approach, including calling for help, reassessing airway, breathing and circulation, confirming adequacy of ventilation, considering targeted reversal of residual drugs, treating hypotension and bradycardia, and screening for serious post-ablation complications such as tamponade, bleeding, myocardial ischaemia, and stroke. Stronger answers also recognised that a normal oxygen saturation on supplemental oxygen does not exclude hypoventilation or hypercapnia.

Overall, this question was answered reasonably well. Better responses were prioritised, clinically reasoned, and demonstrated safe early management of both common and high-risk causes of delayed awakening in PACU.

Paper Two, Question Five:

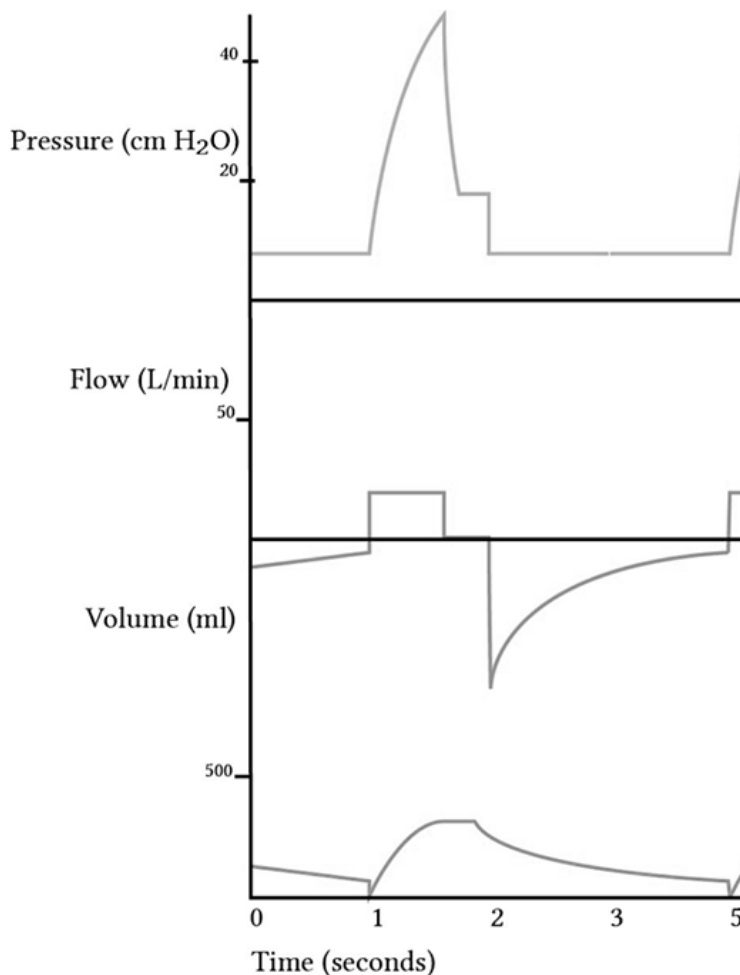
A 25-year-old woman with history of poorly controlled asthma undergoes an uneventful elective laparoscopic cholecystectomy. On the first post-operative day, she develops acute wheezing with respiratory distress and type 2 respiratory failure, requiring emergent intubation and mechanical ventilation. The figure below shows the ventilatory waveforms seen shortly after initiation of volume-controlled ventilation.

A: Describe your observations from the ventilatory waveforms. (20%)

B: Outline your initial ventilatory management, providing rationale for your choices. (40%)

Ten minutes following the initiation of mechanical ventilation, her blood pressure falls from 140/90 to 80/40 mmHg.

C: List five most likely causes and the steps you would take to address the hypotension. (40%)



Pass Rate: 56%

Overall, candidate performance on this question was satisfactory, with a pass rate of 56%. This question tested understanding of ventilatory management in severe obstructive airway disease and the haemodynamic consequences that may follow initiation of positive pressure ventilation.

Stronger answers correctly interpreted the ventilatory waveforms as showing high airway resistance with prolonged expiration, incomplete exhalation, and dynamic hyperinflation with auto-PEEP. Better candidates linked the large peak–plateau pressure difference to obstructive pathology. But few candidates stated that the prolonged expiratory time to return the baseline was associated with airway obstruction. Candidates who just described the waveform without interpretation generally performed poorly overall.

For ventilatory management, better responses focused on maintaining oxygenation while minimising gas trapping, barotrauma, and haemodynamic compromise. These candidates described the use of low tidal volumes, low respiratory rates, prolonged expiratory times, low or zero extrinsic PEEP, and higher inspiratory flow rates, with acceptance of permissive hypercapnia where necessary. A common weakness was insufficient detail on ventilator adjustment, with some candidates giving general asthma management rather than specific ventilatory strategies. Some also incorrectly assumed that changing to pressure control ventilation alone would necessarily improve the situation.

For the hypotension, many candidates were able to give basic emergency management. Better answers identified likely causes such as hypovolaemia, dynamic hyperinflation, reduced sympathetic tone after intubation and sedation, tension pneumothorax, and arrhythmias or electrolyte disturbance. Stronger responses linked these causes to practical corrective steps, particularly recognition and treatment of dynamic hyperinflation as a major reversible contributor.

Overall, this question discriminated well between candidates with a sound grasp of obstructive ventilatory physiology and those relying on more superficial critical care knowledge. Better responses were physiologically reasoned, specific to the ventilator waveforms, and linked management closely to the underlying problem.

Paper Two, Question Six:

A 45-year-old woman, who presented with a severe headache due to subarachnoid haemorrhage, is undergoing endovascular coiling of an anterior communicating artery aneurysm in the interventional neuroradiology suite under general anaesthesia. Fifteen minutes after systemic heparinisation, the interventional neuroradiologist states, “The aneurysm has ruptured.”

A: Outline the cardiovascular and respiratory changes you would expect with the rupture. (35%)

B: Describe your immediate management, prioritising actions and physiological targets. (65%)

Pass Rate: 47%

Overall, candidate performance on this question was fair, with a pass rate of 47%. This question tested the ability to respond to a rare but critical neurointerventional emergency, and it distinguished candidates who could apply physiological principles under pressure from those who relied on less focused crisis responses.

Stronger answers identified the expected cardiovascular and respiratory consequences of aneurysm rupture, including acute sympathetic surge, possible Cushing response, haemodynamic instability, arrhythmias or myocardial dysfunction, and a fall in end-tidal carbon dioxide due to reduced cardiac output. Better candidates also recognised the possibility of neurogenic pulmonary oedema and worsening oxygenation.

For management, better responses were organised, prioritised, and closely coordinated with the interventional neuroradiologist. These candidates described immediate declaration of an emergency, optimisation of oxygenation and ventilation, dynamic blood pressure control to reduce aneurysm transmural pressure while maintaining cerebral perfusion, prompt reversal of heparin, appropriate resuscitation, and planning for urgent imaging or further intervention. Clear organisation was a distinguishing feature of stronger answers.

A common weakness was that many candidates approached the scenario as if it were a major open surgical haemorrhage, with excessive emphasis on severe blood loss and focused mainly on transfer to emergency OT. This did not reflect the specific context of rupture during endovascular coiling.

Overall, this was a challenging but important question. Better responses were structured, physiologically sound, and demonstrated effective crisis management in a high-stakes neuroanaesthetic setting.

Paper Two, Question Seven:

A 48-year-old man (BMI 45 kg/m²) presents for an emergency laparoscopic appendicectomy for perforated appendicitis.

A: Explain how obesity alters the pharmacokinetics of anaesthetic drugs. (30%)

B: List the weight scalars used to guide drug dosing in obese patients. Outline the differences between these scalars. (30%)

C: For each of the following drugs, state the appropriate weight scalar used for dosing, and justify your choice (40%):

- Propofol (induction)
- Succinylcholine
- Rocuronium
- Sugammadex
- Fentanyl
- Morphine

Pass Rate: 47%

Overall, candidate performance on this question was fair, with a pass rate of 47%. This question tested understanding of the pharmacokinetic changes associated with obesity and the practical application of weight scalars to anaesthetic drug dosing.

Stronger answers demonstrated a clear understanding that obesity alters drug distribution, metabolism, and elimination, particularly through increased fat mass, increased lean body mass, altered volume of distribution, and changes in clearance. Better candidates were able to distinguish between lipophilic and hydrophilic drugs and relate these principles to clinical dosing decisions.

For Part B, better responses correctly identified the commonly used weight scalars and explained the differences between total body weight, ideal body weight, lean body weight, and adjusted body weight. Stronger candidates showed a practical understanding of when each scalar is more appropriate and why.

For Part C, better answers applied these principles accurately to individual drugs, particularly propofol, succinylcholine, rocuronium, sugammadex, fentanyl, and morphine. Weaker responses often relied on memorised lists without clear justification, or selected inappropriate scalars, especially where distinction between hydrophilic and lipophilic drugs was important.

Overall, the results shows that the candidates to have a fair understanding of the pharmacological impact of obesity.

Paper Two, Question Eight:

An 85-year-old woman presents with a fractured neck of her left femur following a fall. She is communicative but has a background of mild to moderate cognitive impairment. She is in significant pain and appears drowsy following oral analgesia.

You are consulted regarding the use of a fascia iliaca block for analgesia.

A: Describe how you would assess whether this patient has the capacity to provide informed consent for the procedure. (40%)

B: What specific information must she understand in order to give valid informed consent? (40%)

C: Outline your management if you determine that she does not understand the information you just provided. (20%)

Pass Rate: 66%

Overall, candidate performance on this question was satisfactory, with a pass rate of 66%. Most candidates showed some understanding of how to assess capacity and the information required for valid consent, although performance was variable across the three parts.

Stronger answers clearly distinguished between assessment of capacity and the components of valid informed consent. Better candidates described the need to assess whether the patient could understand, retain, weigh, and communicate a decision, while also recognising the importance of addressing reversible barriers such as pain, drowsiness, sensory impairment, and language difficulties. Some also appropriately referred to baseline cognition from previous records or collateral history.

For Part B, better responses outlined the information the patient must understand, including the nature and purpose of the fascia iliaca block, expected benefits and limitations, material risks, alternatives, and the consequences of refusal. Stronger answers explained these in practical terms relevant to the patient's situation.

The major weakness was in Part C. Many candidates moved too quickly to next-of-kin or surrogate decision-making (e.g., two consultant consent) without first attempting to optimise the patient's ability to understand and reassessing capacity. Documentation was also commonly omitted. Better responses recognised the need to correct reversible causes, repeat the explanation appropriately, identify any legally appointed decision-maker if needed, and document the assessment and decision-making process clearly.

Overall, this question highlighted ongoing confusion in some candidates between capacity assessment and consent-taking. Better responses were structured, practical, and demonstrated a clear ethical and clinical approach to consent in the cognitively impaired older patient.

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Master of Medicine (Anaesthesiology) Examination Committee
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