

FExNet 2026

Collated SAQs: Emergency Anaesthesia

QUESTION BOOKLET

22 short-answer questions covering the ACEM Fellowship emergency anaesthesia curriculum — rapid sequence intubation, difficult airway management, failed intubation algorithm (DAS Plans A-D), cricothyroidotomy, peri-intubation cardiovascular collapse, post-intubation hypotension, ventilation in specific conditions, procedural sedation, ED extubation, regional anaesthesia, LAST, malignant hyperthermia, anaphylaxis to anaesthetic agents, and crisis resource management / human factors. Stems are written in detailed prose with abbreviations spelt out in full.

22 questions • 220 marks

ACEM-aligned format. Sub-questions labelled a) b) c). Mark allocations indicative; references cited in the Answer Booklet. Question and answer indexes are clickable.

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Question 1 | Rapid Sequence Induction — Principles (12 marks)

A 45-year-old male is brought to your emergency department after a high-speed motor vehicle collision. He has a Glasgow Coma Score of 8 (E1 V2 M5), is unable to protect his airway, with vomiting and snoring respirations. His vital signs: heart rate 110 beats per minute, blood pressure 110/70 millimetres of mercury, respiratory rate 22, peripheral oxygen saturation 92 percent on room air, temperature 36.5 degrees Celsius. You decide to perform rapid sequence induction and intubation.

a) List 4 indications for emergency department intubation in adults. (4 marks)

b) Describe the '7 Ps' of RSI preparation. (5 marks)

c) State the typical induction and neuromuscular blocker doses for this patient (70 kg adult). (3 marks)

Question 2 | Suxamethonium Contraindications (10 marks)

Your registrar is preparing to perform rapid sequence intubation on a 60-year-old man with respiratory failure secondary to a chronic obstructive pulmonary disease exacerbation. The registrar plans to use suxamethonium for neuromuscular blockade. You are reviewing the drug choice.

a) List 5 contraindications to suxamethonium. (5 marks)

b) List 3 advantages of rocuronium over suxamethonium. (3 marks)

c) List 2 advantages of suxamethonium. (2 marks)

Question 3 | Failed Intubation — DAS Algorithm (12 marks)

A 55-year-old man with severe community-acquired pneumonia is being intubated by your registrar in the resuscitation bay. After induction with ketamine and rocuronium, the first attempt at intubation has failed (poor view due to secretions and blood). The patient's peripheral oxygen saturation has dropped from 100 percent to 85 percent. You are now responsible for managing this difficult airway.

a) Describe the 4 plans of the Difficult Airway Society algorithm. (4 marks)

b) Describe the scalpel-bougie cricothyroidotomy technique (4 steps). (4 marks)

c) List 4 difficult airway anatomical predictors. (4 marks)

Question 4 | Post-Intubation Hypotension (10 marks)

A 45-year-old female has just been intubated in your resuscitation bay for severe asthma. The intubation was straightforward with first-pass success. Two minutes after intubation, her blood pressure drops from 130/85 to 70/45 millimetres of mercury, with heart rate increasing from 110 to 130 beats per minute. Peripheral oxygen saturation remains 100 percent on 100 percent inspired oxygen.

- a)** List 5 causes of immediate post-intubation hypotension (DOPES mnemonic for ventilated patients). (5 marks)

- b)** State 3 immediate management steps to diagnose and treat (in priority order). (3 marks)

- c)** List 2 specific considerations for ventilating an asthmatic patient. (2 marks)

Question 5 | Pre-Intubation Optimisation in Severe Acidosis (11 marks)

A 35-year-old female presents to your emergency department with severe diabetic ketoacidosis (pH 7.05, bicarbonate 6, glucose 32, sodium 132, potassium 5.8, lactate 2.5). She has been compensating with deep Kussmaul respirations (respiratory rate 38 breaths per minute) but is now tiring with Glasgow Coma Score deteriorating to 11. Her vital signs: heart rate 130 beats per minute, blood pressure 95/55 millimetres of mercury, peripheral oxygen saturation 99 percent on room air. You decide intubation is needed.

a) Explain why intubation is high-risk in this patient (4 considerations). (4 marks)

b) List 4 pre-intubation optimisation measures. (4 marks)

c) State the initial ventilator settings for this patient. (3 marks)

Question 6 | Emergency Department Extubation (12 marks)

A 35-year-old male was intubated overnight in your emergency department by the night registrar after ingestion of an unknown quantity of alcohol and methadone (indication: airway protection for low Glasgow Coma Score). He has spent the night in the ED as no intensive care unit beds were available. Bedside glucose was normal and CT brain shortly after intubation was normal. You are considering ED extubation. Current vital signs: heart rate 80, blood pressure 120/80, peripheral oxygen saturation 100 percent on FiO₂ 0.4, temperature 37.2 degrees Celsius.

a) List 6 clinical criteria that must be met to ensure safe extubation in the ED. (6 marks)

b) List 4 non-clinical criteria for safe ED extubation. (4 marks)

c) List 2 complications anticipated after extubation in this patient. (2 marks)

Question 7 | Local Anaesthetic Systemic Toxicity (11 marks)

A 65-year-old woman undergoes ultrasound-guided femoral nerve block in your emergency department for analgesia following a fractured neck of femur. She receives 30 millilitres of 0.5 percent ropivacaine. Approximately 5 minutes after injection, she becomes agitated and complains of circumoral tingling and tinnitus. She then has a generalised tonic-clonic seizure followed by cardiovascular collapse with broad-complex rhythm on ECG. Her weight is 60 kilograms.

- a)** Calculate the maximum dose of 0.5 percent ropivacaine for this patient AND state whether the dose was excessive. (3 marks)

- b)** List the progressive features of LAST in order. (4 marks)

- c)** State 4 management priorities for LAST (per ANZCA / AAGBI guideline). (4 marks)

Question 8 | Anaphylaxis to Anaesthetic Agents (10 marks)

A 35-year-old man undergoes rapid sequence induction for severe pneumonia. Approximately 60 seconds after administration of rocuronium 100 mg IV, he develops widespread erythema, urticaria, and severe hypotension (BP 65/40), tachycardia (HR 140), and difficulty bag-mask ventilating. Peak inspiratory pressure rises to 45 cm H₂O with reduced chest compliance.

a) List 4 features of intra-anaesthetic anaphylaxis. (4 marks)

b) List the 3 most common anaesthetic drug causes of anaphylaxis (in order). (3 marks)

c) State 3 immediate management priorities. (3 marks)

Question 9 | Malignant Hyperthermia (10 marks)

A 25-year-old male underwent rapid sequence induction with thiopentone and suxamethonium for an unrelated emergency. Approximately 20 minutes after induction, while ventilated with sevoflurane (1 percent end-tidal), he develops tachycardia, generalised muscle rigidity (including jaw rigidity that prevented full mouth opening), and a rapidly rising end-tidal carbon dioxide (now 75 mmHg from 38 mmHg baseline) despite adequate ventilator settings. His temperature has risen from 36.5 to 39.0 degrees Celsius. Skin appears mottled.

a) List 3 early features supporting malignant hyperthermia. (3 marks)

b) State 4 immediate management priorities. (4 marks)

c) List 3 differential diagnoses to consider. (3 marks)

Question 10 | Paediatric Procedural Sedation (12 marks)

A 12-year-old boy is brought to your emergency department after falling off a swing. He has a dorsally angulated displaced fracture of the right distal radius. The fracture requires closed manipulation under sedation and casting in the ED. He weighs 40 kilograms and is otherwise well.

- a)** List 4 pre-procedural assessment requirements (ASA / SAGES principles). (4 marks)

- b)** List 3 procedural sedation options with one pro and one con for each (with doses). (6 marks)

- c)** List 2 monitoring requirements during procedural sedation. (2 marks)

Question 11 | Crisis Resource Management (9 marks)

You are the junior consultant on a temporary contract in a metropolitan emergency department, helping in the resuscitation of a 9-year-old male with Duchenne's muscular dystrophy who has pneumonia and is in respiratory failure. Your senior FACEM colleague (an ACEM examiner of 20 years' experience) is the team leader. He has decided to intubate the patient and asks the nurse to draw up ketamine and suxamethonium.

a) Explain the clinical concern AND the rationale. (3 marks)

b) Describe 4 components of effective communication strategy in this situation (addressing concerns to a senior colleague). (4 marks)

c) Define human factors AND list 2 categories. (2 marks)

Question 12 | Awake Fibre-Optic Intubation (9 marks)

A 60-year-old male with Ludwig's angina (deep neck space infection from a recent dental abscess) presents to your emergency department with severe trismus (mouth opening less than 1 centimetre), tongue swelling, drooling, and stridor. He is sitting upright and is reluctant to lie supine. His vital signs are: heart rate 120, blood pressure 130/85, peripheral oxygen saturation 95 percent on room air, temperature 38.5 degrees Celsius. You are aware that standard rapid sequence intubation is high-risk; the senior anaesthetic consultant is preparing for awake fibre-optic intubation.

a) List 4 indications for awake fibre-optic intubation. (4 marks)

b) Describe 3 essential preparation steps. (3 marks)

c) List 2 complications. (2 marks)

Question 13 | Fascia Iliaca Compartment Block for #NOF (9 marks)

An 85-year-old woman presents to your emergency department after a fall onto her left hip. She has a left subcapital fractured neck of femur. Pain score is 9/10 despite paracetamol 1 gram intravenous and morphine 5 milligrams intravenous. She is mildly delirious (Glasgow Coma Score 14, AMTS 7/10). She weighs 65 kilograms. You plan an ultrasound-guided fascia iliaca compartment block for analgesia.

a) Name the 3 nerves blocked by the fascia iliaca compartment block. (3 marks)

b) Describe the technique for fascia iliaca block (4 steps). (4 marks)

c) List 2 contraindications. (2 marks)

Question 14 | Bier's Block — IV Regional Anaesthesia (9 marks)

A 32-year-old female has a displaced, minimally angulated fracture of the right distal radius requiring manipulation in the emergency department. She weighs 60 kilograms and has no significant comorbidities. You plan a Bier's block (intravenous regional anaesthesia).

a) Describe the technique for Bier's block (4 key steps). (4 marks)

b) List 3 important safety considerations. (3 marks)

c) List 2 complications of Bier's block. (2 marks)

Question 15 | Regional Anaesthesia for Rib Fractures (9 marks)

A 75-year-old man presents to your emergency department after a fall, sustaining fractures of the right 4th to 7th ribs. He has chronic obstructive pulmonary disease and is on warfarin (INR 2.5). His pain is severe and he is splinting with reduced respiratory excursion. SpO₂ 91 percent on room air. He weighs 70 kilograms.

a) List 3 regional anaesthetic options for rib fractures. (3 marks)

b) State 4 considerations for regional anaesthesia in this patient (anticoagulated, elderly, COPD). (4 marks)

c) List 2 contraindications to thoracic epidural. (2 marks)

Question 16 | Pre-Hospital Rapid Sequence Intubation (10 marks)

You are a flight medical officer with a state helicopter retrieval service responding to a motor vehicle collision in a remote area. On arrival, you find a 42-year-old male with a severe traumatic brain injury (Glasgow Coma Score 7, isolated head injury, no obvious external injuries). His vital signs: heart rate 95 beats per minute, blood pressure 135/80 millimetres of mercury, respiratory rate 14 breaths per minute, peripheral oxygen saturation 96 percent on 15 litres oxygen via non-rebreather mask. The tertiary trauma centre is 90 minutes away by helicopter.

a) List 4 considerations specific to pre-hospital RSI. (4 marks)

b) State 4 indications to defer pre-hospital intubation in favour of transport to definitive care. (4 marks)

c) State 2 principles of safe pre-hospital RSI. (2 marks)

Question 17 | Sedation for Synchronised DC Cardioversion (9 marks)

A 60-year-old man presents to your emergency department with new-onset atrial fibrillation with rapid ventricular response (heart rate 160) for the past 4 hours. His blood pressure is dropping (90/55) and he is symptomatic with chest pain. You plan synchronised DC cardioversion.

a) List 4 considerations specific to sedation for emergency cardioversion. (4 marks)

b) State 3 drug options for sedation for cardioversion with dose. (3 marks)

c) State 2 post-procedure priorities. (2 marks)

Question 18 | Intubation in Massive Pulmonary Embolism (9 marks)

A 65-year-old female presents to your emergency department with sudden-onset severe shortness of breath and pleuritic chest pain. She is haemodynamically unstable (blood pressure 75/45, heart rate 130). Bedside echocardiogram shows dilated right ventricle with septal D-shape. CTPA confirms a saddle pulmonary embolism. She is becoming increasingly obtunded (Glasgow Coma Score 11).

a) List 4 specific concerns about intubating this patient. (4 marks)

b) State 3 pre-intubation optimisation strategies. (3 marks)

c) State 2 ventilator settings considerations. (2 marks)

Question 19 | Sedation of the Acutely Agitated Patient (9 marks)

A 28-year-old male presents to your emergency department brought in by police after assaulting two security guards. He is verbally and physically threatening, with police restraint, and is suspected to have taken amphetamines. He is agitated, sweating, tachycardic (140), and hypertensive (170/110). Verbal de-escalation has failed. You are concerned about himself and staff safety.

- a)** List 3 first-line pharmacological options for chemical restraint (drug, dose, route). (3 marks)

- b)** State 3 indications to escalate to ketamine for chemical restraint. (3 marks)

- c)** State 3 post-sedation monitoring priorities. (3 marks)

Question 20 | Apnoeic Oxygenation in RSI (9 marks)

Your registrar is about to perform rapid sequence intubation in a 75-year-old man with severe community-acquired pneumonia. The patient is hypoxic at baseline (SpO_2 89 percent on 15 L oxygen via non-rebreather mask). His weight is 90 kilograms. The registrar asks about strategies to reduce the risk of desaturation during intubation.

a) Define apnoeic oxygenation AND state the principle. (3 marks)

b) List 3 other strategies to optimise pre-oxygenation. (3 marks)

c) List 3 patient groups who benefit most from apnoeic oxygenation. (3 marks)

Question 21 | Failed Bag-Mask Ventilation (10 marks)

During rapid sequence intubation of a 55-year-old male, your registrar has failed two attempts at intubation. Bag-mask ventilation is now difficult (poor chest rise, falling SpO₂ 88 percent). The supraglottic airway device has been placed but you are not achieving adequate ventilation (chest rise minimal, no end-tidal CO₂ trace). Your team is approaching 'can't intubate, can't oxygenate' (CICO).

- a)** List 4 optimisation steps for bag-mask ventilation BEFORE proceeding to surgical airway. (4 marks)

- b)** Describe the 'CICO' (can't intubate, can't oxygenate) management. (4 marks)

- c)** List 2 complications of cricothyroidotomy. (2 marks)

Question 22 | Reversal Agents in Anaesthesia and Toxicology (9 marks)

You are managing several patients with different drug-related issues. Match the appropriate reversal agent / antidote to each scenario: Patient A: 70-year-old female with respiratory depression following IV morphine for post-operative pain. Patient B: Young woman who took a benzodiazepine overdose and is now obtunded with respiratory depression in your ED. Patient C: 60-year-old male with cardiac arrest following bupivacaine infiltration during dental procedure. Patient D: 65-year-old after warfarin overdose with active GI bleeding (INR 12).

a) State the reversal agent, dose, and mechanism for each scenario. (5 marks)

b) State the reversal agent / antidote for: (i) rocuronium; (ii) dabigatran; (iii) apixaban; (iv) heparin. (4 marks)
