

**DIPLOMA OF FELLOW OF THE ROYAL COLLEGE OF ANAESTHETISTS
FINAL EXAMINATION**

**Tuesday 7th March 2017
9:30 am to 12:30 pm**

Candidates MUST answer all 12 questions. Candidates will fail the written section if one or more questions on the SAQ paper are not attempted.

All 12 questions carry equal marks, although their pass marks may vary. Questions are printed in the appropriate coloured book:

1 & 2 in Book A (Blue)	5 & 6 in Book C (Green)	9 & 10 in Book E (Orange)
3 & 4 in Book B (Pink)	7 & 8 in Book D (Yellow)	11 & 12 in Book F (Grey)

One question will be printed on the first page and the second question will be printed half-way through the book. Candidates must write their answer underneath the question in each of their six books. Questions answered in the wrong book will not normally be marked (and the candidate will fail the written section). Please write clearly e.g. a, b, c etc. for which section of the question you are answering.

Where examiners have indicated the way marks are allocated, candidates are advised to spend their time accordingly.

Question 1 (Blue Book)

You are asked to review a 27-year-old male who is a known epileptic in convulsive status epilepticus.

- a) Define convulsive status epilepticus. (1 mark)
- b) Outline your initial management of this patient including the use of emergency antiepileptic drug therapy. (7 marks)
- c) 60 minutes after your initial management the patient continues in status epilepticus. What would be your further management? (5 marks)
- d) What are the complications associated with refractory convulsive status epilepticus? (7 marks)

Question 2 (Blue Book)

- a) List the implications for the patient of an inadvertent wrong-sided peripheral nerve block. (5 marks)
- b) Summarise the recommendations of the "Stop Before You Block" campaign, (4 marks) and list factors that have been identified as contributing to the performance of a wrong side block. (5 marks)
- c) Define the term "never event" (2 marks) and list four drug related never events. (4 marks)

Question 3 (Pink Book)

A patient scheduled for primary elective total knee replacement is found to be anaemic, with a haemoglobin level of 90 g/ litre.

- a) What perioperative consequences may be associated with preoperative anaemia? (5 marks)
- b) What physiological adaptations occur to offset the effects of anaemia? (6 marks)
- c) Describe perioperative events that may worsen the effects of the anaemia. (4 marks)
- d) What further blood tests may help in the classification of this anaemia? (5 marks)

Question 4 (Pink Book)

- a) What are the theoretical advantages of "off pump" coronary artery bypass grafting (OPCAB) compared to an "on bypass" technique? (7 marks)
- b) What are the potential causes of haemodynamic instability during OPCAB? (5 marks)
- c) Which strategies help to minimise this haemodynamic instability? (8 marks)

Question 5 (Green Book)

You are asked to assess a 24-year-old male who has been admitted to the Emergency Department with 30% burns from a house fire.

- a) What clinical features would lead you to suspect significant inhalational injury? (10 marks)
- b) List the indications for early tracheal intubation to secure the airway. (4 marks)
- c) Which investigations would you use to assess the severity of the inhalational injury (3 marks) and what are the likely findings? (3 marks)

Question 6 (Green Book)

The obstetric team tell you about a patient who is 2 days post-partum with what they suspect is a post-dural puncture headache (PDPH).

- What is the differential diagnosis of post-partum headache? (8 marks)
- What features, in this patient, would lead you to consider a serious underlying cause? (7 marks)
- You diagnose a PDPH and arrange treatment by epidural blood patch (EBP). What are the described risks of EBP? (5 marks)

Question 7 (Yellow Book)

A patient is to receive a cadaveric renal transplant.

- Detail the aspects of your pre-operative assessment specific to chronic kidney disease (CKD). (11 marks)
- How can the function of the transplanted kidney be optimised intraoperatively? (3 marks)
- How may this patient's postoperative pain be optimally managed? (3 marks)
- Explain why some common post-operative analgesic drugs should be avoided or used with caution. (3 marks)

Question 8 (Yellow Book)

- List the patient related (7 marks) and anaesthetic related (3 marks) risk factors for postoperative nausea and vomiting (PONV) in adult patients.
- What are the unwanted effects of PONV in adults? (6 marks)
- Which non-pharmacological interventions have been shown to be effective in reducing PONV in adults? (2 marks)
- Briefly explain the proposed mechanisms of action of 5HT₃ antagonists such as ondansetron when used as anti-emetics. (2 marks)

Question 9 (Orange Book)

- Define persistent postoperative pain. (Also known as chronic or persistent post-surgical pain) (3 marks)
- Which surgical procedures are most commonly associated with persistent postoperative pain? (5 marks)
- What are the risk factors for development of persistent postoperative pain? (8 marks)
- What pathophysiological changes occur at spinal cord level during the transition from acute to persistent postoperative pain? (4 marks)

Question 10 (Orange Book)

- List criteria for a diagnosis of acute respiratory distress syndrome (ARDS)? (3 marks)
- Which clinical indices are used to quantify oxygenation in ARDS. (3 marks)
- What tidal volume would you select for a patient that meets the criteria for ARDS, using the ARDSNet protocol? (2 marks)
- What are the ventilatory (6 marks) and non-ventilatory, (6 marks) measures that can be taken to improve oxygenation or prevent further deterioration in a patient with ARDS.

Question 11 (Grey Book)

A 12-week-old male baby presents for a unilateral inguinal hernia repair. He was born at 30 weeks gestation (30/40).

- What are the specific perioperative concerns in this baby? (11 marks)
- What are the options for anaesthesia? (4 marks)
- Discuss the advantages and disadvantages of general anaesthesia for this baby. (5 marks)

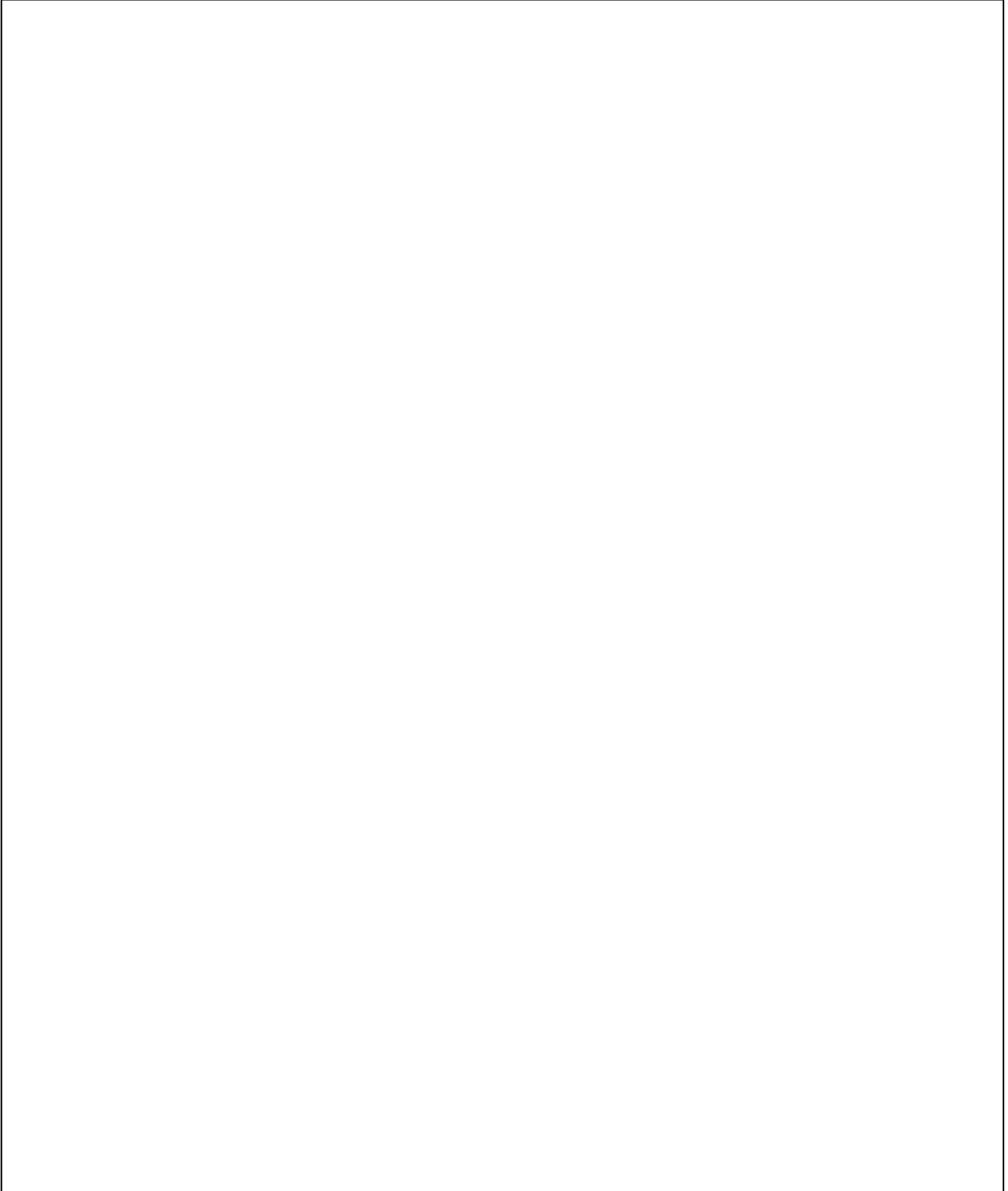
Question 12 (Grey Book)

An 80-year-old woman is admitted to your hospital having sustained a proximal femoral (neck of femur) fracture in a fall.

- How would you optimise this patient's pain preoperatively? (5 marks)
- You decide to perform a fascia iliaca compartment block for analgesia. What are the borders of the fascia iliaca compartment (4 marks) and which nerves are you attempting to block? (1 mark)
- Describe how you would perform this block using an ultrasound-guided technique. (10 marks)
NB consent has already been obtained; you also have adequate assistance, emergency equipment, monitoring and venous access.

BOOK A

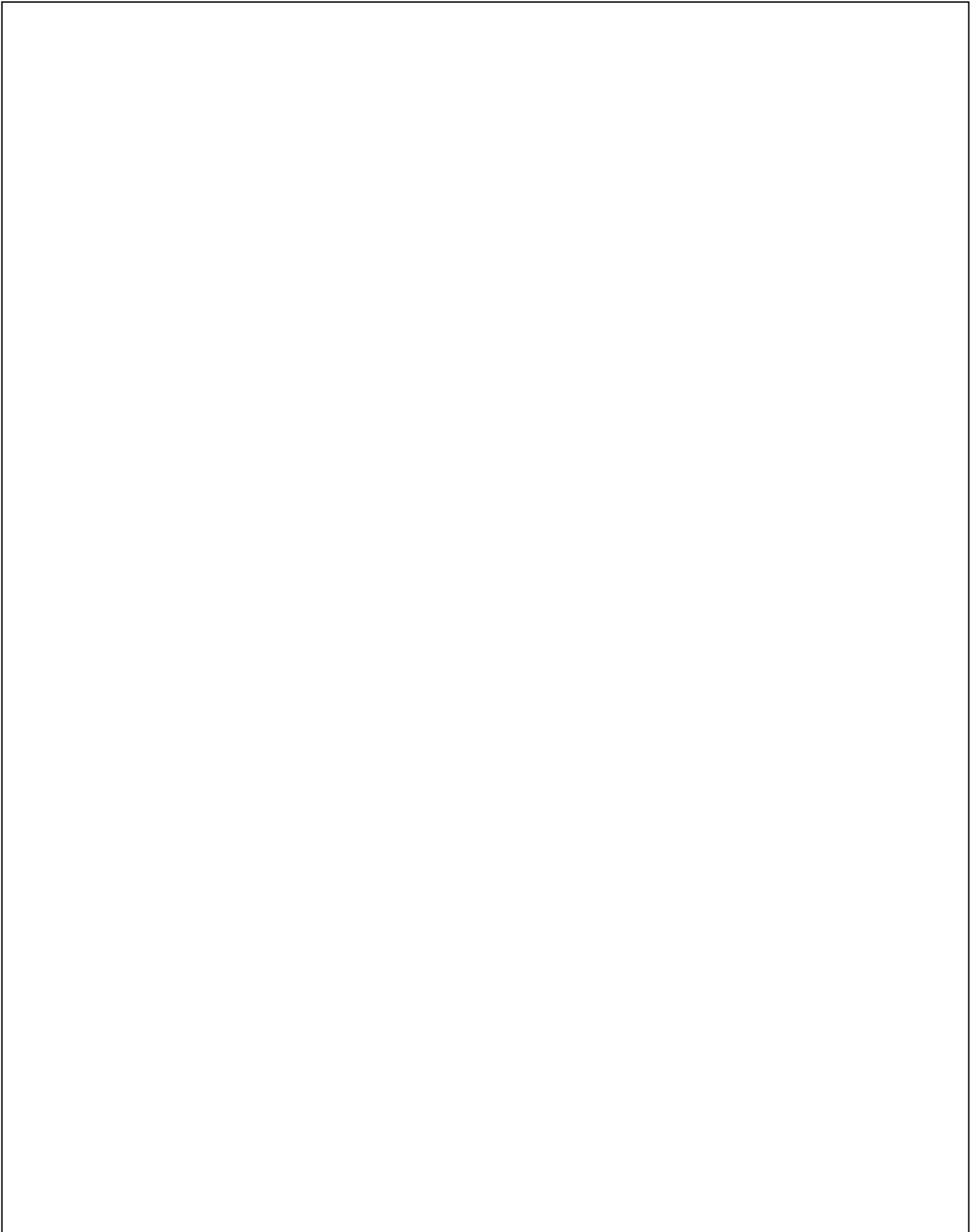
Question 1 (Blue Book)

A large, empty rectangular box with a thin black border, occupying most of the page below the question header. It is intended for the student to write their answer to Question 1.

Question 2 (Blue Book)

BOOK B

Question 3 (Pink Book)



Question 4 (Pink Book)

BOOK C

Question 5 (Green Book)

Question 6 (Green Book)

BOOK D

Question 7 (Yellow Book)

Question 8 (Yellow Book)

BOOK E

Question 9 (Orange Book)

Question 10 (Orange Book)

BOOK F

Question 11 (Grey Book)

Question 12 (Grey Book)