

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

Tuesday 11th March 2014
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)

A 68-year-old patient attends the Pain Management Clinic with a history of intractable low back pain.

- a) What symptoms and signs would alert you to the need for urgent investigation and referral? (50%)
- b) List recommended treatment options that may be considered (with examples) if a magnetic resonance imaging (MRI) scan has excluded significant pathology. (50%)

Question 2 (Blue Book)

- a) What are the indications for insertion of an implantable cardiac defibrillator (ICD)? (20%)
- b) How might surgical diathermy affect the ICD? (20%)
- c) A patient with an ICD is listed for elective surgery; what preparations are necessary preoperatively, intra-operatively and postoperatively? (45%)
- d) How does the management differ if this patient requires emergency surgery? (15%)

Question 3 (Pink Book)

A 45-year-old patient is reviewed in the preoperative assessment clinic prior to surgery for excision of a pheochromocytoma.

- a) What are the characteristic symptoms (15%) and signs (30%) of a pheochromocytoma?
- b) Which specific biochemical (10%) and radiological (5%) investigations might confirm the diagnosis of a pheochromocytoma?
- c) What therapeutic options are available to optimise the cardiovascular system prior to surgery? (40%)

Question 4 (Pink Book)

- a) What are the indications for (20%) and possible contraindications to (25%) elective percutaneous tracheostomy (PCT)?
- b) List the potential early (40%) and late (15%) patient complications of PCT.

Question 5 (Green Book)

A 64-year-old man is scheduled for a stereotactic brain biopsy. He is taking dual antiplatelet therapy following the insertion of a drug-eluting coronary artery stent six months earlier.

- a) Explain the issues that may arise from antiplatelet therapy in this patient. (30%)
- b) Summarise the perioperative strategies to minimise the above issues. (40%)
- c) What are the specific contraindications (15%) and complications (15%) of a stereotactic brain biopsy under sedation?

Question 6 (Green Book)

A 5-year-old patient presents for a myringotomy and grommet insertion as a day case. During your pre-operative assessment you notice that the patient has a nasal discharge.

- a) Why would it be inappropriate to cancel the operation on the basis of this information alone? (25%)
- b) List the features in the history (35%) & examination (25%) that might cause you to postpone the operation due to an increased risk of airway complications in this patient.
- c) What social factors would preclude this child's treatment as a day case? (15%)

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Question 7 (Yellow Book)

A 71-year-old patient requires a rigid bronchoscopy for biopsy and possible laser resection of an endobronchial tumour.

- Outline the options available to maintain anaesthesia (20%) and manage gas exchange. (30%)
- How will use of the laser change the management of anaesthesia? (15%)
- What are the possible complications of rigid bronchoscopy? (35%)

Question 8 (Yellow Book)

An adult patient is to receive a target controlled infusion (TCI) of propofol.

- Detail how TCI devices ensure a steady state blood concentration. (50%)
- What additional pharmacokinetic data is required to allow effect-site targeting? (20%)
- What are the advantages of a TCI device compared to a manual propofol infusion regime? (30%)

Question 9 (Orange Book)

A 27-year-old woman is 13 weeks pregnant. In the antenatal clinic she is found to have an asymptomatic heart murmur. A subsequent echocardiogram shows moderate to severe mitral stenosis.

- List the causes of mitral stenosis. (15%)
- How do the cardiovascular changes in pregnancy exacerbate the pathophysiology of mitral stenosis? (45%)
- Outline the specific management issues when she presents in established labour. (40%)

Question 10 (Orange Book)

- Which human factors contribute to intravenous drug administration errors in theatre-based anaesthetic practice? (30%)
- Outline the organisational strategies that might minimize intravenous drug administration errors. (70%)

Question 11 (Grey Book)

- List the nuclei of the vagus nerve. (10%)
- Describe the immediate relations of the right vagus nerve in the neck at C6 (15%) and thorax at T4. (15%)
- List the branches of the vagus nerve. (30%)
- Which clinical situations commonly produce vagal reflex bradycardia? (30%)

Question 12 (Grey Book)

An elderly patient has sustained a fractured neck of femur following a fall and is scheduled for surgery.

- Which aspects of this patient's care have a significant impact on outcome? (45%)
- Outline the recommendations of best practice for the management of pain in this patient. (30%)
- What causes of a fall in this patient might impact on the anaesthetic management? (25%)