Report on the Constructed Response Question Paper – February 2025

Introduction

The Chairs of the Constructed Response Question (CRQ) Group have compiled this report to provide candidates and trainers with a clear overview of how CRQs are developed, how the paper is constructed, how pass marks are set, and how marking is standardised. It combines general information about the CRQ format, development process, and quality assurance mechanisms with specific analysis of candidate performance and item-level outcomes from the February 2025 sitting.

In addition to its educational purpose, the report also serves a quality assurance function by promoting transparency in the processes used to develop, standard-set, and mark the CRQ paper, in line with the GMC's expectations for fair and defensible assessment. A section at the end includes commentary on each question, intended to support candidates' preparation and trainers' understanding of expected standards.

About the CRQ paper

The CRQ paper consists of twelve questions answered in 3 hours. It assesses both factual recall and the ability to exercise clinical judgement and prioritise information, in line with the Stage 1 and Stage 2 curriculum of the Royal College of Anaesthetists.

Each CRQ is mapped to relevant curriculum domains as part of the blueprinting process, ensuring the content validity of the paper. Mapping data is used during test construction to ensure adequate coverage across curriculum areas. Despite the curriculum change in 2021, the structure of the CRQ paper remains consistent to maintain comparability with previous sittings: six questions taken from each of the previous mandatory units of training and six from the general duties, optional and advanced science modules, as described below.

- Mandatory units: anaesthetic practice relevant to neurosurgery, neuroradiology and neurocritical care, cardiothoracic surgery, intensive care medicine, obstetrics, paediatrics, and pain medicine.
- General duties: airway management, day surgery, critical incidents, general/urology/gynaecology surgery, ENT/maxillofacial/dental surgery, management of respiratory and cardiac arrest, non-theatre duties, orthopaedic surgery, regional anaesthesia, sedation practice, transfer medicine, trauma, and stabilisation practice.
- Optional modules: anaesthetic practice relevant to ophthalmic surgery, plastics & burns surgery, vascular surgery.
- Advanced sciences: anatomy, applied clinical pharmacology, applied physiology/biochemistry, physics/clinical measurement, and statistical basis of clinical trial management.

Question Design and Quality Assurance

All Constructed Response Questions (CRQs) are written by experienced subject matter experts and members of the CRQ Group. Each question is mapped to a specific section of the Stage 1 or Stage 2 training curriculum and is aligned to relevant learning outcomes. This blueprinting process helps

ensure that the CRQ paper provides broad and representative coverage of the curriculum domains being assessed.

Before being included in a live examination, each CRQ undergoes a rigorous multi-stage quality assurance process. This includes initial drafting, peer review within the CRQ Group, and multiple rounds of editing for clinical accuracy, clarity of language, and appropriate level of difficulty. The aim is to ensure each question is unambiguous, relevant, and pitched at the correct standard for the level of training being assessed.

To facilitate an objective and reproducible marking process, a detailed model answer template is produced for each question. This template breaks down the expected response into discrete elements, with marks allocated to each part. Examiners use these templates to guide their marking and ensure consistency across candidates. The use of model answers is an essential component of maintaining fairness and reliability in the marking process.

Question Difficulty and Standard Setting

The CRQ paper is deliberately constructed to include a balance of questions across a range of difficulty levels. Each paper contains an equal mix of questions judged by the CRQ Group to be easy, moderately difficult, and difficult. This ensures that the paper fairly assesses the breadth and depth of knowledge expected at the level of training, while also allowing for meaningful discrimination between candidates of varying ability.

The standard of the paper and its pass mark are determined using a modified Angoff method. This approach involves each examiner independently estimating the mark that a minimally competent candidate would be expected to achieve on each question. These estimates are then discussed and refined in standard setting meetings of the CRQ Group and Final FRCA examiners, before being finalised.

As part of the standard setting process, examiner judgment is calibrated using real candidate scripts. Each question is marked by a small group of examiners using anonymised answers from candidates with a range of MCQ scores. This exercise ensures consistency in how the model answer template is interpreted and helps to align individual examiner standards before live marking.

Candidates must attempt all twelve questions on the paper, but they are not required to pass each individual question to pass the paper as a whole. The overall pass mark is based on the cumulative score across all questions, aligned to the agreed Angoff standard.

Marking and Moderation

To ensure consistency and objectivity in the assessment of candidate responses, all CRQs are marked using a detailed model answer template. Each template outlines the key elements expected in an ideal answer and specifies the number of marks allocated to each part. Examiners are instructed to award marks only for content that aligns with the mark scheme, helping to ensure standardisation across the cohort.

Each question on the CRQ paper is marked by a different examiner. This one-question-per-examiner model reduces the potential for individual bias and promotes fairness by distributing marking responsibility evenly across the examiner group. It also helps to minimise fatigue-related variability that can arise when one examiner marks an entire script.

A moderation process is in place to further assure marking reliability. Members of the CRQ Group re-mark a selection of scripts for each examiner to check for consistency in application of the mark scheme. Any discrepancies or concerns are discussed collectively and, where necessary, adjustments are made to ensure alignment across markers.

After the marking is complete, a post-exam review is conducted by the CRQ Group and the Standard Setting and Psychometrics Manager. This includes scrutiny of the raw marks, review of flagged scripts, and investigation of any unusual patterns or inconsistencies. Where a question is found to have

performed unexpectedly or to have generated confusion among candidates or examiners—as was the case with one item in this paper—decisions may be taken to adjust scores or remove the item from the final mark total. All such decisions are fully documented as part of the College's quality assurance framework.

Quality Assurance Milestones for the February 2025 CRQ

Monday 2nd December 2024 CRQ group meeting

The CRQ group convened at the College on Monday of the Final FRCA SOE exam week for paper checking. This was a final review of the paper to check for factual accuracy, clarity of language and ease of understanding. The group made any necessary amendments and assigned a provisional pass mark to each question.

Tuesday 11th March 2025 – Standard Setting Day (SSD)

The Final examiners were divided into twelve groups of 5-7 people, each chaired by a member of the CRQ group. Each group was given one question and its associated model answer template. The groups then marked four anonymised answer scripts (without candidate or College reference numbers). The lead coordinator for CRQ chose the four sets of scripts based on MCQ scores, to represent the spectrum of ability within the candidate cohort. The MCQ results for the anonymous candidates were not given to the examiners. Subsequent discussion within each group ensured that all these scripts were awarded the correct marks as permitted by the answer template, and that each examiner applied a consistent standard across all four sets of booklets. In addition, prior to standard setting day, each table lead had access to 20 random scripts to get an idea of the range of answers candidates might give for each question. At the end of SSD, a finalised Angoff- referenced pass mark was confirmed for each question.

This process means that for each candidate the twelve questions are marked by twelve different examiners, which helps eliminate any risk of bias that could arise when a single examiner marks all twelve questions. Members of the CRQ group also re-mark a sample of each examiner's scripts to further quality assure and check for consistency of marking. The Standard Setting and Psychometrics Manager liaised with staff from the examinations department to scrutinise the submitted marks and clarify any ambiguities within the marked scripts before the exam was moderated and individual scores ratified.

Results – Thursday 17th April 2025

The overall pass rate for this paper was 57.61%.

This compares with recent CRQ papers:

- September 2024 74.52%
- February 2024 55.17%
- September 2023 79.78%
- February 2023 71.94%
- September 2022 77.42%

Candidate Performance Analysis

There were five repeat questions and seven new questions in this paper. The topics chosen are considered clinically relevant and except for the obesity question, the repeated questions were well answered.

Common performance issues included:

- **Failure to answer the question asked or interpret the stem correctly.**

It is particularly important to read the question carefully and ensure that you are answering the question. This remains a constant reason candidates drop marks. For example, in question 12

(asthma/ICU) when asked for clinical signs of severe asthma in one stem and clinical measurements that indicate severe asthma in another, several candidates mixed up clinical signs and measurements. Similarly in question 8, when asked for symptoms of trigeminal neuralgia several candidates gave clinical signs.

- **Failure to prioritise answers.**

Candidates should remember that CRQs are looking for specific answers and writing as much as possible in the hope of hitting the correct answer will not guarantee marks. When answering the questions, the candidate needs to think about what are the most important points that need to be included in the answer. For example, if asked for three differential diagnoses, you need to think about what would be the most important 3-4 diagnoses in this case and answer appropriately. Writing the tenth or eleventh most common diagnoses, though correct, will not guarantee marks. The candidate instructions clearly state that only the first distinct answer per line will be awarded marks. If a candidate writes several answers on one line, the first will be marked and the rest discounted. In general, this was less of an issue than in previous papers.

Individual Question Commentary

Question 1: Obesity

A repeat question and a core topic but despite this, it had a low pass rate. The definition of lean body weight, principles of pain relief after laparotomy were well answered but underlying respiratory disease/physiology and pharmacology (muscle relaxants) in obesity were not well answered.

Question 2: Paediatric mediastinal mass

A new question and generally well answered. Paediatric anatomy and physiology were well answered but marks were dropped on patient positioning and mode of ventilation possibly indicating that some candidates lack experience of anaesthetising children with mediastinal masses.

Question 3: Cardiac – post op pacing

This was a new question and thought to be moderately difficult, as evidenced by a low pass rate. In moderation, the consensus was that ambiguity in the question had resulted in multiple possible responses which fell outside the scope of the marking scheme. On this basis, it was decided to remove the question from the exam. No candidates were disadvantaged by this decision.

Question 4: Risk prediction/shared decision making

A new question on a very topical area. This question was a good discriminator. Most marks were dropped on not knowing the disadvantages of the ASA and P-POSSUM scoring systems for risk prediction.

Question 5: Neuro – traumatic brain injury/intra-operative monitoring

A new question on a common clinical scenario. This question was well answered and had a high pass rate.

Question 6: Post-op pulmonary complications

A repeat question and a good discriminator. Most candidates answered the CXR question correctly, but marks were dropped on risk factors for post op pulmonary complications and causes of post-op atelectasis.

Question 7: Obstetrics – previous spinal surgery

A new question. The pass rate was a little lower than expected with marks dropped on the physiology of pregnancy, the risk factors for awareness and why awareness might occur in this case.

Question 8: Pain – trigeminal neuralgia

A repeat question on a core pain topic. This question was well answered overall. Marks were dropped on other signs and red flag symptoms seen in trigeminal neuralgia.

Question 9: Thyroidectomy

A new question on a commonly encountered clinical setting. This question was well answered but marks were dropped on strategies to avoid coughing post extubation, measures to reduce and causes of stridor post extubation, and symptoms and signs of hypoparathyroidism post-op.

Question 10: TURP

A repeat question with an acceptable pass rate. Marks were dropped on the recognition and treatment of TUR syndrome; risk factors for development were well answered). Some candidates did not know when saline or glycine is used for a TURP and what ECG changes occur with hyponatraemia.

Question 11: Trauma

A new question on a core topic. This question was well answered and had the highest pass rate possibly indicating that most candidates have had plenty of clinical exposure to trauma anaesthesia.

Question 12: Asthma/ICU

This is a repeat question that was well answered with a high pass rate. Marks were dropped on clinical signs and measurements of life-threatening asthma and on some of the changes to ventilator settings.

Summary

Statistical analysis of this paper shows that the overall standard of the written paper was good, and the pass rate was in keeping with previous sittings. We congratulate the successful candidates on the standard and breadth of their knowledge.

The lowest pass rates were on the shared decision making, post-op pulmonary, cardiac and obstetric questions. Prior to sitting the Final FRCA, it is important that candidates have gained clinical exposure to all the relevant specialities. Compared to previous sittings the paediatric, pain, ICU and neuro questions were well answered in this exam.

Some candidates are still trying to write as many answers as possible per question but in doing so they are potentially disadvantaging themselves. As mentioned previously, only the first answer per line will be marked and all other answers on that line will be discounted (correct or not) and writing too much may cause time pressures.

We extend our thanks to the CRQ Group, Final FRCA examiners, and Examinations Department staff for their continued commitment to maintaining the rigour and fairness of the examination process.

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Chairs, Constructed Response Question Group
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