

# First Examination for the Fellowship in Clinical Oncology

## Guidance Notes for Candidates

### 1 Examination Structure

The First FRCR examination comprises four papers of single best answer (SBA) questions. The written papers for the four subjects are held twice a year over two consecutive days: normally in February and August/September.

Papers	No. of questions	Duration
<b>Day One</b>		
Cancer Biology & Radiobiology	50	2.5 hours
Clinical Pharmacology	40	2 hours
<b>Day Two</b>		
Physics	50	2.5 hours
Medical Statistics	40	2 hours

Candidates may enter any number of subjects per sitting. The Fellowship Regulations restrict candidates to attempting the examination at **four sittings only** for reasons relating to consistency/currency of training. An attempt at the examination is any occasion when a First FRCR examination paper is taken (i.e. any of the four subjects listed above), not four attempts at each subject. There is no requirement to re-sit a subject once a pass in that subject has been achieved; a candidate will be deemed to have achieved success at the First FRCR once all four modules have been passed.

### 2 Venues

The examination is held at three UK venues (Edinburgh, London and Manchester) and three non-UK venues (Dublin, Hong Kong and India - Kolkata).

### 3 Content

The First FRCR examination is divided into the following four modules:

**Cancer Biology and Radiobiology:** the processes of cancer cell transformation and tumour development and how these processes may be demonstrated and the response to ionising radiation of cells both individually and grouped as tissues

**Clinical Pharmacology:** the structure, action, use and evaluation of drugs used in the treatment of a patient with cancer.

**Medical Statistics:** with special reference to clinical trials and assessment of results, and the epidemiology of cancer

**Physics:** the application of physical principles and methods in clinical radiotherapy, physical basis of the therapeutic uses of radioactive isotopes, radiation hazards and protection.

A knowledge of SI units is expected.

Each SBA question comprises a stem (a question or statement) and five items (answers) [labelled (a) to (e)]. Candidates are asked to decide which one of the five items represents the best answer to the question given in the stem.

#### 4 Standard Setting

A 'modified' Angoff method is used to set the pass mark or standard for this exam. This involves a panel of subject matter experts (examiners) evaluating each question and providing an estimate as to how likely the just-passing candidate would know the answer. Each item is scored on the basis of the percentage of 'just passing' candidates who should know the correct answer. These scores are collated and presented at the standard setting meeting. After discussion, the standard setters again score the questions, the highest and lowest scorers are removed, and the mean of the remaining post-discussion scores is used to set the standard. The final pass mark is determined after the examination using the Hofstee compromise method. This takes account of candidate performance in the examination alongside judgements made by standard setters. The candidate cohort and pass rates will vary from sitting to sitting.

#### 5 Marking

The examination is marked by computer. The marking system shown below is used:

For each item correctly answered	+1 mark
For each item incorrectly answered	0 marks

The examination is not negatively marked and therefore candidates are encouraged to offer an answer to all of the questions.

No mark is awarded if more than one answer is recorded to a question or if the answer is not sufficiently clear. In these circumstances the College does not consider it appropriate to interpret a candidate's intentions. Candidates should ensure that any mistakes are clearly and fully erased.

#### 6 Quality Assurance

After each sitting, and prior to results publication, a group of expert examiners conduct a statistical review of the question paper performance and quality control checks to make sure all the questions and answers are fair. This analysis allows the College to ensure that the examination is reaching optimal levels of reliability and fairness. Poorly performing questions are scrutinised and are removed if error or ambiguity is found. If any questions are removed from the examination then the pass mark is adjusted accordingly. Candidates will not be disadvantaged where this occurs. All examination results are checked by College staff before being published to candidates.

#### 7 Equipment Required for the Examination

Candidates are required to bring a HB pencil, pencil sharpener, eraser, ruler and a non-programmable calculator.

Calculators with any of the following facilities are **prohibited**:

- graphic display
- data banks

- dictionaries or language translators
- retrieval or manipulation of text or formulae
- QWERTY keyboards
- built-in symbolic algebraic manipulations
- symbolic differentiation or integration
- capability of remote communication with other machines.

## **8 Examination Results and Feedback**

All candidates will receive details of scores achieved and the level of performance that was required to achieve success per module. A further syllabus section breakdown will also be provided for each module, which will incorporate a list of incorrect questions numbers along with the syllabus section relating to that question. The syllabus breakdowns are provided as feedback and to assist with re-sit preparation and should be read in conjunction with the descriptions of the knowledge required for all syllabus sections in the curriculum.

Candidates interpreting this detailed feedback should note that syllabus sections are not always weighted equally, nor will the number of questions in each section necessarily be repeated at future sittings. Candidates should take care not to overlook any one section of the syllabus based on the quantity of questions designated in any particular sitting.

## **9 Further Information**

Queries arising from this document should be addressed to the College's Examinations Office, either by email to [examinations@rcr.ac.uk](mailto:examinations@rcr.ac.uk) or by telephone on 020 7406 5905.

Queries at the time of the examination should be raised with the invigilators or College staff present. Comments, feedback or complaints following the examination should be brought to the attention of the Examinations Manager, either by email to [examinations@rcr.ac.uk](mailto:examinations@rcr.ac.uk) or by telephone on 020 7406 5905.