Board of assessors' mark awarding algorithm

For 2022 sittings

The board's primary purpose is to protect patients and the public by ensuring that the standard of the registration assessment is maintained at the appropriate level: this will take precedence over all other considerations. The purpose of applying this mark awarding algorithm is to ensure that candidates who pass the assessment do so on merit at the required standard to safely enter the register.

The mark awarding process is multi-step and evidence based.

The board does not know the identity of any candidate when awarding or whether they have been granted an adjustment. Some candidates will be sitting for the first time, others will be repeat sitters.

The registration assessment comprises two papers: Part 1 (calculations) and Part 2 (multiple choice).

In 2022 candidates will sit in UK test centres where the assessment will be delivered online.

Table 1: Stage 1 - Post-assessment meeting 1

Actions	Relevant registration assessment regulations
This first meeting takes place approximately two weeks after the registration assessment sitting. The primary focus of this meeting is a review of each question and its associated data. **Stage 1(a) – consideration of requests for a sitting to be nullified due to adverse circumstances** Requests for sittings to be nullified due to adverse circumstances are considered by the board for a given sitting before the board's mark awarding meeting. A nullified sitting does not count as an attempt. Requests are considered without knowing the candidates' marks or the number of times they have sat the assessment. Note: Candidates must complete initial education and training requirements in eight years. The nullification of a sitting does not extend the eight-year limit. The board makes decisions on each request for nullification, and the outcome is noted before moving on to subsequent stages. **Stage 1(b) – consideration of individual question performance and paper reliability data (see Appendix 1 for post assessment review process)**	Note: If a candidate formally withdraws from a sitting (regulation 5.2) that sitting does not count as a sitting attempt. If a candidate fails to notify the GPhC of their decision to withdraw (regulation 5.4) the candidate will forfeit the sitting attempt through non-attendance. This is dealt with administratively by the GPhC and any candidate who applies to sit the assessment but does not sit, will not appear in the reports presented to the board at stage 1c and stage 2. 6.1 It is the sole responsibility of every candidate to ensure that they only sit the assessment if they are fit to do so. Being 'fit to sit' means that, a candidate knows of no reason why their performance would be adversely affected during the assessment. A candidate who is affected by illness or other adverse circumstance before the day of the assessment, but decides to sit the assessment, will be treated as being fit to sit by the board. 6.2 If, on or before the day of an assessment, a candidate knows of an illness or adverse circumstance that might affect their performance, they should not sit. An illness or adverse circumstance known to a candidate on or before the day of an assessment cannot be used as grounds for nullification of the sitting attempt, or as grounds for an appeal or as evidence in an appeal.

Actions	Relevant registration assessment regulations
The board considers the performance of individual questions, based on metrics provided by the marking contractor. In doing so the board also takes into account the performance data for each item and for each paper as a whole. In addition, the board considers any issues raised about particular questions by candidates and other interested parties. If there is valid reason for doing so, the board may agree to: • remove a question • accept more than one answer for a question • remove question from IRT anchor set • adjust the Angoff score for a question • recommend that a question is reviewed before future use • review any questions displaying differential item functioning for recalibration **Stage 1(c) – Review of sitting data provided by the marking contractor (report 1a).** This includes: • preliminary pass marks for Part 1 and Part 2 • preliminary pass rates per paper and for the overall assessment • statistical performance data **Stage 1 (d) - Recalculation of results data based on decisions made at**	6.3 A candidate who is taken ill or experiences other adverse circumstances during the assessment, must draw this to the attention of test centre staff immediately, in order for the member of staff to assist with the indisposition. The member of test centre staff will submit a report to the GPhC. If the candidate wishes their circumstances to be considered by the board under the provision of 6.4, they must then submit a written request to the board, via the GPhC, for their illness or adverse circumstances to be considered under the provisions of 6.4 below. 6.4 Request for an assessment attempt to be nullified: a candidate who considers that their performance has been affected by illness or other circumstance during the assessment, may request in writing to the board that they be deemed not to have sat the assessment on this occasion, and that their assessment attempt be nullified. 6.5 In order for a request to be considered under 6.4 the request must be in the specified format, including appropriate supporting evidence as detailed in 6.3. The request must be received by the specified date after the assessment, to ensure that it can be considered by the board at its post-assessment meeting. 6.7 When considering a candidate's request for their assessment attempt to be nullified, the board will do so before undertaking the process of awarding results and without knowing the candidate's provisional marks.

Actions	Relevant registration assessment regulations
stages 1a-1b. The marking contractor will make the necessary amendments to the results data to incorporate the decisions made at stages 1a and 1b.	6.8 The board will consider nullification requests without knowing the candidate's identity, the number of their assessment attempt, or whether or not they have been granted an adjustment. 6.9 If the board grants the candidate's request for nullification, the candidate will not be informed about any marks they might have obtained, and they will be deemed not to have sat. The candidate may apply to sit a subsequent sitting of the assessment provided they meet the eligibility requirements and are able to meet the time limit to apply for registration as a pharmacist. For such a further sitting, the candidate will be required to pay a new fee. 6.10 If a candidate's request for their assessment attempt to be nullified is not granted, the board will go on to consider their marks with those of other candidates within the process of awarding results. The board will not pay further regard to the candidate's reported illness or other adverse circumstance.

Table 2: Stage 2 – Post-assessment meeting 2

Action	Relevant registration assessment regulations
At this meeting the board is provided with report 2 by the marking contractor. The data presented in report 2 reflects decisions made by the board at Stage 1. This report includes: • raw cut scores and pass marks for Part 1 and Part 2 • provisional percentage pass rates per paper and for the overall assessment • mean % scores and provisional pass rate by sitting attempt • individual candidate performance **Stage 2(a) – Consideration of the quality of the sitting and papers** The board will consider available evidence: (i) a report of the operational aspects of the sitting, provided by the GPhC operations team and any external contractor as appropriate; (ii) a report of the statistical performance of the papers, provided by the marking contractor; and (iii) other relevant evidence.	
Stage 2(b) – agreeing pass marks Having taken information provided at stage 2a into account, the board will consider whether there is reason to modify the pass mark for one or both	

Action	Relevant registration assessment regulations
assessment papers in order to be satisfied that the passing score is at the required performance standard.	
Stage 2(c) - Recalculation of results data based on decisions made at stage 2(b). The marking contractor makes the necessary amendments to the results data to incorporate any agreed changes to the pass mark for Part 1 and/or Part 2 papers. The assessment pass rate is recalculated and noted for the record.	

Table 3: Awarding marks

Action	Relevant registration assessment regulations
Stage 3(a) - awarding passes and fails to candidates Candidates who have met the pass requirement for both papers (as agreed at stage 2b) will be awarded a pass. Candidates who have not met the pass requirement for both papers (as agreed at stage 2b) will be awarded a fail.	1.16 To pass the assessment, a candidate must achieve the pass mark or greater for Part 1 and Part 2 in the same sitting.

Action	Relevant registration assessment regulations
The pass requirement is: • achieving the pass mark or greater in Part 1; and • achieving the pass mark or greater in Part 2. Note that compensation between papers is not permitted. The pass mark or greater must be achieved in both parts of the same sitting.	
Stage 3(b) – confirming the marks The board will conclude the mark awarding process by agreeing that the marks are correct and confirming the pass/fail outcomes. The chair will confirm this for the record.	1.1 The assessment is set and moderated by the GPhC's board of assessors ('the board'). The board's primary purpose is to protect patients and the public by ensuring the standard of the assessment is maintained. This will take precedence over all other considerations.
Stage 3(c) – recording of final pass marks for Part 1 and Part 2 for communication purposes For clarity of reporting to candidates, the mark required to pass each paper will be reported to candidates to the whole mark equivalent. At this stage, the mark needed to pass Part 1 and Part 2 will be recorded in this format. For purposes of the board, the corresponding percentage pass mark for each paper will be recorded to two decimal places. The chair will confirm these for the record.	7.1 GPhC candidates will be notified of their individual results by the GPhC, and PSNI candidates will be notified of their individual results by the PSNI. Candidates will be provided with the mark required for each paper in order to pass the assessment, along with the mark they achieved for each paper, and their overall pass or fail result.

Appendix 1: Analysing performance data for the common registration assessment

Reporting data set 1:

For each paper present:

- Standard error of measurement (SEM)
- Standard deviation
- Cronbach's *alpha*
- Mark boundaries to classify pass fail and borderline
- Raw cut score
- Provisional passing criteria (as both a mark and a percentage) using IRT
- Rounded pass mark required to achieve the pass percentage

For each item (question) present:

- Correct answer
- Angoff score
- Facility (p value) for all candidates

- Facility (p value) for 'barely passing' candidate performance

- Item total correlation

- Flagging of the item total correlation it less than 0.1

- Cronbach's *alpha* if item removed

- Performance per quintile, presented as a chart

- Correct answer plus full answer response profile as a percentage and number for all answer variations given by over 1% of candidates (Part 1 calculations paper)

- Percentage spread of all answer choices as a table and chart, with correct answer clearly identified (Part 2 multiple choice paper)

- IRT difficulty

- IRT discrimination

- Information at the pass mark (provided in the spreadsheets not in reporting data set PowerPoint report)

- DIF analysis for anchor items (historic versus current diet performance)

For each paper present:

- Raw pass rate as a percentage and as a number using IRT

- Bar chart showing mark distribution

Reporting data set 2

Results data above to be updated with decisions made at the post assessment stage, which may include:

- Removal of candidate data if a nullification of sitting attempt was granted
- Removal of questions
- Accepting more than one correct answer to a question
- Removal of an item as an anchor if its IRT parameters have "drifted" from historic values
- Recalculation of cut score
- Recalculation of IRT ability "passing standard"

Presented for each sitting:

- Updated section 1a and 1c from report 1. (Data in 1b above will be updated in spreadsheets.)
- For each paper - pass rate as a percentage and as a number
- Overall – pass and fail rate as percentages and as numbers
- Breakdown by sitting attempt of pass and fail rate as a percentage and as a number
- Results data for each candidate (identified by candidate number):
  - Mark and percentage score for each paper and overall
  - Whether their mark for each paper falls within the pass or fail criteria
  - Whether they have passed or failed the sitting overall (a candidate must meet the pass mark for both papers to achieve an overall pass)
- Breakdown of pass/fail performance for all candidates and for 1st attempt candidates by:

- education route (MPharm/MPharm with preparatory year/5-yr MPharm with integrated pre-reg/OSPAP)

- sex

- age range

- ethnicity

- country

- sector of pre-registration training

- school of pharmacy