

## Marking Instructions

1. Mark in red. Correct answers should be ticked, errors which determine marks should be indicated by ringing or by a cross or by underlining, and omissions by  $\surd$ . Do not cross out or obliterate any work. In cases of particular difficulty, brief annotations that explain the marks awarded may be helpful should the script be reviewed at a later stage, but in general comments on the candidate's work or corrections to it should *not* be written on the script. Each page of the script which includes any part of the candidate's answer must have some indication that it has been seen, e.g. a tick in the margin.
2. Marks are of the following three types.
  - M Method mark, awarded for a valid method applied to the problem. Method marks are not lost for numerical errors, algebraic slips or errors in units. However, it is not usually sufficient for a candidate just to indicate an intention of using some method or just to quote a formula; the formula or idea must be applied to the specific problem in hand, e.g. by substituting the relevant quantities into the formula.
  - A Accuracy mark, awarded for a correct answer or intermediate step correctly obtained. Accuracy marks cannot be given unless the associated Method mark is earned (or implied).
  - B Mark for a correct result or statement independent of Method marks.

The marks indicated in the scheme may not be subdivided. If there is genuine doubt whether a candidate has earned a mark, allow the candidate the benefit of the doubt. Unless otherwise indicated, marks once gained cannot subsequently be lost, e.g. wrong working following a correct form of answer is ignored.
3. When a part of a question has two or more 'method' steps, the M marks are in principle independent unless the scheme specifically says otherwise; and similarly where there are several B marks allocated. (The notation 'dep \*' is used to indicate that a particular M or B mark is dependent on an earlier, asterisked, mark in the scheme.) Of course, in practice it may happen that when a candidate has once gone wrong in a part of a question, the work from there on is worthless so that no more marks can sensibly be given. On the other hand, when two or more steps are run together by the candidate, the earlier marks are implied and full credit must be given.
4. The symbol  $\surd$  implies that the A or B mark indicated is allowed for work correctly following on from previously incorrect results. Otherwise, A and B marks are given for correct work only — differences in notation are of course permitted. A and B marks are not given for 'correct' answers or results obtained from incorrect working. When A or B marks are awarded for work at an intermediate stage of a solution, there may be various alternatives that are equally acceptable. In such cases, exactly what is acceptable will be agreed at the standardisation meeting.
5. Wrong or missing units in an answer should not lead to the loss of a mark unless the scheme specifically indicates otherwise. Candidates are expected to give numerical answers to an appropriate degree of accuracy, with 3 significant figures being the norm. Small variations in the degree of accuracy to which an answer is given (e.g. 2 or 4 significant figures where 3 is expected) should not normally be penalised, while answers which are grossly over- or under-specified should normally result in the loss of a mark. The situation regarding any particular cases where the accuracy of the answer may be a marking issue will be decided at the standardisation meeting.
6. If work is deleted and replaced, mark the replacement. If work is deleted without replacement, mark the deleted work provided that it is legible. When two solutions are offered (neither crossed out), count what appears the more serious attempt or the more complete attempt at the question. If attempts are indistinguishable in these respects, count the better.

7. For a *genuine* misreading (of numbers or symbols) which is such that the object and the difficulty of the question remain unaltered, mark according to the scheme but following through from the candidate's data. (Note that a miscopy of the candidate's own working is not a misread but an accuracy error.) All M marks are available for a 'misread' solution, and A or B marks are initially given, as per the scheme, but for results as modified by the misread. At the end of each part of the question affected, deduct 0, 1 or 2 according as the number of 'misread' A and B marks earned in that part is 0, 1–4 or >4. If the misread makes the question easier, a further deduction of 1 or more marks may be made at your discretion; this deduction can include M marks.

8. For a partially correct **part** of a question, exhibit the detailed marks, e.g. M1 A0, *in the margin* at the point where the marks have been first earned. Please give sufficient detail to allow your marking to be understood. For a completely correct **part** of a question, only the total mark for that part need be given, *in the margin*. Do NOT use subtotals (underlined or otherwise). The question total should be ringed and placed in the margin at the end of the question. *This total MUST equal the sum of all the marks in the margin for that question* and should be entered against the question number in the question grid on the front of the script. (N.B. Addendum to the booklet 'Instructions for Examiners': *please use the left hand margin of left hand pages.*)

If a candidate's answer is in two instalments, indicate the carried forward total at the end of the first part by, for example, ③, and the brought forward total at the start of the second instalment by, for example, ③.

The total mark for the paper should be obtained (a) by adding all the unringed marks through the script (checking at the same time that all pages have been marked) and (b) by adding the question marks in the grid in reverse order. The two totals must, of course, tally, and the resulting figure should be written, ringed, on the front of the script.

9. The following abbreviations may be used in a mark scheme, or may be found useful for annotating a script.

AEF Any Equivalent Form (of answer or result is equally acceptable).

AG Answer Given on the question paper (so extra care is needed in checking that the detailed working leading to the result is valid).

BOD Benefit Of Doubt (allowed for work whose validity may not be absolutely plain).

CAO Correct Answer Only (emphasising that no 'follow through' from a previous error is allowed).

ISW Ignore Subsequent Working.

MR Misread.

PA Premature Approximation (resulting in basically correct work that is numerically insufficiently accurate).

SOS See Other Solution (the candidate makes a better attempt at the same question).

SR Special Ruling (detailing the mark to be given for a specific wrong solution, or a case where some standard marking practice is to be varied in the light of a particular circumstance).

10. Remember that the mark scheme is designed to assist in marking incorrect solutions. Correct solutions get full marks. Be alert for correct but unfamiliar or unexpected methods — often signalled by a correct result following an *apparently* incorrect method. Such work must be carefully assessed. On the other hand, work must not be judged on the answer alone, and answers that are given in the question, especially, must be validly obtained. Key steps in the working must always be looked at and anything unfamiliar must be investigated thoroughly. If a method is not catered for in the scheme, mark at discretion, imitating the scheme as closely as possible. If a number of candidates are involved, or you are not sure what to do, telephone your Team Leader.

11. For papers in which graphic (and programmable) calculators are allowed, some answers may be obtained with little or no working visible. Allow full marks for correct answers (provided, of course, that there is nothing in the wording of the question specifying that analytical methods are required). Where an answer is wrong but there is some evidence of method, allow appropriate method marks. Wrong answers with no supporting method score zero. If in doubt, consult your Team Leader.
12. If in any case the scheme operates with considerable unfairness, mark at discretion but please give a brief reason and initial the mark. *This discretion should be used very rarely, and only after consultation with your Team Leader.*
13. If there is any suspicion of cheating or copying, mark according to the scheme and enter the marks on the marksheet as usual. Send the script(s) to your Team Leader, as per OCR instructions. Notes concerning illness etc should be forwarded to OCR, but separately from the scripts or mark sheets. The scripts should be marked strictly as per the scheme, as any special circumstances that may have affected a candidate's performance are dealt with at a later stage.
14. Examiners are reminded of the *VITAL* importance of checking the accuracy of the addition of marks and of the transcriptions onto the marksheets; in particular that the marks are entered against the right candidates. Do not assume that the scripts are in the same order as the names on the marksheet. As detailed in §8 above, each Examiner must check the paper total, obtaining the same figure twice by different methods. The transcription to the marksheet should also be checked; ideally, the Checker should read out the candidate's name and mark from the marksheet, while the Examiner checks with the front of the script.

**The Examiner has final responsibility for the accuracy of the mark recorded on the marksheet.**