

## Department of Civil and Environmental Engineering

### Code of Practice on Setting and Marking Undergraduate Examinations

#### Introduction

Your paper should achieve the following two basic requirements:

- (i) that a student who understands the basic concepts and principles of the subject and who has done the tutorials should obtain a pass mark and,
- (ii) that it should provide a good test of the skills and knowledge of a 'first class' student.

These two objectives are usually tackled by setting questions, or parts of questions, of varying difficulty and style. This Code of Practice provides guidance in doing this and specifies the balance between questions directed towards requirements (i) and (ii) above.

#### **1. Structure of Examination Papers**

- 1.1 Ideally two types of question (or part-question) are required: 'straightforward' and 'more difficult'. All questions should be compulsory.
- 1.2 Approximately forty per cent of each paper should consist of 'straightforward' material with the remainder being 'more difficult'.
- 1.3 This 'grading' of material may be achieved either by structuring each question into 'straightforward' and 'more difficult' parts, or by structuring the examination paper into 'straightforward' and 'more difficult' questions, or a combination of the two. Whichever arrangement is used, the student must be required to answer all of the questions.

#### **2. The Difficulty of Questions**

- 2.1 **'Straightforward' questions or parts of questions:** these are aimed at testing principles and students' basic knowledge and understanding. The average student who has worked well should have no difficulty in obtaining 40% of the total marks for the paper from the straightforward parts. 'Straightforward' questions could be set (so far as is appropriate) from book work, or be of similar type and difficulty as questions used in tutorials, or consist of a number of part-questions requiring brief answers.
- 2.2 **'More difficult' questions or parts of questions:** These will require extra thought and/or understanding than 'straightforward' questions, or more specialist knowledge. The average student should be able to get 50% per question and only the brighter students would normally obtain 75% or more.

### **3. Setting Questions**

- 3.1 These notes relate to a 3 hour examination paper in which all questions must be answered. The questions do not need to carry the same marks. They should be used as a guide for other types of examination paper.
- 3.2 It is assumed that 30 minutes will be available, on average, per question, leaving 30 minutes for reading the examination paper and for final checking etc.
- 3.3 **Quantitative questions:** A suggested guide for length of quantitative questions is that it should take the examiner (who knows what the answer should be) 15 minutes to write down his specimen answer in a form which would be acceptable for the award of maximum marks. This will ensure that the examinee has 50% thinking time to go with 50% writing and calculating time.
- 3.4 **Descriptive questions:** For purely descriptive questions the examiner should base the question on about 20 minutes writing time for the student, i.e., about two thirds of the time available. Descriptive questions should be carefully set so that students must indicate understanding of the particular subject. The use of annotated drawings should be encouraged.
- 3.5 **Multi-part questions:** These have many advantages but should conform broadly to the following principles-
- (a) Errors in an early part should not significantly prejudice the gaining of marks for subsequent parts.
  - (b) A mixture of 'straightforward' and 'more difficult' parts may be used to adjust overall difficulty. If possible, the easier parts should come first.
  - (c) The marking schedule should be even between parts unless stated otherwise, when the marks available should be clearly indicated.
- 3.6 **Outline answers:** Clearly written and well presented outline answers are expected from examiners and should accompany the question paper when submitted to Mrs Green.

### **4. Marking Questions**

- 4.1 The pass mark is 40% for the individual examination papers (in addition to the requirement of 40% aggregate of exams and coursework in each model). The paper should be set in such a way as to reflect this target – in other words, that a student who has grasped the fundamentals of the module and can apply them to simple situations, should be able to achieve 40% of the marks.
- 4.2 One question should be marked at a time.
- 4.3 It is recommended that after marking about 20 answers to a given question, when the pattern of marking will have taken shape, the examiner should review the earlier scripts and also the marking schedule.
- 4.4 The marks schedule should reflect the requirement that about 40% of the marks are for 'straightforward' material and the remainder for 'more difficult' material. Note that a

75% mark for the 'straightforward' part and a 50% mark for the 'more difficult' part leads to an overall mark of 60% which is about the desirable overall average.

4.5 Normally, the average mark for a subject paper should lie in the range 55% to 65%.

4.6 **Descriptive Questions:** It is not reasonable to reserve 100% only for a perfect answer as this can seldom, if ever, be achieved. It is therefore recommended that the marks schedule should total more than 100% with a guideline of about 120%. Of course no answer can be awarded more than 100%. Marks should be allocated for clarity, logical and economical expression and for presentation apart from the actual facts presented. A guideline figure for such marks is about 20%.

4.7 A problem may arise when the examinee produces a respectable answer, but to the 'wrong question'! If the same mistake is made by more than one examinee, this may indicate that the question is ambiguous, and marks given accordingly. Similarly, if all students miss a particular point which the examiner considers important, it may be that the point did not come across in lectures. Judgement may be used in individual cases, but where a severe penalty is exacted, a comment on the marks summary justifying this would help the review of border line cases.

4.8 **Double Marking:** The College instructions clearly state that the requirements for double marking are as follows:

*Every script shall be marked by at least **two** Examiners or by **one** Assessor/Assistant Examiner **and one** Examiner who shall afterwards prepare an agreed list of marks.*

The following protocol should be adopted:

**4.8.1** Scripts should be annotated to indicate that first and second marking has taken place.

**4.8.2** Different coloured pens should be used by the first and second marker.

**4.8.3** Where marks cannot be agreed, a third party (for example, the subject coordinator) will act as moderator.

**4.8.4** The cover sheet should be completed to indicate the first and second markers for each question.

## **5. Responsibility**

5.1 Responsibility for implementing the recommendations of this Code of Practice, both in setting the questions and marking the scripts, rests with the person named in the Examination Timetable as the 'Person Responsible'. He/She must consult with all other examiners involved with the paper. This shared responsibility for setting and marking obviously extends to proof-reading the examination paper. Errors and omissions will have to be explained to the Board of Examiners.

5.2 Even if the questions for a paper are to be set by a single examiner, College regulations require that every paper must be vetted by at least two examiners so as to help remove undue bias and avoidable errors.

5.3 A cover sheet has been provided for these purposes and must be used to confirm that the procedures described have been followed.

## 6. Data Protection

6.1 College instructions for examinations state that:

*“The College and all Examiners are required to comply with the Data Protection Act 1998 (DPA98) and process all personal data, including examiners’ comments, examination marks and results, in accordance with the Data Protection Principles set out in the Act.”*

6.2 Examiners should be aware that the Data Protection Act allows, in certain cases, for students to see their scripts. Examiners should ensure therefore that only those comments which are appropriate to a question and its answer are recorded, and are accurate.

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