

UoYClosedExam: Type-setting university examinations

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1 Introduction

This document describes a L^AT_EX2e document class, UoYClosedExam, that supports the typesetting of University of York examination papers. It does this by:

- enforcing style rules;
- Providing containers for questions, and parts of questions.
Each numbered container may be the target of a `\label` declaration.
- helping manage marking notes and answers; and
- checking that enough marks are awarded to parts of questions.

The difference between the number of marks allotted for a question and the sum of the number of marks declared for each part within a question is reported to the log file. A positive number means not enough marks allocated in the parts; a negative number means too many marks allocated in the parts. This difference is not meaningful for questions with no sub-parts.

2 Class options

The class options are given in Table 1. As most options are passed through to the underlying KOMA-Script class file, font size, for example can be changed from the default of 12pt by an option such as “`fontsize=16`”.

3 Front page

The front page is controlled by declarations that appear in the preamble. The declarations are listed in Table 2, and are presented in blocks. Exactly one declaration must appear from each block, up to and including the block headed “Booklet”. At least one declaration must be present from the block containing degree titles; \AND should be used only to separate the last two degree titles, if more than one. Any number, including zero, declarations may be present from the blocks headed “\Rubric” and “\Supplies”.

If \Sectioned is declared, then a list of the sections is printed, together with the rubric: “Answer each Section in a **separate** answer booklet.” To get the list of sections, the file will have to be processed twice, in the usual L^AT_EX fashion for tables of contents, and so on.

4 Sections

The “\Sectioned” declaration must be given if there are any sections in the examination (see section 3).

Individual sections are introduced with the command:

```
\section{name}{rubric for section}
```

The section label is generated automatically by L^AT_EX, and may be the target of a \label declaration.

The rubric may be empty, and may contain paragraph breaks. It may also contain the command ‘\SeparateAnswerBook’ which generates the text: “You must answer this section in a **separate** booklet.”

5 Questions

5.1 Outlines

Questions are typeset using the environment ‘question’:

```
\begin{question}{marks—as—numeral}{rubric—as—long—text}  
  body of question  
\end{question}
```

Option	Effect
answers	produce answers; watermarks the whole document
noanswers	default; does not produce answers; no watermark
KOMA-Script option	passed to the underlying document class, scrartcl

Table 1: Class options for UoYClosedExam

Declaration	Comment
\Maccode{Text}	Module code
\Examyyear{Text}	e.g. 2015— — 16
\Title{Text}	Name of module and subheading
\Duration{Time}	Free text (deprecated)
\OneHour	ONE hour
\OneHourHalf	ONE hour and THIRTY minutes
\TwoHour	TWO hours
\TwoHourHalf	TWO hours and THIRTY minutes
\ThreeHour	THREE hours
\Booklet{Text}	Free text (deprecated)
\GreenBooklet	Requests longer green-covered answer booklet.
\BluePerQ	Requests a shorter blue-covered answer booklet per question.
\BluePerS	Requests a shorter blue-covered answer booklet per section.
\BEng	Use these to construct list of applicable examinations.
\BSc	E.g. \BEng\AND\BSc,
\MEng	\BSc,
\MMath	\MEng\MMath\AND\MSc
\MSc	
\AND	Must separate the last two degrees, if more than one.
\Rubric{Text}	Free text (may have paragraph breaks).
\Sectioned	For papers to be sectioned, for separate marking.
\Resit	Paper to be sat as resit.
\Secure	Paper not to be released from examination hall.
\Supplies{Text}	Free text (deprecated)
\Calculator	
\GraphPaper	
\ScrapPaper	

Table 2: Declarations for the front matter

5.2 Bodies

Question bodies can either be straight text (perhaps for an essay question) or a series of parts. Parts are numbered by lower case roman numerals.

Each part has the form:

`\part text of part`

or

`\part[mark for part] text of part`

The *mark for part* must be a numeral.

Any normal \LaTeX commands can be included in “*text of part*”.

Two environments for use within *text of question* or *text of part* are ‘options’ and ‘sequence’. These are for a choice of optional and sequence of compulsory subparts, respectively.

`\begin{options}`

`\opt text of optional part 1`

`\opt text of optional part 2`

...

`\end{options}`

`\begin{sequence}`

`\bit{mark for compulsory part 1} text of compulsory part 1`

`\bit{mark for compulsory part 2} text of compulsory part 2`

...

`\end{sequence}`

6 Marking notes

The printing of marking notes is controlled by a pair of class options: ‘answers’ and ‘noanswers’ (see section 2). The marking notes contain all the Section, Question and Part, option and sequence numbers and headings, including marks and rubrics.

The model answers also contain any comments placed in the main body of text using `\ans{...}` and environment `answer`. They may be used as follows:

What is $2+3$?
`\ans{2+3=5}`

Give the quicksort algorithm in Ada.

`\begin{answer}`

...Ada code and other comments.
`\end{answer}`

Floats (constructs such the \LaTeX environments `figure` and `table`) and footnotes are not supported in the model answers. Commands such `\newpage` are supported.

7 Continuation indicator

If a question is broken over an odd page the foot must contain the text “Continued.”, otherwise an odd foot should contain the text “Turn over.”. The `UoYExamination` class tries to manage this, but does not always succeed. In cases when it does not, one of the two following declarations should be given to force the right message to appear. The declaration should be placed next to text which is known to appear on the page with the incorrect message:

Declaration	Message produced
<code>\TurnOver</code>	Turn over.
<code>\Continued</code>	Continued.