

Manual for `uoftexam.sty`
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1. Introduction

`uoftexam.sty` is a L^AT_EX 2_ε style file for typesetting tests and exams in the style required by the University of Toronto Faculty of Arts and Science. The latest version is available at <http://www.economics.utoronto/osborne/latex>.

You specify the name of the course, the type of exam, the questions¹, and the number of points for each question. The style

- marks the pages in the right way (“page k of n ”)
- puts the number of pages and number of questions in the exam on the cover page
- reports the total number of points on the exam
- puts the correct statement at the end of the exam
- optionally prints a table on the front page with the list of question numbers, the number of points each question is worth, and space for a grader to enter the number of points a student obtained.

If you include solutions after the questions, these can be printed by including a option when the package is loaded.

Macros to leave space on the exam for the students to write their answers are provided.

2. Installation

- Put `uoftexam.sty` in a directory from which T_EX reads input files. (In MiKTeX the directory might be something like `\miktex\localtexmf\tex\latex\` or a subdirectory thereof. If you don’t know the directory, search on your system for files with extension `sty`; look at the directories in which such files exist and choose the most promising one.)

¹Suggestions are welcome on how to modify the style so that it makes up the questions.

- Let T_EX know that `uoftexam` has arrived. (In MiKTeX, “refresh the filename database”.)
- To use the package in a document, put the line `\usepackage{uoftexam}` in the preamble.

3. Document structure

A document should start by specifying the style:

```
\begin{document}
\documentclass[12pt]{article}
\usepackage{uoftexam}
```

The last line may be replaced by

```
\usepackage[<options>]{uoftexam}
```

where `<options>` is a comma-separated list of strings from the set `{draft, PointsAtRight, solutions}`. For example, you can say

```
\usepackage[draft, solutions]{uoftexam}.
```

For the effects of the options, see Section 5.

Next come the parameters of the course and the exam type:

```
\Course{ECO 299H1 S}{Game Theory}
\Instructor{Martin J. Osborne}
\TestName{TERM TEST 1}
\Date{February 2000}
\Time{75 minutes}
\Aids{No aids allowed}
\QToBeAnswered{all}
\SpInstructions{{\bfseries To obtain credit, you must give
arguments to support your answers.}}
\Test
```

As an alternative to `\Test`, you may use `\WriteOnTest`, `\Final`, or `\WriteOnFinal`.

The commands ending in `Final` ignore the `\TestName` parameter, which can be omitted. The commands beginning `\WriteOn` put a header at the top of the page for a student to write her name, student ID, and signature.

The argument of `\SpInstructions` may be empty.

Now, if you wish, you can put a table with the points on each question, by including the line

`\PointTable`

(This command takes the points from the numbers you enter in the body of the test, below). If the table doesn't fit on the cover page and you need to split it, put an optional argument after `\PointTable` giving the number of columns—for example,

`\PointTable[2]`

If you like, you can next put

`\nextpage`

to start a fresh page (probably a good idea for a write-on test).

Now the body of the test starts. It consists of a list of questions, after each of which a number of points is indicated in parentheses. For a write-on test, space for students to write their answers is specified by adding `\pad` where you want the space, and `\nextpage` where you want a new page to start. Thus for a write-on test you might have:

```
\begin{enumerate}
\item \begin{enumerate}
  \item (30) Show that every finite strategic game has
    a mixed strategy Nash equilibrium.
  \pad
  \item (10) Show that not every finite strategic game has
    a pure strategy Nash equilibrium.
  \pad
\end{enumerate}
\item (70) Show that every trembling hand perfect equilibrium
  of an extensive game induces a sequential equilibrium.
\pad
\end{enumerate}
```

(For a test on which the students will not write their answers, the pads are not needed.)

Finally, end the document:

```
\end{document}
```

You may add material after the `\end{enumerate}` (material to which the students may refer during the exam), but this material cannot include any `enumerate` environment.

If a question continues from one page to the next, the command

```
\qcontnextpage
```

instead of `\nextpage` will put a statement at the bottom of the page that the question continues on the next page. Similarly

```
\scontnextpage
```

puts a statement that space for the answer continues on the next page at the bottom of the page.

If students write their answers on the exam paper, you may wish to include some pages for rough work at the end. You may do so by including the command

```
\roughpage{Text to go at top of page}
```

(The text might, for example, be “**Page for rough work (will not be graded)**”). You can also of course produce the same effect manually; using the `\roughpage` command has the advantage that under the `draft` option nothing will print.

You can include a solution after a question by making it an argument of the `\solution` command. For example,

```
\solution{All strategy pairs are Nash equilibria.}
```

Then if the `solutions` option is included in the preamble (see Section 5) the solutions will be printed; if this option is not included, the solutions will not be printed. (Note that if you wish to include a strategic game using my `\begin{game} ... \end{game}` macros as an argument of `\solution`, you will need to use the package `sgamevar` rather than `sgame`.)

You need to compile your exam two or three times to resolve the (implicit) cross-references used to put the number of questions on the first page, etc. At the end of a compilation you’ll see on the screen a report of the total number of points on your exam.

4. Using the itemization environment

The package redefines `\item`. If you wish to use the `itemization` environment within a question or a solution you need to use `\xitem` (which functions in that way that `\item` normally does) instead of `\item` to start each item.

5. Options

The style has three options. You invoke them by including their names in a comma-separated list in brackets between `\usepackage` and `{uoftexam}` in the preamble. For example, you can specify

```
\usepackage[draft,solutions]{uoftexam}
or
\usepackage[PointsAtRight]{uoftexam}.
```

draft Spaces left in the exam for students to write their answers are ignored, if there are any such spaces. (This option allows you to print a draft without using a lot of paper.)

solutions The solutions to the question (as specified as arguments of the `\solution` command) are printed.

PointsAtRight The number of points a question is worth is printed not immediately after the question number, as in the default style, but right-justified at the end of the question. **This option requires the text of each question to be enclosed in braces, as in the following example.**

```
\begin{enumerate}
\item \begin{enumerate}
\item (30) {Show that every finite strategic game has
a mixed strategy Nash equilibrium.}
\pad
\item (10) {Show that not every finite strategic game has
a pure strategy Nash equilibrium.}
\pad
\end{enumerate}
\item (70) {Show that every trembling hand perfect equilibrium
of an extensive game induces a sequential equilibrium.}
\pad
\end{enumerate}
```

6. History

Version 1.0, 2000/1/29 Developed from a style written in 1996.

Version 1.1 2000/3/19 `\PointTable` reimplemented as an alignment, with split between two tables allowed via optional argument giving number of columns.

Version 1.2 2005/1/28 Added `PointsAtRight` option (at suggestion of Jonathan Lau).

Version 1.3 2005/2/28 Added `solutions` option and `\solution` macro (at suggestion of Alex Maynard), and `\roughpage` macro.

Version 1.4 2005/3/19 Added `\xitem` macro to handle itemizations (or other uses of `\item`).