

CSS322 – Example Quiz

Name: _____ ID: _____ Marks: _____ (20)

This style/template allows you to write a single \LaTeX file for a quiz (or other assessment item) that is then used to produce multiple variants of question sheets, as well as a single answer sheet. The variants are used to give different questions to different sets of students. For example, you can create a quiz that has 3 questions (each with multiple parts), and where the first 2 questions are the same on each variant of the quiz, while the last question has 4 different variants. Four question sheets will be produced (typically referred to in this template as variants a, b, c and d), as well as a single answer sheet (which may include the answers for all variants).

This is best explained via examples, as you will see in the following questions.

Question 1 [2 marks]

This is a simple question that will be the same across all variants. To start a question use the `\question{n}` command, where n is the number of marks for that question. For example, the heading you see above with 2 marks allocated was created using:

```
\question{2}
```

Normal \LaTeX code can be used in a question.

Now lets look at how answers can be included. There are several options, illustrated below.

(a) What is $4 + 5$?

(b) What is $4 + 5$?

(c) What is $4 + 5$?

Look at both the question sheet and the answer sheet to compare these three options.

In part (a), the answer was created using the command `\qans{9}`. In the answer sheet, this command prints the word **Answer.** followed by the specified value in the command. In the question sheet, the answer is obviously not included.

In part (b), the answer was created using the command `\qansbox{30}{9}`. In the answer sheet, this produces the same output as using `\qans{9}`. However in the question sheet, 30mm of vertical space is created after the question, leaving the student space to write their answer. You may need to trial-and-error to find the appropriate amount of space that should be printed (this gets a bit harder when dealing with multiple pages and figures).

In part (c), the answer was created using the command `\qansshort{9}`. In the answer sheet, this prints just the value (in italics) next to the question, useful for short answers. In the question sheet, it produces the same output as `\qans{9}`.

Question 2 [3 marks]

How do you create the separate question and answer sheets?

Question 3 [3 marks]

Now lets look at creating question variants. The first approach will be to use different values in the same question. For example, you want a quiz question that is essentially identical for all students, but the numbers in the question change. Lets assume you want three different variants, as illustrated in the following example.

- (a) What is $6 + 2$?

This question was created using the command `\qvariii{}{}{}{}`, which means “a question with iii (3) variants”. When you compile the \LaTeX file using the `ans` variant, the answer sheet will show all three variants in square brackets (as well as showing the answer). When you compile the file using the variant `a`, then the first question, $4 + 5$, will be displayed. Using variant `b` will display $6 + 2$, and using variant `c` will display $5 + 1$.

Currently the number of variants supported is from 2 to 6, i.e. the commands:

- `\qvarii{}{}{}`
- `\qvariii{}{}{}{}`
- `\qvariv{}{}{}{}{}`
- `\qvarv{}{}{}{}{}{}`
- `\qvarvi{}{}{}{}{}{}{}`

Question 4 [2 marks]

Another way to create question variants is to create entire questions that differ. To do so, you can specify that you want text to appear in only one specific variant.

- (a) This question will appear only in the question sheet for variant **b**. It was produced using the command `\qonlyx{b}{question text}`.

All of the above questions appear in the answer sheet, but they only appear in the question sheet of the variant specified.

Sometimes you may want to re-use a question across two variants. Here is an example:

- (b) This question will appear only in the question sheet for variant **b**. It was produced using the command `\qonlyx{b}{question text}`.

Question 5 [1 marks]

When dealing with variants, it is highly recommend to use the same number across all questions in the quiz. For example, if you want 3 variants, then you may use commands:

- `\qvariii{}{}{}`
- `\qonlyx{a}{}{}`
- `\qonlyx{b}{}{}`
- `\qonlyx{c}{}{}`
- `\qonlyxory{a}{b}{}{}`
- `\qonlyxory{a}{c}{}{}`
- `\qonlyxory{b}{c}{}{}`

If using the above commands, you should *not* use commands that are specific to another number of variants, e.g. `\qvarii{}{}{}`, `\qonlyx{d}{}{}`.

Question 6 [2 marks]

Now lets return to the answers, and look at two specific types of answers. First, is for creating question which require filling in the blanks.

- (a) The capital city of Thailand is _____.
- (b) The capital city of _____ is Bangkok.

The above two questions made use of the command `\qansalt{}{}{}`, which includes the first option in the question sheet and the second option (in italics) in the answer sheet. In these examples the first option was a horizontal line created with `\rule{width}{thickness}`, to allow the student space to write an answer.

The next type of answer is useful when creating multiple choice questions.

- (c) What is $4 + 5$?
- i. 4
 - ii. 7

- iii. 9
- iv. 10
- v. 8

(d) What is the capital of Thailand?

- i. Singapore
- ii. Bangkok
- iii. Tokyo
- iv. Taipei
- v. Phnom Penh

The correct answer in the multiple choice was specified using the command `\qansmc{}`. In the question sheet, all possible answers are printed the same. In the answer sheet, the correct answer is shown in **bold**.

Question 7 [5 marks]

This question contains cut down examples of all the question and answer types that you may use as templates.

Answer types:

- (a) Question text
- (b) Question text

- (c) Question text
- (d) Question text _____
- (e) Multiple choice question

- i. Option 1
- ii. Option 2
- iii. Option 3 (correct)
- iv. Option 3

Question variants:

- (f) Question with 3 variants b
- (g) Question included in 2 variants