

## Tests/Surveys - Question types in VITAL

This guide is a companion to the **Test tool - create, run and assess** and **Survey** "How to" guides. There are 17 question types that can be used in a VITAL test or survey, briefly summarised here and with links to full details in the guide below. All question types have the complete text editor functionality for creating the question. For tests to be deployed with mobile devices please see the separate guidance to Mobile tests and question types.

The most frequently-used question types are Multiple Choice, Multiple Answer and Essay, along with Hotspot and Fill in the Blanks. Some of these questions types are variations of each other such as Multiple Answer and Multiple Choice.

You can also get full details on a question type when you are creating the question by clicking on the **More Help** link at the top of the question creation page, as shown here.

### Create/Edit True/False Question

A True/False question displays two answer options: true and false. There is no partial credit options for True/False



### Question types overview - click title to see full details

### **Question types - detailed descriptions**

### **Calculated Formula**

Questions contain a formula with variables that change for each user so each student's answer can be different. E.g. "If a small glass contains [X] ounces of water and a large glass contains [Y] ounces of water, what is the total number of ounces in [Z] large and [W] small glasses of water?" The system fills in numbers for each variable within a range you specify. The student must work out the answer.

10 points Save Answer

| E | xample  |                |        |
|---|---|----------------|--------|
| Ģ | Question 17   | 10 points      | Save   |
|   | If a small glass contains 11 ounces of water and a large glass contains 17 ounces of water, what is the total number of ounces in 67 large and 87 sma | all glasses of | water? |

### Options

| Automated Marking?        | YES |
|---------------------------|-----|
| Negative Marking?         | NO  |
| Partial Credit Available? | YES |

### Extra Info

Also includes the Wiris maths editor to create the question. Partial Credit answer range can be specified (if answer is within certain limits a partial credit can be given). An option to include the student specifying the correct units. Click here for Video on how to create this question type

### **Calculated Numeric**

Questions resemble a fill-in-the-blank question. The user enters a number to complete a statement. The correct answer can be a specific number or within a range of numbers.

| Example   |                       |
|---|-----------------------|
| Question 16   | 10 points Save Answer |
| The answer to this question is a number. Enter your response as r | numeral.              |
| 6 plus 7 equals   |                       |
|   |                       |
| Options   |                       |
| Automated Marking? YES  |                       |
| Negative Marking? NO  |                       |
| Partial Credit Available? NO                                      |                       |
| Extra Info  |                       |
| <u>Click here for Video</u> on how to create this question type   |                       |

### Either/ Or

Students are shown a statement and must select one of two pre-defined answers: e.gs True/False, Yes/No, Agree/Disagree or Right/Wrong.

## Example Question 15 10 points Save Answer Cucumbers can be grown outdoors in the UK. Agree Disagree Options Automated Marking? YES Negative Marking? NO Partial Credit Available? NO

### Extra Info

N/a

### Essay

Students write extended free text in response to your question/statement. A model answer can be provided for feedback after the test.

### Example

| estion ′                                   | 14  |      |     |     |     |     |    |               |     |    |    |       |      |      |     |     |                  |      |      |     |     |     |     |      |     |    |    |     |     |        |    | 10 | point | ts | Sa       | /e A | nsv  | /er   |
|--|-----|------|-----|-----|-----|-----|----|---------------|-----|----|----|-------|------|------|-----|-----|------------------|------|------|-----|-----|-----|-----|------|-----|----|----|-----|-----|--------|----|----|-------|----|----------|------|------|-------|
| You  | ha  | /e   | hal | far | ho  | oui | to | o v           | vri | te | an | ess   | ay o | on 1 | the | lif | ecy              | /cl  | e a  | nd  | con | tro | ١o  | f th | e c | ab | ba | ge  | wh  | itefly | y. |    |       |    |          |      |      |       |
| $\mathbf{T}$                               | Т   | 2    | 2   | Ŧ   | P   | ara | gr | ap            | h   | Ŧ  |    | Arial |      |      | *   | 3   | 6 (12            | 2pt) | )    |     |     | •   | 123 | Ξ    | •   | т  | Ŧ  | ø   | •   | ٢      |    |    |       |    | <b>_</b> | i    | 20   | \$    |
| Ж  | D   | [    | 1   | Q   | K)  |     | 31 |               | F   | Ξ  |    | ≣     |      | È    | 4   |     | $\mathbf{T}^{x}$ | I    | x    | 0   | 25  | Þ   | T   | ¶٩   | -   |    | _  | L   | A A | 7      |    |    |       |    |          |      |      |       |
| $f_x$                                      | 0   | • Ma | shu | ps  | Ŧ   | T   | (  | 6             | 0   |    | 3  | Ĵ     | Ħ    |      |     |     |                  |      | •    |     | •   |     |     |      |     |    |    | нтм |     | 5      |    |    |       |    |          |      |      |       |
| Path                                       | : p |      |     |     |     |     |    |               |     |    |    |       |      |      |     |     |                  |      |      |     |     |     |     |      |     |    |    |     |     |        |    |    |       |    |          | Wo   | ords | :0 // |
| ons<br>mated<br>ative M<br>ial Cre         | lar | kir  | ۱g? | Ū   | ole | ?   | Ν  | 10<br>0<br>10 |     |    |    |       |      |      |     |     |                  |      |      |     |     |     |     |      |     |    |    |     |     |        |    |    |       |    |          |      |      |       |
| <sup>r</sup> a Info<br><mark>k here</mark> | fo  | or ' | /ic | lec | 0   | n   | าด | w             | ′t  | 0  | cr | eat   | e tl | his  | q   | ue  | sti              | or   | n ty | /pe | ò   |     |     |      |     |    |    |     |     |        |    |    |       |    |          |      |      |       |

| Example                                 |          |                            |                      |          |           |             |
|---|----------|----------------------------|----------------------|----------|-----------|-------------|
| Question 13                             |          |                            |                      |          | 10 points | Save Answer |
| Please upload your                      | complete | ed lab report template asy | our answer to this q | uestion. |           |             |
| Attach File                             |          | Browse My Computer         | Browse Course        |          |           |             |
| Options                                 |          |                            |                      |          |           |             |
| Automated Marking?<br>Negative Marking? | NO<br>NO |                            |                      |          |           |             |
| Partial Credit Available?               |          |                            |                      |          |           |             |

### Fill in Multiple Blanks

Create text which has a number of single words (or very short phrases) blanked out throughout it. Students must type in the missing words to complete the sentence.

| Example  |                |              |
|--|----------------|--------------|
| Question 12  | 10 points      | Save Answer  |
| There are three main groups of crops that must be around the plot. These are .   | ,              | and          |
| <b>Options</b><br>Automated Marking? YES<br>Negative Marking? NO<br>Partial Credit Available? YES  |                |              |
| <b>Extra Info</b><br>Each student response can be evaluated through either 'exact', 'contains' and 'pa<br>to reduce workload of entering all possible Student answers. Also can specify case<br><u>See this note on pattern matching</u> for more information.<br><u>Click here for Video</u> on how to create this question type. |                | •            |
| (Text below copyright Blackboard 2013)<br>Fill in Multiple Blanks questions have two parts: the question and the set of answer<br>that it is apparent where the answer goes. Variables must be unique and placed w<br>Separate sets of answers are defined for each variable. Bracketed variables appear<br>students.              | ithin square b | rackets [ ]. |

Example question: In first aid, the mnemonic ABC stands for [A], [B], and [C].

### Variables

Variables must be composed of letters, digits (0-9), full stops (.), underscores (\_) and hyphens (-). No spaces are allowed in the variable name. Up to 10 variables can be included in the question. If the left square bracket ([) character appears in the variable but is not used to identify a variable, it must be preceded by a back slash to prevent the system from reading the text following it as a variable. Variable names must be unique and cannot be reused within the question.

### **Answer Sets**

As many as 20 different answers can be added for each variable in the question. To add more than one answer, select from the **Number of Answers** drop-down list. To delete an answer, click **Remove**. For each answer you select **Contains**, **Exact Match**, or **Pattern Match** to specify how the answer you specify is evaluated against the student's answer. For Contains and Exact Match check the box if the answer is **Case Sensitive**.

Keep the answers simple and limited to as few words as possible. Limit answers to one word to avoid extra spaces between words or the order of the words in the answer causing a student answer to be scored as incorrect.

- Provide additional answers that allow for common spelling errors or select **Pattern Match** from the drop-down list in the answer to create a regular expression that allows for spelling variations.
- Select **Contains** from the drop-down list in the answer to allow for abbreviations or partial answers. This option counts the student's answer as correct if it includes the word or words you specify. For example, set up a single answer that contains Franklin so that Benjamin Franklin, Franklin, B Franklin, B. Franklin, and Ben Franklin are all counted as correct answers. This eliminates the need for you to list all acceptable possibilities for the answer Benjamin Franklin.

### Fill in the Blank

Create text where one word (or one very short phrase) is a blank which the students must type in the answer box to complete the sentence.

### Example

| Question 11  | 10 points Save Answer |
|--|-----------------------|
| A solution of can be used as an effective deterrent for blackfly on broad beans. |                       |
|  |                       |

### Options

| Automated Marking?        | YES |
|---------------------------|-----|
| Negative Marking?         | NO  |
| Partial Credit Available? | NO  |

### Extra Info

The student response can be evaluated through either 'exact', 'contains' and 'pattern' matching options to reduce workload of entering all possible Student answers. Also can specify case sensitivity in the answer. <u>See this note on pattern matching</u> for more information.

Phrase the question so that it is apparent where the answer goes in the context of the question and so that there is only one answer.

Click here for Video on how to create this question type

### (Text below copyright Blackboard 2013)

To add more than one answer, select from the **Number of Answers** drop-down list. To delete an answer, click **Remove**. For each answer, you select **Contains**, **Exact Match**, or **Pattern Match** to specify how the answer is evaluated against the student's answer. For Contains and Exact Match, check the box if the answer is **Case Sensitive**.

Keep the answers simple and limited to as few words as possible. Limit answers to one word to avoid extra spaces between words or the order of the words in the answer causing a student answer to be scored as incorrect.

• Provide additional answers that allow for common spelling errors or select **Pattern Match**from the

drop-down list in the answer to create a regular expression that allows for spelling variations. Select **Contains** from the drop-down list in the answer to allow for abbreviations or partial answers. This option counts the student's answer as correct if it includes the word or words you specify. For example, set up a single answer that contains Franklin so that Benjamin Franklin, Franklin, B Franklin, B. Franklin, and Ben Franklin are all counted as correct answers. This eliminates the need for you to list all acceptable possibilities for the answer Benjamin Franklin.

### Hot Spot

Student is shown an image and asked to select a specific point on the image as their answer. A range of pixel coordinates is used to define the correct answer. Hot Spot refers to the area of an image that, when selected, yields a correct answer.



<u>Click here for Video</u> on how to create this question type

### Jumbled Sentence

Students are shown a sentence where some sections are a drop-down list from which they must select the correct word or phrase for that part of the sentence. Only one set of answers is used for all of the drop-down lists.

### Example

| схатре   |  |                               |
|--|--|-------------------------------|
| Question 9   |  | 10 points Save Answer         |
| to ensure that you can have so   |  | nost crops will have finished |
| and none yet begun. Crops tha  | 5  | d alpine varities of          |
| ✓ like Gigante de  | el Invierno. Crops can be left in the ground until late in the winter such as son brassicas<br>brassicas<br>leek | ike bikores.                  |
| <b>Options</b><br>Automated Marking?<br>Negative Marking?<br>Partial Credit Available? | YES<br>NO<br>YES   |                               |
| Extra Info   |  |                               |
| Click here for Video on  | how to create this question type   |                               |

| N | la | tc | hi | n | g |
|---|----|----|----|---|---|
| - |    |    |    |   |   |

|  | Students pa | ir items in | one column | to items ir | n another | column. |
|--|-------------|-------------|------------|-------------|-----------|---------|
|--|-------------|-------------|------------|-------------|-----------|---------|

| Exam   | ple  |
|--------|------|
| EXCALL | P.C. |

| uestion 8                              | 10 points Save A             | nswer |
|--|------------------------------|-------|
| Pair the varieties against the type of | vegetable.                   |       |
| - 🗸 Wonderwax.                         | A. Summer Ball               |       |
| -                                      | B. Elsanta                   |       |
| - 🗸 Detroit                            | C. Purple Sprouting Broccoli |       |
| - 🗸 The Sutton                         | D.Broad Bean                 |       |
| - 🔽 Red Arrow                          | E. American Yellow Bean.     |       |
| -<br>A.<br>B.                          | F. Pea                       |       |
| в.<br>С.<br>D.<br>Е.                   | G. Beetroot                  |       |
| F.<br>G.                               |                              |       |

Options

Automated Marking?YESNegative Marking?YESPartial Credit Available?YES

Extra Info

Distractor (non-matching) items can be included. Letters and numbers can be customised (i.e. A,B,B or I, II,III etc).

<u>Click here for Video</u> on how to create this question type

### **Multiple Answer**

Students pick **one or more answer(s)** from a list of possible correct answers (up to 100), which they think correctly meets the question criteria.

### Example

| Which of these varieties are beetroot. Your answer can be made up of one or more selections. |  |
|--|--|
|  |  |
| Bikores  |  |
| E Kelvedon   |  |
| None of these  |  |
| French breakfast   |  |
| Chioggia   |  |

### Multiple Choice

Students pick **only one answer** from a list of possible correct answers (up to 100), which they think correctly meets the question criteria.

### Example

| Questic | on 6              |                       | 10 points | Save Answer |
|---------|-------------------|-----------------------|-----------|-------------|
| v       | Which of these va | arieties is a potato? |           |             |
|         | Striata di italia |                       |           |             |
|         | Streamline        |                       |           |             |
|         | Kestrel           |                       |           |             |
|         | Gentleman         |                       |           |             |

| Automated Marking?        | YES |
|---------------------------|-----|
| Negative Marking?         | YES |
| Partial Credit Available? | YES |

### Extra Info

<u>Click here for Video</u> on how to create this question type

| <b>Opinion Scale/ Likert</b><br>Non-graded question - a rationstatement.  | ng-scale based response designed to measure attitudes or                  | reactions | to a        |
|---|---|-----------|-------------|
| Example   |   |           |             |
| Question 5  |   | 10 points | Save Answer |
| How difficult would you rate  | e the questions in this test, on balance?                                 |           |             |
| 💿 1. Agree 💿 2. Neither Agr   | ree nor Disagree 💿 3. Disagree 💿 4. Strongly Disagree 💿 5. Not Applicable |           |             |
| OptionsAutomated Marking?NONegative Marking?N/Partial Credit Available?N/ | -   |           |             |
| 5 5 7   | creating surveys rather than tests.<br>to create this guestion type       |           |             |

**Ordering** Students order a list of items according to the criteria you set e.g. rank a list in terms of size, smallest to largest.

### Example

| Question 4   |                           | 10 points | Save Answer |
|--|---------------------------|-----------|-------------|
| Order these animals by size, sta<br>-  -<br>Blue Whale.                                | arting with the smallest: |           |             |
| - ▼<br>Cat.  |                           |           |             |
| - 💌<br>Lion.   |                           |           |             |
| - 🔻<br>Mouse.  |                           |           |             |
| <b>Options</b><br>Automated Marking?<br>Negative Marking?<br>Partial Credit Available? | YES<br>NO<br>YES          |           |             |
| Extra Info<br>Click here for Video on h  | now to create thi         | s quest   | ion type    |

### Quiz Bowl

You state the answer to a question and students must create the correct question to that answer. Part of the answer includes at least one interrogative (such as who, what, or where) An answer must include a phrase and a question word to be marked as correct.

### Example

# Question 3 10 points Save Answer In this item, you are given the answer and you must devise the question. In this item, you are given the answer and you must devise the question. The answer is: "Andrew Ritchie". Image: Comparison of the provided of the p

### Short Answer

Similar to essay questions but *the size of the student's answer text box can be limited to a specified number of rows*. A model answer can be provided for feedback after the test.

### Example Question 2 10 points Save Answer Summarise the ways in which a Learning Management System can organise resources for students. Please write no more than 500 words in your answer. T T T T Paragraph - Arial - 3 (12pt) - Ξ - Ξ - T - 🖋 - 🗶 🖵 i 🖾 🗇 🗶 🗅 🏚 🗢 🖙 듣 듣 듣 듣 듣 듣 T T T 🖉 🖉 🗠 🕶 🕶 🗕 — 🗆 🖤 -Path: p Words:0 Options Automated Marking? NO Negative Marking? NO Partial Credit Available? Extra Info Can attach Rubric card for marking. Click here for Video on how to create this question type

### True/ False

Questions take the format of a statement and user must choose either true or false option to answer. Answer options are limited to the words True and False.

### Example

| Question 1   | 10 points | Save Answer |
|--|-----------|-------------|
| 'Detroit' is a variety of beetroot. True or false? |           |             |
| o True o False                                     |           |             |
| Options  |           |             |
| Automated Marking? YES                             |           |             |
| Negative Marking? NO                               |           |             |
| Partial Credit Available? NO                       |           |             |
| Extra Info   |           |             |
| Click here for Video on how to create this quest   | ion type  |             |

### A note on Pattern Matching (Fill in the Blank/Fill in Multiple Blanks)

(Text copyright Blackboard)

Pattern Match is an advanced technique that enables you to use regular expressions when specifying correct answers to allow for some variability in the answers that will be counted as correct. They enable you to count certain patterns as correct, rather than an exact text match. For example, regular expressions enable grading of the wide range of possible answers that are typical of scientific data.

In a regular expression, most characters in the string match only themselves and are called literals. Some characters have special meaning and are called metacharacters. You can conduct an internet search on regular expressions for a complete list. Here are a few examples:

A dot (.) matches any single character except newline characters.

Brackets [] match anything inside the square brackets for one character.

A dash (-) inside square brackets allows you to define a range. For example [0123456789] could be rewritten as [0-9].

A question mark (?) makes the preceding item in the regular expression optional. For example, Dec(ember)? will match Dec and December.

Simple string examples:

b.t - matches with bat, bet, but, bit, b9t because any character can take the place of the dot (.) b[aeui]t matches bat, bet, but, bit

b[a-z]t would accept any three-letter combination that begins with b and ends with t. A number would not be accepted as the second character.

[A-Z] matches any uppercase letter

[12] matches the target character to 1 or 2

[0-9] matches the target character to any number in the range 0 to 9

When you select Pattern Match for an answer, you can click Check Pattern to open a new window where you can test your pattern to be sure it will produce the results you want. After testing and editing the pattern, click Save & Exit to save your modified pattern as the answer.

### Point Values and Extra Credit

Points and extra credit are handled in the Points boxes for each question on the test canvas. By selecting Extra Credit, a correct answer will result in added points as defined in the Points box. An incorrect answer will not result in a point deduction.