



# Designing high quality objective questions

- **Multiple Choice**
- **Matching**
- **Re-order**
- **Gap-fill**



# Some Common Design Issues in Multiple Choice Questions

Each of the following questions contains a design problem, obvious or less obvious, that leads people to be able to spot the “right” answer.



# Question 1

Complete the following statement using one of the options below.

The usual function of grunge-prowkers is to remove

- A. grunges
- B. snarts
- C. trigs
- D. grods



# Q1 answer and observations

Most people pick A.

This is because the option contains a word from the stem, which is a sort of give-away. Therefore avoid using words from the stem in one particular option, especially if it is the correct answer.



## Question 2

Antigrottification occurs on

- A. spring mornings
- B. summer evenings provided there is no rain after dusk
- C. autumn afternoons
- D. winter nights



## Q2 answer and observations

Most people pick B.

This seems to be because it is longer and therefore appears more probable. Therefore, try to keep all options to the same length, within reason. Also, it is a qualified option whereas the others are unqualified; a qualified option may seem more likely to be correct.



## Question 3

Lurkies suffer from trangitis because

- A. their prads are always underdeveloped
- B. all their brizes are horizontal
- C. their curnpieces are usually imperfect
- D. none of their dringoes can ever adapt



## Q3 answer and observations

Most people pick C.

This is mainly because of the word “usually”, which seems more probable than always, none or all. It is best not to mix definites and indefinites, although all definites or all indefinites is fine.



## Question 4

Non-responsive flattling is usually found in an

- A. gringle
- B. janket
- C. kloppie
- D. uckerpod



# Q4 answer and observations

Almost everyone picks D.

The “an” in the stem gives this away. Many questions like this have found their way into print – some even into examinations!



## Question 5

Which of the following are exceptions to the law of lompicality?

- A. the miltrip and the nattercup
- B. the bifid pantrip
- C. the common queeter
- D. the flanged ozzle



# Q5 answer and observations

The most probable option is A.

This is given away by the plurality of the stem, and the singularity of B, C and D.



## Question 6

Which must be present for parbling to take place?

- A. phlot and runge
- B. runge
- C. stuke and runge
- D. runge and trake



# Q6 answer and observations

Most people choose B.

Its a bit harder to explain why this is – it seems to be something along the lines of “if B isn’t right, none of them can be right, as they all involve “runge”. Take care with overlapping options.



## Question 7

One common disorder of an overspragged uckerpod is

- A. copious vezzling
- B. intermittent weggerment
- C. non-responsive frattling
- D. uneven yerkation



## Q7 answer and observations

This is trickier. However, most people go for C. The main reason is that the topic has already come up in Question 4 where the indefinite article gave away the answer. So, take care not to set questions where earlier ones give away the answer.



## Question 8

Which one of these is the correct answer?

A.

B.

C.

D.



# Q8 answer and observations

The correct answer is, of course D!

Most people would have recognised the pattern Q1-A, Q2-B, Q3-C, Q4-D, Q5-A, Q6-B, Q7-C and so on. So, D seems ripe for coming up on question 8.

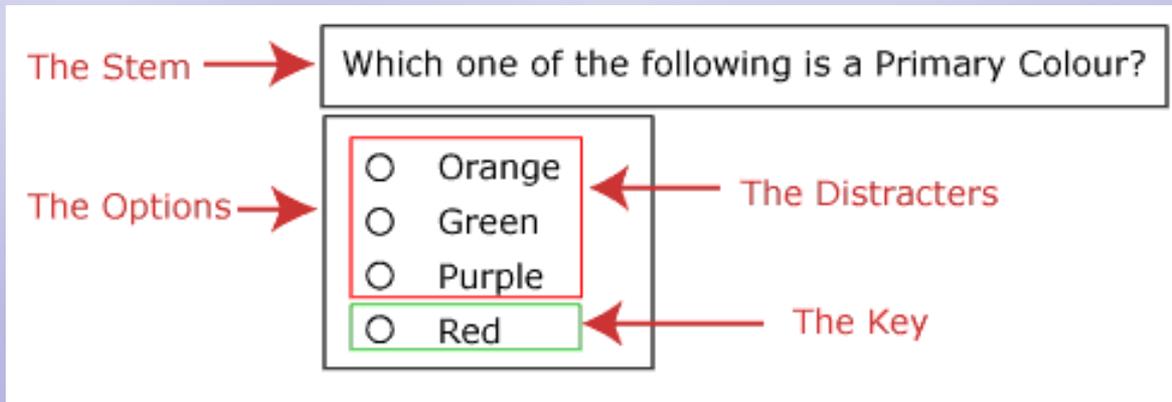


# Traditional Layout of a Multiple Choice Question

A traditional multiple-choice question (or item) is one in which a candidate chooses one answer from a number of choices supplied. A multiple-choice question is commonly described as comprising:

- A stem which is the text of the question;
- Options which are all of the choices provided after the stem;
- The Key which is the correct answer in the list of options; and
- Distracters which are the incorrect answers in the list of options.

## Example of a multiple-choice question



# Key Points for Writing Stems

1. Present a single, definite statement to be completed or answered by one of the several given choices.
2. Avoid unnecessary and irrelevant material.
3. Use clear, straightforward language in the stem of the item.
4. Use negatives sparingly. If negatives must be used, capitalise, underscore, embolden or otherwise highlight.
5. Put as much of the question in the stem as possible, rather than duplicating material in each of the options.
6. Avoid using ALWAYS, NEVER, SOMETIMES, BAD, HIGH, etc. in the stem.



# Key Points for Writing Options

1. For single response MCQs, ensure that there is only one correct option.
2. Use only plausible and attractive alternatives as distracters.
3. Avoid giving clues to the correct answer.
4. If possible, avoid the choices "All of the above" and "None of the above". If you do include them, make sure that they appear as correct answers some of the time.



# Key Points for Writing Distracters

1. Provide a sufficient number of distracters.
2. Do not create distracters that are so close to the correct answer that they may confuse candidates who really know the answer to the question.
3. Distracters based on common candidate errors or misconceptions are very effective.
4. Correct statements that do not answer the question are often strong distracters.



# Writing Matching Questions

Useful when measuring the ability to identify relationships between items with two components.

- ◆ Events and Dates
- ◆ Equipment and uses
- ◆ Terms and definitions
- ◆ People and accomplishments
- ◆ Descriptions and principles

## Remember

*Matching* questions don't allow for discussion or opinion so there has to be absolute agreement on what the match is.



# Writing re-ordering questions

These questions are useful if you need to assess a student's ability to put things in sequence.

For example to demonstrate knowledge of:

- ◆ a process that needs to be followed
- ◆ the chronological order of a series of events

## Remember

*Re-order* questions don't allow for discussion or opinion so there has to be absolute agreement on what the order should be



# Writing gap-fill questions

These questions are useful if you need to assess:

- ◆ the ability to extract relevant information from a passage, diagram or graph
- ◆ knowledge of significant concepts or names
- ◆ understanding of the meaning of a passage or visual prompt

## Remember

For *Gap fill* it is important to consider what words are removed and how many. The wrong choice may mean that there are several possible answers.



# Question 1

Which must be present for combustion to take place?

- A. fuel and heat
- B. heat
- C. oxygen and heat
- D. oxygen, heat and fuel



## Question 2

A joiner is fitting a door. The door frame has measurements of  $2100 \pm 5$  mm high by  $800 \pm 5$  mm wide.

Select all of the doors that the joiner could use.

- A. Door 1: 2098 mm by 796 mm
- B. Door 2: 2104 mm by 801mm
- C. Door 3: 2106 mm by 799 mm
- D. Door 3: 2106 mm by 799 mm



## Question 3

A zoo has 18 lions and 13 tigers.

How many animals in the zoo altogether?





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