A Short Primer on Writing and Assessing Multiple Choice Questions
Psychology 495: Teaching Assistantship - Gurung, R.A. R., 2009

[See Chapter 30. Davis, B. G. (1993). Tools for Teaching. San Francisco: Jossey-Bass.]

1. Make sure that the questions span the different levels of learning.
   - Facts
   - Understanding, synthesis, evaluation

2. Write questions throughout the semester and not just before the exam.
   - Identify key learning goals/facts for chapter/section.
     o Write questions for each learning goal/fact.
   - Write a few before/after every lecture.

3. Have the bulk of the question in the 'stem'.
   - The main facts should be present before the answers are read
   - All relevant material should be in the stem (do not repeat phrases in the alternatives.

4. Limit the number of alternatives.
   - Even 3 choices have been shown to be effective tests.

5. Make the distractors appealing and (mostly) plausible.
   - Distractors should represent common mistakes made by students.

6. Make all choices of roughly equal length and parallel in structure.

7. Do not use 'all the or none of the above" type questions.

8. Try not to use words such as always, never, all, or none.

9. Organize choices conceptually/logically.

10. Avoid negative wording or trick questions.

11. Provide approx 1 minute per question.

Assessment
Item analysis of difficulty 50-70% of class should get it.
   - Badly written question, Concept not taught well, Student did not study.
   - Assess # in Upper (UQ) and Lower Quartile (LQ) columns. UQ >LQ

Difficulty Factor: Proportion that got the question correct. Optimal approx .50
Discrimination Index: Corr. of item with total test. Negative and zero correlations bad.
Reliability: Are all the items tapping into a common concept? (Kuder Richardson)