Designing multiple-choice examinations that assess higher order thinking

Multiple-choice exams are a very important part of the assessor’s toolkit.

Multiple-choice examinations are sometimes critiqued in educational circles because of the concern that they:

- are only testing atomised, fragmentary knowledge
- encourage students to adopt a surface, rote learning approach
- are overused as a convenient or cost-saving method to process student assessment.

Yet multiple-choice exams are a very important part of the assessor’s toolkit, particularly when we want to assess students’ broad-ranging knowledge and understanding, and also when we need to authenticate the identity of the student and ensure it is their own work. They are used extensively and often very effectively in many disciplines in higher education.

The concerns expressed above are usually addressed at multiple-choice exams that are only testing factual knowledge, and have not been designed to assess student abilities such as analysis, critical thinking, problem solving, applying information to new contexts, and so forth.

The sound design of multiple-choice examinations takes considerable expertise. If you are involved with their design, it is worthwhile exploring some of these useful resources that make suggestions about how to design rigorous tests.
Web resources

Writing multiple choice questions that demand critical thinking, University of Oregon

This site makes some useful suggestions about design of multiple-choice questions that demand critical thinking. Note the five different suggestions for types of critical thinking questions:

- premise-consequence
- analogy
- case study
- incomplete scenario, and
- problem/solution evaluation

http://tep.uoregon.edu/resources/assessment/multiplechoicequestions/mc4critthink.html

10 Rules for Writing Multiple Choice Questions, the e-Learning Coach

This site provides guidance to the designer of multiple-choice questions with the aim of making tests more accurate and answer options clear and without hints.

http://theelearningcoach.com/elearning_design/rules-for-multiple-choice-questions/