



Fellowship in Dental Sleep Medicine

Guidelines for writing multiple choice questions

Thank you for volunteering to construct questions for ASA's Fellowship in Dental Sleep Medicine.

Any questions you provide must be based on the learning outcomes that have been allocated to you. Please cover your allocated learning outcomes equally (see attachment). The following information provides guidelines on writing Multiple Choice Questions. Please use the template for your questions. Once you have constructed your questions, it is recommended you request a colleague trial your questions for validity. Please submit your finalised templated questions to ramesh.balasubramaniam@uwa.edu.au

Writing the question

- Write the question simply and clearly without attempting to confuse or trick the candidate (see appendix).
- The question may be stated as such or may be an unfinished statement (the stem).
- The question should be meaningful on its own without having to read the answer choices.
- Remove any irrelevant information from the question.
- State the question in positive terms as negative terms can be confusing and difficult to interpret. Avoid questions with double-negatives.
- Do not give away the answers away in the question.

Writing the correct answer

- The correct answer could be either "evidence-based" or the "best answer" or "which is most likely".
- Avoid giving blatant clues as to the correct option including:
 - the answer being the lengthy and comprehensive one
 - grammar and syntax pointing towards a highly qualified circumstance
 - being the only one to match the stem based on the number of factors required by the correct answer.
- Avoid "all of the above" and "none of the above" answers.
- The correct answer must be independent of other questions in the examination.

Writing the incorrect answers

- Avoid blatantly wrong answers; rather the wrong answers should be plausible distractors.
- Answers that are known to be common misconceptions among candidates make good distractors.
- Answers that do not directly address the question make good distractors.
- Avoid the use of absolute statements (e.g. "Always", "Never", "All") as these types of answers are rarely true and are easily eliminated by the candidate.
- The distractors must be adequately different to the correct answer in response to the questions and not pose a "play on words" to confuse or trick the candidate.
- Avoid absurd and unprofessional distractor answers.
- All distractors answers must be independent and mutually exclusive.

- All distractors must be grammatically similar to the correct answer.

Template for each question

Question	Construct questions based on the learning outcome
Answers	FOUR options for answers (one correct and three incorrect)
Explanation	Explain why the correct answer is correct, and why incorrect answers are incorrect. Explanations will be used to reply candidates who might challenge the validity of the question. The explanation must be cross referenced.
References	You must provide up to 3 references to support your explanation.
Name of Contributor	
Your affiliations	
Email address	

References

Sloman, L (2014) Creating Good Self-Test Questions, King's Health Partners: An Academic Health Sciences Centre for London p1-4.

Case, S.M. & Swanson, D.B (2002) Constructing Written Test Questions For the Basic and Clinical Sciences, Third Edition p.39. Philadelphia: National Board of Medical Examiners.

Jackson, K. (2003) Guidelines for writing multiple choice questions. University of Tasmania, Flexible Education Unit. (Based on Rees, K (1996). Writing Multiple Choice Questions, Deakin Australia, Deakin University)

Appendix: Multiple choice example templates taken from Case & Swanson (2002)

- A (*patient description*) has a (*type of injury and location*). Which of the following structures is most likely to be affected?
- A (*patient description*) has (*history findings*) and is taking (*medications*). Which of the following medications is the most likely cause of his (*one history, PE or lab finding*)?
- A (*patient description*) has (*abnormal findings*). Which [additional] finding would suggest/suggests a diagnosis of (*disease1*) rather than (*disease 2*)?
- A (*patient description*) has (*symptoms and signs*). These observations suggest that the disease is a result of the (*absence or presence*) of which of the following (*enzymes, mechanisms*)?
- A (*patient description*) follows a (*specific dietary regime*). Which of the following conditions is most likely to occur?
- A (*patient description*) has (*symptoms, signs, or specific disease*) and is being treated with (*drug or drug class*). The drug acts by inhibiting which of the following (*functions, processes*)?
- A (*patient description*) has (*abnormal findings*). Which of the following (*positive laboratory results*) would be expected? (*time period*) after a (*event such as trip or meal with certain foods*), a (*patient or group description*) became ill with (*symptoms and signs*). Which of the following (*organisms, agents*) is most likely to be found on analysis of (*food*)?
- Following (*procedure*), a (*patient description*) develops (*symptoms and signs*). Laboratory findings show (*findings*). Which of the following is the most likely cause?
- A (*patient description*) dies of (*disease*). Which of the following is the most likely finding on autopsy?

- A patient has (*symptoms and signs*). Which of the following is the most likely explanation for the (*findings*)?
- A (*patient description*) has (*symptoms and signs*). Exposure to which of the (*toxic agents*) is the most likely cause?
- Which of the following is the most likely mechanism of the therapeutic effect of this (*drug class*) in patients with (*disease*)?
- A patient has (*abnormal findings*), but (*normal findings*). Which of the following is the most likely diagnosis?

Health

- Which of the following immunizations should be administered at this time?
- Which of the following is the most appropriate screening test?
- Which of the following tests would have predicted these findings?
- Which of the following is the most appropriate intervention?
- For which of the following conditions is the patient at greatest risk?
- Which of the following is most likely to have prevented this condition?
- Which of the following is the most appropriate next step in management to prevent [morbidity/mortality/disability]?
- Which of the following should be recommended to prevent disability from this injury/condition?
- Early treatment with which of the following is most likely to have prevented this patient's condition?
- Supplementation with which of the following is most likely to have prevented this condition?

Mechanisms of disease

- Which of the following is the most likely explanation for these findings?
- Which of the following is the most likely location of the patient's lesion?
- Which of the following is the most likely pathogen?
- Which of the following findings is most likely to be increased/decreased?
- A biopsy is most likely to show which of the following?

Diagnosis

- Which of the following is the most likely diagnosis?
- Which of the following is the most appropriate next step in diagnosis?
- Which of the following is most likely to confirm the diagnosis?

Management

- Which of the following is the most appropriate initial or next step in patient care?
- Which of the following is the most effective management?
- Which of the following is the most appropriate pharmacotherapy?
- Which of the following is the first priority in caring for this patient? (eg, in emergency department)