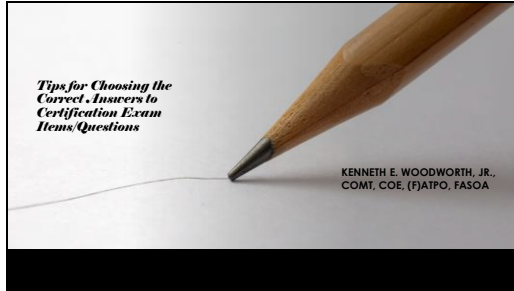
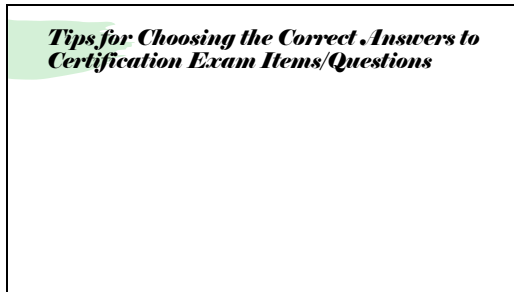


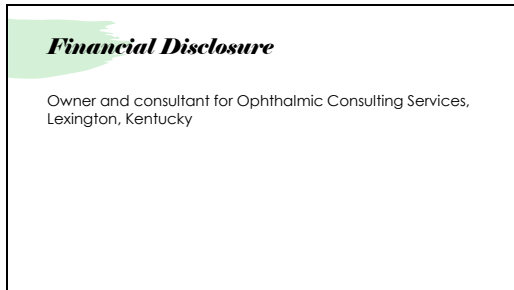
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Slide 2



Slide 3



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***Qualifications to Teach This Course***

- Was a member of and chaired various JCAHPO (now IJCAHPO) Certification Committees over 28 year period. Also served a term as Secretary of Certification
- COE Development Task Force
- NBCOE Charter Member
- Two-term NBCOE Chair (now called President)

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***Definitions***

**SBA** – Single Best Answer  
**Item** – Test question  
**Stem** – The item statement or question  
**Key** – Correct answer  
**Cut score** – The minimum score necessary to pass an exam – moves in opposite direction to overall item difficulty (or should)  
**Alternatives**- Item choices (made up of key + foils/distractors – see below)  
**Foil or distractor** – incorrect alternative

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***Definitions Continued***

**Psychometrician** – An individual, often a PhD, who assists certification agencies with all aspects of test development including, but not limited to, job task analysis, knowledge, skills and abilities (KSAs), item writing, exam validity and reliability, and standard setting.

"I don't know anything about your content, but what I do know is that I can pass your exam."

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***Definitions Continued***

**Sophisticated Distractor** – A foil or distractor that represents a plausible alternative. As sophisticated distractors increase, so also does item difficulty.

Which of the following anatomical structures contributes the most to the eye's refractive power?

- a. Iris
- b. Lens\*
- c. "Ciliary body"
- d. Cornea and its tear film (Key – correct answer)

\*Sophisticated distractors

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***SB.1 HISTORY***

- Years ago most SBA items had 5 alternatives (i.e. possible answers)
- Typical advice: If answer unknown, pick C
- Some items were types typically not used today (e.g. multiple answer items, negatively worded stems and foils).
- Today, four alternatives are typically used; Easier to write and only result in a 5% better chance of guessing correctly.

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***All of the Above, None of the Above***

Rarely used today

- All of the above – If two alternatives are correct, then all the above is the correct answer
- None of the above – If two alternatives are incorrect, then 50/50 chance of correct answer being none of the above

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***Alternative with Most Words***

Often times, the alternative with the most words is the correct answer.

Example:  
An employee left after two weeks on the job. What should be the first thing you do in response?

- Advertise the vacancy\*
- Restart the interviewing process with previous applicants\*
- Analyze whether the practice needs the vacated position\*
- Review the practice's security policies and do those things those policies require you to do whenever an employee leaves the practice voluntarily or involuntarily

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***Pick "a" or "d"***

If you don't know the answer, pick "a" or "d"

Reason: Item writers often start or end with correct alternative.

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***Eliminating Two Distractors***

If you can eliminate two alternatives, then guessing the correct answer has the same odds as a true/false question (i.e. 50%).

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**Other SBA Issues**

Alternatives containing certain words (qualifiers) make an alternative a correct or incorrect choice.

Examples:

Kentucky never experiences crippling winter snow storms. Correct or Incorrect?  
**Incorrect**

Kentucky always experiences crippling winter snow storms. Correct or Incorrect?  
**Incorrect**

Kentucky sometimes experiences crippling winter snow storms. – Correct or Incorrect?  
**Correct**

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**Confusing Stems and Alternatives**

Negative words, such as the following, reverse a stem or alternative's meaning.

- No
- Never
- None
- Not

Prefixes like ill (*illogical*) or in (*indistinguishable*) also reverse a stem or alternatives meaning.

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**Examples of Confusing Stems and Alternatives**

Which of the following is not a compliance plan component?

- Disciplinary Standards and Enforcement
- Internal monitoring and auditing
- Training and Education
- Paid Time Off

The physical attributes of NFL lineman are indistinguishable from NBA point guards.  
**Incorrect**

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***Confusing Alternatives Continued***

It is logical to assume that Will Rogers' fame was due to his humor. – Correct or Incorrect?  
**Correct**

It is illogical to assume that Will Rogers' fame was not due to his humor. Correct or Incorrect?  
**Also correct, but the word illogical and negative format (not) make the alternative confusing.**

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***Choose Single Best Answer***

- Several alternatives may be plausible (sophisticated foils/distractors discussed previously)
- Read the item carefully (stem and all alternatives)
- Select the best of the plausible alternatives.
- Smart way to get a question wrong and dumb way to get it right – Take away – Don't overanalyze the stem and foils.

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***Grammatical Clues***

Look for grammatical clues to eliminate alternatives.

\*Example:  
Which one of the following statements regarding Icelanders is true?  
a. a country located just outside the Arctic Circle  
**What would make this foil correct?**  
"They live in a country located just outside the Arctic Circle."  
b. They are avid readers.  
**correct answer**

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***Grammatical Clues Continued***

c. They are all Native American descendants.  
**grammatically correct, but incorrect foil (some actually are)**

d. The capital of Iceland is Reykjavik. (Ray'-sha-vik)  
**true but no relationship to the stem. What would make this foil correct?**  
"They live in a country whose capital is Reykjavik"

\*Adapted from Pauk, Walter, [How to Study in College](#)

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***Other Tips***

- Answer all items for which you know the correct answers first.
- Mark the items you are unsure of.
- Use the clues referenced previously to increase your odds of choosing the correct answer to the "unsure" items.

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***Item Writing***

Characteristics of a good SBA Exam\*

- **Versatility** - can evaluate various levels of learning outcomes
- **Reliability** - the degree to which a test consistently measures a learning outcome.
- **Validity** - the degree to which a test measures the desired learning outcomes

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***The Stem***

The stem should\*

- present a definite and unambiguous concept.
- be concise and not contain superfluous information.
- not be negatively worded except in unusual circumstances.
- be constructed as a question or partial sentence (question format preferred)

**A universal donor has a blood type of \_\_\_\_\_**

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***The Alternatives***

Alternatives should be

- *plausible* (one silly foil increases the odds from 25% to 33%).
- *stated clearly and concisely* (Wordy alternatives test reading ability not content).
- *independent of alternatives found in other items and consistent with regard to grammar, length, formatting and language* (otherwise good test takers will pick up on the clues).
- *presented logically* (smallest or least to largest or most and vice versa)

\* Adapted from: Braine, C. (2013) Writing good multiple choice test questions. Retrieved 8/18/2020 from <https://cjit.vanderbilt.edu/guides/sub-pages/writing-good-multiple-choice-test-questions/>.

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***Alternatives Examples***

According to the National Association of Realtors, which of the following represents the number of full bathrooms in a typical home?

a. 1	a. 4
b. 2*	b. 3
c. 3	c. 2*
d. 4	d. 1

The stem concisely states the problem. Knowledgeable test takers would likely know the correct answer without reading the alternatives. The alternatives are listed in logical order.



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***Examples Continued***

The First Continental Congress members were Patrick Henry, George Washington, John and Samuel Adams, John Jay, and John Dickinson. New members of the Second Continental Congress included Benjamin Franklin and Thomas Jefferson. In what city did the First and Second Continental Congress meet?

- a. Boston
- b. New York
- c. Richmond
- d. Philadelphia

Is the stem concise and without superfluous information? What would be the preferred wording in this case?  
Are the alternatives listed properly? Would there be another proper way to list them?

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***Examples Continued***

How many air miles is it from the Atlanta airport (ATL) to the Los Angeles airport (LAX)?

- a. 1946   a. 1750   a. 2050
- b. 1850   b. 1850   b. 1946
- c. 2050   c. 1946   c. 1850
- d. 1750   d. 2050   d. 1750

Which of the above three ways of listing alternatives is correct? Anyone know the key (correct answer)? Any clues in the alternatives?

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**QUESTIONS?**

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