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OVERVIEW

Well written questions are necessary for a valid examination. Valid questions target the functions, tasks, knowledge, and skills that professionals actually demonstrate in practice. That’s why the Institute for Safety and Health Management (ISHM) depends on current certified professionals to submit questions for examinations leading to ISHM credentials.

This document is designed to help volunteers write ISHM exam questions. This document explains question construction and supporting information, offers hints for writing questions, and identifies the subjects included on examinations leading to ISHM credentials.

By following the guidelines in this document, you can develop valid questions. All questions submitted to ISHM go through extensive review and evaluation before they are used in an examination. When creating a new exam or updating an existing examination, ISHM selects only valid questions that have gone through comprehensive review. This process begins with your questions.

DEFINITIONS

Question Stem: It's the part of the question where the question number appears. There may be other information or a graphic before this but the question number typically appears next to what you are being asked to answer. In the testing industry the stem is the actual question itself.

Question stem example: "If the statements above are true, which one of the following must also be true? ..."

Distracters: incorrect option in multiple-choice question: an incorrect option shown as a possible answer to a multiple-choice question

GENERAL QUESTION-WRITING RULES

ISHM exams utilize standard multiple-choice questions with four answer choices, one correct and three incorrect.

Question Stems . ISHM prefers that a stem be formatted as a question (interrogative), rather than as a statement to be completed. Sometimes, this is not possible due to the content of the question stem. However, you should make every effort to phrase the item as a discreet question. A test item may be a simple question or statement to be completed (i.e., having only one sentence). A test item may also be complex and contain background information leading up to the question or statement to be completed.
Single Questions. Even if the question is complex and has background information, a single question is itself complete. All examinations use single questions. Because questions may be selected independently for an examination each question must be complete in itself.

Examination Content. A role delineation survey defines the subject matter requirements for the examination and the allocation of the questions. Each section of the exam highlights the major functions/job tasks addressed. The second level of each section further defines the scope. When writing questions for an ISHM examination, you must focus on the major function/job tasks targeted. Questions must then be directed at the area of knowledge and skills that professionals must demonstrate to be effective in practice. The questions must also fit within the confines of the outline.

Reference for the Correct Answer and Distracters. Every question must have one or more reputable, published references that serve as an authority for the correct answer and for the distracters. (Having a reference does not mean that the question stem itself is derived directly from the published source. Every question must have complete reference citations so that an independent party can verify that the correct answer is, in fact, correct and that the incorrect answers (the distracters) are, in fact, incorrect. The citations shall include sufficient information to verify the validity of the answers.

Contact Information. Since it is possible to earn Continuance of Certification (COC) or Certification Maintenance (CM) credit for writing valid questions, it is important to include full contact data for every question submitted. Record your current contact information. In addition to ensuring proper COC credit, questions may arise about your test question, and reviewers/editors may need to contact you for resolution. Additionally, please let us know if you are requesting COC points.

Questions applicable to the examination. Questions for ISHM examinations must apply only to the four subject areas and 26 subsets in the examination outline. Select only subjects that fall within the subject areas described in the examination outline [Appendix I]. ISHM validates its examinations to ensure that they cover only topics that are relevant and important in practice. ISHM follows accepted psychometric practices to identify the subject areas from a representative sample of practicing safety professionals. In order to test whether or not a proposed topic would lead to a good question, first make sure it is covered in the examination outline. Then, ensure the topic is relevant to professional practice.

Questions that reflect current practice. Questions should reflect methods and practices currently in use. Do not use material that is very new and not generally accepted in practice, out-of-date methods and practices or material that does not relate to the majority of professional. Additionally, use modern reference texts and the most current editions of books when citing the authority for a question. ISHM cannot accept questions using old references, texts, and out-of-date methods and practices.
Questions appropriate to examination candidates. It is important to consider the characteristics of the examination for which questions are submitted along with the minimum qualifications of candidates for the examination.

Plausible distracters. Each distracter, without exception, should provide a complete, plausible answer to the question stem question or a full choice to complete the question stem statement. A plausible distracter is one that could be reasonably expected to be selected by someone without any knowledge of the subject covered in the question. In addition, answer selections with terms such as “All of the above”, “None of the above”, or combinations of other choices, such as “Both Answer A and Answer B” are not acceptable.

Write to be understood and use simple language and terms. Write questions with clarity. Tricky, flowery, and superfluous words are not acceptable nor is unnecessary information (i.e., information not applicable to the question). Review the first draft of a question and remove information that is not needed. However, if the purpose of the question is to measure a candidate’s precise knowledge additional information may be appropriate for evaluating basic knowledge.

Questions using positive statements. Negatively-stated question stems are generally not acceptable. For example, the use of “never”, “not”, “except”, “false”, and “all of the following except” should be avoided.

Do not use abbreviations or acronyms not commonly used Use complete terms and spell out acronyms and abbreviations. It may help to include an acronym in parentheses following the complete term. Acronyms and abbreviations not commonly used will result in the question not being considered.

Do not test rote knowledge of codes, standards, and regulations. Professional level practice requires general knowledge and skill and application of methods when there are no specific standards. Draw on situations that test the ability of a candidate to effectively use and apply knowledge of the field and to perform in situations beyond basic knowledge of regulatory compliance. Questions quoting text from laws, regulations, codes, or standards are generally not acceptable. Questions requiring a candidate to demonstrate specific knowledge of one or more laws, regulations, codes, or standards are not desired.

Do not write questions that are based solely on a single author or text. An exam taker should not have to read a particular textbook to answer a question correctly. Though one textbook may be used as an authority for a question, the knowledge tested by the question must be universal in practice. Questions testing knowledge of text- or author-specific concepts are not acceptable. In addition, questions using author-specific or text-specific buzzwords and terminology or requiring knowledge of author-specific or text-specific buzzwords and terminology are not acceptable.

Write questions for international applicability. Because the examination may be used internationally, write questions that are universally applicable. Avoid questions about regulations or laws that apply only in the USA.
Write to include knowledge and skill in all aspects of safety, health, environmental, and security practice. Questions should address not only safety, but also industrial hygiene, health, environmental protection, ergonomics, fire protection, security, and other related fields in the broader discipline of professional safety practice, as long as the questions conform explicitly to the designated examination blueprint.

WRITING FOR COGNITIVE LEVELS
Recall and Recognition. These questions test the depth of understanding of a theory, method, or procedure, or require a candidate to apply information to new situations. These questions may require selecting the best procedure from among several, applying a particular principle or theory to a specific problem, or using a formula. Application questions include computations appropriate to the examination. The question stems on application questions often include data or background information.

CONFIDENTIALITY AND SECURITY
To be effective credible, certification examinations and the question development process for them must maintain confidentiality and security. Therefore, question writers who submit questions to ISHM for use on examinations must agree in advance to destroy all physical and electronic copies of submitted questions and scenarios and any related physical or electronic materials. Confidentiality is governed by the ISHM Code of Ethics and Professional Conduct and enforced in accordance with the ISHM disciplinary action procedures detailed in Article XIV of the ISHM Bylaws. You must agree not to reveal the specific content of questions you have submitted or the content of questions that other question writers have discussed with you or have asked you to evaluate. This includes, but is not limited to, the sharing of such information during private instruction, workshops, or training programs; and/or the development, modification, or enhancement of training programs, courses, software, and workshops. By submitting a question or scenario to ISHM you are agreeing to these terms.

SUBMITTED QUESTIONS
Questions submitted to ISHM become the sole property of ISHM. Question writers must agree that they will not disclose the content of submitted questions, submit them to other organizations, or use them for any other purpose. In addition, questions submitted must be the question writer’s original work and shall not be copied from materials copyrighted, owned, or created by other people or organizations. Question writers who submit questions shown not to be their original work may incur severe administrative and legal penalties. By submitting the question or scenario to ISHM, you are agreeing to these terms.

QUESTION NEEDS
ISHM is always in need of examination questions. Keeping examinations current requires continuous question development. From time to time there are needs in particular domains, topics/tasks, and knowledge/skill areas. ISHM publishes specific needs when they occur on the ISHM web site (www.ISHM.org) and sometimes conducts special question-writing activities to meet these needs. It is suggested that volunteers submit questions for areas that are highlighted with an asterisk in Appendix I because those areas currently have relatively few questions in the bank.
Submit questions to ISHM at any time. ISHM accepts hard copies of question submissions as well as electronic format.

Questions may be sent to:
Institute for Safety and Health Management
4841 E. County 14 ¼ St.
Yuma, AZ 85365 manager@ishm.org / 877-201-4053

CONTINUANCE OF CERTIFICATION CREDIT
Every Professional with an accredited certification must participate in the respective recertification program. The recertification program uses a point system based on a variety of activities to help ensure that certificant stay current in professional practice. Writing questions for potential use on ISHM examinations is a very cost effective way to earn COC points. ISHM awards one COC point for every five questions accepted there is no limit to the number of COC points certificants may earn through this form of question development.

After you have submitted questions, ISHM will send you a formal notice of acceptance and issue your COC credit. That letter will serve as your only proof of credit should ISHM audit your certification activities.

QUESTION REVIEW PROCESS
There is a lengthy process to prepare questions for use on examinations. Questions go through several technical/editing reviews to verify technical content, to ensure that the questions read well while not providing clues to the correct answer, and to ensure that the questions are current and valid, and will perform well on an examination. Questions that meet or exceed ISHM’s high quality standards are potentially used on an examination. When an examination edition is created or updated, ISHM selects these high quality questions to meet the examination specification and to achieve a good distribution among domains, topics/tasks, knowledge, and skills. The questions you submit are never used directly on an examination without first undergoing the technical/editing review process.

MULTIPLE-CHOICE QUESTIONS
GENERAL
Before you begin writing a question, organize your ideas. Write for a specific examination, topic/task, and knowledge/skill.

1. The question shall represent current practice or the knowledge required for current practice.
2. Determine the level of difficulty for the question.
3. The question shall not test trivia or simple recollection of codes, standards, or regulations. Focus only on meaningful facts, principles, and knowledge.
4. Describe job-related situations for examination questions. Frame the question in the correct context or situation to make it interesting and relevant.
5. Focus on only one element of knowledge or skill in a question.
QUESTION STEM
[Write?] The question stem first.
1. Include enough information so that the question can be clearly understood.
2. Use additional sentences to provide background information or data (but only when necessary).
3. Do not add unnecessary or irrelevant information.
4. Wherever possible, phrase the stem in the form of a question (interrogative) instead of as a statement to be completed.
5. If the question requires a judgment, provide the authority for the judgment in the stem.
6. A question stem should pose only one question or problem.
7. Do not ask what the candidate (“you”) should do. Candidates will always feel that their opinions are correct. Instead, ask what a “safety professional” should do.
8. Include in the stem any words that would otherwise be repeated in the answer and distracters.
9. Do not use negative words (not, never, except) in the question stem.
10. If an illustration is needed, carefully sketch and include it.
11. If a question involves computations, check the appropriate Examination Reference (if applicable) to see if the equation, formula, constant, chart, or conversion appears there. If so, identify that on the Question Construction Form. If not, include the general formula in the question stem. Verify that the equation is shown in the cited reference.
12. Always show the equation/formula in preparing the solution to a computational question.

CORRECT ANSWER AND PLAUSIBLE DISTRACTERS
Record the correct answer. Then develop plausible distracters, often the final task in a multiple-choice question. Consider the following when preparing the correct answer and the plausible distracters.
1. Verify that all distracters are actually incorrect. If necessary, cite one or more references that show that the distracters are, in fact, incorrect and that the proper answer, is, in fact, correct.
2. Do not use terms such as “All of the above” or “None of the above” for any answer selection.
3. Do not use qualifying words such as “usually”, “always”, or “never” in the answer selections.
4. Do not take the wording for the correct answer directly from a reference. This makes the correct answer.
5. Do not use quotes from specific sources, such as “(specific author says)” or “according to Specific author.”
6. Use terms and concepts found in the discipline of practice and cited in appropriate, reputable references.

When finished with the question check and double check for accuracy and applicability.

APPENDIX I
CRITERIA FOR CERTIFICATION

Examination

Certification requires achievement of a passing grade on the CSHM examination. Candidates must meet all education and experience requirements before taking the examination. Candidates who possess a valid certification with similar education and experience requirements (such as a CSP or CIH) may be eligible to meet these education and experience criteria, and will not be required to submit transcripts. The examination will be based on multiple choice questions designed to measure the applicant’s knowledge in following four subject areas:

I. General and Business Management (20% of test/30 questions)

1: Finance, budgeting and cost accounting

2: Human resources issues (wage and hour, FMLA, labor law, EEO, ADA) *

3: Ethics and law

4: Organization and behavioral sciences

5: Education, training and communication

II. EHS Management Methods and Systems (38% of test/ 57 questions)

6: Regulatory compliance *

7: Quality systems (TQM, Lean Manufacturing, 6 Sigma)

8: Auditing *

9: Safety in design, system safety

10: Performance metrics, recordkeeping, data analysis and statistics

11: Benchmarking

12: Accident investigation and root cause analysis
13: Behavioral safety *
14: Management systems (ISO 14000, OHSAS 18000, ANSI Z-10, OSHA VPP)

### III. Safety, Health and Environment Applications (11% of test/ 17 questions)

15: Basic sciences
16: Applied sciences
17: Hazard controls

### IV. Risk Identification, Management and Control (31% of test/ 46 questions)

18: Workers’ Compensation *
19: Risk management and financing *
20: General liability and product safety *
21: Fleet safety
22: Fire safety, life safety, and security
23: Health and wellness
24: Emergency preparedness, crisis planning
25: Sustainability *
26: Occupational medicine, medical services, first aid *

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**APPENDIX II**
**ISHM TEST QUESTION DRAFT FORM**
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<th>C. Stem of question:</th>
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<th>D. Correct Answer:</th>
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☐ References

☐ Substantiate Correct Answer