Fundamentals of Industrial Hygiene (IH) Practice Test (Sample)

Study Guide

Everything you need from our exam experts!

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Introduction

Preparing for a certification exam can feel overwhelming, but with the right tools, it becomes an opportunity to build confidence, sharpen your skills, and move one step closer to your goals. At Examzify, we believe that effective exam preparation isn't just about memorization, it's about understanding the material, identifying knowledge gaps, and building the test-taking strategies that lead to success.

This guide was designed to help you do exactly that.

Whether you're preparing for a licensing exam, professional certification, or entry-level qualification, this book offers structured practice to reinforce key concepts. You'll find a wide range of multiple-choice questions, each followed by clear explanations to help you understand not just the right answer, but why it's correct.

The content in this guide is based on real-world exam objectives and aligned with the types of questions and topics commonly found on official tests. It's ideal for learners who want to:

- **Practice answering questions under realistic conditions,**
- **Improve accuracy and speed,**
- **Review explanations to strengthen weak areas, and**
- **Approach the exam with greater confidence.**

We recommend using this book not as a stand-alone study tool, but alongside other resources like flashcards, textbooks, or hands-on training. For best results, we recommend working through each question, reflecting on the explanation provided, and revisiting the topics that challenge you most.

Remember: successful test preparation isn't about getting every question right the first time, it's about learning from your mistakes and improving over time. Stay focused, trust the process, and know that every page you turn brings you closer to success.

Let's begin.

How to Use This Guide

This guide is designed to help you study more effectively and approach your exam with confidence. Whether you're reviewing for the first time or doing a final refresh, here’s how to get the most out of your Examzify study guide:

1. Start with a Diagnostic Review

Skim through the questions to get a sense of what you know and what you need to focus on. Your goal is to identify knowledge gaps early.

2. Study in Short, Focused Sessions

Break your study time into manageable blocks (e.g. 30 – 45 minutes). Review a handful of questions, reflect on the explanations.

3. Learn from the Explanations

After answering a question, always read the explanation, even if you got it right. It reinforces key points, corrects misunderstandings, and teaches subtle distinctions between similar answers.

4. Track Your Progress

Use bookmarks or notes (if reading digitally) to mark difficult questions. Revisit these regularly and track improvements over time.

5. Simulate the Real Exam

Once you're comfortable, try taking a full set of questions without pausing. Set a timer and simulate test-day conditions to build confidence and time management skills.

6. Repeat and Review

Don’t just study once, repetition builds retention. Re-attempt questions after a few days and revisit explanations to reinforce learning. Pair this guide with other Examzify tools like flashcards, and digital practice tests to strengthen your preparation across formats.

There’s no single right way to study, but consistent, thoughtful effort always wins. Use this guide flexibly, adapt the tips above to fit your pace and learning style. You've got this!

Questions

1. Sum of Static and Velocity Pressure is called what?

A. Sum of Static and Velocity Pressure

B. Sum of Dynamic and Static Pressure

C. Sum of Velocity and Ambient Pressure

D. Sum of Positive and Negative Pressure

2. What does LEV stand for in ventilation terminology?

A. Local Exhaust Ventilation (LEV)

B. LEV Components

C. General/Dilution Ventilation

D. Measuring Velocity

3. Which term describes any pressure variation that can be detected by the human ear?

A. Noise

B. Frequency

C. Amplitude

D. Waveform

4. Threshold Limit Values (TLVs) are guidelines provided by which organization?

A. OSHA

B. ACGIH

C. NIOSH

D. EPA

5. Which statistic measures the average distance of data points from the mean?

A. Range

B. Mean

C. Median

D. Standard Deviation

6. The amount of a chemical absorbed is called

- **A. Concentration**
- **B. Exposure**
- **C. Absorption**
- **D. Dose**

7. Which route of exposure is exemplified by an injection?

- **A. Inhalation**
- **B. Dermal**
- **C. Ingestion**
- **D. Injection**

8. The purpose of the Hierarchy of Controls is to do what?

- **A. To describe hazard scouting technique**
- **B. To systematically control hazards by the most effective means**
- **C. To rate PPE sufficiency**
- **D. To categorize hazards by type**

9. What term refers to the amount of noise measured over a workday and expressed as a percentage?

- **A. Noise**
- **B. Frequency**
- **C. Noise Dose**
- **D. Exposure**

10. The acronym ACH stands for which of the following?

- **A. Air Circulation Per Hour**
- **B. Air Changes Per Hour**
- **C. Ambient Change in Humidity**
- **D. Average Chemical Hazard**

Answers

1. A
2. A
3. A
4. B
5. D
6. D
7. D
8. B
9. C
10. B

Explanations

1. Sum of Static and Velocity Pressure is called what?

A. Sum of Static and Velocity Pressure

B. Sum of Dynamic and Static Pressure

C. Sum of Velocity and Ambient Pressure

D. Sum of Positive and Negative Pressure

In fluid flow, the total or stagnation pressure at a point is what you get when you combine the pressure from the fluid being at rest (static pressure) with the pressure arising from the fluid's motion (velocity pressure). Velocity pressure, defined as ½ ρ v^2, represents the energy associated with the flow's speed. When flow is slowed to zero, this velocity pressure is converted to additional static pressure, giving the total pressure. Therefore, the sum of static pressure and velocity pressure is the total (stagnation) pressure, which is the concept tested here. While dynamic pressure is another common term for the same fluid-motion component, the option using velocity pressure aligns with the wording used in many IH contexts, making it the best match.

2. What does LEV stand for in ventilation terminology?

A. Local Exhaust Ventilation (LEV)

B. LEV Components

C. General/Dilution Ventilation

D. Measuring Velocity

Local Exhaust Ventilation is a system designed to remove contaminants right at the source, before they have a chance to spread into the worker's breathing zone. It uses a hood or capture device placed close to the emission point, connected to ducts and a fan that exhausts or filters the contaminated air. This at-source capture is what makes LEV effective in protecting health, especially for fumes, dust, or vapors produced during a process. So LEV stands for Local Exhaust Ventilation. The other options don't fit this acronym: a reference to LEV components is just parts of the system, general/dilution ventilation describes ventilating the whole room rather than capturing at the source, and measuring velocity is a performance parameter, not the name of the ventilation type.

3. Which term describes any pressure variation that can be detected by the human ear?

A. Noise

B. Frequency

C. Amplitude

D. Waveform

Sound energy is produced by pressure variations in air that the human ear can detect. In many IH contexts, the term used to describe any audible pressure variation is noise—the audible signal that can be perceived by the ear. This broad label emphasizes the presence of detectable sound, regardless of its desirability. The other terms describe specific properties of that sound: frequency tells you how often the pressure fluctuates per second (which relates to pitch), amplitude indicates how large the pressure fluctuations are (relating to loudness), and waveform refers to the shape of the pressure-time signal (the actual form of the oscillation). So, while those properties affect what you hear, the word that captures the idea of a pressure variation detectable by the ear is noise.

4. Threshold Limit Values (TLVs) are guidelines provided by which organization?

A. OSHA

B. ACGIH

C. NIOSH

D. EPA

Threshold Limit Values are exposure guidelines developed by the American Conference of Governmental Industrial Hygienists (ACGIH). They indicate the maximum airborne concentrations to which workers can be exposed day after day without expected adverse health effects for specified exposure durations. TLVs are meant as practical guidance for industrial hygiene practice rather than legally enforceable limits, and they're published in ACGIH's Threshold Limit Values and Biological Exposure Indices handbook. This distinguishes them from OSHA's enforceable PELs, NIOSH's RELs (recommended, not enforceable), and EPA's regulatory standards.

5. Which statistic measures the average distance of data points from the mean?

A. Range

B. Mean

C. Median

D. Standard Deviation

The concept being tested is how we quantify the spread of data around the center. The standard deviation measures, on average, how far each data point lies from the mean. It does this by taking each deviation from the mean, squaring them, averaging those squares, and then taking the square root. This gives a value in the same units as the data that reflects typical distance from the mean, i.e., the dispersion of the dataset. The range, by contrast, only shows the total span from minimum to maximum and can be heavily influenced by outliers, without describing how data are generally distributed around the mean. The mean is just the average value and tells you the central tendency, not how far values tend to deviate from it. The median is the middle value and likewise conveys central position rather than spread. Therefore, standard deviation best captures the average distance of data points from the mean.

6. The amount of a chemical absorbed is called

A. Concentration

B. Exposure

C. Absorption

D. Dose

The amount of a chemical absorbed is called the dose because dose represents the quantity that actually enters and becomes available to interact with body tissues after absorption. Concentration describes how much chemical is present in air or a solution, while exposure refers to the contact with the chemical over time. Absorption is the process of crossing biological barriers into the body, but the term dose specifies the amount that has successfully entered systemic circulation or the target tissues, often expressed as mg or mg/kg.

7. Which route of exposure is exemplified by an injection?

A. Inhalation

B. Dermal

C. Ingestion

D. Injection

Exposure routes describe how a substance enters the body. An injection demonstrates a parenteral route, where material is delivered through a puncture with a needle directly into tissues or the bloodstream, bypassing the skin's outer barrier and the gastrointestinal tract. This is distinct from inhalation (through the lungs), dermal exposure (through skin contact and absorption), and ingestion (through swallowing). The injection route often leads to rapid, systemic absorption, especially if delivered into a vein, and it underlines why sharps safety and sterile technique are crucial in handling hazardous materials.

8. The purpose of the Hierarchy of Controls is to do what?

A. To describe hazard scouting technique

B. To systematically control hazards by the most effective means

C. To rate PPE sufficiency

D. To categorize hazards by type

The main idea is to reduce risk by applying controls in order of their effectiveness. The point of the Hierarchy of Controls is to systematically control hazards by the most effective means, starting with eliminating the hazard or substituting a safer option, then using engineering controls to remove or isolate the hazard, followed by administrative controls to change how people work, and finally relying on personal protective equipment as a last line of defense. This emphasizes prevention at the source and design level rather than depending on workers to protect themselves with PPE, since PPE alone is less reliable and depends on proper use. For example, if a chemical hazard exists, you'd first look to remove or replace the chemical, then install ventilation or containment, then implement procedures or training, and only then use respirators if residual risk remains. The other ideas—hazard scouting, rating PPE sufficiency, or categorizing hazards by type—don't describe the purpose of prioritizing controls to reduce exposure through the most effective means.

9. What term refers to the amount of noise measured over a workday and expressed as a percentage?

A. Noise

B. Frequency

C. Noise Dose

D. Exposure

The key idea is the noise dose metric, which captures how much of the allowable daily noise exposure a worker has accumulated, expressed as a percentage. A noise dosimeter or similar instrument integrates the sound level and the time spent at that level over the workday and compares it to the regulatory or policy-based limit (for example, the standard that defines 100% dose as the full allowable daily exposure). If the dose reaches 100%, the daily limit has been met; less than 100% means there's still allowable exposure remaining; more than 100% indicates overexposure and a need for controls or protection. This differs from plain noise, which is the actual sound level measured at a moment in time; frequency, which refers to cycles per second in a sound, not exposure; and a general term like exposure, which is broader and not inherently a percentage of the daily limit.

10. The acronym ACH stands for which of the following?

A. Air Circulation Per Hour

B. Air Changes Per Hour

C. Ambient Change in Humidity

D. Average Chemical Hazard

Air changes per hour describes how many times the air in a space is replaced each hour. The acronym ACH is exactly that: the rate at which ventilation cleans the air by diluting and removing contaminants. It's calculated by dividing the ventilation rate by the room volume: ACH = Q / V, where Q is the supply air flow in cubic meters per hour and V is the room volume in cubic meters. This metric helps IH professionals assess whether a space has enough ventilation to protect occupants and control contaminants. For example, a 150 m^3 room with a ventilation supply of 450 m^3/h achieves 3 air changes per hour, meaning the room's air is replaced about three times each hour. The other options aren't standard ventilation terms: air circulation per hour isn't a recognized metric; ambient change in humidity refers to humidity shifts, not air replacement; and average chemical hazard isn't a ventilation metric.

Next Steps

Congratulations on reaching the final section of this guide. You've taken a meaningful step toward passing your certification exam and advancing your career.

As you continue preparing, remember that consistent practice, review, and self-reflection are key to success. Make time to revisit difficult topics, simulate exam conditions, and track your progress along the way.

If you need help, have suggestions, or want to share feedback, we'd love to hear from you. Reach out to our team at hello@examzify.com.

Or visit your dedicated course page for more study tools and resources:

https://fundamentalsofih.examzify.com

We wish you the very best on your exam journey. You've got this!