# AUDIO FUNDAMENTALS COLLIER TEST 1 PRACTICE (SAMPLE)

## STUDY GUIDE

## SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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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. Which role is primarily responsible for mixing the audio in a live radio broadcast?**

A. Foley Engineer

B. Sound-Effects Designer

C. Electronic Music Producer

D. Radio Broadcast Streaming Engineer

**2. What does ADSR stand for in sound envelope terminology?**

A. Amplitude-Decay-Sustain-Release

B. Attack-Drive-Sustain-Release

C. Attack-Decay-Sustain-Release

D. Attack-Decay-Sustain-Rate

**3. Which frequency range is associated with IAD?**

A. 80Hz-800Hz

B. 800Hz-1,600Hz & 1,600Hz and up

C. 1,600Hz and up

D. 80Hz-1,600Hz

**4. 0 dB SPL is equal to?**

A. The threshold of hearing

B. The threshold of pain

C. A typical conversational level

D. Peak sound pressure

**5. Which structure catches and focuses acoustic waves into the ear canal?**

A. Pinna

B. Auditory Canal

C. Ear Drum

D. Ossicles

**6. Which formula expresses wavelength as velocity divided by frequency?**

A. Wavelength = Velocity * Frequency

B. Wavelength = Frequency / Velocity

C. Wavelength = Velocity / Frequency

D. Wavelength = Frequency * Velocity

**7. Which role is responsible for mixing audio for a live show audience?**

A. Monitor engineer

B. Location Sound Recordist

C. FOH engineer

D. Radio Broadcast Streaming engineer

**8. Which analysis expresses any periodic function as a sum of sine and cosine functions?**

A. Fourier analysis

B. Transducer

C. Auditory Canal

D. Ear Drum

**9. What perceptual phenomenon demonstrates interaction between hearing and vision in speech perception?**

A. Doppler Effect

B. Leslie Speaker Cabinet

C. Acoustic Shadow

D. McGurk effect

**10. Which channel control is used to set the level of a channel in the main mix?**

A. Gain

B. Pan

C. Fader

D. Aux

# Answers

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

# Explanations

## 1. Which role is primarily responsible for mixing the audio in a live radio broadcast?

A. Foley Engineer

B. Sound-Effects Designer

C. Electronic Music Producer

D. Radio Broadcast Streaming Engineer

*In a live radio broadcast, the audio mix for what listeners hear is created by the person who coordinates all the live signals—the microphones, music, ads, and any pre-recorded content—and makes sure everything sounds balanced and consistent across the air and any live stream. This role handles leveling, routing, and dynamics in real time to deliver a clean, professional broadcast experience. That's why the Radio Broadcast Streaming Engineer is the best fit: they're responsible for managing the live feed and its distribution, including mixing for both the air and the stream. The other roles focus on creating or adding sound effects or music, rather than balancing a live on-air mix.*

## 2. What does ADSR stand for in sound envelope terminology?

A. Amplitude-Decay-Sustain-Release

B. Attack-Drive-Sustain-Release

C. Attack-Decay-Sustain-Release

D. Attack-Decay-Sustain-Rate

*Attack-Decay-Sustain-Release describes how a sound's amplitude envelope unfolds over time after a note is triggered. Attack is how quickly the level rises from silence to its maximum; a short attack makes the note hit hard and immediately, while a longer attack creates a gradual swell. After the peak, the envelope decays as the level drops down to the sustain level over the Decay time. Sustain is the amplitude kept while the note is held, defining the steady level during the key press. Release is how long the sound takes to fade back to silence after the key is released. This sequence is the standard way we shape how a sound starts, settles, and ends in synthesis and sound design. The other terms don't fit the conventional envelope model.*

## 3. Which frequency range is associated with IAD?

A. 80Hz-800Hz

B. 800Hz-1,600Hz & 1,600Hz and up

C. 1,600Hz and up

D. 80Hz-1,600Hz

*Interaural amplitude differences (IAD) rely on how the head shadow reduces sound at the two ears, and this effect becomes pronounced at higher frequencies. Low-frequency sounds wrap around the head and produce small level differences, while frequencies around 800 Hz and above show noticeable differences between the ears. Therefore, the range that best matches where IAD is effective starts at about 800 Hz and continues into mid and high frequencies, covering 800 Hz-1,600 Hz and 1,600 Hz and up. The other ranges either lie below where head shadow yields strong level differences or miss the higher-frequency region where IAD cues are strongest.*

## 4. 0 dB SPL is equal to?

A. The threshold of hearing

B. The threshold of pain

C. A typical conversational level

D. Peak sound pressure

*0 dB SPL is the reference sound pressure level equal to 20 µPa in air. This corresponds to the quietest sound a typical human ear can detect at mid frequencies, known as the threshold of hearing. It isn't zero pressure; it's the baseline used to compare all other sounds. Because of that definition, 0 dB SPL represents the threshold of hearing. The threshold of pain is much higher on the scale, typically around 120–140 dB SPL, and a typical conversational level sits well below that, around 60–70 dB SPL. Peak sound pressure refers to brief pressure spikes and is not a fixed SPL value like 0 dB; SPL is usually an averaged (often RMS) measure over time.*

## 5. Which structure catches and focuses acoustic waves into the ear canal?

A. Pinna

B. Auditory Canal

C. Ear Drum

D. Ossicles

*The outer ear component that catches and helps direct sound into the ear canal is the visible outer ear itself—the pinna. Its folds and shape gather acoustic waves and guide them toward the external auditory canal, which then serves as the passageway carrying those vibrations inward to the eardrum. The eardrum vibrates in response to the incoming sound, and those vibrations are then transmitted through the middle-ear ossicles to the inner ear. So, the pinna is responsible for catching and focusing sound into the ear canal, while the other parts mainly channel, vibrate, or transmit the sound further along the pathway.*

## 6. Which formula expresses wavelength as velocity divided by frequency?

A. Wavelength = Velocity * Frequency

B. Wavelength = Frequency / Velocity

C. Wavelength = Velocity / Frequency

D. Wavelength = Frequency * Velocity

*In waves, speed v equals frequency f times wavelength λ ($v = f\lambda$). This links how often crests pass a point with how far a single crest travels in one cycle. To get wavelength from speed and frequency, rearrange the equation to $\lambda = v / f$. So the distance per cycle is the wave speed divided by the frequency. Checking the units reinforces this: v is meters per second, f is cycles per second (hertz), so λ becomes meters (m/s divided by 1/s is m). The other forms would mix the quantities in ways that don't give a length and don't match the relationship $v = f\lambda$.*

## 7. Which role is responsible for mixing audio for a live show audience?

A. Monitor engineer

B. Location Sound Recordist

C. FOH engineer

D. Radio Broadcast Streaming engineer

*In live sound, the person responsible for mixing what the audience hears is the Front of House engineer. This role sits at the main mixing console that feeds the house PA system, shaping the overall balance, tonal quality, and dynamics so speech and music are clear and even for the audience across the venue. The Front of House engineer focuses on the audience experience, adjusting levels and EQ to suit the room and size of the crowd. The monitor engineer, by contrast, creates a separate mix for performers to hear on stage through their monitor speakers or in-ear monitors, which is not the audience's feed. A Location Sound Recordist is tasked with capturing audio on location for recordings, not delivering the live audience mix. A Radio Broadcast Streaming engineer handles audio that goes to broadcast or streaming outlets, which is a different output from the live audience mix.*

## 8. Which analysis expresses any periodic function as a sum of sine and cosine functions?

A. Fourier analysis

B. Transducer

C. Auditory Canal

D. Ear Drum

*The main idea being tested is that any periodic function can be written as a sum of sine and cosine waves. This is Fourier analysis, which breaks a signal into its frequency components. Because sine and cosine functions form an orthogonal set over a period, you can determine the coefficients of the sine and cosine terms by integrating the product of the function with each basis function over one period. This yields a Fourier series that reconstructs the original function from its harmonics. In practice, Fourier analysis lets you analyze a signal in the frequency domain, identify its components, and synthesize complex waveforms from simple tones. The other terms—transducer, auditory canal, and ear drum—are parts of the hearing system and measurement hardware; they don't describe how a periodic function is decomposed into sine and cosine components.*

## 9. What perceptual phenomenon demonstrates interaction between hearing and vision in speech perception?

A. Doppler Effect

B. Leslie Speaker Cabinet

C. Acoustic Shadow

D. McGurk effect

*The McGurk effect demonstrates how hearing and vision interact in speech perception. When you hear one syllable while seeing a different lip movement, your brain often perceives a third syllable that blends the two cues. For example, hearing "ba" while watching lips say "ga" can yield the percept "da." This shows that visual information from lip movements is integrated with auditory input to shape what we perceive as speech, revealing multisensory processing in the brain rather than separate, unisensory channels. The other options don't involve cross-modal integration in speech: the Doppler effect is about frequency shifts from motion, the Leslie Speaker Cabinet is a type of loudspeaker, and acoustic shadow describes how sound is attenuated behind obstacles.*

**10. Which channel control is used to set the level of a channel in the main mix?**

A. Gain

B. Pan

C. Fader

D. Aux

*The key control for setting a channel's level in the main mix is the fader. It sits at the end of the channel's signal path and determines how loud that channel actually contributes to the master mix. While other controls on the channel—gain sets the input level, pan places the signal in the stereo field, and auxiliary sends route copies of the signal to effects or monitors—do not set the main mix balance. Adjusting the fader up increases that channel's presence in the overall mix; pulling it down reduces it. Remember that the master fader, if present, controls the overall level of the entire mix, not the level of individual channels.*

# 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://audiofundcolliertest1.examzify.com

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