

SØRAV MUSIC ACADEMY

LEVEL 1 · FOUNDATIONS FINAL ASSESSMENT

160 multiple-choice questions · 8 topics · 20 questions per topic

Instructions: Select one answer (A, B, C or D) for each question. Complete all eight topic sections before checking the answer key at the end of this document.

Suggested use: attempt one topic section at a time, then complete the full assessment as a final review.

1. What Is Sound?

Choose one answer for each question.

1. What creates sound in the physical world?

- A. A vibrating source causing pressure variations in a medium
- B. A static object with no motion
- C. Light travelling through a vacuum
- D. A digital file existing on a drive

2. Can sound travel through a perfect vacuum?

- A. Yes, faster than through air
- B. No, sound needs a material medium
- C. Only if the frequency is high
- D. Only digital sound can

3. What does a microphone diaphragm do?

- A. Stores MIDI notes
- B. Converts acoustic pressure changes into an electrical signal
- C. Removes all room reflections
- D. Sets the project tempo

4. What is the main purpose of a loudspeaker?

- A. Convert an electrical audio signal into moving air pressure
- B. Convert audio into MIDI automatically
- C. Measure musical key
- D. Prevent clipping in every situation

5. What does a waveform display in a typical audio editor?

- A. The artist's emotional intent
- B. Amplitude over time
- C. Only the stereo width
- D. The exact perceived loudness at every moment

6. Which statement best describes frequency?

- A. How many cycles occur per second
- B. The physical size of a speaker
- C. The number of tracks in a project
- D. The length of a reverb tail

7. Which statement best describes amplitude?

- A. The number of musical bars
- B. The magnitude of a signal variation
- C. The pitch name of a note
- D. The sample rate

8. Why does sound usually travel differently through different materials?

- A. Materials have different physical properties
- B. Sound changes into MIDI
- C. All materials force sound to 0 dBFS
- D. Frequency stops existing in solids

9. What is the difference between an acoustic sound and a digital audio file?

- A. They are identical physical things
- B. Acoustic sound is pressure variation; digital audio is numerical sample data representing it
- C. A digital file always sounds louder
- D. Acoustic sound contains no frequency

10. What does a sound wave carry from source to listener?

- A. A transfer of energy through a medium
- B. The air molecules all travelling from source to ear
- C. Only electrical current
- D. A list of MIDI commands

11. What does pitch mainly relate to for a simple periodic tone?

- A. Frequency
- B. File size
- C. Track colour
- D. Bit depth

12. What is a complex tone?

- A. A tone containing more than one frequency component
- B. A sound with no vibration
- C. A sound that cannot be recorded
- D. A MIDI region with no notes

13. What is a transducer in audio?

- A. A device that converts one form of energy to another
- B. A tempo grid
- C. A type of musical scale
- D. A file naming rule

14. Why can two sounds with the same peak level seem different in loudness?

- A. Loudness depends on more than peak amplitude alone
- B. Peak level always determines exact loudness
- C. One must be MIDI
- D. The quieter one has no harmonics

15. What is resonance in a physical system?

- A. A tendency to respond strongly near certain frequencies
- B. A synonym for digital clipping
- C. A type of MIDI controller
- D. A way to export stems

16. What is the safest way to compare two sound examples?

- A. Use similar playback loudness and listen for a defined difference
- B. Always choose the louder one
- C. Change five settings at once
- D. Look only at the waveform

17. What is noise in an audio context?

- A. Unwanted or non-musical signal content, depending on context
- B. Always a sound below 20 Hz
- C. Only a corrupted MIDI file
- D. A required part of every recording

18. What is a periodic waveform?

- A. A pattern that repeats over time
- B. A waveform with no amplitude
- C. A list of plugin presets
- D. An audio file without samples

19. What is one reason to learn basic acoustics before mixing?

- A. It helps explain what microphones, speakers, rooms, and signals are doing
- B. It eliminates the need to listen
- C. It automatically masters music
- D. It makes every plugin sound identical

20. What should you do first when a sound seems wrong in a session?

- A. Listen carefully and identify the problem before changing settings
- B. Insert every plugin you own
- C. Raise every fader
- D. Export immediately

2. Frequency, Amplitude and Phase

Choose one answer for each question.

21. Frequency is measured in...

- A. Decibels
- B. Hertz
- C. Samples per bit
- D. Bars per minute

22. Amplitude most directly describes...

- A. The size of signal variation
- B. The musical key
- C. The number of plugins
- D. The stereo pan law

23. What can happen when two similar signals combine with opposing polarity?

- A. Their frequencies double automatically
- B. They may partially or fully cancel
- C. They always become louder
- D. They turn into MIDI

24. What does phase describe for a periodic signal?

- A. Its position within a cycle relative to a reference
- B. Its sample rate only
- C. Its track name
- D. Its bit depth

25. What is the period of a waveform?

- A. Time required for one cycle
- B. The peak meter colour
- C. A type of EQ
- D. A file export setting

26. If frequency increases, the period becomes...

- A. Longer
- B. Shorter
- C. Always exactly one second
- D. Unrelated in every case

27. What does a spectrum analyser help you see?

- A. Energy distribution across frequencies
- B. The lyrics automatically
- C. The artist's intention
- D. The MIDI note length only

28. Are frequency and pitch exactly identical concepts?

- A. Yes in every possible context
- B. No; pitch is perception strongly related to frequency
- C. Frequency is measured in metres
- D. Pitch is measured in samples

29. What does polarity inversion do to an ideal signal?

- A. Reverses its sign at each instant
- B. Adds 90 dB
- C. Changes its tempo
- D. Removes all high frequencies

30. Why can a small time delay change phase relationships?

- A. A delay corresponds to a phase shift that depends on frequency
- B. It always removes bass
- C. It changes the file name
- D. It turns stereo into MIDI

31. What is constructive interference?

- A. Signals combine to reinforce each other at some frequencies/times
- B. All signals cancel
- C. A plugin fails to load
- D. A MIDI note is quantised

32. What is destructive interference?

- A. Signals combine to reduce one another at some frequencies/times
- B. Every frequency gets louder
- C. The sample rate doubles
- D. The DAW loses its tempo

33. Which range is generally called the audible range for healthy young human hearing?

- A. About 20 Hz to 20 kHz
- B. 0 Hz to 1 Hz
- C. 20 kHz to 200 kHz for everyone
- D. Exactly 100 Hz to 1 kHz

34. What is a harmonic series?

- A. Frequency components at integer multiples of a fundamental
- B. A sequence of track colours
- C. A collection of MIDI controllers
- D. A list of export formats

35. What does a fundamental frequency usually represent in a harmonic tone?

- A. The lowest harmonic and a strong pitch reference
- B. The loudest sample in a file always
- C. The stereo width
- D. The tempo

36. If a sine wave amplitude is doubled, what happens to its level in dB relative to the original?

- A. Approximately +6 dB
- B. Approximately +1 dB
- C. -6 dB
- D. No change

37. What should you avoid when checking phase between microphones?

- A. Assuming one polarity button fixes every timing issue
- B. Listening in mono
- C. Checking the arrangement
- D. Using reference material

38. Why is mono checking useful during mixing?

- A. It can reveal phase-related losses and masking that stereo may hide
- B. It always makes a mix better
- C. It removes all room sound
- D. It changes the song key

39. What does amplitude modulation mean in a basic signal context?

- A. Amplitude changes over time according to a pattern
- B. Pitch is permanently fixed at 440 Hz
- C. A file becomes a plugin
- D. A track is automatically panned

40. What is the best way to learn phase audibly?

- A. Compare related signals in mono and listen for tonal changes as alignment changes
- B. Read meters only
- C. Raise the master fader
- D. Use reverb on every track

3. Decibels and Gain Staging

Choose one answer for each question.

41. In a conventional digital full-scale meter, 0 dBFS represents...

- A. The maximum digital full-scale level
- B. Silence
- C. A fixed acoustic loudness
- D. The analogue noise floor

42. If a plugin distorts because its input is too hot, what should you try first?

- A. Lower the plugin input or drive
- B. Raise the master output
- C. Add more plugins
- D. Change the song key

43. Gain staging is primarily about...

- A. Keeping signal levels appropriate through the signal path
- B. Making every track peak at 0 dBFS
- C. Using the same fader position on all tracks
- D. Maximising loudness at every stage

44. What does dBFS measure?

- A. Digital level relative to full scale
- B. Acoustic frequency
- C. Tempo
- D. MIDI velocity only

45. What does a peak meter show?

- A. Short-term maximum signal amplitude over its measurement window
- B. Exact perceived loudness in every context
- C. The musical scale
- D. The amount of reverb

46. Why leave headroom while mixing?

- A. To reduce risk of overload and allow processing and summing margin
- B. Because audio must peak at -30 dBFS
- C. To make every track inaudible
- D. To remove all dynamics

47. What does a fader change in a typical DAW channel strip?

- A. The channel's level at that point in the signal path
- B. The sample rate
- C. The pitch of all notes
- D. The microphone polar pattern

48. What is the difference between gain and loudness?

- A. Gain is a signal-level change; loudness is a perceptual experience
- B. They are always identical
- C. Loudness is measured only in Hz
- D. Gain means MIDI note length

49. Why level-match when comparing plugins?

- A. Louder versions can seem better even when processing is not beneficial
- B. Plugins only work at one level
- C. It makes EQ unnecessary
- D. It changes the source recording

50. What is clipping?

- A. A signal exceeding the available level range and being truncated or distorted
- B. A type of tempo map
- C. A MIDI articulation
- D. A stereo panning technique

51. What is a true-peak meter intended to estimate?

- A. Potential peaks between digital samples after reconstruction
- B. Only MIDI velocity
- C. The track's key
- D. Reverb decay time

52. If you reduce a track fader but a plugin before the fader still distorts, what is likely true?

- A. The overload occurs before the fader
- B. The song is too slow
- C. The plugin is a MIDI instrument
- D. The fader changes the source file

53. What is unity gain on a fader commonly represented as?

- A. 0 dB change
- B. +12 dB always
- C. Silence
- D. $-\infty$ dB

54. What is a common safe habit when inserting a new plugin?

- A. Check input/output levels and compare at matched loudness
- B. Set every knob to maximum
- C. Always add 10 dB
- D. Ignore meters

55. Does a track need to peak close to 0 dBFS to sound professional?

- A. No; sensible levels and balance matter more
- B. Yes, every track must peak at 0
- C. Only MIDI tracks need this
- D. Only bass must peak at 0

56. What does a gain plugin before a compressor let you control?

- A. The level hitting the compressor
- B. The session frame rate
- C. The MIDI channel name
- D. The room temperature

57. What is a bus in a DAW?

- A. A routing path that combines or directs signals
- B. A type of audio cable only
- C. A tempo marking
- D. A musical interval

58. Why can summing multiple tracks increase the master level?

- A. Their signals combine and may add in amplitude
- B. Track count reduces level automatically
- C. Every track becomes mono
- D. The sample rate changes

59. What is the best first response to a red overload indicator?

- A. Find where overload occurs and reduce level there
- B. Ignore it forever
- C. Raise the master to compensate
- D. Export at a higher sample rate

60. What is the main aim of gain staging in a mix?

- A. Predictable levels, headroom, and clean processing where desired
- B. Maximum meter readings
- C. Removing the need for listening
- D. Making all tracks equally loud

4. Digital Audio

Choose one answer for each question.

61. What does sample rate describe?

- A. How many samples per second are captured or played
- B. The number of audio tracks
- C. The bit depth of each sample
- D. The tempo

62. What does bit depth primarily affect in PCM audio?

- A. The available quantisation resolution and theoretical noise floor
- B. The musical key
- C. The number of plugins
- D. The stereo pan position

63. What is the Nyquist frequency for a 48 kHz sample rate?

- A. 24 kHz
- B. 48 kHz
- C. 96 kHz
- D. 12 kHz

64. Why is an anti-aliasing filter used before sampling?

- A. To reduce frequencies that would alias above Nyquist
- B. To add reverb
- C. To convert MIDI to audio
- D. To raise loudness

65. What is aliasing?

- A. Incorrect lower-frequency components caused by inadequate sampling of higher frequencies
- B. A type of compression ratio
- C. A MIDI chord inversion
- D. A file name collision

66. What is a DAW's audio buffer size mainly associated with?

- A. The amount of audio processed per buffer and resulting latency/CPU trade-offs
- B. The bit depth of exported files only
- C. The song's key
- D. The number of MIDI notes

67. Why might recording use a lower buffer than mixing?

- A. Low-latency monitoring is important during recording; mixing can tolerate more latency
- B. A lower buffer increases bit depth
- C. Mixing cannot use plugins
- D. Recording changes the tempo

68. What is latency?

- A. A delay between an input/action and the corresponding output
- B. The loudness of a track
- C. The duration of a reverb only
- D. A file's bit depth

69. What is dithering in digital audio?

- A. Adding low-level noise before reducing bit depth to decorrelate quantisation distortion
- B. Increasing sample rate automatically
- C. Removing silence from MIDI
- D. Compressing a vocal

70. What does PCM stand for?

- A. Pulse-code modulation
- B. Phase control mapping
- C. Plugin chain management
- D. Pitch curve mode

71. Which format is typically lossless PCM?

- A. WAV or AIFF when stored as PCM
- B. MP3 at any bitrate
- C. AAC at any bitrate
- D. A screenshot of a waveform

72. What is the main distinction between a lossless and lossy codec?

- A. Lossless preserves the encoded source data exactly; lossy discards information to reduce size
- B. Lossless always sounds louder
- C. Lossy files cannot contain stereo
- D. They differ only in file extension

73. What does an audio interface's converter do?

- A. Converts analogue signals to digital and/or digital signals to analogue
- B. Creates chord progressions automatically
- C. Sets the DAW's tempo
- D. Measures room dimensions

74. Why should the project sample rate be chosen deliberately?

- A. It affects compatibility, processing, storage and conversion workflow
- B. Higher is always better with no cost
- C. It determines musical key
- D. It replaces bit depth

75. What happens if audio is clipped before it is recorded digitally?

- A. The clipped distortion is captured in the recording
- B. A higher export bit depth restores it
- C. MIDI corrects it automatically
- D. It becomes phase-aligned

76. What is quantisation error?

- A. The difference between an input value and its quantised representation
- B. A note placed on a grid
- C. A reverb preset
- D. A type of pan automation

77. What does an interleaved stereo file contain?

- A. Left and right channel samples arranged in one file stream
- B. Only MIDI events
- C. Two separate Logic projects
- D. A mono file with two names

78. Why might a very small buffer cause clicks during playback?

- A. The computer may fail to process buffers in time
- B. The sample rate becomes zero
- C. The track becomes MIDI
- D. The waveform is too colourful

79. What does a higher sample rate not automatically guarantee?

- A. Better-sounding music in every situation
- B. A larger amount of sample data per second
- C. A higher Nyquist frequency
- D. More CPU and storage use in many workflows

80. What should you check if an exported file sounds different from the session?

- A. Export range, sample-rate conversion, bit-depth settings, processing, and playback level
- B. Only the file name
- C. Only the track colour
- D. The keyboard layout

5. Audio Signal Flow

Choose one answer for each question.

81. What is audio signal flow?

- A. The route audio takes through inputs, tracks, processing, buses and outputs
- B. The musical scale of a song
- C. The order of MIDI notes only
- D. The shape of a room

82. What is an insert effect typically used for?

- A. Processing the signal directly in a channel path
- B. Changing the file extension
- C. Creating a new microphone
- D. Setting the project tempo

83. What is an auxiliary send commonly used for?

- A. Sending some signal to a shared effect or bus
- B. Changing sample rate
- C. Deleting the source recording
- D. Converting audio into lyrics

84. What is the difference between pre-fader and post-fader send behaviour?

- A. Pre-fader sends are generally independent of the channel fader; post-fader sends follow it
- B. They always sound identical
- C. Pre-fader sends only work with MIDI
- D. Post-fader changes the song key

85. What does a bus compressor receive when multiple tracks are routed to it?

- A. The combined routed signals
- B. Only the track names
- C. The project's tempo map
- D. The room's acoustic reflections directly

86. Why should you understand a plugin's position in the chain?

- A. Order affects what signal it receives and what later processors receive
- B. Plugin order never matters
- C. It changes the song title
- D. It determines the microphone brand

87. What is a common reason to route several backing vocals to a bus?

- A. Shared processing and easier group control
- B. To make them automatically in tune
- C. To remove all breaths without editing
- D. To convert them to MIDI

88. What does a master output channel generally represent?

- A. The final mix output path before the audio device/export path
- B. The first microphone input only
- C. A MIDI keyboard
- D. The tempo track

89. Why can a feedback loop be dangerous in routing?

- A. Signal can repeatedly recirculate and build up to extreme levels
- B. It always improves stereo width
- C. It lowers all frequencies
- D. It changes MIDI velocity

90. What is parallel processing?

- A. Blending a processed signal with an unprocessed or differently processed version
- B. Using only one plugin in series
- C. Exporting two file names
- D. Panning every track centre

91. What is a sidechain input on a compressor used for?

- A. A separate signal controls the compressor's gain reduction
- B. It changes the session sample rate
- C. It adds notes to the piano roll
- D. It automatically masters the song

92. In a typical kick-to-bass sidechain setup, which signal is commonly the key input?

- A. Kick signal
- B. Master output only
- C. Reverb tail only
- D. A silent MIDI region

93. If muting a bus makes several tracks disappear, what does that suggest?

- A. Those tracks are routed through that bus
- B. Those tracks share a sample rate
- C. The bus changes their key
- D. The tracks are all MIDI

94. What is the purpose of a pre-fader send for a monitor mix?

- A. It can remain stable when the main channel fader changes
- B. It always adds compression
- C. It prevents latency entirely
- D. It sets a new project tempo

95. Why should you avoid sending a reverb return back into the same reverb without intent?

- A. It may create excessive buildup or feedback-like effects
- B. It lowers the sample rate
- C. It changes MIDI into audio
- D. It removes all reflections

96. What does routing a track directly to an output instead of a bus change?

- A. It bypasses processing or control that exists on the bus path
- B. It always improves sound
- C. It changes the pitch
- D. It adds a MIDI instrument

97. What should you do first when no audio reaches the master output?

- A. Trace the signal path from source to destination and check meters
- B. Add a limiter immediately
- C. Change the project key
- D. Raise every plugin control

98. What does a send level control?

- A. How much signal is sent along the auxiliary route
- B. The microphone's physical distance
- C. The sample rate
- D. The chord inversion

99. Why is gain reduction on a sidechain compressor rhythmic?

- A. The key signal's timing and level trigger the detector response
- B. The compressor follows the song lyrics
- C. The bass changes its MIDI notes
- D. The sample rate creates beats

100. What is the safest way to troubleshoot a routing issue?

- A. Inspect one stage at a time and use meters or solo/mute checks
- B. Change every route at once
- C. Delete all tracks
- D. Raise the master until sound returns

6. Understanding Your DAW

Choose one answer for each question.

101. What does DAW stand for?

- A. Digital Audio Workstation
- B. Dynamic Arrangement Wave
- C. Digital Amplitude Width
- D. Direct Audio Wire

102. In Logic Pro, what is a track used for?

- A. Hosting and organising audio, MIDI/instrument, or other track data
- B. Changing the Mac's screen resolution
- C. Replacing the audio interface
- D. Setting the room's dimensions

103. What is a region in a DAW arrangement?

- A. A section of audio or MIDI placed on a track
- B. A plugin manufacturer
- C. A type of audio cable
- D. A master-meter scale

104. What does the transport control?

- A. Playback, stop, record and navigation through the project
- B. Only plugin presets
- C. The room's temperature
- D. The microphone's polar pattern

105. What is the purpose of the mixer view?

- A. Adjust channel levels, routing, inserts, sends and related controls
- B. Edit video subtitles only
- C. Change the computer password
- D. Create physical sound waves without speakers

106. What is a software instrument track commonly used for?

- A. Playing a virtual instrument from MIDI input or regions
- B. Recording only analogue microphone signals
- C. Measuring room acoustics automatically
- D. Exporting PDFs

107. What is the difference between saving and exporting a project?

- A. Saving preserves the editable session; exporting creates a deliverable file or stem
- B. They are always the same action
- C. Exporting always deletes the session
- D. Saving creates only MP3

108. Why should you name tracks clearly?

- A. It speeds navigation, collaboration and troubleshooting
- B. It increases sample rate
- C. It prevents every CPU overload
- D. It makes MIDI audible without an instrument

109. What is automation in a DAW?

- A. Time-based control changes to parameters such as volume or pan
- B. A type of audio cable
- C. A fixed tempo only
- D. A method to raise bit depth

110. What is a plug-in?

- A. Software processing or instrument functionality hosted by the DAW
- B. A physical microphone stand
- C. A music theory degree
- D. A type of sample rate

111. Why create a project folder before recording?

- A. To keep audio, session files and related assets organised
- B. To make all recordings louder
- C. To change the key automatically
- D. To avoid backups

112. What is the cycle/loop range used for?

- A. Repeating playback over a selected timeline range
- B. Changing the track's instrument
- C. Converting stereo to mono
- D. Changing MIDI velocity globally

113. What is a marker useful for?

- A. Labelling important locations or sections in the timeline
- B. Changing the audio interface clock automatically
- C. Removing noise
- D. Creating a compressor sidechain

114. What does solo do?

- A. Auditions selected track(s) while suppressing other non-soloed paths according to solo logic
- B. Deletes other tracks
- C. Raises the master by 6 dB
- D. Converts audio to MIDI

115. What does mute do?

- A. Silences a track or path without deleting its content
- B. Deletes the region permanently
- C. Changes the song tempo
- D. Changes bit depth

116. Why should you save versions or backups?

- A. To recover from mistakes and preserve earlier project states
- B. To increase stereo width
- C. To avoid learning shortcuts
- D. To remove all latency

117. What is the piano roll commonly used for?

- A. Editing MIDI note pitch, timing, length and velocity
- B. Editing acoustic room reflections
- C. Measuring speaker impedance
- D. Writing PDF answers

118. What is quantisation used for in MIDI editing?

- A. Moving note timing toward a rhythmic grid, according to settings
- B. Changing the sample rate
- C. Adding room reverb
- D. Changing the audio file extension

119. What should you check if Logic Pro has no input signal?

- A. Input selection, interface connection, track type, monitoring and meters
- B. Only the track colour
- C. The song key
- D. The export file name

120. What is a good first-session workflow?

- A. Create and save a project, set audio devices, import/record material, label tracks and check playback
- B. Insert every plugin first
- C. Master before recording
- D. Ignore routing

7. MIDI versus Audio

Choose one answer for each question.

121. What does MIDI normally contain?

- A. Musical performance/control instructions such as notes and timing
- B. A recording of the speaker's air pressure
- C. Only an MP3 waveform
- D. The exact timbre of every synthesizer

122. Can a MIDI file be heard by itself without a sound generator?

- A. Yes, it always contains recorded sound
- B. No, it needs an instrument or renderer to produce audio
- C. Only if saved at 48 kHz
- D. Only when stereo

123. What is an audio region generally made of in a DAW?

- A. Recorded or rendered digital audio samples
- B. Only note names and velocities
- C. A list of plugin presets
- D. A tempo map only

124. What does MIDI velocity commonly control?

- A. How strongly a note is played, interpreted by the instrument
- B. The audio sample rate
- C. The track's pan position in every instrument
- D. The export folder

125. Why might the same MIDI part sound different with two instruments?

- A. Each instrument maps the same events to different sounds and responses
- B. MIDI contains the exact same waveform
- C. The file automatically changes key
- D. Audio cannot be synthesised

126. What is a MIDI note's duration usually represented by?

- A. Its note-on and note-off timing or note length
- B. A sample's bit depth
- C. The stereo width
- D. The reverb preset name

127. What does bouncing an instrument track to audio do?

- A. Renders the instrument output into audio data
- B. Turns audio into a scale automatically
- C. Removes all effects in every case
- D. Creates only a text file

128. What is one advantage of keeping MIDI editable?

- A. You can change notes, timing, velocity and often the instrument later
- B. It guarantees zero CPU use
- C. It preserves the exact sound of every plugin forever
- D. It cannot be accidentally changed

129. What is one advantage of printing audio?

- A. It can make playback more predictable and reduce reliance on a live instrument instance
- B. It preserves every note as editable MIDI
- C. It always reduces file size
- D. It automatically fixes timing

130. Can a MIDI region store an audio waveform?

- A. Normally no; it stores events rather than waveform samples
- B. Yes, all MIDI files are WAVs
- C. Only when mono
- D. Only when exported at 24-bit

131. What is MIDI CC used for?

- A. Sending continuous controller values such as modulation or expression
- B. Storing stereo audio samples
- C. Measuring acoustic frequency
- D. Creating an MP3 header

132. What does MIDI channel information help specify?

- A. Which channel a MIDI event is addressed to in multichannel setups
- B. The bit depth of a WAV file
- C. The master output loudness
- D. The physical microphone model

133. Why might MIDI playback be silent in Logic Pro?

- A. No suitable instrument is loaded or the track/routing is wrong
- B. MIDI always includes silence
- C. The project is stereo
- D. The file is 24-bit

134. What is an audio stem?

- A. A rendered audio part or group intended for separate use
- B. A MIDI note name
- C. A plugin window
- D. A project tempo

135. Can you edit pitch directly in MIDI more easily than in a fixed audio recording?

- A. Usually yes, by changing note events
- B. No, MIDI is always fixed audio
- C. Only after mastering
- D. Only by changing sample rate

136. What does MIDI quantisation affect?

- A. The timing of MIDI note events
- B. The room reverb in an audio file
- C. The sample bit depth
- D. The analogue microphone gain

137. What is an audio interface's role in recording audio?

- A. It converts incoming analogue signals to digital audio and sends playback to outputs
- B. It creates MIDI notes from every sound perfectly
- C. It selects the song key
- D. It replaces the DAW

138. Why can an exported MIDI file play a different sound on another computer?

- A. The receiving system may use a different instrument, sound bank or mapping
- B. MIDI contains no notes
- C. MIDI stores the exact original audio
- D. Sample rate determines timbre exactly

139. What is a common workflow for editing a virtual piano performance?

- A. Edit MIDI notes, then adjust the instrument and render audio when needed
- B. Edit only the MP3's MIDI channel
- C. Change the WAV's key metadata
- D. Use only the master fader

140. What should you deliver if a collaborator specifically needs the exact sound you approved?

- A. A rendered audio file, and MIDI/session data if further editing is needed
- B. MIDI only and assume the sound will match
- C. A screenshot of the piano roll only
- D. A track name list

8. Critical Listening Fundamentals

Choose one answer for each question.

141. What is critical listening?

- A. Focused listening with a clear question and evidence-based observations
- B. Listening only to meters
- C. Turning the speakers as loud as possible
- D. Adding plugins until it sounds different

142. Why level-match A/B comparisons?

- A. Louder audio is often perceived as better, biasing judgement
- B. It changes the song key
- C. It removes all masking
- D. It makes the comparison meaningless

143. What is masking?

- A. One sound making another harder to hear
- B. A file format
- C. A MIDI articulation
- D. A synonym for stereo width

144. Why use reference tracks?

- A. To compare balance, tonal character and dynamics against a known example
- B. To copy every mix decision blindly
- C. To guarantee a hit song
- D. To replace learning signal flow

145. What should you do when listening for vocal intelligibility?

- A. Focus on whether words remain clear against the arrangement
- B. Watch only the master peak meter
- C. Turn every instrument off permanently
- D. Raise all high frequencies automatically

146. Why check a mix at a lower monitoring level?

- A. It can reveal balance problems and reduces listening fatigue
- B. It makes the mix objectively louder
- C. It adds bass automatically
- D. It fixes clipping

147. What does stereo width describe?

- A. The perceived spread of sound between left and right
- B. The sample rate
- C. The note length
- D. The file bit depth

148. Why check a mix in mono?

- A. To reveal potential phase cancellations and balance changes
- B. To guarantee a better stereo image
- C. To remove all reverberation
- D. To set tempo

149. What is a useful first step when a mix sounds muddy?

- A. Identify which sources and frequency regions contribute before EQ changes
- B. Boost every track's treble
- C. Add a limiter to every channel
- D. Turn up the master

150. Why should you take listening breaks?

- A. Hearing fatigue can reduce judgement and consistency
- B. Breaks change the sample rate
- C. They guarantee perfect pitch
- D. They remove all noise

151. What is a blind or sight-reduced comparison useful for?

- A. Reducing expectation bias from labels or visuals
- B. Making audio louder
- C. Changing the waveform
- D. Correcting phase automatically

152. What is an objective measurement best used for?

- A. Answering a defined measurable question, alongside listening
- B. Replacing all listening decisions
- C. Proving every artistic choice
- D. Choosing a song lyric

153. What is a common sign of over-processing?

- A. The sound loses desired naturalness or musical impact without a clear benefit
- B. Every meter is green
- C. A project contains four tracks
- D. The sample rate is 44.1 kHz

154. Why compare before and after processing at similar loudness?

- A. To judge the processing change rather than the level increase
- B. To make the processed version always win
- C. To reduce the sample rate
- D. To change the arrangement

155. What does a mix reference not tell you automatically?

- A. The exact plugin settings needed for your own session
- B. A useful target for broad balance and tone
- C. How a commercial mix translates on your system
- D. A perspective on arrangement density

156. What is translation in mixing?

- A. How a mix holds up across playback systems and listening environments
- B. Converting lyrics to another language
- C. Changing MIDI to audio
- D. Exporting a PDF

157. Why listen on more than one playback system when possible?

- A. Different systems reveal different balance and translation issues
- B. All systems should sound identical
- C. It changes the musical key
- D. It eliminates the need for references

158. What should you write in a listening log?

- A. The specific observation, test performed and result
- B. Only whether you liked it
- C. A random plugin list
- D. The song's file size only

159. Why is louder not automatically better?

- A. Level affects perception, and louder comparisons can bias judgement
- B. Louder audio always has less distortion
- C. Volume never affects perception
- D. Only MIDI can be loud

160. What is a professional critical-listening habit?

- A. Define the problem, listen at controlled levels, change one thing, and re-check
- B. Change many plugins at once
- C. Judge from waveform shape alone
- D. Never use references

ANSWER KEY WITH EXPLANATIONS

Answers are grouped by topic. Each explanation states the key concept being tested.

1. What Is Sound?

1. What creates sound in the physical world?

Correct answer: A. A vibrating source causing pressure variations in a medium

Sound usually begins with vibration that creates pressure variations in a medium such as air.

2. Can sound travel through a perfect vacuum?

Correct answer: B. No, sound needs a material medium

Sound is a mechanical wave and requires a medium; electromagnetic waves can travel through a vacuum.

3. What does a microphone diaphragm do?

Correct answer: B. Converts acoustic pressure changes into an electrical signal

A microphone transducer converts sound pressure variations into a corresponding electrical signal.

4. What is the main purpose of a loudspeaker?

Correct answer: A. Convert an electrical audio signal into moving air pressure

A loudspeaker uses a moving diaphragm to create pressure variations that we hear as sound.

5. What does a waveform display in a typical audio editor?

Correct answer: B. Amplitude over time

A waveform shows sample amplitude over time; it does not directly display every aspect of perceived loudness.

6. Which statement best describes frequency?

Correct answer: A. How many cycles occur per second

Frequency is measured in hertz (Hz), or cycles per second.

7. Which statement best describes amplitude?

Correct answer: B. The magnitude of a signal variation

Amplitude describes signal magnitude; perceived loudness also depends on other factors.

8. Why does sound usually travel differently through different materials?

Correct answer: A. Materials have different physical properties

Density, elasticity, and other material properties affect sound propagation.

9. What is the difference between an acoustic sound and a digital audio file?

Correct answer: B. Acoustic sound is pressure variation; digital audio is numerical sample data representing it

A file stores numerical samples that a converter and playback system turn into a physical sound wave.

10. What does a sound wave carry from source to listener?

Correct answer: A. A transfer of energy through a medium

The disturbance propagates and transfers energy; the medium's particles oscillate locally.

11. What does pitch mainly relate to for a simple periodic tone?

Correct answer: A. Frequency

Pitch perception is strongly related to frequency, although complex sounds and context affect perception.

12. What is a complex tone?

Correct answer: A. A tone containing more than one frequency component

Many musical sounds contain a fundamental and additional components called partials.

13. What is a transducer in audio?

Correct answer: A. A device that converts one form of energy to another

Microphones and loudspeakers are examples of electroacoustic transducers.

14. Why can two sounds with the same peak level seem different in loudness?

Correct answer: A. Loudness depends on more than peak amplitude alone

Duration, spectrum, dynamics, and listening conditions influence perceived loudness.

15. What is resonance in a physical system?

Correct answer: A. A tendency to respond strongly near certain frequencies

Resonant systems respond more strongly around their natural resonant frequencies.

16. What is the safest way to compare two sound examples?

Correct answer: A. Use similar playback loudness and listen for a defined difference

Level-matched, focused comparisons reduce loudness bias and make differences easier to identify.

17. What is noise in an audio context?

Correct answer: A. Unwanted or non-musical signal content, depending on context

Noise is context-dependent unwanted signal; some noise can be intentional in creative work.

18. What is a periodic waveform?

Correct answer: A. A pattern that repeats over time

Periodicity means the pattern repeats after a consistent time interval.

19. What is one reason to learn basic acoustics before mixing?

Correct answer: A. It helps explain what microphones, speakers, rooms, and signals are doing

Basic acoustics supports informed recording, monitoring, and mixing decisions.

20. What should you do first when a sound seems wrong in a session?

Correct answer: A. Listen carefully and identify the problem before changing settings

Diagnosis before processing prevents random changes and helps build repeatable skills.

2. Frequency, Amplitude and Phase

21. Frequency is measured in...

Correct answer: B. Hertz

Hertz (Hz) measures cycles per second.

22. Amplitude most directly describes...

Correct answer: A. The size of signal variation

Amplitude is signal magnitude; perceived loudness is related but more complex.

23. What can happen when two similar signals combine with opposing polarity?

Correct answer: B. They may partially or fully cancel

Opposing polarity can cause cancellation when signals align appropriately; complete cancellation requires close matching.

24. What does phase describe for a periodic signal?

Correct answer: A. Its position within a cycle relative to a reference

Phase expresses cycle position and matters when signals are combined.

25. What is the period of a waveform?

Correct answer: A. Time required for one cycle

Period is the duration of one cycle and is inversely related to frequency.

26. If frequency increases, the period becomes...

Correct answer: B. Shorter

For a periodic waveform, period equals 1 divided by frequency.

27. What does a spectrum analyser help you see?

Correct answer: A. Energy distribution across frequencies

A spectrum analyser displays signal energy or magnitude by frequency.

28. Are frequency and pitch exactly identical concepts?

Correct answer: B. No; pitch is perception strongly related to frequency

Pitch is perceptual; frequency is a measurable physical property.

29. What does polarity inversion do to an ideal signal?

Correct answer: A. Reverses its sign at each instant

Polarity inversion multiplies the signal by -1 ; this is distinct from a time delay.

30. Why can a small time delay change phase relationships?

Correct answer: A. A delay corresponds to a phase shift that depends on frequency

The phase shift from a time delay varies with frequency.

31. What is constructive interference?

Correct answer: A. Signals combine to reinforce each other at some frequencies/times

Signals that align in phase can reinforce each other.

32. What is destructive interference?

Correct answer: A. Signals combine to reduce one another at some frequencies/times

Opposing components can reduce the combined amplitude.

33. Which range is generally called the audible range for healthy young human hearing?

Correct answer: A. About 20 Hz to 20 kHz

20 Hz–20 kHz is a common approximation; hearing limits vary with age and individual.

34. What is a harmonic series?

Correct answer: A. Frequency components at integer multiples of a fundamental

Harmonics occur at whole-number multiples of the fundamental frequency.

35. What does a fundamental frequency usually represent in a harmonic tone?

Correct answer: A. The lowest harmonic and a strong pitch reference

The fundamental is the first harmonic, though it can be weak or absent while pitch is still perceived.

36. If a sine wave amplitude is doubled, what happens to its level in dB relative to the original?

Correct answer: A. Approximately +6 dB

Doubling amplitude corresponds to approximately +6.02 dB.

37. What should you avoid when checking phase between microphones?

Correct answer: A. Assuming one polarity button fixes every timing issue

Polarity inversion cannot correct all time-of-arrival differences or frequency-dependent phase interactions.

38. Why is mono checking useful during mixing?

Correct answer: A. It can reveal phase-related losses and masking that stereo may hide

Summing to mono can expose cancellations and balance problems.

39. What does amplitude modulation mean in a basic signal context?

Correct answer: A. Amplitude changes over time according to a pattern

Amplitude modulation varies a signal's amplitude over time.

40. What is the best way to learn phase audibly?

Correct answer: A. Compare related signals in mono and listen for tonal changes as alignment changes

Listening to combined signals reveals reinforcement and cancellation.

3. Decibels and Gain Staging

41. In a conventional digital full-scale meter, 0 dBFS represents...

Correct answer: A. The maximum digital full-scale level

0 dBFS is the digital full-scale reference; signals exceeding it cannot be represented in ordinary fixed-point PCM without clipping.

42. If a plugin distorts because its input is too hot, what should you try first?

Correct answer: A. Lower the plugin input or drive

Reduce level at the stage where overload occurs.

43. Gain staging is primarily about...

Correct answer: A. Keeping signal levels appropriate through the signal path

Appropriate levels preserve headroom and help plugins operate as intended.

44. What does dBFS measure?

Correct answer: A. Digital level relative to full scale

dBFS is a digital full-scale level reference.

45. What does a peak meter show?

Correct answer: A. Short-term maximum signal amplitude over its measurement window

Peak meters indicate signal peaks; loudness meters measure different properties.

46. Why leave headroom while mixing?

Correct answer: A. To reduce risk of overload and allow processing and summing margin

Headroom provides margin before digital full scale and makes level management easier.

47. What does a fader change in a typical DAW channel strip?

Correct answer: A. The channel's level at that point in the signal path

A channel fader changes signal level at its location in the channel path.

48. What is the difference between gain and loudness?

Correct answer: A. Gain is a signal-level change; loudness is a perceptual experience

Gain is a controllable signal parameter; loudness depends on signal characteristics and listening conditions.

49. Why level-match when comparing plugins?

Correct answer: A. Louder versions can seem better even when processing is not beneficial

Level matching reduces loudness bias in A/B comparisons.

50. What is clipping?

Correct answer: A. A signal exceeding the available level range and being truncated or distorted

Digital clipping occurs when signal values exceed representable range; analogue stages can also overload.

51. What is a true-peak meter intended to estimate?

Correct answer: A. Potential peaks between digital samples after reconstruction

True-peak measurement estimates inter-sample peaks, which can exceed sample peak values.

52. If you reduce a track fader but a plugin before the fader still distorts, what is likely true?

Correct answer: A. The overload occurs before the fader

A downstream fader cannot undo overload already created earlier in the chain.

53. What is unity gain on a fader commonly represented as?

Correct answer: A. 0 dB change

Unity gain means the fader applies no level change.

54. What is a common safe habit when inserting a new plugin?

Correct answer: A. Check input/output levels and compare at matched loudness

Level-aware setup avoids unexpected jumps and makes comparisons fair.

55. Does a track need to peak close to 0 dBFS to sound professional?

Correct answer: A. No; sensible levels and balance matter more

There is no requirement for every track to approach full scale.

56. What does a gain plugin before a compressor let you control?

Correct answer: A. The level hitting the compressor

Pre-compressor gain affects how strongly the signal drives the compressor.

57. What is a bus in a DAW?

Correct answer: A. A routing path that combines or directs signals

Buses route multiple signals to shared processing or destinations.

58. Why can summing multiple tracks increase the master level?

Correct answer: A. Their signals combine and may add in amplitude

Summed signals can create higher peaks depending on their correlation and timing.

59. What is the best first response to a red overload indicator?

Correct answer: A. Find where overload occurs and reduce level there

Identify the exact stage that overloads and correct it upstream.

60. What is the main aim of gain staging in a mix?

Correct answer: A. Predictable levels, headroom, and clean processing where desired

Gain staging supports controlled signal flow; intentional distortion can still be creative.

4. Digital Audio

61. What does sample rate describe?

Correct answer: A. How many samples per second are captured or played

Sample rate is measured in samples per second, such as 44.1 kHz.

62. What does bit depth primarily affect in PCM audio?

Correct answer: A. The available quantisation resolution and theoretical noise floor

Bit depth determines the number of representable amplitude values and affects quantisation noise.

63. What is the Nyquist frequency for a 48 kHz sample rate?

Correct answer: A. 24 kHz

The Nyquist frequency is half the sample rate.

64. Why is an anti-aliasing filter used before sampling?

Correct answer: A. To reduce frequencies that would alias above Nyquist

Frequencies above Nyquist can fold into lower frequencies if not appropriately filtered.

65. What is aliasing?

Correct answer: A. Incorrect lower-frequency components caused by inadequate sampling of higher frequencies

Aliasing occurs when frequency components exceed what the sampling system can represent.

66. What is a DAW's audio buffer size mainly associated with?

Correct answer: A. The amount of audio processed per buffer and resulting latency/CPU trade-offs

Smaller buffers often reduce monitoring latency but increase CPU pressure.

67. Why might recording use a lower buffer than mixing?

Correct answer: A. Low-latency monitoring is important during recording; mixing can tolerate more latency

Buffer choices balance latency against processing stability.

68. What is latency?

Correct answer: A. A delay between an input/action and the corresponding output

Latency is time delay through recording, processing, and playback systems.

69. What is dithering in digital audio?

Correct answer: A. Adding low-level noise before reducing bit depth to decorrelate quantisation distortion

Dither can make quantisation distortion less objectionable when reducing bit depth.

70. What does PCM stand for?

Correct answer: A. Pulse-code modulation

PCM represents sampled audio as numerical amplitude values.

71. Which format is typically lossless PCM?

Correct answer: A. WAV or AIFF when stored as PCM

WAV and AIFF can store uncompressed PCM; they may also support other encodings.

72. What is the main distinction between a lossless and lossy codec?

Correct answer: A. Lossless preserves the encoded source data exactly; lossy discards information to reduce size

Lossless compression reconstructs the original encoded data; lossy coding uses perceptual compromises.

73. What does an audio interface's converter do?

Correct answer: A. Converts analogue signals to digital and/or digital signals to analogue

ADCs digitise analogue input; DACs convert digital audio to analogue output.

74. Why should the project sample rate be chosen deliberately?

Correct answer: A. It affects compatibility, processing, storage and conversion workflow

Sample-rate choices affect session compatibility and resource use.

75. What happens if audio is clipped before it is recorded digitally?

Correct answer: A. The clipped distortion is captured in the recording

Clipping captured at the input is part of the recorded waveform and cannot be perfectly undone by export settings.

76. What is quantisation error?

Correct answer: A. The difference between an input value and its quantised representation

Quantisation maps continuous amplitudes to discrete digital values.

77. What does an interleaved stereo file contain?

Correct answer: A. Left and right channel samples arranged in one file stream

Interleaved stereo stores both channels in one file.

78. Why might a very small buffer cause clicks during playback?

Correct answer: A. The computer may fail to process buffers in time

CPU overload or missed deadlines can cause audio dropouts and clicks.

79. What does a higher sample rate not automatically guarantee?

Correct answer: A. Better-sounding music in every situation

Higher sample rate alone does not guarantee audible improvement; implementation and context matter.

80. What should you check if an exported file sounds different from the session?

Correct answer: A. Export range, sample-rate conversion, bit-depth settings, processing, and playback level

Systematically check export settings and signal path rather than guessing.

5. Audio Signal Flow

81. What is audio signal flow?

Correct answer: A. The route audio takes through inputs, tracks, processing, buses and outputs

Signal flow is the path a signal follows through the system.

82. What is an insert effect typically used for?

Correct answer: A. Processing the signal directly in a channel path

An insert processes the channel signal at its position in the chain.

83. What is an auxiliary send commonly used for?

Correct answer: A. Sending some signal to a shared effect or bus

Sends allow parallel routing, such as multiple tracks feeding one reverb.

84. What is the difference between pre-fader and post-fader send behaviour?

Correct answer: A. Pre-fader sends are generally independent of the channel fader; post-fader sends follow it

The send tap point determines whether channel fader moves affect the send level.

85. What does a bus compressor receive when multiple tracks are routed to it?

Correct answer: A. The combined routed signals

A bus receives the signals routed to it and processes their combined result.

86. Why should you understand a plugin's position in the chain?

Correct answer: A. Order affects what signal it receives and what later processors receive

Processing order can change dynamics, tone, and gain at later stages.

87. What is a common reason to route several backing vocals to a bus?

Correct answer: A. Shared processing and easier group control

A vocal bus provides shared processing and group level control.

88. What does a master output channel generally represent?

Correct answer: A. The final mix output path before the audio device/export path

The master channel collects the mix routed to the main output.

89. Why can a feedback loop be dangerous in routing?

Correct answer: A. Signal can repeatedly recirculate and build up to extreme levels

Feedback loops can create runaway level or instability; avoid unintended routing loops.

90. What is parallel processing?

Correct answer: A. Blending a processed signal with an unprocessed or differently processed version

Parallel paths allow blending different processing contributions.

91. What is a sidechain input on a compressor used for?

Correct answer: A. A separate signal controls the compressor's gain reduction

The detector listens to a key signal while the compressor acts on the target audio.

92. In a typical kick-to-bass sidechain setup, which signal is commonly the key input?

Correct answer: A. Kick signal

The kick triggers gain reduction on the bass when routed to the compressor's sidechain input.

93. If muting a bus makes several tracks disappear, what does that suggest?

Correct answer: A. Those tracks are routed through that bus

Muting a bus silences the signals routed through it.

94. What is the purpose of a pre-fader send for a monitor mix?

Correct answer: A. It can remain stable when the main channel fader changes

Pre-fader sends are useful when a separate feed should not follow the main fader.

95. Why should you avoid sending a reverb return back into the same reverb without intent?

Correct answer: A. It may create excessive buildup or feedback-like effects

Recursive routing can cause uncontrolled accumulation or unintended tonal effects.

96. What does routing a track directly to an output instead of a bus change?

Correct answer: A. It bypasses processing or control that exists on the bus path

Routing determines which shared processing and level controls affect the signal.

97. What should you do first when no audio reaches the master output?

Correct answer: A. Trace the signal path from source to destination and check meters

Signal tracing identifies where the signal stops.

98. What does a send level control?

Correct answer: A. How much signal is sent along the auxiliary route

The send amount determines the level feeding the destination bus or effect.

99. Why is gain reduction on a sidechain compressor rhythmic?

Correct answer: A. The key signal's timing and level trigger the detector response

The detector responds to the key input's envelope and the compressor's timing settings.

100. What is the safest way to troubleshoot a routing issue?

Correct answer: A. Inspect one stage at a time and use meters or solo/mute checks

Stepwise tracing isolates the fault and avoids creating new problems.

6. Understanding Your DAW

101. What does DAW stand for?

Correct answer: A. Digital Audio Workstation

A DAW is software used to record, edit, arrange, process and mix audio/MIDI.

102. In Logic Pro, what is a track used for?

Correct answer: A. Hosting and organising audio, MIDI/instrument, or other track data

Tracks organise performances, recordings, instruments, and routing.

103. What is a region in a DAW arrangement?

Correct answer: A. A section of audio or MIDI placed on a track

Regions represent arranged audio or MIDI material on the timeline.

104. What does the transport control?

Correct answer: A. Playback, stop, record and navigation through the project

Transport controls operate the timeline playback and recording state.

105. What is the purpose of the mixer view?

Correct answer: A. Adjust channel levels, routing, inserts, sends and related controls

The mixer provides access to channel strips and routing/processing controls.

106. What is a software instrument track commonly used for?

Correct answer: A. Playing a virtual instrument from MIDI input or regions

Instrument tracks host virtual instruments that generate audio from MIDI or other control.

107. What is the difference between saving and exporting a project?

Correct answer: A. Saving preserves the editable session; exporting creates a deliverable file or stem

A session preserves editability; an export renders selected content to an output format.

108. Why should you name tracks clearly?

Correct answer: A. It speeds navigation, collaboration and troubleshooting

Clear names reduce confusion in complex sessions.

109. What is automation in a DAW?

Correct answer: A. Time-based control changes to parameters such as volume or pan

Automation records or draws parameter changes across time.

110. What is a plug-in?

Correct answer: A. Software processing or instrument functionality hosted by the DAW

Plugins extend a DAW with effects, instruments, metering and utilities.

111. Why create a project folder before recording?

Correct answer: A. To keep audio, session files and related assets organised

A well-organised project reduces missing-file and handoff problems.

112. What is the cycle/loop range used for?

Correct answer: A. Repeating playback over a selected timeline range

Cycle playback helps repeat a section for recording, editing and comparison.

113. What is a marker useful for?

Correct answer: A. Labelling important locations or sections in the timeline

Markers identify sections such as verse, chorus, bridge or edit points.

114. What does solo do?

Correct answer: A. Auditions selected track(s) while suppressing other non-soloed paths according to solo logic

Solo isolates selected paths for focused listening.

115. What does mute do?

Correct answer: A. Silences a track or path without deleting its content

Mute is a non-destructive way to temporarily silence material.

116. Why should you save versions or backups?

Correct answer: A. To recover from mistakes and preserve earlier project states

Versions and backups protect work from accidental edits or file problems.

117. What is the piano roll commonly used for?

Correct answer: A. Editing MIDI note pitch, timing, length and velocity

The piano roll is a visual editor for MIDI notes and related data.

118. What is quantisation used for in MIDI editing?

Correct answer: A. Moving note timing toward a rhythmic grid, according to settings

Quantisation adjusts note timing; strength and grid settings affect the result.

119. What should you check if Logic Pro has no input signal?

Correct answer: A. Input selection, interface connection, track type, monitoring and meters

Input routing and monitoring are common causes of no signal.

120. What is a good first-session workflow?

Correct answer: A. Create and save a project, set audio devices, import/record material, label tracks and check playback

A deliberate setup establishes a reliable foundation for later work.

7. MIDI versus Audio

121. What does MIDI normally contain?

Correct answer: A. Musical performance/control instructions such as notes and timing

MIDI carries event data; an instrument or sound generator produces audio from it.

122. Can a MIDI file be heard by itself without a sound generator?

Correct answer: B. No, it needs an instrument or renderer to produce audio

MIDI describes events rather than storing a rendered audio waveform.

123. What is an audio region generally made of in a DAW?

Correct answer: A. Recorded or rendered digital audio samples

Audio regions reference or contain waveform sample data.

124. What does MIDI velocity commonly control?

Correct answer: A. How strongly a note is played, interpreted by the instrument

Velocity is a note-on value often mapped to volume, timbre or articulation.

125. Why might the same MIDI part sound different with two instruments?

Correct answer: A. Each instrument maps the same events to different sounds and responses

MIDI events trigger each instrument's own sound engine and mappings.

126. What is a MIDI note's duration usually represented by?

Correct answer: A. Its note-on and note-off timing or note length

Note events and their timing define the intended duration.

127. What does bouncing an instrument track to audio do?

Correct answer: A. Renders the instrument output into audio data

Bouncing commits the rendered sound to audio, depending on the chosen bounce settings.

128. What is one advantage of keeping MIDI editable?

Correct answer: A. You can change notes, timing, velocity and often the instrument later

MIDI keeps performance data editable, but the resulting sound depends on the instrument and settings.

129. What is one advantage of printing audio?

Correct answer: A. It can make playback more predictable and reduce reliance on a live instrument instance

Rendered audio captures the result of the chosen sound and processing state.

130. Can a MIDI region store an audio waveform?

Correct answer: A. Normally no; it stores events rather than waveform samples

MIDI and audio use different data representations.

131. What is MIDI CC used for?

Correct answer: A. Sending continuous controller values such as modulation or expression

Control Change messages carry controller values that instruments can interpret.

132. What does MIDI channel information help specify?

Correct answer: A. Which channel a MIDI event is addressed to in multichannel setups

MIDI channel messages can direct events to different parts or instruments.

133. Why might MIDI playback be silent in Logic Pro?

Correct answer: A. No suitable instrument is loaded or the track/routing is wrong

MIDI needs a sound source and correct routing to become audible.

134. What is an audio stem?

Correct answer: A. A rendered audio part or group intended for separate use

Stems are rendered audio components, though the exact definition varies by workflow.

135. Can you edit pitch directly in MIDI more easily than in a fixed audio recording?

Correct answer: A. Usually yes, by changing note events

MIDI note pitches are event data and can be edited directly.

136. What does MIDI quantisation affect?

Correct answer: A. The timing of MIDI note events

Quantisation changes note timing relative to a grid.

137. What is an audio interface's role in recording audio?

Correct answer: A. It converts incoming analogue signals to digital audio and sends playback to outputs

An interface provides conversion and often input/output connectivity.

138. Why can an exported MIDI file play a different sound on another computer?

Correct answer: A. The receiving system may use a different instrument, sound bank or mapping

MIDI sound depends on the sound generator and setup used for playback.

139. What is a common workflow for editing a virtual piano performance?

Correct answer: A. Edit MIDI notes, then adjust the instrument and render audio when needed

MIDI editing controls the performance; the instrument shapes the sound.

140. What should you deliver if a collaborator specifically needs the exact sound you approved?

Correct answer: A. A rendered audio file, and MIDI/session data if further editing is needed

Audio preserves the approved render more reliably across different instruments.

8. Critical Listening Fundamentals

141. What is critical listening?

Correct answer: A. Focused listening with a clear question and evidence-based observations

Critical listening uses attention and comparison to identify specific audible characteristics.

142. Why level-match A/B comparisons?

Correct answer: A. Louder audio is often perceived as better, biasing judgement

Similar loudness helps separate tonal/dynamic differences from simple level differences.

143. What is masking?

Correct answer: A. One sound making another harder to hear

Masking occurs when one sound reduces the audibility of another, often in overlapping frequency/time regions.

144. Why use reference tracks?

Correct answer: A. To compare balance, tonal character and dynamics against a known example

References provide context, but must be compared thoughtfully and level-matched.

145. What should you do when listening for vocal intelligibility?

Correct answer: A. Focus on whether words remain clear against the arrangement

Intelligibility depends on level, arrangement, spectrum, articulation and other factors.

146. Why check a mix at a lower monitoring level?

Correct answer: A. It can reveal balance problems and reduces listening fatigue

Lower-level listening can reveal whether important elements remain balanced without relying on high playback volume.

147. What does stereo width describe?

Correct answer: A. The perceived spread of sound between left and right

Stereo width relates to spatial distribution and differences between channels.

148. Why check a mix in mono?

Correct answer: A. To reveal potential phase cancellations and balance changes

Mono compatibility checks whether important elements remain audible when channels are summed.

149. What is a useful first step when a mix sounds muddy?

Correct answer: A. Identify which sources and frequency regions contribute before EQ changes

Muddiness can come from arrangement, overlapping sources, room sound and frequency balance; diagnose first.

150. Why should you take listening breaks?

Correct answer: A. Hearing fatigue can reduce judgement and consistency

Short breaks help reduce fatigue and restore perspective.

151. What is a blind or sight-reduced comparison useful for?

Correct answer: A. Reducing expectation bias from labels or visuals

Removing visual cues can reduce bias during subjective comparisons.

152. What is an objective measurement best used for?

Correct answer: A. Answering a defined measurable question, alongside listening

Meters can answer specific questions but do not capture every perceptual or artistic dimension.

153. What is a common sign of over-processing?

Correct answer: A. The sound loses desired naturalness or musical impact without a clear benefit

Processing should serve a goal; audible side effects without benefit suggest reconsidering it.

154. Why compare before and after processing at similar loudness?

Correct answer: A. To judge the processing change rather than the level increase

Loudness matching makes differences more meaningful.

155. What does a mix reference not tell you automatically?

Correct answer: A. The exact plugin settings needed for your own session

Reference tracks guide decisions but cannot prescribe universal settings.

156. What is translation in mixing?

Correct answer: A. How a mix holds up across playback systems and listening environments

Translation describes how the mix works on different speakers, headphones and environments.

157. Why listen on more than one playback system when possible?

Correct answer: A. Different systems reveal different balance and translation issues

Multiple systems can expose problems that one monitoring setup hides.

158. What should you write in a listening log?

Correct answer: A. The specific observation, test performed and result

A concise log makes listening repeatable and helps distinguish observations from assumptions.

159. Why is louder not automatically better?

Correct answer: A. Level affects perception, and louder comparisons can bias judgement

Loudness can influence preference independently of fidelity or musical usefulness.

160. What is a professional critical-listening habit?

Correct answer: A. Define the problem, listen at controlled levels, change one thing, and re-check

A disciplined process produces more reliable and explainable decisions.