



**NCFE Level 1 Technical Award in Music Technology  
(601/6777/4)**

**NCFE Level 2 Technical Award in Music Technology  
(601/6774/9)**

**Paper Number: P000731 (Written)**

**Assessment window: 11 March 2019 – 15 March 2019**

## **Mark Scheme**

This mark scheme has been written by the Assessment Writer and refined, alongside the relevant questions, by a panel of subject experts through the external assessment writing process and at standardisation meetings.

The purpose of this mark scheme is to give you:

- examples and criteria of the types of response expected from a learner
- information on how individual marks are to be awarded.

## Marking guidelines

### *General guidelines*

You must apply the following marking guidelines to all marking undertaken throughout the marking period. This is to ensure fairness to all learners, who must receive the same treatment. You must mark the first learner in exactly the same way as you mark the last.

- The mark scheme must be referred to throughout the marking period and applied consistently. Do not change your approach to marking once you have been standardised.
- Reward learners positively, giving credit for what they have shown rather than penalising for what they might have omitted.
- Utilise the whole mark range and always award full marks when the response merits them.
- Be prepared to award zero marks if the learner's response has no creditworthy material.
- Do not credit irrelevant material that does not answer the question, no matter how impressive the response might be.
- The marks awarded for each response should be clearly and legibly recorded in the grid on the front of the question paper.
- If you are in any doubt about the application of the mark scheme, you must consult with a senior Examiner.

### *Guidelines for using level of response marking grids*

Level of response marking grids have been designed to award a learner's response holistically and should follow a best-fit approach. The grids are broken down into levels, with each level having an associated descriptor indicating the performance at that level. You should determine the level before determining the mark.

When determining a level, you should use a bottom-up approach. If the response meets all the descriptors in the lowest level, you should move to the next one, and so on, until the response matches the level descriptor. Remember to look at the overall quality of the response and reward learners positively rather than focussing on small omissions. If the response covers aspects at different levels, you should use a best-fit approach at this stage, and use the available marks within the level to credit the response appropriately.

When determining a mark, your decision should be based on the quality of the response in relation to the descriptors. Standardisation materials, marked by senior Examiners, will help you with determining a mark. You will be able to use exemplar learner responses to compare to a live response, to decide if it is the same, better or worse.

You are reminded that any indicative content provided is there as a guide, and therefore you must credit any other suitable responses a learner may produce. It is not a requirement either, that learners must cover all of the indicative content to be awarded full marks.

Qu	Marking guidance	Total marks
<b>Section 1</b>		<b>Total for this section: 52 marks</b>
1	<p><b>You want to connect an external hard drive to a computer. Which one of the following types of connection would typically be used?</b></p> <p>Answer: C (USB).</p>	1
2	<p><b>You want to remove an unwanted section of audio material. Which two of the following digital audio workstation (DAW) editing tools would be most appropriate to use?</b></p> <p>Answer: A (Cut).</p> <p>Answer: E (Split).</p>	2
3	<p><b>Which one of the following most accurately describes dynamics processing (e.g. expansion)?</b></p> <p>Answer: B. Processing used to change the volume of sounds</p>	1
4	<p><b>A MIDI controller keyboard is found in the majority of working studios.</b></p> <p><b>Explain the function of the pitch bend wheel on a typical MIDI controller keyboard.</b></p> <p>Award one mark for identification of function and one mark for explanation.</p> <p>For example:</p> <ul style="list-style-type: none"> <li>• to allow for MIDI pitch bend data (1) to be recorded into a DAW (1)</li> <li>• the pitch bend wheel can be manipulated by the user (1) to change the pitch of notes being performed (1).</li> </ul> <p>Accept other reasonable responses.</p>	2

<p><b>5</b></p>	<p><b>MP3 is an example of a compressed audio file format.</b></p> <p><b>Explain what is meant by compressed in this context.</b></p> <p>Award one mark for identification of lossy encoding and one mark for explanation.</p> <p>For example:</p> <ul style="list-style-type: none"> <li>• Data is removed from the audio file (1) to reduce file size (1).</li> </ul> <p>Accept other reasonable responses.</p>	<p><b>2</b></p>
<p><b>6</b></p>	<p><b>Quantisation is an editing feature that is common to all DAW software.</b></p> <p><b>Explain two ways that you could use quantisation to rhythmically enhance a musical performance.</b></p> <p>Award one mark for function and one mark for explanation</p> <p>For example:</p> <ul style="list-style-type: none"> <li>• to correct timings of notes (1) so that performance is tighter (1)</li> <li>• to add swing to notes (1) to create consistent feel in parts (1)</li> <li>• to apply quantise template drawn from another part (1) to align musical parts into same rhythmic feel (1)</li> <li>• Note Length Quantise can be used to adjust the length of each selected note (1) so that each note has an identical length (1).</li> </ul> <p>Accept other reasonable responses.</p>	<p><b>4</b></p>
<p><b>7</b></p>	<p><b>A time signature is used to indicate the rhythmic pattern of accents in a piece of music.</b></p> <p><b>A 6/8 time signature is generally accented on which two of the following beats in each bar?</b></p> <p>Answer: A. Beat 1</p> <p>Answer: C. Beat 4</p>	<p><b>2</b></p>

<p><b>8</b></p>	<p><b>Give two typical rhythmic features associated with Reggae music.</b></p> <p>Award one mark for each of the following up to a maximum of 2 marks.</p> <p>For example:</p> <ul style="list-style-type: none"> <li>• Skank (1)</li> <li>• Bubble (1)</li> <li>• Syncopation/off beat (1)</li> <li>• snare on the 3 (1)</li> <li>• half time feel (1)</li> <li>• 4/4 (1)</li> <li>• one drop (1)</li> <li>• relaxed tempo (1)</li> <li>• triplets (1)</li> <li>• use of delay/echo effects (1).</li> </ul> <p>Accept other reasonable responses.</p>	<p><b>2</b></p>
<p><b>9</b></p>	<p><b>Describe the typical function of a verse in terms of the structure of a song.</b></p> <p>Award one mark for each of the following up to a maximum of 1 mark.</p> <p>For example:</p> <ul style="list-style-type: none"> <li>• lyrical and melodic pattern which is repeated with variations a number of times through a song (1)</li> <li>• usually tells the story in a song (1)</li> <li>• section leading to chorus or refrain parts (1).</li> </ul> <p>Accept other reasonable responses.</p>	<p><b>1</b></p>
<p><b>10</b></p>	<p><b>In recent years, sales of vinyl records have started to increase.</b></p> <p><b>Explain one disadvantage of vinyl as a consumer format for music.</b></p> <p>Award one mark for identification of disadvantage and one mark for explanation.</p> <p>For example:</p> <ul style="list-style-type: none"> <li>• requires dedicated hardware to playback (1) making it potentially expensive for consumers (1)</li> <li>• fragile/prone to wear (1) so more difficult to keep in good condition (1)</li> <li>• large physical format (1) so is inconvenient to store (1)</li> <li>• noisy/limited bandwidth/limited playing time (1) making it less appealing than digital formats (1)</li> <li>• potentially expensive to manufacture/package (1) making it potentially more costly to end consumer so having potentially less profit margin (1).</li> </ul> <p>Accept other reasonable responses.</p>	<p><b>2</b></p>

<p><b>11</b></p>	<p><b>You have been asked to mix a song for a band.</b></p> <p><b>Explain one advantage and one disadvantage of creating the mixdown as a .WAV file.</b></p> <p>Award one mark for identification of advantage and one additional mark for explanation of advantage.</p> <p>Award one mark for identification of disadvantage and one additional mark for explanation of disadvantage.</p> <p>Advantages:</p> <ul style="list-style-type: none"> <li>• WAV files are typically of highest audio quality (1) so as to allow listeners to experience the detail of the mix/dynamic range/full bandwidth (1)</li> <li>• WAV files are suitable for burning to CD (1) so as to allow the mix to be easily duplicated onto CD (1)</li> <li>• WAV files are lossless (1) so allowing for CD quality audio (1)</li> <li>• WAV files are the accepted industry standard for mastering and duplication (1) meaning that the band will more easily be able to get their mix onto a hard format (1)</li> <li>• WAV files are compatible across the majority of playback platforms (1) so ensuring that the band can playback the mix (1).</li> </ul> <p>Disadvantages:</p> <ul style="list-style-type: none"> <li>• WAV files are comparatively large (1) and so cannot be easily emailed to the band (1)</li> <li>• WAV files are comparatively large (1) and so may not be suitable for all streaming/download website applications (1)</li> <li>• WAV files are comparatively large (1) and so may require more storage space (1).</li> </ul> <p>Accept other reasonable responses.</p>	<p><b>4</b></p>
<p><b>12</b></p>	<p><b>Which two of the following properties are typical of dynamic microphones?</b></p> <p>Answer: A (Does not require phantom power).</p> <p>Answer: E (Uses a moving coil).</p>	<p><b>2</b></p>

<p><b>13 (a)</b></p>	<p><b>EQ is an important part of recording and mixing.</b></p> <p><b>State two ways in which EQ can be used to modify sounds.</b></p> <p>Award one mark for each of the following up to a maximum of two marks.</p> <p>For example:</p> <ul style="list-style-type: none"> <li>• boost/highlight frequencies (1)</li> <li>• cut/attenuate/remove/filter frequencies (1).</li> </ul> <p>Award for plausible exemplification of response (e.g. if your bass drum has no beater click, you can boost the treble using EQ/if your bass drum is too boomy you can cut the bass using EQ).</p>	<p><b>2</b></p>
<p><b>13 (b)</b></p>	<p><b>State the function of a High Pass Filter (HPF).</b></p> <p>Award one mark for each of the following up to a maximum of one mark.</p> <p>For example:</p> <ul style="list-style-type: none"> <li>• attenuates frequencies below a given frequency (1)</li> <li>• lets high frequencies through (1).</li> </ul> <p>Accept other reasonable responses.</p>	<p><b>1</b></p>
<p><b>14</b></p>	<p><b>Computer display screens are used in most modern recording studios.</b></p> <p><b>Describe one safety measure which you should take when using a computer display screen during a recording session.</b></p> <p>Award one mark for description.</p> <p>For example:</p> <ul style="list-style-type: none"> <li>• taking regular breaks to avoid eyestrain (1)</li> <li>• negating risk of electric shock not placing liquids near monitor /by ensuring that monitor is electrically safe/PAT tested (1).</li> </ul> <p>Accept other reasonable responses.</p>	<p><b>1</b></p>

<b>15</b>	<p><b>You are recording a musician in a studio live room and have asked the musician to monitor their performance using headphones.</b></p> <p><b>Explain one advantage of musicians wearing headphones when they are recording.</b></p> <p>Award max two marks for an advantage. Award one mark for an explanation and a further mark for expansion.</p> <p>For example:</p> <ul style="list-style-type: none"><li>• do not need to use speakers to monitor (1) so reducing spill into live mics (1)</li><li>• spill is reduced (1) so allowing for cleaner recording (1)</li><li>• risk of feedback is reduced (1) so allowing for cleaner recording (1)</li><li>• some musicians like the feeling of isolation induced by headphones (1) so give a more intimate performance (1)</li><li>• so individual mix can be established (1) to encourage more dynamic performance (1)</li><li>• so reverb (or other effects) can be routed to the headphones (1) to make performing more comfortable (1).</li></ul> <p>Accept other reasonable responses.</p>	<b>2</b>
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16

**You are working as a producer. You have been asked to plan a recording session with a drummer.**

**For the session, there are two options. The drummer might use an electronic drum kit or might use an acoustic drum kit.**

**Compare the time and equipment needed in these two options.**

6

Band	Marks	Description
3	5–6	<p>Very good.</p> <p>Detailed explanations of time and equipment requirements for both electric and acoustic kits covering each stage of the session (set up, record, processing).</p> <p>Appropriate terminology used accurately and consistently throughout.</p> <p>Conclusions should give clear comparison of time and equipment requirements for both kits.</p>
2	3–4	<p>Good.</p> <p>Explanations of time and equipment requirements for both electric and acoustic kits. May not cover all stages of the session.</p> <p>Use of terminology is generally appropriate and accurate.</p> <p>Conclusions may be inconsistent in parts – comparisons may be limited due to lack of consideration of all aspects.</p>
1	1–2	<p>Limited.</p> <p>Descriptions of time and equipment requirements. May only cover one instrument. May only focus on one stage of the session.</p> <p>Some use of terminology but is likely to be limited and lacking accuracy.</p> <p>Conclusions, where present, are limited – comparisons may be absent or inaccurate.</p>
	0	<p>Insufficient evidence for a mark to be awarded.</p>

	<p><b>Indicative content:</b></p> <p><b>Time:</b></p> <ul style="list-style-type: none"> <li>• Electronic Kit: <ul style="list-style-type: none"> <li>- limited hardware &amp; stands to set up</li> <li>- no tuning required</li> <li>- may be less responsive for drummer than live kit so taking longer for drummer to settle in; more available sounds (eg percussion) may encourage greater exploration so taking time</li> <li>- lacks sound of room so may require additional reverb processing to blend</li> <li>- can potentially be recorded as MIDI so allowing for faster editing</li> <li>- potential for changing sounds at mix stage easily if recorded as MIDI – either from kit brain or triggering DAW sounds</li> <li>- processing likely to be built into kit brain so potentially requiring less DAW based processing</li> <li>- sounds may be edited easily</li> <li>- sounds more consistent take to take</li> <li>- sounds from DAW can potentially be triggered.</li> </ul> </li> <li>• Acoustic Kit: <ul style="list-style-type: none"> <li>- setting up kit hardware/tuning/damping/getting rid of rattle/squeaks</li> <li>- takes longer to set up than electric kit</li> <li>- gain checking</li> <li>- phase coherence</li> <li>- hard to drop in to correct mistakes</li> <li>- potentially takes longer to get good take as fewer editing options (although learners may be potentially more responsive/ expressive to drummer so may assist in getting quicker takes/ reference triggering samples from live kit)</li> <li>- potential for room sound to add to outcome so requiring less reverb processing</li> <li>- likely to require significant post processing – EQ/gate/compression/effects/drum replacement/sounds can only be altered by electronic or physical means.</li> </ul> </li> </ul> <p><b>Equipment:</b></p> <ul style="list-style-type: none"> <li>• Electronic Kit: <ul style="list-style-type: none"> <li>- DI box</li> <li>- audio interface</li> <li>- audio cables</li> <li>- USB to MIDI cables or interface.</li> </ul> </li> <li>• Acoustic Kit: <ul style="list-style-type: none"> <li>- multiple mics required – variety of mics to capture full kit (condenser &amp; dynamics)</li> <li>- mic stands</li> <li>- more audio inputs</li> <li>- pre-amps</li> <li>- processing – hardware or plug ins</li> <li>- requires multiple tracks.</li> </ul> </li> </ul>	
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<p><b>17</b></p>	<p><b>Which two of the following are forms of media?</b></p> <p>Answer: C (Radio Broadcast).</p> <p>Answer: E (Theatre).</p>	<p><b>2</b></p>
<p><b>18</b></p>	<p><b>Which one of the following types of sound creation can also be described as a 'sounds used to emphasise actions seen onscreen'?</b></p> <p>Answer: C (Special/Spot effects).</p>	<p><b>1</b></p>
<p><b>19</b></p>	<p><b>You have been asked to re-record dialogue for a film using a DAW. The actor is coming to your studio to record.</b></p> <p><b>Name two items of hardware equipment you would need to make the recording.</b></p> <p>Award one mark for each of the following up to a maximum of two marks, e.g.:</p> <p>For example:</p> <ul style="list-style-type: none"> <li>• computer (1)</li> <li>• microphone (1)</li> <li>• pop shield (1)</li> <li>• vocal booth (1)</li> <li>• mic stand (1)</li> <li>• mic cable (1)</li> <li>• pre-amp (1)</li> <li>• music stand/script stand/monitor/screen/iPad (1)</li> <li>• headphones (1)</li> <li>• headphone amp (1)</li> <li>• seat/stool (1).</li> </ul> <p>Accept other reasonable responses.</p>	<p><b>2</b></p>

<b>20</b>	<p><b>You have been asked to create recorded sounds for a performance in a local theatre.</b></p> <p><b>Give two reasons why environmental sounds are added to theatre performances.</b></p> <p>Award one mark for relevant description of purpose of environmental sounds to max two marks.</p> <p>For example:</p> <ul style="list-style-type: none"><li>• gives a sense of place (1)</li><li>• gives a sense of space (1)</li><li>• helps audience to imagine that they are not in a theatre (1)</li><li>• allows audience/actors to become immersed in performance (1)</li><li>• can add subconscious cues to drama/narrative (1).</li></ul> <p>Accept other reasonable responses.</p> <p>Do not credit references to music, dialogue, special or spot effects.</p>	<b>2</b>
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<b>21</b>	<p><b>You have been given the task of adding music to a movie.</b></p> <p><b>You can use one of two approaches. You can either:</b></p> <ul style="list-style-type: none"> <li>• <b>use existing songs by other artists or</b></li> <li>• <b>compose original music.</b></li> </ul> <p><b>Evaluate both of these approaches for adding music to a movie.</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Band</th> <th style="text-align: center;">Marks</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;">7–8</td> <td> <p>Very good.</p> <p>Comprehensive evaluation of both methods of adding music to a movie, considering a range of creative, logistical and technical requirements consistently and balances each.</p> <p>Appropriate terminology is used accurately and consistently throughout.</p> <p>Clear links are drawn between the two methods with reasonable and appropriate conclusions drawn.</p> </td> </tr> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;">4–6</td> <td> <p>Good.</p> <p>Explanation of a both methods of adding music to a movie which considers some requirements and includes detail of would be achieved by use.</p> <p>Use of terminology is mostly appropriate and generally accurate.</p> <p>Some links may be drawn between the two methods but may be weak and lacking supported conclusions.</p> </td> </tr> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">1–3</td> <td> <p>Limited.</p> <p>Description of adding music to a movie, which identifies a narrow range of requirements and may not reference both methods.</p> <p>Some use of terminology but may lack appropriateness and accuracy</p> <p>Where attempts are made to draw links between processes they lack support and/or relevance.</p> </td> </tr> <tr> <td></td> <td style="text-align: center;">0</td> <td>Insufficient evidence for a mark to be awarded.</td> </tr> </tbody> </table>	Band	Marks	Description	3	7–8	<p>Very good.</p> <p>Comprehensive evaluation of both methods of adding music to a movie, considering a range of creative, logistical and technical requirements consistently and balances each.</p> <p>Appropriate terminology is used accurately and consistently throughout.</p> <p>Clear links are drawn between the two methods with reasonable and appropriate conclusions drawn.</p>	2	4–6	<p>Good.</p> <p>Explanation of a both methods of adding music to a movie which considers some requirements and includes detail of would be achieved by use.</p> <p>Use of terminology is mostly appropriate and generally accurate.</p> <p>Some links may be drawn between the two methods but may be weak and lacking supported conclusions.</p>	1	1–3	<p>Limited.</p> <p>Description of adding music to a movie, which identifies a narrow range of requirements and may not reference both methods.</p> <p>Some use of terminology but may lack appropriateness and accuracy</p> <p>Where attempts are made to draw links between processes they lack support and/or relevance.</p>		0	Insufficient evidence for a mark to be awarded.	<b>8</b>
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	<p><b>Indicative content</b></p> <p>Songs:</p> <ul style="list-style-type: none"><li>• less time consuming (than composing from fresh)</li><li>• likely to draw in audience as material more familiar</li><li>• lyrics may add additional narrative/meaning</li><li>• large selection of songs available to choose from</li><li>• less recording time/expense</li><li>• potential for use as independently released audio promo for movie</li><li>• potential for copyright issues/licensing issues.</li></ul> <p>Original music:</p> <ul style="list-style-type: none"><li>• can be made to fit mood, pace, texture, narrative of scenes flexibly</li><li>• themes/motifs/stings/leitmotifs can be more easily incorporated</li><li>• exciting for audience as new music</li><li>• less distracting for audience as not drawn into familiarity of songs, thus focussing on visuals/plot</li><li>• may be cheaper than licensing popular songs</li><li>• may be composed to incorporate other elements such as ambience/atmosphere/spot effects</li><li>• Unlikely to require extensive editing.</li></ul> <p>Where appropriate, uses of each method may be given as disadvantages of the other (i.e. an original score may be time consuming to compose) and should be credited accordingly.</p>	
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Section 2	Total for this section: 8 marks	
22	<p><b>Listen to the audio file labelled 'Audio File Q22'.</b></p> <p><b>Describe the software instrument sound heard from 0:07 to 0:09.</b></p> <p>Answer: Sampled vocal sound.</p> <p>Accept other reasonable responses.</p>	1
23	<p><b>Listen to the audio file labelled 'Audio File Q23'.</b></p> <p><b>Bass drum, snare drum and tom-tom drums enter at 0:11.</b></p> <p><b>Identify three instruments which enter at 0:13 to 0:15.</b></p> <p>Award one mark for each of the following up to a maximum of three marks.</p> <p>For example:</p> <ul style="list-style-type: none"> <li>• organ (1)</li> <li>• conga (percussion) (1)</li> <li>• flute (1)</li> <li>• hi-hat (1)</li> <li>• rimshot (1)</li> <li>• cymbal (1).</li> </ul> <p>Accept reasonable descriptions of timbres.</p>	3
24	<p><b>Listen to the audio file labelled 'Audio File Q24'.</b></p> <p><b>Which one of the following best describes the musical structure of the audio file?</b></p> <p>Answer: B (ABA).</p>	1
25	<p><b>Listen to the audio file labelled 'Audio File Q25'.</b></p> <p><b>Describe the stereo placement of the sound which enters at 0:37.</b></p> <p>Answer: (Extreme/Hard) Right.</p>	1

<b>26</b>	<p><b>Listen to the audio file labelled 'Audio File Q26'.</b></p> <p><b>Explain how dynamics processing has been used on the tom-tom sounds from 0:40 to 0:45.</b></p> <p>Award one mark for identification of gate and one mark for explanation of use.</p> <p>For example:</p> <ul style="list-style-type: none"><li>• a noise gate (1) has been used to chop the reverb tail (1)</li><li>• the reverb on the toms (1) has been gated (1).</li></ul> <p>Accept other reasonable explanations of use.</p>	<b>2</b>
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