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Mark Scheme (Results)
Music Technology 2010

GCE

GCE Music Technology (6MT04) Paper 01
Analysing and Producing

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General Marking Guidance

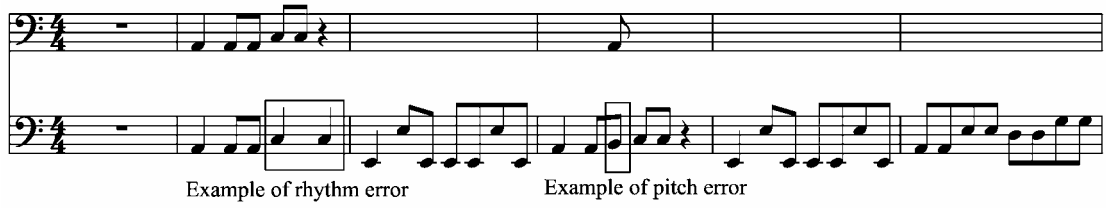
- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Section A

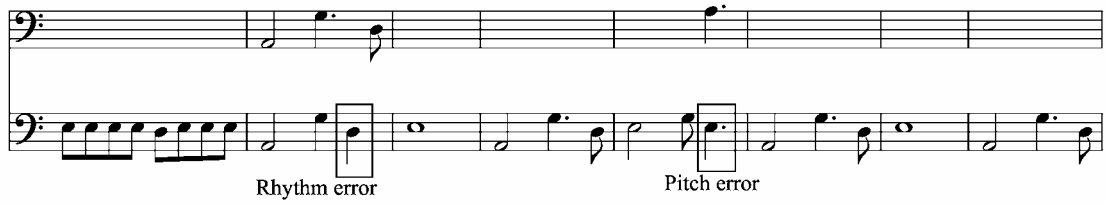
Question Number	Question	Mark
1(a)	What key is the music in?	**1**
	Acceptable Answers	
	A minor Aeolian mode Am Amin A^{-}	

Question Number	Question	Mark
1(b)	Look at the score between **bars 8-25**. There are **two** errors in pitch where the score is incorrect. Identify the **two** errors by circling them in the score. Notate the correct pitch on the blank stave above. An example of a pitch error is given in bar 4.	**4**
	Acceptable Answers	
	One mark for each pitch circled; 1 mark for each correct pitch written. (See score opposite) Only credit if only one note is circled.	

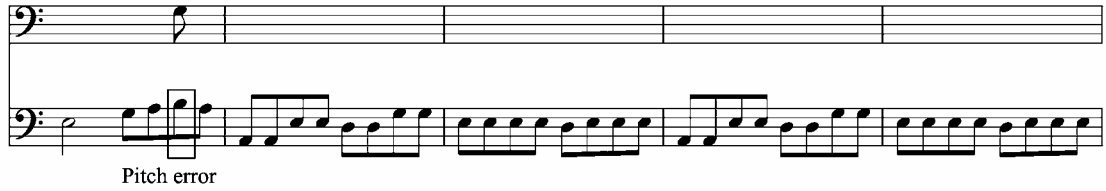
Question Number	Question	Mark
1(c)	Look at the score between **bars 8-25**. There are **two** errors of rhythm where the score is incorrect. Identify the **two** errors by circling them in the score. Notate the correct rhythm for the **whole bar** on the blank stave above. An example of a rhythm error is given in bar 2.	**4**
	Acceptable Answers	
	One mark for each rhythm circled; 1 mark for each correct rhythm written. The whole of the corrected rhythm bar must be accurate. (See score opposite) Only credit if only one error is circled within a bar.	


Example of rhythm error
Example of pitch error

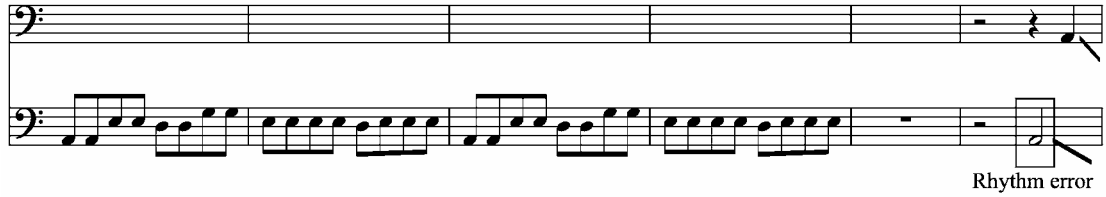
7


Rhythm error
Pitch error

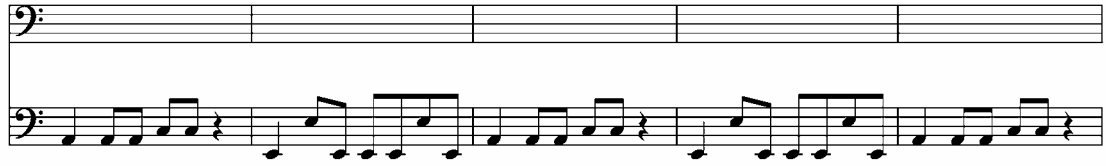
15


Pitch error

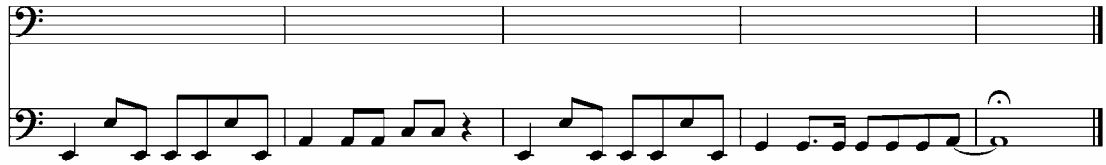
20


Rhythm error

26



31



Question Number	Question	Mark
1(d)(i)	How was the bass track recorded?	**1**
	Acceptable Answers	
	D MIDI sequenced	

Question Number	Question	Mark
1(d)(ii)	How is the slide achieved in bar 25?	**1**
	Acceptable Answers	
	Pitchbend (1) Portamento / Glide (1)	

Question Number	Question	Mark
1(d)(iii)	Bars 2–5 and 26–end of the bass part have a brighter tone than bars 6–23. Describe how this is achieved.	**2**
	Acceptable Answers	
	Velocity sensitive / higher velocities have a brighter tone (1) Low pass / high cut (1) filter (1) has a higher cutoff frequency(1) using automation / MIDI controller (1) Brightness / cc 74 (1) High EQ boost / HF boost/ treble boost (1) Credit any reference to duller tone of bars 6-23.	

(Total for Question 1 = 13 marks)

<table>
<tr><th>Question Number</th><th>Question</th><th>Mark</th></tr>
<tr><td>2(a)</td><td>Using appropriate production and editing tools, remove any unwanted noises from the vocal recording.
Acceptable Answers

<table><tr><th>Mark</th><th>Preparation of vocal track — removing unwanted noises</th></tr><tr><td>4</td><td>Carefully edited vocal. The vocal is intact without any sections cut out and with no unwanted noises present.</td></tr><tr><td>3</td><td>The vocal is intact with no abrupt cuts but with some unwanted noises still present.</td></tr><tr><td>2</td><td>Parts of vocal have been cut off, but no unwanted noises present.</td></tr><tr><td>1</td><td>Parts of vocal have been cut off and some unwanted noises still present.</td></tr><tr><td>0</td><td>No attempt at cutting out any noise / not present as a separately recorded track / completely silent track</td></tr></table>If vocal track is not soloed then max. 1.</td><td>4</td></tr>
</table>

Question Number	Question	Mark
2(b)	What would a compressor do to help this vocal part sit better in the mix? Acceptable Answers Reduce dynamic range / evens out volume (2) Reduces the volume of the peaks / makes the louder sounds quieter (1) Makes the quieter sounds louder (1) Award 1 mark for mention of dynamic range	**2**

Question Number	Question	Mark
2(c)	In the table below, give three controls commonly found on a compressor and briefly describe how they affect the signal. An example is given.	**9**

Acceptable Answers

Control	**Description**
Ratio (1)	Gives the ratio between the input signal and the output signal / amount of compression (1) for any signal exceeding the threshold (1). A higher ratio gives more compression / squashing (1). Infinite/very high ratio gives limiting (1). Award 1 mark for a specific example e.g. "2:1. For every 2 decibels above threshold only 1 decibel would be output"
Attack (1)	The time taken (measured in milliseconds) (1) for the compressor to reduce the gain / start compressing (1) after the threshold has been exceeded (1). A longer attack time preserves the transients of the signal / A shorter attack time reduces / squashes the transients of the signal (1).
Release (1)	The time taken (measured in milliseconds) (1) for the compressor to return the gain to unity / normal / stop compressing (1) after the signal has fallen below the threshold (1). A slow release time can help avoid gain pumping / a fast release time can emphasise pumping (1). The release time can control/increase sustain (1).
Knee (1)	Hard knee (1) Soft knee (1) This controls whether the bend in the response curve (1) is a sharp angle or has a rounded edge (1). Soft knee slowly increases the compression ratio as the level increases and eventually reaches the compression ratio set by the user (1). A soft knee reduces the audible change from uncompressed to compressed, especially for higher ratios where the changeover is more noticeable (1).
Peak/RMS (1)	Root mean squared (1) A peak sensing compressor responds to the instantaneous level of the input signal (1). A RMS sensing compressor responds to the average level of the input signal (1).
Gain (Make-Up)/ Output (1)	The gain/volume (measured in decibels) is increased (allow 'makes it louder') (1) **after** compression (1) because the compressor is reducing the gain (or level) of the signal (1). The amount of gain (make-up) can be established by looking at the Gain Reduction Meter (1).
Bypass(1) In/Out (1)	Turns the compressor on or off (1) so that the engineer can hear the effect of the compressor before and after (1).
Stereo Link (1)	Allows two **mono** compressors (1) to be linked to form a **stereo** compressor (1) so that the same compression

		is applied to both channels (1) sound does not wander across the stereo image during compression (1).	
	Input (1)	Used to set an appropriate level (1) entering the compressor (1) to avoid distortion/clipping (1).	
	Description must match the correct control. Max 2 for each description box.		

(Total for Question 2 = 15 marks)

Question Number	Question	Mark
3(a)(i)	What does DI stand for?	**1**
	Acceptable Answers	
	Direct injection, direct input, direct in, direct inject, direct interface	

Question Number	Question	Mark
3(a)(ii)	Briefly describe how this would be achieved.	**1**
	Acceptable Answers	
	Plug guitar straight into pre-amp/DI box /DI rack – **not just "DI"** Plug guitar straight into instrument / guitar / high impedance input on mixer/computer interface DI output from amplifier/amp modeller (accept brand names, e.g., Pod)	

Question Number	Question	Mark
3(b)	An amplifier simulator has been applied to the DI guitar recording. Complete the table below to describe how you would mic an amplifier to achieve a similar distorted tone to that heard in tracks 4 and 6, giving reasons for your choices.	**6**
	Acceptable Answers	

	What you would choose	Reason for choice
Microphone polar pattern	Cardioid Hyper cardioid Super cardioid Uni-directional **(1)**	Less reverb / less ambience / dry (1) Proximity effect (1) emphasises low frequencies (1) rejects off axis sound / less room noise / background noise / spill (1) **NOT "**only the sound of the amp is picked up". **(2)**
Microphone placement	Mic close / 1-6 inches / 1-15 cm Pointing near centre of the cone **(1)**	Less reverb / less ambience / dry (1) Proximity effect (1) emphasises low frequencies (1) rejects off axis sound / less room noise / background noise / spill (1) **NOT "**only the sound of the amp is picked up". Bright tone / more high frequencies / more presence (1) **(2)**

The "What" box must be correct to award a mark in the "reason" box.
Award accurate diagrams for "What" box

<table>
<tr><th>Question Number</th><th>Question</th><th>Mark</th></tr>
<tr><td>3(c)</td><td>Assemble the guitar part by copying and pasting together tracks 4, 5 and 6 from the CD, as shown in the table below.
Acceptable Answers

<table>
<tr><th>Mark</th><th>Preparation of guitar track — Pasting</th></tr>
<tr><td>6</td><td>Excellent – no errors evident</td></tr>
<tr><td>5</td><td>Good – a successfully edited track with one error</td></tr>
<tr><td>4</td><td>Good – a successfully edited track with two errors</td></tr>
<tr><td>3</td><td>Inconsistent – a partially successfully edited track with three errors</td></tr>
<tr><td>2</td><td>Inconsistent – a partially successfully edited track with four errors</td></tr>
<tr><td>1</td><td>Poor – an unsuccessfully edited track with more than four intrusive errors which detract from the final result</td></tr>
<tr><td>0</td><td>Not present as a separately recorded track</td></tr>
</table>

Errors could be:
Music not placed exactly in time with metronome
Incorrect guitar parts used in the wrong place according to the score
Glitches (multiple glitches count as one error) / audible joins / gaps / digital clicks between the guitar parts
If any attempt has been made to eradicate glitches at the ends of tracks 4 and 5 do not count remaining glitches as errors
If the metronome has been left switched on then don't award for glitch removal.

Each missing / additional instance of verse phrase = 1 error
Each missing / additional instance of chorus phrase = 1 error
Each missing / additional instance of final phrase = 1 error
Missing silence at start = 1 error</td><td>6</td></tr>
</table>

<table>
<tr><th>Question Number</th><th>Question</th><th>Mark</th></tr>
<tr><td>3(d)</td><td>Hiss is increased when using distortion on the electric guitar. This is particularly evident at the end of the song when the electric guitar dies away. Using automation, put a fade-out on the electric guitar part so that the hiss is not intrusive and the electric guitar still appears to fade naturally.
Acceptable Answers

<table>
<tr><th>Mark</th><th>Preparation of guitar track — Adding a suitable fade at the end</th></tr>
<tr><td>4</td><td>Excellent – a natural sounding fade has been used which fades slowly and consistently over several bars, and very little hiss may be present</td></tr>
<tr><td>3</td><td>Good – a natural sounding fade has been used which fades slowly and consistently over several bars, but a little intrusive hiss is present at the end
OR
Fade is natural sounding but begins too early</td></tr>
<tr><td>2</td><td>Inconsistent – an abrupt fade has been used with a little intrusive hiss present</td></tr>
<tr><td>1</td><td>Basic – an uneven / extremely abrupt fade has been used with some intrusive hiss present, or end cuts off</td></tr>
<tr><td>0</td><td>No fade
Or not present as a separately recorded track</td></tr>
</table>
</td><td>4</td></tr>
</table>

(Total for Question 3 = 18 marks)

In the case that a student has answered both questions, mark both and take the highest mark, unless one response is crossed out.

Question Number	Question	Mark
4(a)	The digital sampler has transformed the sonic palette available to musicians and producers by allowing any sound to be incorporated into a recording with accurate control. Describe what a sampler is and how sampling technology has developed from the 1980s to the present day. You should refer to technical specifications of sampling equipment in your answer.	**16**
	Acceptable Answers	
	A sampler is a musical instrument that stores recordings of sounds (1) digitally in RAM (or ROM) (1). These are usually played back on a keyboard (1) using MIDI (1). Sounds are played at different pitches (1) by speeding up or slowing down (1) the digital recordings. Unfortunately this changes their length (1) and timbre (1) and is more noticeable when transposed more than a couple of tones (1). Multisampling (1) is used to overcome this. This ensures that each sample is transposed over a limited range (1). Each key may be assigned an individual sample (1). Velocity layering (1) is where different samples are assigned to different velocity ranges (1) e.g. brighter timbre for high velocities (1). Accept any other appropriate example of velocity layering. Samples are often looped (1) to create a longer / more sustained sound (1) or to create a groove (1). Care must be taken at the loop point so as not to get a glitch / click (1). Crossfade looping (1) or choosing a zero-crossing (1) loop point overcomes this. Samples can be reversed (1). Nyquist's criteria (1) states that sample rate (1) is double (1) the frequency response (1). Low sample rates give lower quality of sound because high frequencies (1) are not captured. A typical sample rate that captures the human hearing range (1) is 44100Hz (1). Bit depth/resolution (1). Lower bit depths reduce the signal to noise ratio (1) and also give a brittle/crunchy (accept any other appropriate descriptor) quality to the sound (1). This is often sought after in lo-fi recordings (1). A common bit depth for samplers is 16-bit (1). Red book standard (1). Pioneering early samplers include the Synclavier (1) and the Fairlight CMI (1). In the 1980's computer systems didn't have much RAM (1). This limited sample time (1). To compensate bit depths and sample rates were lowered (1). **Award any suitable examples of bit depths (1) and sample rates (1).** Drum machines embraced early sampling technology (1) because only short samples are required for drum hits (1). **Award an**	

	example of a sampling drum machine (Max 1) As RAM increased (1) in the late 1980's sampling synthesisers (1) appeared. These synthesisers gave more realistic sounds than previous synthesisers (1). **Award an example of a sampling synthesiser (max 1).** In the 1980's and 1990's samplers were hardware (1) units. **Award any example of hardware (max 1).** Storage was initially on floppy discs (1), and later on external hard-drives (1) and CD ROM (1). These were normally SCSI devices (1). Editing waveforms was difficult (1) because of the small displays (1). Polyphony was often limited (1). In the latter half of the 1990's sampling moved onto the PC/computer (1) as plug-ins etc (1) **(award any example (max 1))** because computers had enough processing power (1) and enough RAM (1). Digital audio is now stored on hard drives (1) so sample time is virtually limitless (1). The advantages are: better sound quality because more layered (1) and velocity sensitive samples (1); large screen/GUI (1) makes it easier to edit samples (1). Sample edit window (1). Sampling plug-ins are normally supplied with sequencing software (1). Samples are often found on CD ROM sample libraries (1) and increasingly on the internet (1). Samplers usually have the same controls as a synthesiser (1), for example, filters (DCF) (1), envelope/ADSR (1), LFO/modulation (1). **Max 3 for discussion of synthesis.** In late 1990's/2000's, because processing power had improved (1), timestretching (1) became a common feature. This is when the length of the sample can be changed without changing the pitch (or vice versa)(1). In 2000's, phrase samplers (1) sampled entire phrases of a performance (1) allowing performers to build up looped textures of themselves playing multiple parts (1). **Award an example of a phrase sampler.**	

Question Number	Question	Mark
4(b)	Without the invention of the electric guitar, rock music would probably not exist as we recognise it. Describe the features found on an electric guitar and give a technical explanation of how an electric guitar works.	**16**
	Acceptable Answers	
	The electric guitar was invented to make guitars audible when playing in big bands (1). The first examples of electric guitars were hollow-bodied / archtop (1). George Beauchamp (1) has been credited with inventing the electric guitar. These were susceptible to feedback at higher volumes (1) so solid-body guitars were developed to combat this problem (1). Solid-body guitars were cheaper to produce (1), featuring either a glue-in (1) or bolt-on (1) neck. Give max 1 mark for discussion of tonal aspects of different types of wood. (Leo) Fender (1) produced the first **commercially** successful solid-body electric guitars(1). Les Paul (1) The headstock (1) contains the metal machine heads/tuners/tuning pegs (1). Some bridges feature fine tuners (1). Some bridges allow instant tuning to various preset altered tunings (1). The tremolo arm/whammy bar/vibrato bar (1) is a lever attached to the bridge (1) which is sprung (1) and is used to slacken or tighten the strings temporarily (1) which changes the pitch / bends notes / adds vibrato (1). **Not "tremolo".** Unfortunately, use of the tremolo arm does affect overall tuning of the guitar (1). This can be used to create effects like dive bomb/harmonic screams (1). Locking (nut/bridge) / Floyd Rose tremolo systems (1) were introduced to reduce tuning problems (1). The nut (1) is a strip of metal/plastic/bone/graphite with grooves (1) which the strings pass over as they go onto the fretboard (1). The frets are thin metal strips which stop the string at the correct pitch (1) when a string is pressed down against the fretboard. A truss rod (1) is used for adjusting the tension of the neck (1). An electric guitar makes very little audible sound (1) without amplification because the body is solid (1). The electric guitar sustains longer (1) than an acoustic guitar because the bridge and body do not take as much energy from the vibrating string (1). The pickups (1) are magnets (1) wrapped in coils of wire (1). Most pickups are passive (1). They normally have 1 pole piece (1) for each string, or a blade (1) across all 6 strings. They are transducers (1) which convert the sound energy into electrical energy (1), **not "electronic"**. When the metal string (1) vibrates, an electrical current is induced (1) in the pickups, analogous to the pitch of the string (1). The thickness (1) of the string affects the amount of current induced.	

	Modern styles sometimes require a much heavier gauge of strings for lower tunings (1). Some guitars have additional strings to accomplish this, e.g., 7-string guitars (1). 12-string guitars were developed to give a chorus / ensemble effect (1). Electric-acoustic guitars have additional microphones or piezoelectric pickups (1) which pick up vibrations from the body (1). Special bridges incorporating piezo crystals (1) can be used on solid body guitars to recreate acoustic guitar–like sounds (1) Hum (1) which is usually 50/60Hz (1) is often picked up. Humbucker (1) pickups are double coil (1) as opposed to the original single coil design(1); they have two coils of opposite magnetic and electrical polarity (1) so hum or noise hitting both coils should cancel out/be (partially) removed (1) due to destructive interference/phase cancellation(1). The two coils give a richer/thicker (1) tone (accept any other appropriate descriptor). Pickups are also susceptible to interference/RF/radio frequency noise (1). A pickup selector switch (1) selects which pick ups or combination of pickups (1) are to be used, which alters the tone (1) **not "sound"** because the different pickups are in different positions along the length of the string (1) and may introduce desirable phase cancellation (1). When the bridge pickup is selected the sound is brighter / thinner (1) and cuts through the mix more easily (1) and is typically used for solos (1). The neck pickup 'sounds warmer / less bright' (1) **not "softer"**. Give one mark for description of any other pickup combination / selection, e.g., Stratocaster positions 2 and 4. There is a volume knob/pot/potentiometer (1). Some manufacturers assign a separate volume control for each pickup (1). The tone knob/pot/potentiometer (1) is filter (1) which is used to adjust the high frequency content/brightness (1) of the sound. Active electronics (1) allow for many additional EQ options (1). Some guitars include built-in effects (1). Other active electronics include sustaining devices (1) which cause the strings to vibrate (1). Output is a (¼ inch /6.3mm) jack (1) at instrument level (1) and high impedance (1). Amplifier converts the electrical signal back into sound (1). Other innovations include virtual guitar modelling (1), e.g., Variax (1) emulates the sounds of classic guitars (1). MIDI pickups /controllers (1). **Max 1 for any discussion of amplifiers/amplification.** **Max 1 for any discussion of effects / pedals.**	

14 – 16	An excellent response. Substantial and thorough with a perceptive and accurate commentary on the main points of the detailed assessment criteria. The response will be coherent in terms of structure. There will be an excellent understanding of technical issues. QWC: Very few syntactical and/or spelling errors may be found but these will not detract from the overall coherence. Excellent organisation and planning. All the skills required to produce convincing writing are in place.
10 – 13	A good response. Detailed and accurate commentary on the main points of the detailed assessment criteria. The response will be coherent on the whole and a good understanding of technical issues is shown. QWC: Few syntactical and/or spelling errors may be found but these will not detract from the overall coherence. Good organisation and planning. Almost all of the skills required to produce convincing writing are in place.
6 – 9	An acceptable response. There may be limited detail, but reference has been made to most of the main points in the detailed assessment criteria. The response will have some coherence, but may lack a sense of understanding of technical issues at times. QWC: Some syntactical and/or spelling errors may be found but overall the writing is coherent. Some organisation and clarity. Most of the skills needed to produce convincing writing are in place.
2 – 5	A limited response. Mention has been made of some of the main points on the detailed assessment criteria, but little reason has been given for them. The response will have limited coherence and little understanding of technical issues. QWC: Some syntactical and/or spelling errors are present. The writing will display some degree of organisation and clarity but this will not be sustained throughout the response. Some of the skills needed to produce convincing writing are in place.
1	A poor response with little reference to any relevant technologies. QWC: Frequent syntactical and/or spelling errors are present. The writing contains passages which lack clarity and organisation. A few of the skills needed to produce convincing writing are present.

(Total for Question 4 = 16 marks)

TOTAL FOR SECTION A = 62 MARKS

Section B

You should now have the following tracks on the computer: bass, drums, vocals and guitar. You may wish to split the guitar part into two tracks, one clean and one distorted, so you can process the different tones separately.

Produce a final balanced stereo mix with the following features:

<table>
<tr><th>Question Number</th><th>Question</th><th>Mark</th></tr>
<tr><td>5(a)</td><td>Compress the guitar and vocal tracks.
• The compression should suit the style of the music.
• Ensure that the dynamics of the performance are controlled and do not jump
out of the mix.
• Do not over compress the tracks.
Acceptable Answers
<table><tr><th></th><th>Management & Controlling Dynamics of vocals and electric guitar</th></tr><tr><td>3</td><td>In vocals, the peaks are controlled effectively in the chorus and the final phrase is clearly audible. The guitar sits in the mix without jumping out.</td></tr><tr><td>2</td><td>The vocals have some appropriate audible compression but either the peaks are not fully controlled or the final phrase is masked by the guitar. The guitar sits in the mix without jumping out.</td></tr><tr><td>1</td><td>Compression is present but poorly managed. Excessive pumping evident.</td></tr><tr><td>0</td><td>No compression can be identified on any track.
OR
No mix present on CD.</td></tr></table></td><td>3</td></tr>
</table>

<table>
<tr><th>Question Number</th><th>Question</th><th>Mark</th></tr>
<tr><td>5(b)</td><td>EQ the vocals.
• Give them a slightly brighter tone to bring them forward in the mix.
Acceptable Answers
<table><tr><th></th><th>Management & Controlling EQ of vocals</th></tr><tr><td>3</td><td>The vocal is brighter than the original without extreme frequency exaggeration or restriction.</td></tr><tr><td>2</td><td>Some effort has been made to apply EQ, but not with complete success. E.g. focusing on incorrect frequency range (thin LF or boosted upper-mids)</td></tr><tr><td>1</td><td>EQ applied poorly, with extreme / inappropriate settings.</td></tr><tr><td>0</td><td>No EQ can be identified.
No mix present on CD.</td></tr></table></td><td>3</td></tr>
</table>

Question Number	Question	Mark
5(c)	Apply stereo double tracking to both the clean and distorted **guitar parts** throughout. • Pan the double tracked guitar so that it is suitably wide, but not fully opposite panned.	**3**
	Acceptable Answers	

	Management & Control of double tracking and pan on the guitar
3	Excellent double tracking effect which sounds like **two** appropriately panned guitar parts.
2	A **wide** stereo effect has been applied but it sounds like **one** processed guitar.
1	A **narrow** stereo effect has been applied but it sounds like **one** processed guitar OR Guitar is double-tracked in mono / phases intrusively / delay time too long / has delay feedback.
0	No double tracking effect can be heard on the guitar. No mix present on CD.

Question Number	Question	Mark
5(d)	Apply reverb to **each** of the four tracks. • 1.5 second reverb time. • The reverb should not be intrusive. • The vocals should have the most reverb, the bass should have the least.	**3**
	Acceptable Answers	

	Application of reverb
3	Excellent use of reverb on **all** tracks.
2	Inconsistent use of reverb with some misjudgements.
1	Serious misjudgement on 1 track or more OR wrong effect.
0	No use of reverb on any track. No mix present on CD.

<table>
<tr><th>Question Number</th><th>Question</th><th>Mark</th></tr>
<tr><td>5(e)</td><td>Balance the mix.
• The balance should suit the style of the music.
• Ensure that all of the tracks can be heard clearly.
Acceptable Answers
<table><tr><td></td><td>Balance and blend</td></tr><tr><td>3</td><td>Consistently well balanced and effectively blended across all parts of the mix.</td></tr><tr><td>2</td><td>Most tracks are well balanced. A few misjudgements.</td></tr><tr><td>1</td><td>Poorly balanced, detrimental to the musical outcome.
OR
Not all tracks present / additional tracks.
OR
The metronome has not been turned off.</td></tr><tr><td>0</td><td>No mix on CD.</td></tr></table></td><td>3</td></tr>
</table>

<table>
<tr><th>Question Number</th><th>Question</th><th>Mark</th></tr>
<tr><td>5(f)</td><td>Produce a final stereo mix.
• You will need to fade the bass part at the end to match the fade on the guitar part.
• Ensure that the mix output is at as high a level as possible.
• It should be free from distortion.
• Do not limit or compress the mix output.
• Ensure that the beginning and end of the mix are not cut off.
• Silences at the beginning and end should not exceed one second.
Acceptable Answers
<table><tr><td></td><td>Presentation of mix</td></tr><tr><td>3</td><td>Beginning and end of mix does not cut out music or reverb tail. The beginning should have 0.2-1 seconds of silence before the music starts. The mix output should be near normalised with no distortion.</td></tr><tr><td>2</td><td>Beginning and end of mix does not cut out music or reverb tail. The beginning has a silence of greater than 1 second.
OR
The mix output is too low OR is compressed.</td></tr><tr><td>1</td><td>Obviously chopped start or ending.
OR
Any part is noticeably out of sync.
OR
The mix output is unacceptably low or too high (distorted).
OR
Excessive use of mix compression causes pumping.</td></tr><tr><td>0</td><td>No mix present on CD.</td></tr></table>
-1 if the bass is not faded in synchronisation with the guitar fade, unless 1 has already been awarded for this criterion.</td><td>3</td></tr>
</table>

(Total for Question 5 = 18 marks)

TOTAL FOR SECTION B = 18 MARKS
TOTAL FOR PAPER = 80 MARKS

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