edexcel

A Level Music Technology

Student Exemplars

Pearson Edexcel Level 3 Advanced GCE in Music Technology (9MT0/03)

Pearson

Contents

About this exemplar pack

This pack has been produced to support Music Technology teachers delivering the new A Level Music Technology qualification (first assessment summer 2019).

The pack contains exemplar student responses for Component 3, Section A and B. This component assesses two different Assessment Objectives. AO3 and AO4.

	Students must:
AO3	Demonstrate and apply knowledge and understanding of music technology
AO4	Use analytical and appraising skills to make evaluative and critical judgements about the use of music technology

Following the mark scheme you will find the student answer(s) and the level that the student has achieved, with accompanying examiner comments on how the marks have been awarded.

This pack currently contains sample work for Section A and B.

Students and teachers are to be thanked for their time and generosity in completing these responses.

Overview of Areas of Study

Three Areas of Study underpin the whole specification, encouraging both breadth and depth of knowledge and understanding. In addition, within individual components, they provide a contextual focus for students' practical and theoretical work. Under the overview for Areas of Study we have concentrated on component 3, removing all other components apart from within the table below.

Area of Study 1: Recording and production techniques for both corrective and creative purposes

In component 3, the focus will be on the capture, arrangement of sounds and mixing and mastering techniques that have been used on a series of unfamiliar commercially available recordings.

Area of Study 2: Principles of sound and audio technology

In component 3, the focus of this Area of Study will be the knowledge and understanding of the principles of sound and of audio technology in relation to unfamiliar commercially available recordings provided by Pearson in the exam.

Area of Study 3: The development of recording and production technology

In component 3, the focus of this Area of Study will be the knowledge and understanding of the history and development of recording and production technology from current digital technologies back to the mono, analogue recording technologies in the 1930s.

The table below identifies where each Area of Study is covered in the components. Please refer to *Appendix 3* for definitions of any acronyms used in each Area of Study.

Area of Study	Component
1: Recording and production techniques for both corrective and creative purposes	1: Recording 2: Technology-based composition 3: Listening and analysing 4: Producing and analysing
2: Principles of sound and audio technology	3: Listening and analysing 4: Producing and analysing
3: The development of recording and production technology	3: Listening and analysing

Component 3: Listening and Analysing

Question 1(f)

Delay has been applied to the snare drum. Complete the table below to identify the settings used.

<table>
<tr><th>Question number</th><th>Answer</th><th>Mark</th></tr>
<tr><td>1(f)</td><td>
<table>
<tr><th>Control</th><th>Setting</th></tr>
<tr><td>Pan position</td><td>Right (1)</td></tr>
<tr><td>Feedback %</td><td>0 (1)</td></tr>
<tr><td>Note length of delay time</td><td>Allow values between 12th/12/triplet quaver and 16th/16/semiquaver (1)</td></tr>
</table>
</td><td>(3)</td></tr>
</table>

Student answer A

(f) Delay has been applied to the snare drum. Complete the table below to identify the settings used.

Control	Setting	
Pan position	left x (1)	0
Feedback %	20%. x (1)	0
Note length of delay time	quaver x (1)	0

Examiner comments
The example scores no marks. The candidate probably had her headphones the wrong way around. Although the candidate identified a low amount of feedback, it's clear from the recording that it's just a single repeat. The delay time the candidate has given is too long.

Student answer B

(f) Delay has been applied to the snare drum. Complete the table below to identify the settings used.

Control	Setting	
Pan position	Right (1)	1
Feedback %	0 (1)	1
Note length of delay time	Semiquaver (1)	1

Examiner comments
This example scores full marks. The candidate has correctly identified the pan, feedback and delay time using note values.

Question 2(a)

Describe the dynamic processing applied to the drum kit.

Question number	Answer	Mark
2(a)	Any three of the following: • heavy compression (1) • pumping/squashed (1) • valve compression causing soft clipping (1) • low threshold (1) • high ratio (1) • fast release (1) • increased average/RMS level (1).	**(3)**

Student answer A

(a) Describe the dynamic processing applied to the drum kit.

(3) 3

The drums have been heavily compressed to make them all sound a very similar volume. It has been compressed with a high ratio, a low threshold and a high gain.

Examiner comments

This example scores full marks. The candidate can hear the extreme compression settings in the music and can explain them using technical terms with correct parameter settings. The underlined phrases match the mark scheme marks almost word for word. However "to make them all sound a very similar volume" is a definition of what a compressor does but isn't really answering the specific question about the effect in this song so doesn't get the "pumping" mark.

Student answer B

(a) Describe the dynamic processing applied to the drum kit.

(3) 0

Low pass filter using EQ. This is particularly noticeable on the snare. The high/mid-high frequencies have been cut. x

Compression has been applied Expand

The cymbals have had the high frequencies removed as well. x

Examiner comments

The example scores no marks. The candidate has mostly discussed EQ rather than dynamic processing so most of the information isn't relevant. The candidate has noticed that compression has been used. The command word is "describe" but there is no description of the compression and no reference to parameter settings.

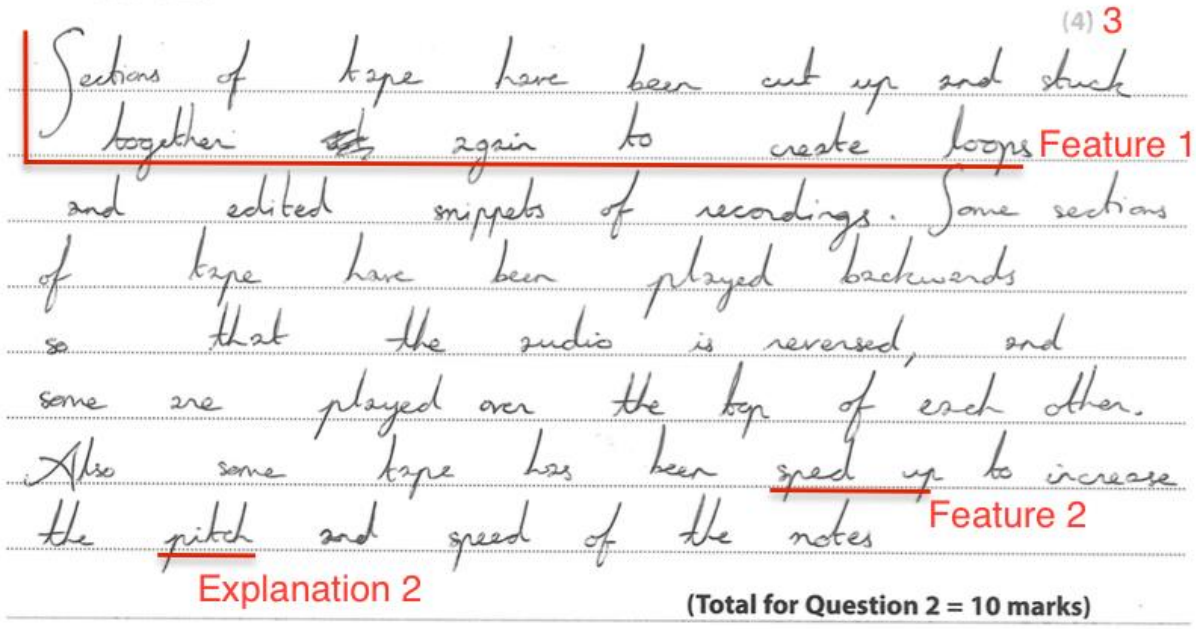
Question 2(c)

Explain how analogue tape technology has been used creatively between 0:56–1:25

Question number	Answer	Mark
2(c)	One mark is awarded for each point to a maximum of 2 marks, with a further mark for an explanation of each point, to a maximum of 4 marks. Answers might include: • tape loops/sections of tape (1) being overdubbed onto the main multitrack/master tape from another tape (1) • tape recordings have been played in reverse (1) following the parts being recorded with the tape running backwards (1) • tape recordings have been played at faster/slower speeds (1) than originally recorded giving a higher/lower pitch (1) • the speed of the looped tape is varied manually (1) the engineer pulls the tape over the tape heads at varying velocities (1) • some of the sounds that were used were recorded from Mellotron (1), which has sections of tape inside (1) • tape recordings are used as an 'instrumental/solo' (1) section which is very innovative for the time period (1) • tape solos are in a free/irregular rhythm, (1) contrasting with the regular 2-bar drums and bass riff (1). Accept other reasonable responses.	**(4)**

Student answer A

(c) Explain how analogue tape technology has been used creatively between 0:56–1:25.



Examiner comments

This example scores 3 marks. The first sentence = "tape loops/sections of tape" in the mark scheme. There is no further explanation of how this would be recorded back on to the multi-track tape so scores 1. The final sentence identifies that the "tape recordings have been played at faster/slower speeds" and then goes on to link this to a change of pitch, scoring the explanation mark. Although there is a potential further mark in the middle sentence about reversing tape, similarly to the first sentence, there is no further explanation. According to the mark scheme, "one mark is awarded for each point to a maximum of 2 marks" so no further mark can be given for identifying a third feature.

Student answer B

(c) Explain how analogue tape technology has been used creatively between 0:56–1:25.

(4) 1

Panning has been used for each instruments solo section so they can be heard clearly in the mix. These instruments are also faded out making a harsh transition between each solo. Tape loops have also been used effectively within the instrumental where the instruments fade in and out repetitivly throughout it.

Examiner comments

This example scores 1 mark. There are references to panning and volume which isn't answering the question about tape so these don't receive credit. The candidate has correctly identified that "tape loops" were used.

Question 3(a)

This song was recorded using 1950s technology. Explain two characteristics heard in this song that support this statement.

Question number	Answer	Mark
3(a)	One mark is awarded for each point to a maximum of 2 marks, with a further mark for an explanation of each point, to a maximum of 4 marks. Answers might include: • chamber reverb has been used on vocals/saxophone (1) which was the most popular way to have different ambience on recordings (1) • the recording is mono (1) as only one track tape was available (1) • no effects other than reverb (1) as they had not been invented until the 1960s (1) • some of the instruments sound distant (1) due to limited number of microphones (1) • surface noise present (1) due to vinyl consumer format. (1) • double bass used (1) because the bass guitar was not widely used at the time. (1). Accept other reasonable responses.	**(4)**

Student answer A

(a) This song was recorded using 1950s technology. Explain **two** characteristics heard in this song that support this statement.

(4) 0

1 12 bar blues. x

2

Examiner comments
This example scores no marks. The question is asking about the use of technology, not musical features.

Student answer B

(a) This song was recorded using 1950s technology. Explain **two** characteristics heard in this song that support this statement.

(4) 3

1 The recording is in mono, ~~as~~ which is common of this time period as stereo was barely possible

2 The only audible drum is the ~~sna~~ snare drum, as only one microphone would have been on the drum kit at the time

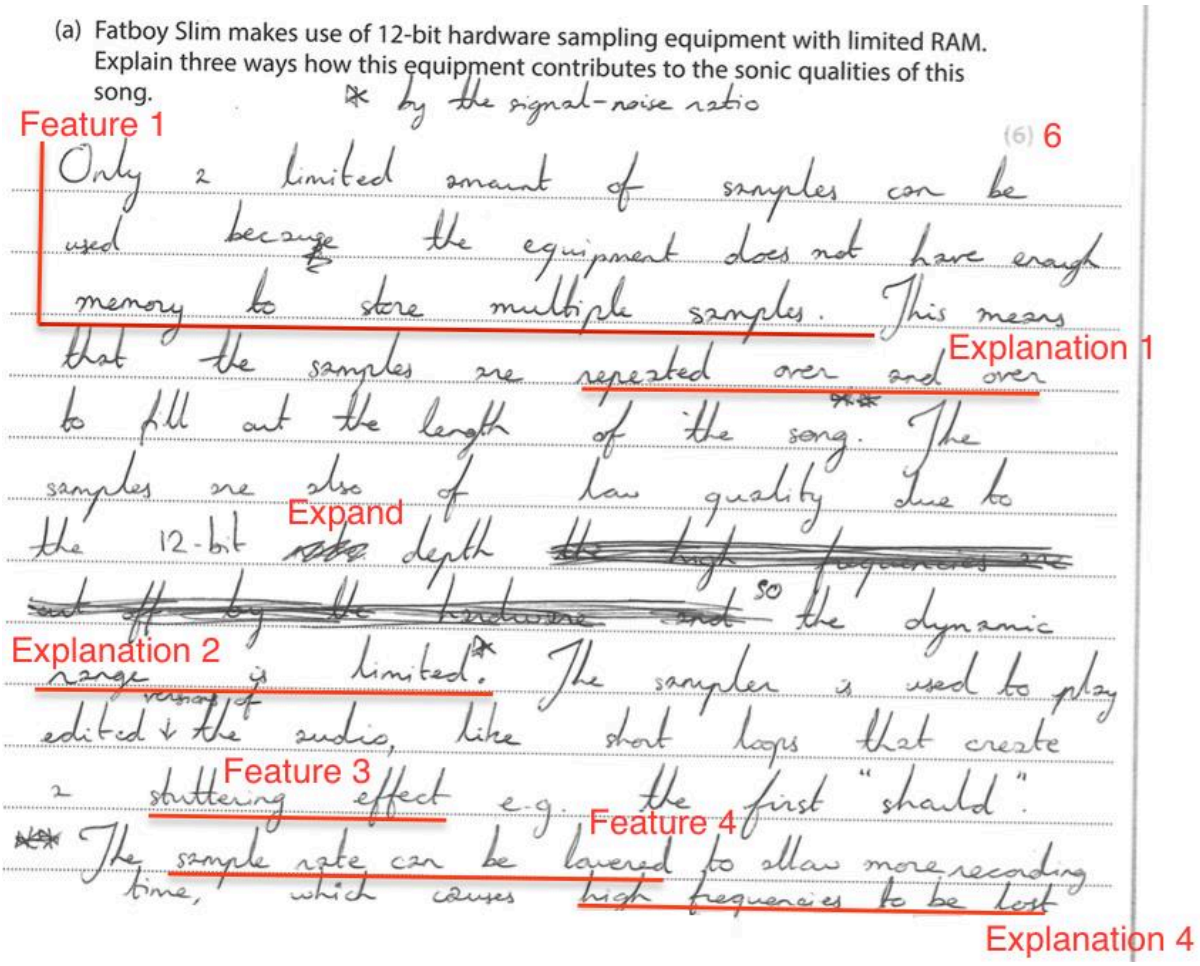
Examiner comments
This example scores 3 marks.
In point 1: "mono" is correctly stated. However there is no further explanation about the technology of the time.
In point 2: "only one microphone would have been used on the drum kit" = "due to limited number of microphones" in the mark scheme. "The only audible drum is the snare drum" = "some of the instruments sound distant" in the mark scheme.

Question 4(a)

Fatboy Slim makes use of 12-bit hardware sampling equipment with limited RAM. Explain three ways how this equipment contributes to the sonic qualities of this song.

Question number	Answer	Mark
4(a)	One mark is awarded for each point to a maximum of 3 marks, with a further mark for an explanation of each point, to a maximum of 6 marks. Answers might include: • short samples taken from other recordings (1), which sound 'retro' (1) • sample stutters/chopped samples (1) adds rhythmic/glitch effect (1) • limited sample time (1), leading to lots of looping/limited number of samples/reduction in sample rate (1) • limited bit depth (1) reduces dynamic range/signal-to-noise ratio/resolution/adds grit distortion to samples (1) • reducing sample rate (1) to give mirroring frequencies/aliasing/distortion/restricted frequency response (1). Accept other reasonable responses.	**(6)**

Student answer A



Examiner comments

This example scores full marks.

This question is marked 1 mark for a feature, and one mark for an explanation. According to the mark scheme, candidates may only score a maximum of three marks for listing features without further explanation.

Feature 1 = "limited sample time" in the mark scheme. Explanation 1 = "leading to lots of looping" in the mark scheme.

Feature 2 is not explicitly stated. The candidate refers to 12-bit which is already in the question, so no credit is given for "limited bit depth" in the mark scheme. However explanation 2 can be credited as "reduces dynamic range" in the mark scheme because it's very clear that she is referring to the result of a low bit depth.

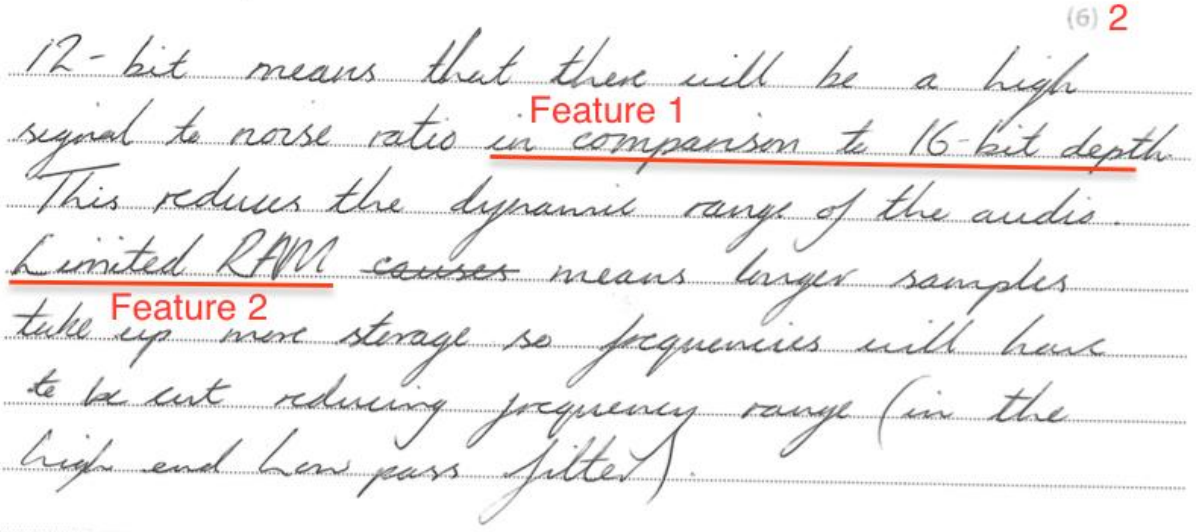
Feature 3 = "sample stutters" in the mark scheme.

Feature 4 = "reducing sampling rate" in the mark scheme. Explanation 4 = "restricted frequency response" in the mark scheme.

Student answer B

(a) Fatboy Slim makes use of 12-bit hardware sampling equipment with limited RAM. Explain three ways how this equipment contributes to the sonic qualities of this song.

(6) 2



Examiner comments

This example scores 2 marks.

The first two sentences contradict each other so no credit can be given for the explanation of "reduces dynamic range" in the mark scheme. However credit can be given for "limited bit depth" in the mark scheme because a comparison has been made with the standard depth of 16 bits.

Feature 2 = "limited sample time" in the mark scheme. No credit can be given for the reference to frequency range because it's incorrectly linked to filtering rather than sample rate.

Question 5

Gregory Porter: Liquid Spirit Track 5
Gregory Porter: Liquid Spirit [20 Syl Remix] Track 6
Compare the production techniques used in both versions.

Question number	Indicative content
5	**AO3 (5 marks)/AO4 (10 marks)** **Marking instructions** Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below. Responses that demonstrate **only** AO3 without any AO4 should be awarded marks as follows: • Level 1 AO3 performance: 1 mark • Level 2 AO3 performance: 2 marks • Level 3 AO3 performance: 3 marks • Level 4 AO3 performance: 4 marks • Level 5 AO3 performance: 5 marks. **Indicative content guidance** The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include: AO3 Capture • Original is captured through mics and recorded live. • Remix is sequenced in a DAW. • Remix takes stems from the original as the basis for the track. • The remix has lots of vocal layers taken from the original giving the impression of overdubbing. • Piano is used in the remix but it is sequenced and isn't sampled from the original. Sampling • No sampling in the original, all acoustic instruments. • The samples in the remix are made from stems from the original. • Vocal samples are looped and stuttered in places. • Vocals from the original are also 'scratched'. • Drums are looped from the original. Synthesis • No synthesis in the original; all acoustic instruments. • Synths replace the horn section in places from the original. • Synth bassline replaces the double bass from the original. Effects • There is limited use of effects in the original. • Vocals have the most processing on them with reverb and compression in the original. • Delay is used most prominently on the vocals in the remix. • Stereo widening/ADT is applied to the vocals in places in the remix. • Automated filters are used in the remix.

Question number	Indicative content
5 (contd.)	AO4 • The original preserves the 'live' feel by using only acoustic instruments, minimal overdubs, minimal processing. • On the whole, the techniques and processing used in the electronic remix would not be appropriate for the original jazz track as they are working in different styles. • The remix is sequenced and makes use of heavily edited samples from the original, adding more layers, giving a bigger and more contemporary feel. • In the remix, vocal fragments are sampled to provide new harmony and rhythm, and retaining continuity with the original. • In the remix, the looped drum sample from the original has a rising cutoff on the low pass filter applied to it to give a sense of build. • The looped drum samples from the original serve as an additional percussion track, underneath the sequenced drums. • The sequenced drums in the remix have been heavily compressed, ensuring that the transients cut through the mix, unlike the original drums. • Short delay/stereo widening is applied to the 'clap your hands now' chorus vocal line to give a wider image in the remix. • In the remix, vocals from the original are also 'scratched' giving further manipulation of samples. • Pitch bend used on the synth bass, which does not happen to the same degree in the original, with slides on the double bass. • Compression is more subtle in the orignal version and far more prominent in the remix, giving a punchy dynamic/pumping. • Side-chain compression on the synth pad triggered by the kick is used in the remix during the breakdown section, which is stylistic to electronic music and provides rhythmic movement.

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• Demonstrates limited knowledge and understanding of production techniques used, some of which may be inaccurate or irrelevant (AO3). • Gives limited analysis and deconstruction of production techniques used with little attempt at chains of reasoning (AO4). • Makes limited comparisons between the two recordings, with little or no conclusion (AO4).
Level 2	4–6	• Demonstrates some knowledge and understanding of production techniques used, which is occasionally relevant but may include some inaccuracies (AO3). • Gives some analysis and deconstruction of production techniques used with simplistic chains of reasoning (AO4). • Makes some comparisons between the two recordings, reaching unsupported conclusions (AO4).
Level 3	7–9	• Demonstrates clear knowledge and understanding of production techniques used, which is mostly relevant and accurate (AO3). • Gives clear analysis and deconstruction of production techniques used, with competent chains of reasoning (AO4). • Makes clear comparisons between the two recordings, reaching partially supported conclusions (AO4).
Level 4	10–12	• Demonstrates detailed knowledge and understanding of production techniques used, which is relevant and accurate (AO3). • Gives detailed and accurate analysis and deconstruction of production techniques used, with logical chains of reasoning on occasion (AO4). • Makes detailed comparisons between the two recordings, reaching well supported conclusions (AO4).
Level 5	13–15	• Demonstrates sophisticated and accurate knowledge of production techniques used throughout (AO3). • Gives sophisticated and accurate analysis and deconstruction of production techniques used, with logical chains of reasoning throughout (AO4). • Makes detailed comparisons between the two recordings, reaching sophisticated conclusions (AO4).

Student answer A

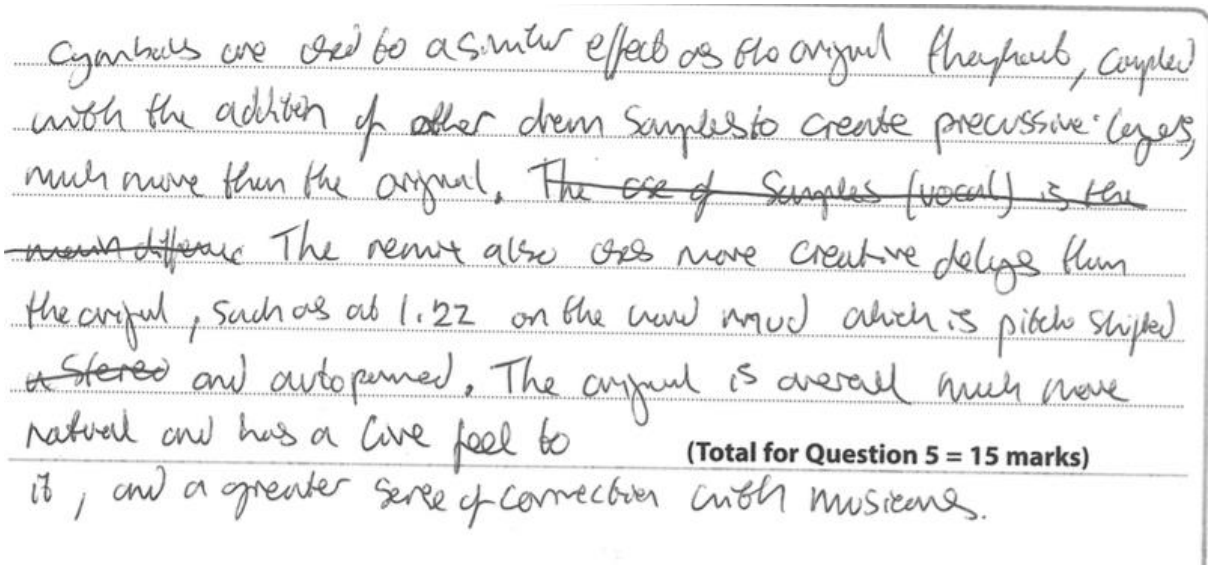
Compare the production techniques used in both versions.

(15)

~~In the original,~~

Both versions of the song exemplify different styles of music, and hence both embody different production features.
// In the original, it has a fully ~~close mixed recorded~~ individually recorded jazz band, with a use of reverb, most likely from the room, and layer amounts of reverb on the main voice. The remix however exhibits use of an electronic drum kit and electronic Synths. The remix uses production elements from modern club/dance music, such as ~~the~~ the use of Samples and drum machines. The remix also uses Side chain compression ~~off~~ on the ~~lead pan~~ stereo Synth, side chained to the kick to create pumping.

The original uses compression but to natural level on all the instruments to keep it sounding human and natural, where more compression is used on the remix, to create a tighter but less human mix. The original uses panning to place the brass instruments in the stereo field, and ~~lots of~~ ~~for~~ more reverb has been used on the ~~drums~~ drums to create a distant sound, and a wash ride cymbal. The drums on the remix however are electronic and tighter during the chorus, however the same Jazz style


Cymbals are used to a similar effect as the original Rhythm, coupled with the addition of other drum samples to create percussive layers much more than the original. The ~~use of Samples (vocal) is the most different~~ The remix also uses more creative delays than the original, such as at 1.22 on the new mix which is pitch shifted ~~& stereo~~ and autopanned. The original is overall much more natural and has a live feel to it, and a greater sense of connection with musicians.

(Total for Question 5 = 15 marks)

Examiner comments

This example is level 5. The opening paragraph explains how the original was recorded including references to room ambience, linking this with the jazz style. This is then contrasted with the electronic production of the remix with stylistic links to dance production, including instrumentation, sampling and side chain compression. The second paragraph opens with a direct comparison of the types of compression used and links that to the different styles and instrumentation. This paragraph continues, making stylistic comparisons between the drums and percussion in terms of timbre and ambience. The final two sentences make a comparison between the two, comparing the heavily effects laden remix with the "more natural… live feel" of the original.

In summary, there is sophisticated discussion of production techniques (AO3) and these are linked to the respective styles and recording settings (AO4). Detailed comparisons are drawn between the two versions of the songs (AO4).

Student answer B

Compare the production techniques used in both versions.

(15)

The original song has been recorded with live instruments as oppose to the remix where midi instruments have been used. This differentiation in instruments can be heard in the bass' of both songs. In the original, you can hear the light buzzing of the bass at the beginning of the song as well as the harsh plucking, suggesting that the bass has been recorded live and then been ~~eq~~ eq'd to get rid of the ~~get~~ buzzing which would've been clearly audible in the raw recording. The eq gets rid of this buzzing but leaves some ~~to keep~~ so that the song feels more realistic. Whereas in the remix, a synth-like bass is used and would've been recorded using midi making the song less like the original and fit its remix style.

Examiner comments

This example is level 1. The opening sentence states that there is a difference in instrumentation but no further links are made with jazz and dance styles. The rest of this page merely compares a "live bass", so not even mentioning double bass, with a synth bass. There is a lot of irrelevant information about EQing the string buzz that's inconclusive.

In summary, there is limited knowledge and understanding of production techniques (AO3). Any comparisons between the two songs are limited to the bass (AO4).

Student answer C

Compare the production techniques used in both versions.

(15)

Liquid Spirit : ORIGINAL:

This is a very natural sounding mix, with small amounts of Reverb on the instrument tracks, and a natural 1.5s Reverb on the lead vocals.
The instruments blend together well, with the vocals sitting nicely on top. All the instruments are acoustic.
The vocals are only lightly compressed.

REMIX:

In the 2015 Syl Remix, the drums are more prominant - and possibly on an 808.
There is an added synth part that has a dub-step feel to it.
There is a ~~comp~~ high compression ratio on this track, especially on the vocals. The vocals also have been cut up and ~~pasted~~ sampled to create choppy rhythms and harmony lines. This remix sounds more like a dance track, rather than the Jazz/Blues of the original track.

Examiner comments

This example is level 3. This candidate has written about the two versions in separate paragraphs so that comparisons are not clearly drawn. There are clear references to the processing in each version with descriptions of parameter settings for reverb and compression; however these are not expanded upon to describe their musical effect. The final two sentences contain some musical effect from the production and comparisons between the versions that fulfil AO4 criteria. In summary, the candidate demonstrates clear knowledge of relevant production techniques (AO3) and some deconstruction of these production techniques to draw comparisons between the two versions (AO4).

Question 6

Britney Spears: Oops!… I Did It Again

Question number	Indicative content
6	**AO3 (5 marks)/AO4 (15 marks)** **Marking instructions** Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below. Responses that demonstrate **only** AO3 without any AO4 should be awarded marks as follows: • Level 1 AO3 performance: 1 mark • Level 2 AO3 performance: 2 marks • Level 3 AO3 performance: 3 marks • Level 4 AO3 performance: 4 marks • Level 5 AO3 performance: 5 marks. **Indicative content guidance** The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include: (Candidates must connect the DAW production techniques on this track with the wider impact they have had on music production.) AO3 • Copy/pasting of vocal edits. • Reversing of vocals. • Extensive use of vocal stacks/overdubs. • Auto-Tune on vocals. • Volume automation. • Timed delay on vocals. • Minimal noise/hiss on vocal takes. AO4 • Copy/pasting of vocal 'hums' and breath noises used as effects/rhythmic elements. • Can easily place consecutive vocal samples in opposing pan positions and with varied effects (e.g. filtering/telephone effect) – techniques widely used as a 'hook' in pop hits to hold the listener's attention. • Reversing vocal breaths as a transition effect, e.g. 1:13. • Vocal editing is a lot faster so therefore production time and associated costs can be lower. • Vocal editing can be so precise that pitch can be corrected. • Rhythm correction of audio is so precise that lead and backing vocals are perfectly matched. • Reversing vocals is extremely easy and allows producers to create new and interesting timbres using audio. • Ability to record multiple (virtually unlimited) takes and then easily compile together.

Question number	Indicative content
6 (contd.)	• Auto-Tune was initially used as a corrective tool but has since been used as a creative tool, e.g. T-Pain, Kanye West. • Pitch/rhythm correction has led to the rise of 'factory produced' music featuring performers with limited musical talent. • Pitch correction alogrithms are so advanced that polyphonic audio can now be repitched, for example recorded vocal ensembles can now be corrected. • Artists have reacted in opposition to Auto-Tune and produced purposefully unpolished vocals, e.g. Jay-Z: *D.O.A.* • Volume automation/heavy compression used on vocals to bring up the signature 'vocal fry' inflection. • Timed delay on vocals can be synced to note value/bpm of the project giving a tighter rhythm. • There is minimal noise/hiss because audio can be edited tightly giving a more polished production. • All editing is non-destructive which has both advantages such as being able to 'undo' and disadvantages such as encouraging indecisiveness. • The polished vocal production that DAW technology can achieve has shifted consumers' expectations of recorded music. • Producers are likely to over-use new technologies, which can have both positive and negative outcomes.

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–4	• Demonstrates limited knowledge and understanding of production techniques/technology used, some of which may be inaccurate or irrelevant (AO3). • Applies limited analysis and deconstruction of production techniques/technology used in the recording with little attempt at chains of reasoning (AO4). • Makes limited connections between the production techniques/technology used in the recording and their wider impact (AO4). • Makes limited evaluative and/or critical judgements about the wider impact of the production techniques/technology used in the recording (AO4).
Level 2	5–8	• Demonstrates knowledge and understanding of production techniques/technology used, which are occasionally relevant but may include some inaccuracies (AO3). • Applies some analysis and deconstruction of production techniques/technology used in the recording, with simplistic chains of reasoning (AO4). • Makes some connections between the production techniques/technology used in the recording and their wider impact (AO4). • Makes some evaluative and/or critical judgements about the wider impact of the production techniques/technology used in the recording (AO4).
Level 3	9–12	• Demonstrates clear knowledge and understanding of production techniques/technology used, which are mostly relevant and accurate (AO3). • Applies clear analysis and deconstruction of production techniques/technology used in the recording which is mostly detailed, with competent chains of reasoning (AO4). • Makes valid connections between the production techniques/technology used in the recording and their wider impact (AO4). • Makes clear evaluative and critical judgements about the wider impact of the production techniques/technology used in the recording (AO4).
Level 4	13–16	• Demonstrates detailed knowledge and understanding of production techniques/technology used, which are relevant and accurate (AO3) • Applies detailed and accurate analysis and deconstruction of production techniques/technology used in the recording, with logical chains of reasoning on occasion (AO4). • Makes detailed and valid connections between the production techniques/technology used in the recording and their wider impact (AO4). • Makes detailed and valid evaluative and critical judgements about the wider impact of the production techniques/technology used in the recording (AO4).

Level	Mark	Descriptor
Level 5	17–20	• Demonstrates sophisticated and accurate knowledge and understanding of production techniques/technology used throughout (AO3). • Applies sophisticated and accurate analysis and deconstruction of production techniques/technology used in the recording and logical chains of reasoning throughout (AO4). • Makes sophisticated and valid connections between the production techniques/technology used in the recording and their wider impact (AO4). • Makes sophisticated and valid evaluative and critical judgements about the wider impact of the production techniques/technology used in the recording (AO4).

Student answer A

This track was produced in 1999. Evaluate the impact that digital audio workstation (DAW) technology has had on the vocal production in this track, and the wider impact DAW technology has had on vocal production since 1999.

(20)

DAW has had a huge impact on the track and the vocal production is constantly changing in the song. In the intro the mid frequencies have been boosted and the high frequencies cut to give the impression of being heard over a mic reciever.

Backing vocals panned so they're set off the middle of the stereo field.

Examiner comments

This example is level 1. There is some information about the creative use of EQ on the vocal but there is no further information about anything else. Unfortunately this candidate probably ran out of time. It can be seen that had she continued with this standard of writing, including some connections with the wider impact of the technology, she probably would have achieved level 3.

Student answer B

This track was produced in 1999. Evaluate the impact that digital audio workstation (DAW) technology has had on the vocal production in this track, and the wider impact DAW technology has had on vocal production since 1999.

(20)

From listening to this track, DAW tech has had a major influence on the production. I noticed that there was sampling of the vocals. Sampling had been done before, however to sample just the vocal track and modulate the sound (using a low & high pass filter to create a small frequency response of the vocals is something that can be done only with ease with DAW as you can extract certain sounds with complete accuracy. Sampling was most noticable of the hard left & right panning of the vocalists breathing.

Furthermore DAW allow for the vocals like to be double tracked and for the pitch of vocals to be altered (using pitch shifter plug-in ins.). This technology is unique to DAW as it can done in post production so you are able to choose what sections you want to be altered. Also DAW has allowed for virtal recording spaces to be re-recorded with the development of reverb & delay plugins that emulate real spaces. This can be heard on the vocals in this track with bright reverbs and delays to create atmosphere.

Examiner comments

This example is level 3. There is clear knowledge of sampling, and how telephone effect could be created from a high and low pass filter. However the candidate doesn't go much further in making connections between this song and the wider impact of DAW on modern pop music. Many of the comments, e.g. about reverbs and delays, are too general for further credit.

In summary, there is clear understanding of production techniques (AO3). There is clear analysis of production techniques and some links to the wider impact of DAW on music, so the AO4 element exhibits some level 2 attributes.

Student answer C

This track was produced in 1999. Evaluate the impact that digital audio workstation (DAW) technology has had on the vocal production in this track, and the wider impact DAW technology has had on vocal production since 1999.

(20)

The DAW technology has had a huge impact on the vocal production of this track. Through the DAW, early digital technology such as pitch correction for vocals has been utilised, which gave Britney Spears her pitch perfect vocal performance, and also allows for perfect, almost synthesised sounding backing vocal harmonies which are very effective for this style of music.

Through the DAW, the producers are able to use lots and lots (infinite) of tracks for overdubbing, allowing for huge backing vocal harmonies to be built up in the chorus', and the unlimited use of samples and other instruments.

The DAW has also been used for editing the vocal waveform, allowing for the creation of vocal samples, from cutting up the waveform which can be copied into a digital sampler in the DAW and controlled via midi for example, allowing the creation of rhythmic sample loops, such as the stab 0:39, with ease. The easy usability of the DAW also allows for these cut up vocal samples to be copied onto other tracks and manipulated, such as the 'telephone' EQ at 0:41 ~~This touch was not~~ Britney Spears specifically was a pioneer in this new digital technology

Such as pitch correction / Auto tune and Samples, and it is agreed that this is for better and for worse, as it could be said that though this music looses its natural human quality. From 1999 onwards this technology has been developed into almost every D and DAW's are now easily accessible to any musician, even in a bedroom for bedroom producers. On Vocal production specifically the DAW has allowed for limitless creativity. ~~with and as easy accessibility for artists for all musicians and producers~~ It has made it easy to turn a bad / imperfect vocal performance into a pitch perfect master piece via Stereo EQ, compression and auto tune. However Lots of Major Studios Still prefer to ~~Overall the impact of the~~ use analogue equipment as its vintage colour / sound is sought after (such as valves), and many integrate ~~the use of~~ a DAW such as Logic Pro or And Pro Tools with an SSL desk for ~~maximum~~ analogue sound ~~and~~ combined with digital usability.

Overall the impact of the DAW on the vocal production of this track is imperative, and could not be the same without it. This is also true for the impact the DAW has had on the modern music industry, giving opportunities to all producers and musicians alike to record music.

(Total for Question 6 = 20 marks)

TOTAL FOR SECTION B = 35 MARKS

TOTAL FOR PAPER = 75 MARKS

Examiner comments

This example is level 5. There are sophisticated descriptions of vocal processing using a DAW, including sampling, EQ, effects and Autotune. He makes evaluations of their impact, for example Autotune, questioning whether the musical influence is detrimental rather than positive. He questions whether DAW has gone too far in making it too easy for a bad vocalist to be corrected. Furthermore, this candidate goes onto discuss how a DAW could be integrated into an analogue studio so that the engineer has the best of both worlds.

In summary, there is sophisticated understanding of production techniques (AO3). There is sophisticated analysis of production techniques with equally sophisticated links to the wider impact of DAW on music (AO4).