



# **Examiners' Report**

## **June 2022**

**GCE Music Technology 9MT0 03**

## Edexcel and BTEC Qualifications

Edexcel and BTEC qualifications come from Pearson, the UK's largest awarding body. We provide a wide range of qualifications including academic, vocational, occupational and specific programmes for employers. For further information visit our qualifications websites at [www.edexcel.com](http://www.edexcel.com) or [www.btec.co.uk](http://www.btec.co.uk).

Alternatively, you can get in touch with us using the details on our contact us page at [www.edexcel.com/contactus](http://www.edexcel.com/contactus).



### Giving you insight to inform next steps

ResultsPlus is Pearson's free online service giving instant and detailed analysis of your students' exam results.

- See students' scores for every exam question.
- Understand how your students' performance compares with class and national averages.
- Identify potential topics, skills and types of question where students may need to develop their learning further.

For more information on ResultsPlus, or to log in, visit [www.edexcel.com/resultsplus](http://www.edexcel.com/resultsplus). Your exams officer will be able to set up your ResultsPlus account in minutes via Edexcel Online.

### Pearson: helping people progress, everywhere

Pearson aspires to be the world's leading learning company. Our aim is to help everyone progress in their lives through education. We believe in every kind of learning, for all kinds of people, wherever they are in the world. We've been involved in education for over 150 years, and by working across 70 countries, in 100 languages, we have built an international reputation for our commitment to high standards and raising achievement through innovation in education. Find out more about how we can help you and your students at: [www.pearson.com/uk](http://www.pearson.com/uk).

June 2022

Publications Code 9MT0\_03\_2206\_ER

All the material in this publication is copyright

© Pearson Education Ltd 2022

## Introduction

The paper appeared to be more accessible for the cohort compared with the first 'full' series in 2019. This is testament to the detailed preparations on the part of candidates and their teachers.

There were very few blank responses on either short or extended responses. An extremely limited number of candidates appeared to run out of time, whereas there were many blank question Q5 and Q6 responses previously.

A notable improvement was candidates' inclusion of song-specific detail in Q6, to access marks allocated to AO3. In 2019, far fewer candidates attempted to extract relevant features from the stimulus song.

Spurred on by the Advance Information provided to centres and their candidates, discussion of development of the chosen process throughout the history of music technology in Q6 was typically thoroughly prepared and exhaustive.

## Question 1 (a)

The vast majority of candidates gained 2-3 marks in Q1a.

Frequent errors were not realising that the arpeggiated bass was not 100% hard panned and confusion between hi-hats and cabasa/shaker in the mix.

A few candidates seemed to be wearing their headphones the wrong way around.

### 1 **Grace Jones: *Crush* (1986)** **Track 1**

(a) Identify the pan position for the following tracks/instruments. Draw a line on each dial.

(3)



**Arpeggiated bass synth**  
(0:00–0:02)



**Claps**  
(0:08–0:22)



**Hi-hats**  
(0:03–0:22)



**ResultsPlus**  
Examiner Comments

A response achieving full marks.

This candidate identifies the correct position for each track/instrument, noting that the arpeggiated bass synth was not 100% hard panned.

Total: 3 Marks



**ResultsPlus**  
Examiner Tip

Ensure your headphones are on the correct way around!

## Question 1 (c)

The majority of candidates gained 1-2 marks here.

Credit was given for a number of relevant production features.

(c) Describe the lead electric guitar part first heard at 0:22.

Chorus is used to create a slight  
synth sound <sup>(2)</sup>



**ResultsPlus**  
Examiner Comments

This example shows a limited response.

This candidate gains 1 mark for the identification of the chorus effect.

Total: 1 Mark



**ResultsPlus**  
Examiner Tip

Always check the mark allocation – here, at least two points need to be given

(c) Describe the lead electric guitar part first heard at 0:22.

(2)

The guitar has been modulated using a flanger, and has light overdrive distortion.



**ResultsPlus**  
Examiner Comments

This response receives full marks.

Marks are given for:

- flanger (1)
- distortion (1)
- Total: 2 Marks



**ResultsPlus**  
Examiner Tip

Use bullets to make points concisely

## Question 1 (d)

There was good differentiation of candidates' responses observed, with more limited responses citing tight rhythms/quantise for 1 mark.

More detailed responses covered several relevant technical features included in the mark scheme.

A very small number of candidates misunderstood the 'describe' command word: instead, they provided a qualitative evaluation of sequencing within the song (or the topic of sequencing in general).

(d) Describe the use of sequencing within the song.

(4)

- Sequencing has been used to create the drum track.
- this is most identifiable by the perfectly quantised sound that will only be achieved by a drum machine.
- The velocity and timing is identical throughout → looped sequence
- The synth bass part has also been sequenced and looped throughout the song. This part is identical throughout with timing and velocity.

(Total for Question 1 = 10 marks)



Full marks are awarded for this successful response, as follows:

- Quantise (1)
- Use of drum machine (1)
- Fixed velocities (1)
- Looping (1)

Total: 4 Marks

## **Question 2 (a)**

This question proved surprisingly challenging for most candidates.

Incorrect responses often featured the Hammond organ.

Please refer to Section 3.2 of the component's subject content, in the specification.



## Question 2 (b)(iii)

This question was challenging and gave a good insight into candidates' technical knowledge.

Relatively few candidates were able to offer sufficient technical detail to identify a method that would have resulted in the particular sound.

(iii) Describe how the pitch of the synthesised sound is being changed.

(1)

It is being changed using a random wave form LFO



This example shows a credit-worthy response.

The candidate gives assured technical detail.

Total: 1 Mark

## Question 2 (c)

A range of marks was observed, with the most technical responses gaining 3 marks for describing the whole process.

Limited responses made mention of tape, for 1 mark.

A full marks response

(c) Reversed sounds are heard at the start of the song. Describe the steps that would need to be taken in 1967 to create these sounds.

(3)

The sound would be recorded on tape then once record the tape would be remove then flip over and played this would play the tape backwards creating this reversed sound they would simply record this sound to a new tape



**ResultsPlus**  
Examiner Comments

This example demonstrates a full-marks response.

The candidate describes an entire, valid process for achieving the reversed sounds.

The description in this response of how the tape direction is changed is far better than a response saying only: 'play the tape in reverse'.

Total: 3 Marks



**ResultsPlus**  
Examiner Tip

Describe *how* a technical process works.

## Question 2 (d)(i)

Most candidates identified the problem of peaks/clipping.

Incorrect responses frequently referred to timing issues.

(d) (i) Identify the problem heard in the drums at 3:40.

(1)

Too loud - distortion



**ResultsPlus**  
Examiner Comments

Distortion is identified correctly.

Total: 1 Mark

## Question 2 (d)(ii)

Nearly all candidates identified an appropriate process/method for overcoming the issue when mixing in a DAW.

Accompanying explanations, however, frequently needed greater technical detail or description of the effect.

- (ii) Explain **one** way this problem could be solved if the song was being mixed using a DAW. )

you could lower the volume of <sup>(2)</sup>  
just that with using automation



**ResultsPlus**  
Examiner Comments

This is a full-marks response – volume automation.

The candidate identifies volume automation correctly as a relevant method and then explains that it should be applied only to the problematic section within the song.

Total: 2 Marks

A more limited response – compression

(ii) Explain **one** way this problem could be solved if the song was being mixed using a DAW.

(2)

A compressor could be applied to the track with a specific threshold  
so the volume levels we hear are constant.



Compression identified as a valid method/process but there is not sufficient detail – or parameter settings – in the explanation.

### Question 3 (a)

Whilst the majority of candidates were able to identify an appropriate feedback percentage for the second row, few candidates understood the relationship between Hz and seconds.

Please refer to the Numeracy section (2.3) of the component subject content.

#### 3 **Blink-182: Bored To Death (2016)** Track 3

- (a) Listen to the drums in the introduction (0:00–0:08). Identify the settings used for the flange effect in the table below.

Rate in Hz	0.20	(1)
Feedback %	50%	(1)

$$T = 1/f$$
$$f = 1/T$$



**ResultsPlus**  
Examiner Comments

Both values were within the allowed ranges in the mark scheme, achieving both marks.

Total: 2 Marks

### Question 3 (b)

Candidates were broadly successful here, but there were some issues with candidates not clarifying to which of the two sections they were referring.

(b) Apart from flange, identify **two** ways in which the drum production in the first verse (0:09–0:32) differs from the introduction (0:00–0:08).

(2)

1. verse goes across the stereo field intro doesn't
2. ALSO verse has heavy compression intro doesn't



**ResultsPlus**  
Examiner Comments

This is a full marks, clear response.

The candidate makes two valid points and is careful to clarify to which section they are referring, for each.

Total: 2 Marks



**ResultsPlus**  
Examiner Tip

Clarify to which section you are referring, in your response

### Question 3 (c)

The majority of candidates were correct in their responses to this question.

### Question 3 (d)

There was a wide variety of responses – this question was more challenging than Q3c.

Candidates need to understand the difference in sound between different filter types.

### Question 3 (e)

There was a wide variety of response quality, but it was encouraging to read many that explained the entire process, from the guitar output jack right through to the amp simulator plug-in, within the DAW.

- (e) In the DAW era electric guitars are often recorded direct, without the use of a hardware amplifier or microphone. Describe the process of setting up for an electric guitar recording using this method.

(2)

The electric guitar would be plugged into an interface or a DI box which is a jack cable. The DI box is then connected to a mixer via an XLR cable.



**ResultsPlus**  
Examiner Comments

This candidate reaches the maximum of 2 marks, mentioning a DI box, jack cable plus the XLR cable running from the output of the DI box.

Total: 2 Marks



### Question 3 (f)

Nearly all candidates gained at least 1 mark, identifying compression/limiting as the process, correctly .

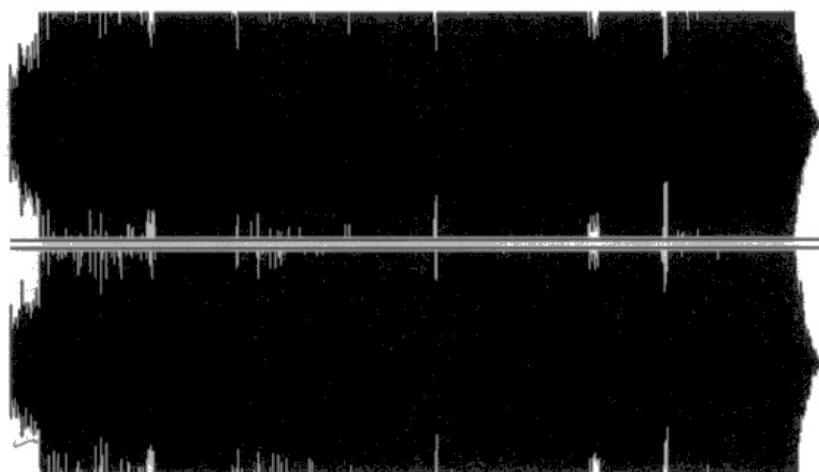
Fewer were able to offer an explanation with sufficient parameter detail or discussion of the effect on the sound/signal.

Explain items usually require a point and accompanying explanation.

Explanations should cover the parameter settings required, and/or the resulting effect upon the sound.

- (f) The image below shows the master stereo waveform for this song. Explain **one** process that would have been used to maintain the high average level.

(2)



heavy compression would have been used this is visible from the levelled waveform. This would require a low threshold, high ratio and high make up.



The candidate receives both marks for this response.

A valid AO3 point, reinforced with multiple appropriate parameter settings for AO4.

Total: 2 Marks

### Question 4 (a)

The majority of candidates knew the correct answer.

Frequent incorrect responses cited 'blues' and 'soul'.

Please refer to page 35 of the specification for the Music styles list.

### Question 4 (b)

This question was answered well, on the whole.

Some candidates placed the piano too far forward, gaining 2, of the possible 3, marks.

Candidates are reminded that they must label the instrument names, as per the example provided.

### Question 4 (c)

Most candidates were able to offer a suitable process for AO3.

Mid and high level candidates were also able to explain the effect or relevance for AO4.

(c) This recording was remastered for a 2020 compilation album release.

Explain **one** remastering process that may have been used in the context of what is heard.

(2)

Using noise reduction software to remove tape  
hiss or crackle.



The candidate named a valid process for AO3 and justified why it was needed for AO4, gaining both marks.

Total: 2 Marks

## Question 4 (d)

Candidates found this question challenging, frequently identifying problems that would not necessarily be encountered when capturing those specific instruments.

Many candidates were able to identify 'clipping' as an issue, and could explain how to avoid it.

Far fewer candidates were able also to explain a challenge/solution for the second instrument.

- (d) Excluding unwanted room reverb and spill, explain **one** challenge associated with close-miking each of the instruments below and how each challenge could be overcome.

(4)

### Saxophone

Unwanted noise from the keys of the instrument which could be solved by placing the mic closer to the bell than the keys on the side and front of the instrument.

### Trombone

Overloading the mic keys as trombones have a high SPL. The mic can be placed off-axis to the bell of the instrument so the sound isn't played directly into the mic diaphragm.



**ResultsPlus**  
Examiner Comments

A challenge was identified for each instrument (AO3) accompanied by a valid solution for AO4, gaining full marks.

Total: 4 Marks



**ResultsPlus**  
Examiner Tip

Identify two different challenges: avoid duplication in your answers

## Question 5

There was a wide variety of response quality, meaning the item performed well. However, the role of the Advance Information meant that some candidates concentrated primarily on key differences between the two eras, rather than concentrating on the two songs.

- Level 1 (1-3) responses tended to be extremely brief and usually limited to a few valid AO3 points
- Level 2 (4-6) demonstrated a slight improvement in scope and detail, although principally limited to AO3 points, rather than explaining parameters and/or effect for each feature
- Level 3 (7-9) responses had some clear detail, but this tended to be very general, or have strong AO3 but limited AO4 depth of explanation. There was much detail that matched the era in a general way and was not specific to the stimulus songs
- Level 4 (10-12) responses were detailed and covered most/all aspects of production. There was a slight limitation in depth of explanation
- Level 5 (13-15) responses were highly detailed, without limitation of scope; assured expertise and most/all aspects were explained in depth

5 Pink Floyd: *Comfortably Numb* (1979)  
Track 5

and

Scissor Sisters: *Comfortably Numb* (2004)  
Track 6



Evaluate the production techniques in both versions of the song.

Comfortably Numb <sup>by pink floyd</sup> ~~was recorded~~ (15)  
released in 1979. This means  
the recording was analogue.

The scissor sisters version was released  
in 2004 and was recorded digitally.

Therefore Pink floyd would have faced more  
limitations when recording. For example,  
pink floyd could only record on  
up to ~~64~~ 64 tracks, whereas  
scissor sisters could record onto  
as many tracks as their processor  
could handle.

At 0:07 in the pink floyd version  
there is slapback delay applied to  
the vocals. This would have been applied  
~~to~~ via an external plugin (maybe  
a pedal). On the vocals of the  
scissor sisters version there is also

delay applied. This would have been done digitally using a plugin. This would have made the process of adding the effect much quicker.



**ResultsPlus**  
Examiner Comments

This is a limited response.

This response sits at the bottom of Level 2.

There is limited detail, aside from some general points connected to the respective eras of the songs.

Level 2

Total: 4 Marks

5 Pink Floyd: Comfortably Numb (1979)  
Track 5

and

Scissor Sisters: Comfortably Numb (2004)  
Track 6

Compression      Reverb  
EQ                      Panning  
Instrumentation  
Texture  
Samples

Evaluate the production techniques in both versions of the song.

(15)

A03	A04 range
· No light compression on PF.	· Dynamic is wider. · Perceived master level lower. · Natural sounding.
· Heavy compression on SS.	· Reduced dynamic range. · Perceived master level seems louder. · Dance track typically uses heavy compression.
· No pitch correction on PF.	· Was not available at the time. · Sounds natural.
· Pitch correction used on SS.	· Makes singer sound more processed.

## A03

- Sequencing and sampling.

SS uses loops of the guitar.

- No sequencing or sampling in PF.

- Synth synchronized to a  $\frac{16}{8}$  note.

- Tape delay used on SS and PF.

- SS has lots of instrumentation. Includes synth bass, synth lead, sampled drums and claps.

- PF has a ~~heavy~~ heavy pairing.

- SS created on a DAW.

- PF uses analogue multi-track.

## A04

- Typical of dance, ~~also~~

- Sounds more natural.

- Tight mechanical rhythms.

- Creates a sense of depth in the track.

- More textural variation compared to PF.

- Uncluttered stereo field.

- More processing can be done.

- Non-destructive editing.
- More tracks.

- Tape saturation.

- Destructive editing.





This concise Level 5 response considers a number of aspects of each production, matching points with brief – yet effective – explanations.

Total: 15 Marks



Use tabular form and bullet points to convey information more efficiently

## Question 6

A wide variation of response quality was observed for Q6.

- Low-level responses tended to be strong on the later development section for AO4 but were limited to 1-2 AO3 marks for identifying song-specific reverb features
- Mid-level responses achieved close-to full marks on AO4 and identified 3-4 points for AO3, when identifying which reverb types/parameters were used in the stimulus song
- High-level responses achieved full marks on the AO4 component and also 4-5 AO3 marks

## 6 Michael Penn: Figment (1997) Track 7

Evaluate the use of reverb within this song as well as methods used to create reverb from the earliest days of recording through to the present day.

This song makes use of digital reverb. The vocals <sup>in the intro (20)</sup> at 3:28 have a <sup>large</sup> ~~to~~ reverb with <sup>medium</sup> ~~high~~ wet mix and feedback. When the acoustic guitar enters around 1:10 the reverb is removed to add contrast. ~~Also~~ The intro guitars also have reverb applied to give an ambient sound. The main section is dry in comparison, creating contrast with the more ambient sections. Bells appear later with high feedback and wet mix. Low cut is applied to all EQ to prevent muddiness. Reverb was the main effect used to transition live music to recorded music. It was first used in recorded music ~~from the 30s~~ room reverb, which is where the song would be recorded and performed in a room with the desired reverberated sound. This was quickly problematic because there was no control over how much reverb could be used. Later in the 40s this led to chamber reverb, which is where the signal would be played from a speaker into a reflective room and the reverberated sound would be <sup>captured</sup> ~~captured~~ through a mic and used to blend with the dry signal as wet mix. ~~This was used by the likes of Ella Fitzgerald~~

This quickly led to problems however because the sound of the reverb could not be adjusted. In the 50s spring reverb therefore became popular when it was discovered as being used in Hammond organs in the 30s and 40s. Spring reverb could be adjusted by changing the tension <sup>of</sup> the spring <sup>in the reverb box</sup>. ~~and~~ It became the signature guitar amp sound in the 50s, as well as being commonly used in dub music in the 60s by the likes of King Tubby. Plate reverb was another popular reverb used in the 60s which gave

music of this decade its signature warm sound, used by bands like the Beatles and Beach Boys. By the late 70s, digital reverb was popular since you had even more control of individual parameters like feedback, as well as being able to add modulation to reverb. The 70s were famous known for using massive reverbs on vocals, which was common in soul music.

By the 80s, gated reverb was very popular, which combined a noise gate with reverb and could be achieved digitally as well as via analog. Artists like Phil Collins and Grace Jones were famous for this.

By the late 90s when DAWs were popular, the reverb plug-ins where the norm which could recreate the sound of any room by using impulse responses in convolution reverb, as well as being able to recreate any previous analog <sup>or digital using mathematical algorithms.</sup> reverb. ~~These were the~~ This is now the ideal reverb, since it is not expensive and does not need to be physically carried around, despite perhaps being CPU intensive. In modern day music, ambient music from artists like Aphex Twin and Ichiko Aoba make use of plug-in reverb almost as its own reverb instrument.



This is a high level response.

The candidate first makes a number of relevant observations regarding a number of reverb types (and associated settings) within the stimulus song.

This is the AO3 aspect of the question, for which 5 marks are allocated.

Accompanying explanations are mostly assured and the second part of the question gives great detail too, leading to a very strong AO4 component.

Total: 20 Marks



Use sub-headings, bullet points and AO3/AO4 columns if preferred

## Paper Summary

Based on their performance in this year's examination, candidates are advised to:

- refer to the subject content and Music Styles list from the Component 3 section of the specification
- familiarise themselves with the command word taxonomy, in particular, the difference between the 'describe' and 'explain' commands
- use tabular formats and subheadings (as preferred) when responding to each item, including extended responses. There is no requirement to write in continuous prose
- give an account of the effect on the sound and/or parameter settings that may have been used when explaining points
- be as specific as possible when describing parameter names/settings, particularly in regard to synthesisers

## **Grade boundaries**

Grade boundaries for this, and all other papers, can be found on the website on this link:

<https://qualifications.pearson.com/en/support/support-topics/results-certification/grade-boundaries.html>

