

Please check the examination details below before entering your candidate information

Candidate surname

Other names

Centre Number

Candidate Number

--	--	--	--	--

--	--	--	--

## Pearson Edexcel Level 3 GCE

**Time** 1 hour 45 minutes plus  
10 minutes setting up time

**Paper  
reference**

**8MT0/41**

### Music Technology

**Advanced Subsidiary**

**COMPONENT 4: Producing and analysing**

**You must have:**

Figure 1 for Question 6 (enclosed), 2022 Pearson audio/MIDI files, headphones or monitor speakers, digital audio workstation (DAW) and MIDI keyboard.

Total Marks

### Setting up time

- Open a new project in your DAW using 16 bit/44.1 kHz sample rate.
- Save the project as '**comp4\_your candidate number**' (e.g. **comp4\_1234**) in the folder designated by your centre.
- Set the metronome to **128 bpm**.
- Import 'drums.wav' to a new track in your DAW, aligned with the beginning of bar 1.
- Ensure that the drums are audible and begin on beat 1 of bar 2. Ensure the drums play in time with the metronome during the first 4 bars.
- You must not open the paper until instructed to do so by the invigilator.

### Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- Save your audio files for Questions 1, 2, 3 and 5 within the 1 hour 45 minutes examination time.
- You must ensure that the left and right earpieces of your headphones are worn correctly.
- Access to a calculator or calculator software is not permitted.
- Access to the internet or local network is not permitted.

### Information

- The total mark for this paper is 84.
- The marks for **each** question are shown in brackets – *use this as a guide as to how much time to spend on each question.*

### Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ►

P74789RA

©2022 Pearson Education Ltd.

Q:1/1/1



P 7 4 7 8 9 R A 0 1 1 2

  
Pearson

## SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross . If you change your mind about an answer, put a line through the box  and then mark your new answer with a cross .

Question 1 is about the drum part.

1 Listen to the drum part that you have imported.

(a) (i) Identify the most suitable quantise value for the kick drum pattern in bars 2–5. (1)

- A 1/2
- B 1/4 dotted
- C 1/4
- D 1/8

(ii) Name **one** style of music that uses the drum pattern heard in the opening 4 bars. (1)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



(b) There are timing errors at the end of bar 18 and during bar 19.

- Remove the section of drums with timing errors.
- Copy bar 21 without the cymbal splash.
- Use this to repair the errors in bar 19. It should be identical to bar 21 up to the cymbal splash.
- Make sure the last hi-hat remains in bar 19.

(4)

**Bounce/export the completed drum part as a single 16 bit/44.1 kHz stereo .wav file to the designated folder on your computer.**

**Name it 'q1\_ your candidate number' (e.g. q1\_1234).**

(c) (i) Name the type of reverb applied to the clap in bar 33.

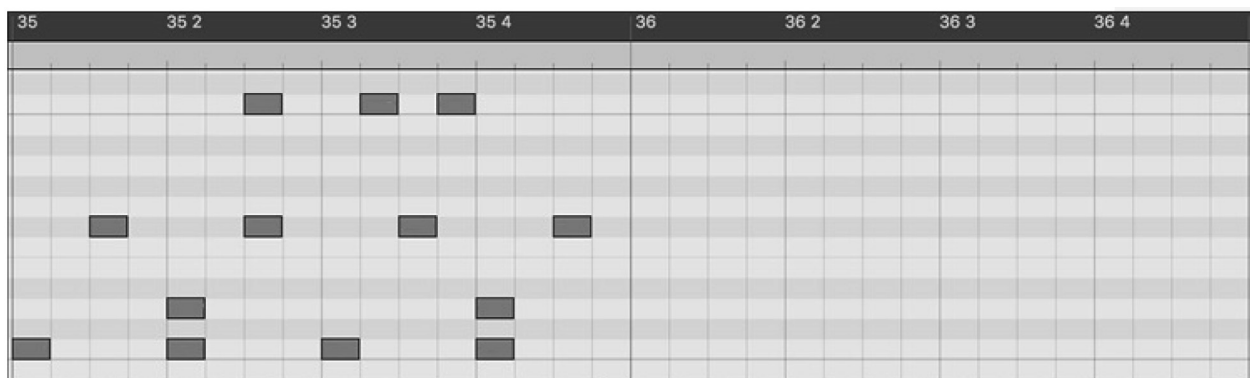
(1)

(ii) Describe the filter applied to the delay in bar 29.

(2)

(d) Draw the drum pattern for bar 36 on the piano roll editor below.

(4)



**(Total for Question 1 = 13 marks)**

**Question 2 is about the keyboard.**

- 2 Import 'keyboard.mid' to a new instrument track in your DAW. Align the part so that the first note is at the start of bar 2.

Import 'keyboard example.wav' to a new audio track in your DAW. This file illustrates how bars 1–6 of the keyboard should sound.

Do not use this audio in your final mix.

- (a) The keyboard sound is made with a synthesiser.

(i) Name the oscillator waveform.

(1)

(ii) State the number of oscillators used to create this sound.

(1)

- (b) Choose a keyboard sound that is similar to 'keyboard example.wav'.

Ensure that:

- the octave matches the example
- there are no effects.

(4)

- (c) Apply volume automation to the long chord that plays from the end of bar 24 to the end of bar 25.

- The chord should be quiet but still audible when it starts playing.
- It should gradually get louder through to the end of bar 25, finishing at the original level.
- There must be no other volume changes in the keyboard part.

(3)

**Bounce/export the completed keyboard part as a single 16 bit/44.1 kHz stereo .wav file to the designated folder on your computer.**

**Name it 'q2\_your candidate number' (e.g. q2\_1234).**



(d) The image below shows an analogue chorus pedal.



(Source: © Guitarist Magazine/Contributor/Getty Image)

(i) Give **two** reasons why chorus might be used on a synthesiser.

(2)

1 .....

2 .....

(ii) Describe the function of the rate control.

(2)

.....

.....

**(Total for Question 2 = 13 marks)**

DO NOT WRITE IN THIS AREA



**Question 3 is about the vocal.**

3 Import 'vocal.wav' to a new track in your DAW. The beginning of this audio track should be aligned with the start of bar 1. The vocal starts in bar 9.

(a) Identify the audio editing technique used in bar 26, beat 4 on the word 'wanna'. (1)

- A Beat-matching
- B Pitch-correction
- C Stuttering
- D Time-stretch

(b) Recreate this technique starting on bar 27, beat 2.

- Copy the word 'I' from bar 26.
  - Use this to create the same timing and number of repeats as heard in bar 26, beat 4.
- (3)

(c) The vocal part has a bit-crusher effect added in bar 35. Describe what a bit-crusher does. (3)

.....

.....

.....

.....

.....

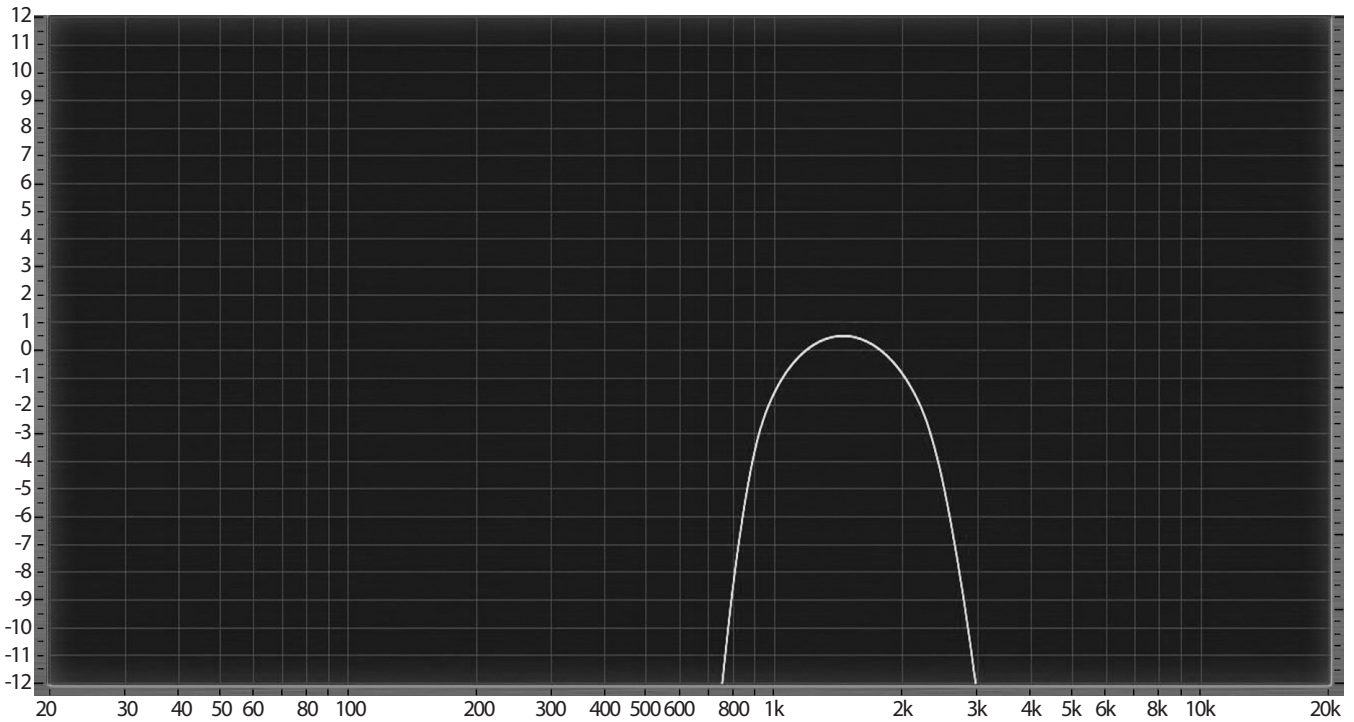
(d) Add a similar bit-crusher effect to the vocal from the start of bar 28 to the end of the vocal phrase in bar 29. (4)

**Bounce/export the completed vocal part as a single 16 bit/44.1 kHz stereo .wav file to the designated folder on your computer.**

**Name it 'q3\_ your candidate number' (e.g. q3\_1234).**



(e) The graph below shows the EQ used for the telephone voice effect in bars 32–33.



(i) Complete the two sentences about this graph: (4)

The x-axis shows ..... and is measured in .....

The y-axis shows ..... and is measured in .....

(ii) Name this filter type. (2)

(iii) Give **two** reasons why the values on the x-axis start at 20 and finish at 20 k. (2)

**(Total for Question 3 = 19 marks)**

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



**Question 4 is about the bass.**

4 Import the audio file 'bass.wav' to a new track in your DAW. The beginning of this audio track should be aligned with the start of bar 1. The bass starts in bar 2.

(a) Name the synthesiser technique used on the last note of the bass in bar 17.

(1)

(b) (i) Give **three** reasons why bass instruments are usually panned to the centre of a mix.

(3)

1 .....

2 .....

3 .....

(ii) Identify **one** other instrument that is usually panned centrally.

(1)

- A** Backing vocal
- B** Grand piano
- C** Hi-hat
- D** Kick drum

**(Total for Question 4 = 5 marks)**





5 You should now have the following tracks in your DAW: drums, keyboard, vocal and bass.

Follow the instructions below to produce a final stereo mix.

(a) Add reverb to the snare in bar 8.

- It should be the same type, level and length as the reverb on the hand clap in bar 33.
- Do not add reverb to any other drums.

(3)

(b) Create a clean version of the vocal line 'I feel alive' in bar 35.

- Use sections of the vocal from bars 31 and 34.
- Re-pitch the notes to match bar 35.

(6)

(c) Apply a 1/4 note delay to the vocal.

- The delay must be audible but not dominate the dry vocal.
- There must be three repeats.
- The delay must be on the vocal for the whole song.

(3)

(d) Balance the mix.

(3)

(e) Produce a final stereo mix.

- 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 silences at the beginning and end do not exceed one second.

(3)

**Bounce/export the completed final mix as a single 16 bit/44.1 kHz stereo .wav file to the designated folder on your computer.**

**Name it 'q5\_ your candidate number' (e.g. q5\_ 1234).**

**(Total for Question 5 = 18 marks)**

**TOTAL FOR SECTION A = 68 MARKS**



P 7 4 7 8 9 R A 0 9 1 2



DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

Handwriting practice area with 20 sets of horizontal dotted lines.



P 7 4 7 8 9 R A 0 1 1 1 2

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

(Total for Question 6 = 16 marks)

**TOTAL FOR SECTION B = 16 MARKS**  
**TOTAL FOR PAPER = 84 MARKS**



**Pearson Edexcel GCE**

Paper  
reference

**8MT0/41**

# **Music Technology**

**Advanced Subsidiary**

**COMPONENT 4: Producing and analysing**

**Figure 1 for question 6**

**Do not return Figure 1 with the question paper.**

*Turn over* ►

**P74789RA**

©2022 Pearson Education Ltd.

Q:1/1/1



P 7 4 7 8 9 R A



**Pearson**

Figure 1

