Please check the examination details below before entering your candidate information

Candidate surname	Other names

Pearson Edexcel Level 3 GCE

Centre Number | | | | | |

Candidate Number | | | | |

Tuesday 21 May 2019

Afternoon (1 hour 45 minutes plus 10 minutes setting up time)

Paper Reference **8MT0/04**

Music Technology

Advanced Subsidiary
Component 4: Producing and analysing

You must have:
Figure 1 for Question 6 (enclosed), CD ROM containing component audio/MIDI files, blank CD for burning finished tasks, 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/44.1kHz 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 **96 bpm**.
- Import 'bass.wav' to a new track in your DAW, aligned with the beginning of bar 1.
- Ensure that the bass is audible and begins on beat 1 of bar 2.
- 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 ▶

P58505A

1/1/1/1/1/1/1/1/1

P 5 8 5 0 5 A 0 1 1 6

Pearson

SECTION A

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

Some questions must be answered with a cross in a box ☒. 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 bass part.

1 Listen to the bass that you have imported.

(a) The bass has been recorded with some unwanted sound in bar 24.

(i) Identify the unwanted sound.

(1)

☒ **A** saw wave

☒ **B** sine wave

☒ **C** square wave

☒ **D** white noise

(ii) State **two** possible causes of the unwanted sound.

(2)

1 .....

2 .....

(b) Copy the first note from the start of bar 25 and use this to repair the error.

(3)

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

Name it 'q1_your candidate number' (e.g. *q1_1234*).

(Total for Question 1 = 6 marks)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

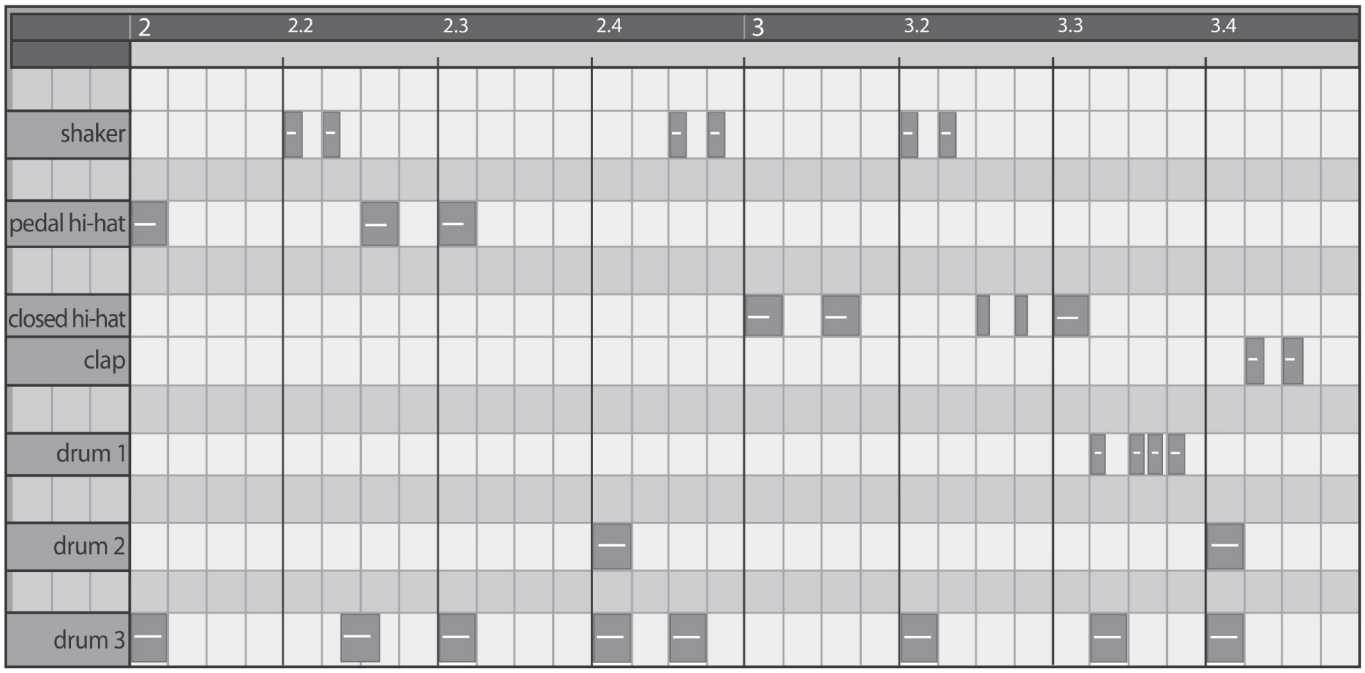
DO NOT WRITE IN THIS AREA

BLANK PAGE

Question 2 is about the drums.

2 (a) Import 'drums example.wav' to a new audio track in your DAW. This file illustrates how bars 2–3 of the drums should sound. Do not use this audio in your final mix.

Listen to 'drums example.wav'. Name drums 1, 2 and 3 as shown in the grid edit window.



drum 1

.....

drum 2

.....

drum 3

.....

(3)

(b) Import 'drums.mid' to a new instrument track in your DAW. Align the part so that the first note is on beat 1 of bar 2.

The notes in the MIDI file have been assigned to the incorrect sounds. Using a suitable drum kit, assign the notes to the sounds heard in 'drum example.wav'. You should not change the rhythm.

(7)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

(c) Identify the most suitable quantise value for the drum roll in bar 3.

- ☒ **A** 1/16
- ☒ **B** 1/16T
- ☒ **C** 1/32
- ☒ **D** 1/32T

(1)

(d) Remove all the drums from bar 43 except the first hi-hat on beat 1.

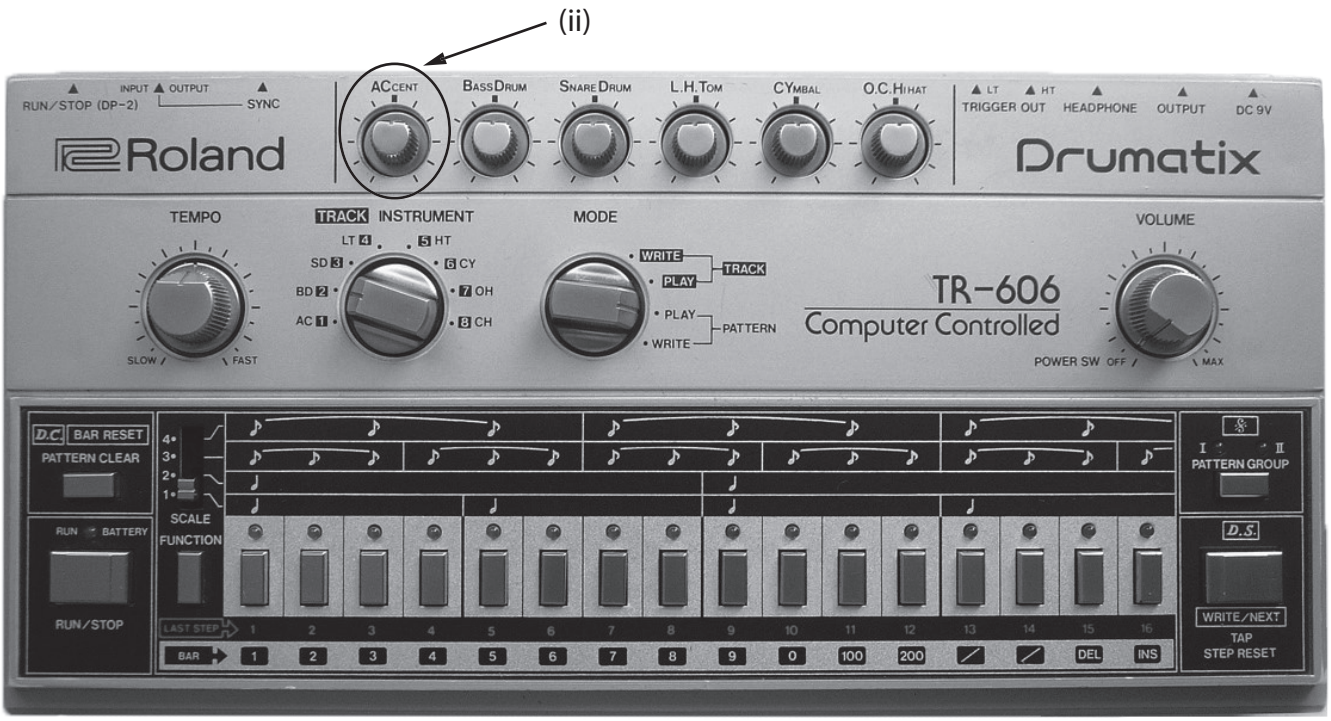
Copy the clap and drum 1 pattern from bar 3 to bar 43.

(2)

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

Name it 'q2_your candidate number' (e.g. *q2_1234*).

(e) The image below shows an analogue drum machine.



(i) State what analogue means.

(2)

.....

.....

(ii) Explain the function of the AC or ACcent control.

(2)

.....

.....

(iii) State **three** disadvantages of using the analogue drum machine shown instead of modern DAW-based plug-in drum machines.

(3)

1 .....

2 .....

3 .....

(Total for Question 2 = 20 marks)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

Question 3 is about the vocals.

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 at the beginning of bar 12.

(a) Name the effect on the vocal part that starts in bar 27.

(1)

(b) Apply a high pass filter to the effected vocal phrase that starts in bar 27 and ends in bar 29.

- The filter should have a cutoff frequency of 2kHz.
- The filter must be turned off when the next phrase starts with the word 'I' at the end of bar 29.

(3)

(c) Explain why it is important to use fades or crossfades when joining two sections of truncated audio.

(3)

(d) Edit the vocal.

In bars 43–44, remove the last part of the phrase from the start of the word 'don't'.

Copy the vocal starting with the word 'don't' at the start of bar 30 and ending with 'wanna' at the end of bar 31.

Paste this phrase so it starts on beat 1 of bar 44. The timing of the phrase must be the same as in bars 30–31.

(3)

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

Name it 'q3_your candidate number' (e.g. *q3_1234*).

(Total for Question 3 = 10 marks)

Question 4 is about the keyboards.

4 Import the audio file 'keyboards.wav' to a new track in your DAW. Align 'keyboards.wav' to the start of bar 1. The keyboards begin on beat 1 of bar 2.

(a) (i) One of the two keyboard timbres playing in the intro in bars 2–3 is a Hammond Organ. Name the other timbre used.

(1)

.....

(ii) Identify the pan positions of the keyboards playing in bars 2–3 by putting their names in the correct boxes.

(2)

LEFT	CENTRE	RIGHT

(b) Listen to the synth melody in bars 9–10. Name the synthesis technique that is used to alter the sound.

(1)

.....

(c) Describe the filtering on the synth pad sound in bars 28–29.

(4)

.....

.....

.....

.....

.....

.....

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

(d) A sampler has been used to create the muted guitar timbre in 'keyboards.wav'. Explain how pitch mapping is used when sampling instruments.

(3)

(e) Describe the delay settings used on the muted guitar part in bars 40–43.

(3)

(Total for Question 4 = 14 marks)

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

(a) Apply reverb to the vocals.

- Use a 2 second reverb.
- The reverb must be clearly audible but not swamp the vocals.

(3)

(b) Pan the keyboards.

- Only bars 34–35 should be affected.
- Pan bar 34 hard left.
- Pan bar 35 hard right.

(3)

(c) The bass part has an EQ error from bar 39 to the end of the song. Apply an EQ cut from bar 39 onwards so that the bass part sounds the same throughout.

(3)

(d) Apply delay to the keyboards.

- Only bars 36–39 should be affected.
- Use a dotted 1/8 note delay time.
- The delay must die away by the start of bar 40.

(3)

(e) Balance the mix.

(3)

(f) Produce a final stereo mix.

- Ensure that the mix output is at as high a level as possible.
- It must 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/44.1kHz 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

SECTION B

Answer Question 6. Write your answer in the space provided.

6 Figure 1 (refer to Figure 1) shows the processing chosen for a male vocalist during the mixing stage. The vocalist was recorded using a cardioid dynamic microphone at a distance of 2 cm. The vocal is soft and has a narrow dynamic range. The peak level is –10dB. There is some hiss during the parts where there is no singing. Evaluate the processing techniques used.

(16)

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

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

BLANK PAGE

BLANK PAGE

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

BLANK PAGE