Write your name here

Surname	Other names

Pearson Edexcel GCE

Centre Number | | | | | |

Candidate Number | | | | |

Music Technology

Advanced
Unit 4: Analysing and Producing

Wednesday 6 June 2018 – Afternoon
Time: 2 hours (plus 10 minutes setting up time)

Paper Reference
6MT04/01

You must have: CD ROM containing component files, blank CD for burning finished tasks, headphones or monitor speakers, computer workstation and music production software.
Supplementary page containing Figure 1 for question 4(b) (enclosed).

Total Marks

Setting up time

1. Open a new project in the music production software using 16 bit/44.1kHz sample rate.
2. Save the project as **unit4_your candidate number (e.g. unit4_1234)** in the folder designated by your centre.
3. Set the metronome to **98 bpm**.
4. Import "chords.wav" from the CD ROM to a **stereo** audio track in the music production software, aligned with the beginning of bar 1.
5. Ensure that the chords are audible and play in time with the metronome. The chords begin at bar 2, beat 1.

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.
- Write your answers to Section A in the spaces provided in this question paper.
- You must save your exported audio files for Questions 3(b) & 3(c) in Section A, and Question 5 in Section B to your project folder within the 2 hour examination time.
- You must ensure that the left and right earpieces of your headphones are worn correctly.
- Access to the internet or local network is not permitted.

Information

- The total mark for this paper is 80.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed
  – *you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.*

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.

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1/1/1

P 5 7 5 6 1 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 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 ☒.

1 Listen to the chords that you have imported.

(a) Identify the most appropriate quantise value for the chords. Put a cross in the correct box.

(1)

- ☒ **A** 1/32
- ☒ **B** 1/16
- ☒ **C** 1/12
- ☒ **D** 1/8

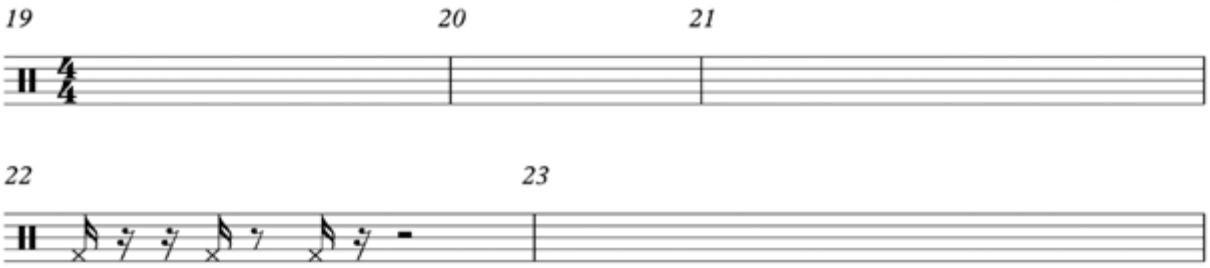
(b) Identify the term that best describes the change in the cutoff frequency between bars 27-30. Put a cross in the correct box.

(1)

- ☒ **A** Accelerando
- ☒ **B** Crescendo
- ☒ **C** Diminuendo
- ☒ **D** Ritardando

(c) Notate the chords rhythm in bars 19-23. Bar 22 has been given as an example.

(4)



(d) Delay has been introduced to the chords at the end of bar 17.

(i) Identify the settings that have been used.

Control	Setting
Time (note value)	**(1)**
Feedback (%)	**(1)**
High cut (Hz)	**(1)**

(ii) The wet signal has a wider stereo field. Describe how this has been achieved.

(2)

.....

.....

(e) In bars 2-5 a pre-fade auxiliary send has been used to apply reverb. Explain how you can tell the auxiliary send is pre-fade rather than post-fade. Describe the effect it creates.

(4)

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.....

(Total for Question 1 = 15 marks)

2 Import "bass.wav" from the CD ROM to a new mono audio track in your music production software. Ensure that the beginning of this audio track is aligned with the start of bar 1. The bass begins on beat 4 of bar 5.

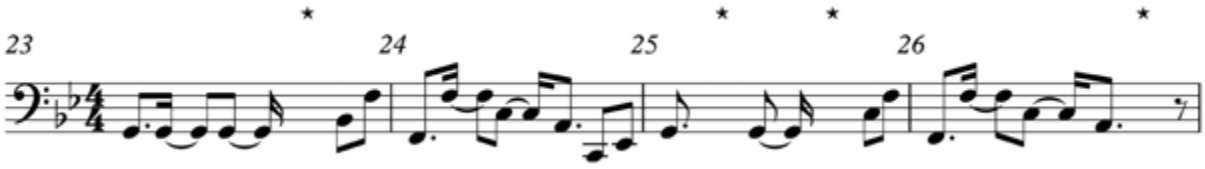
(a) Bars 23-26 of the bass part are notated below.

(i) Fill in the four missing pitches (each marked by an asterisk).

(4)

(ii) Circle the note on the score that has pitch bend.

(1)



(b) Describe the tremolo added to the bass in bar 18.

(3)

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.....

(c) EQ has been applied to the bass. On the graph below, illustrate the two EQ curves used on the bass.

(i) Label the two axes.

(2)

(ii) Draw the low shelf EQ.

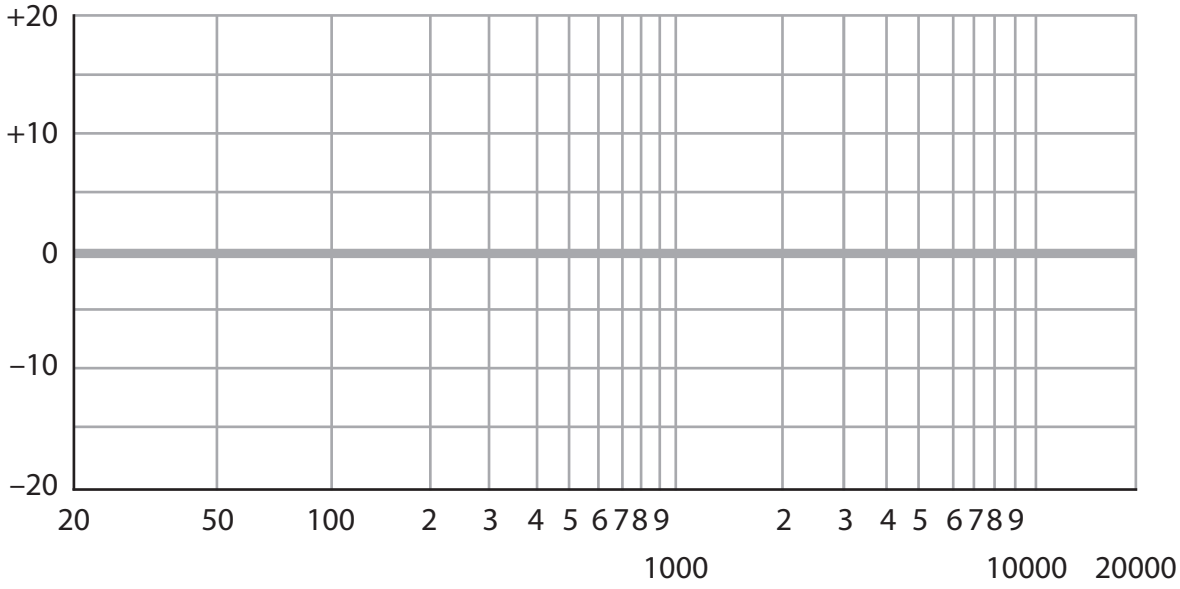
(3)

(iii) Draw the low pass filter.

(3)

(iv) On the curve you have drawn for part (iii), draw a cross to indicate the low pass filter cutoff frequency.

(1)



(Total for Question 2 = 17 marks)

3 Import the MIDI file "drums.mid" from the CD ROM to a new MIDI/instrument track in your music production software. Align the part so that the MIDI begins playing at the start of bar 6.

(a) Identify the lowest note velocity in the MIDI file.

(1)

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(b) The notes in the MIDI file have been assigned to the incorrect sounds. Using an electronic drum kit, assign the notes to the sounds listed below to form an electronic dance music drum part. You should not change the rhythm.

- Kick drum
- Clap
- Closed hi-hat
- Open hi-hat
- Crash cymbal

(5)

Solo the completed drum part. Turn off the metronome click.

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

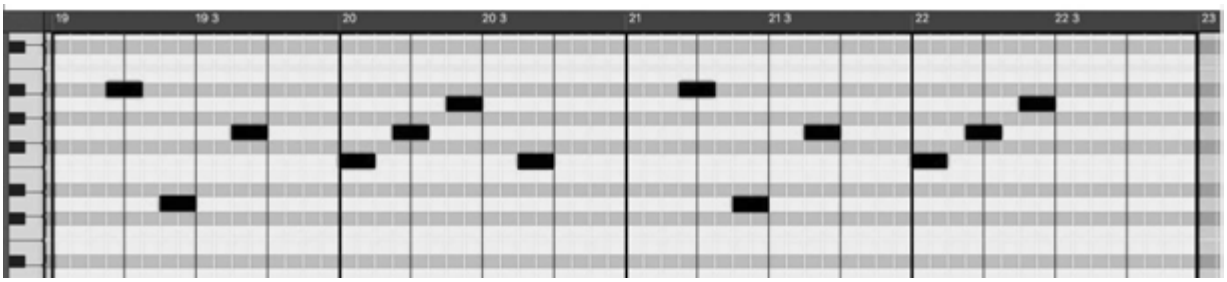
Name it 'task1_ your candidate number' (e.g. *task1_1234*).

Import "vocals.wav" from the CD ROM to a new stereo track in your music production software. This track is the vocal part. Ensure that the beginning of this audio track is aligned with the start of bar 1. The vocals begin in bar 6.

(c) Complete the vocal part for bars 19-22.

- Use the "duh" vocal syllable as heard in bar 19.
- Bars 19-22 must have the same melody and rhythm as bars 6-9.
- The melody and rhythm are shown in the piano roll editor below.

(8)



Solo the completed vocal part. Turn off the metronome click.

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 'task2_ your candidate number' (e.g. *task2_1234*).

(Total for Question 3 = 14 marks)

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4 Answer EITHER Question 4(a) OR 4(b). You are advised to keep your answer to a maximum of 250 words. You may write in continuous prose, use bullet points, a table and/or diagrams to communicate your answer.

EITHER

*(a) The following is a quote from Peter Franco & Mick Guzauski, the recording and mixing engineers who worked on the *Random Access Memories* album by Daft Punk.

"We were doing lots of tests with analogue tape… We wanted to see what the different combinations did; what and how tape could get us certain sounds… We recorded [parts] both to analogue [tape] and directly to Pro Tools [digital audio workstation], and later loaded the tape material in the same Pro Tools sessions, so we could choose what we liked the best… The analogue and digital versions were very similar but subtly different."

Describe how the analogue tape and digital recordings would sound different. Explain why editing in a digital audio workstation is preferred to editing using analogue tape.

(16)

OR

*(b) Figure 1 shows a selection of leads. Identify and explain features and applications of these leads.

Indicate which question you are answering by marking a cross in the box ☒. If you change your mind, put a line through the box ☒ and then indicate your new question with a cross ☒.

Chosen question number: **Question 4(a)** ☒ **Question 4(b)** ☒

Figure 1 is provided on a supplementary page.

(16)

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(Total for Question 4 = 16 marks)

TOTAL FOR SECTION A = 62 MARKS

SECTION B

5 You should now have the following tracks imported on the computer: chords, bass, drums and vocals.

Follow the instructions below to produce a final stereo mix.

(a) Apply automated panning to the chords.
- Only bars 6-9 should be affected; all other bars should be panned to the centre.
- Bars 6 and 7 should be panned hard left.
- Bars 8 and 9 should be panned hard right.

(3)

(b) Apply a gate to the vocals to remove the hiss.

(3)

(c) Apply a filter to the vocals.
- Use the filter type as heard in bar 24.
- Only bar 26 should be affected.

(3)

(d) Apply a 1.5s reverb to the chords.
- Only bars 31-36 should be affected.
- Recreate the reverb and fade effect from bars 2-5, but with the dry signal fading out instead of fading in.

(3)

(e) Balance the mix.
- Ensure that all of the tracks can be heard clearly.

(3)

(f) 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 the beginning and the end of the music are not cut off.
- Ensure that silences at the beginning and end do not exceed one second.

(3)

Turn off the metronome click.

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

Name it 'task3_your candidate number' (e.g. *task3_1234*).

(Total for Question 5 = 18 marks)

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

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