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Examiners' Report

Summer 2013

GCE Music Technology
Analysing and Producing: 6MT04

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General Introduction

All questions reflected a full range of responses. Paper totals ranged between 15 and 77 reflecting a well-judged assessment. It is thought that the paper was very fair, revealing clearly the candidate's ability level. This is reflected in feedback received from both teachers and examiners.

There was a clear distinction between centres that had prepared well using past papers and thoroughly researched music technology theory, and those that seemingly had invested little time on theory and mock examinations. Candidates from the latter centres would not be able to access the higher grades due to insufficient detail in responses.

Some students did not solo the tracks for tasks 1 and 2 so they could not access all of the marks. There were very few incomplete task 3; an improvement on last year.

Good quality DAW software should be used. Centres should not rely on entry-level software because many of the plug-ins and editing functions required for the paper may not be available. In particular this year, some centres' software did not support sidechain gating.

Most centres were well prepared for the examination. However, there continue to be similar problems to previous years:

- Some CDs did not play, suggesting that centres did not test them before posting.
- Some were damaged in the post, so please wrap them carefully.
- The most common mistake was burning a data CD instead of an audio CD.
- Some exam papers were posted much later than the exam date. The scripts should be posted on the day of the exam.
- This year there was an increase of exams officers not putting the CDs in with the papers.
- Please don't put sticky labels on the CDs because they damage the fragile CD drives in laptops with which this paper is marked.

There were examples of suspected malpractice. In these cases, it is probable that centres did not provide an exam log-on free from any previously saved data. Candidates had imported the 2011 bass part, probably from their mock exam. Unfortunately for these candidates, they didn't have access to about 7 marks because the wrong material had been used. Computers must not have access to the internet, any

other network or previously saved files. Read the "Instructions for the Conduct of Examinations" on the Edexcel website for guidance.

Question 1

(a) Most candidates circled both bars correctly, with many correctly writing out the error in bar 33. Most who attempted to rewrite bar 38 missed one of the four consecutive quavers. The most common mark awarded for this question was 3. It's still surprising that many A2 candidates cannot add up a bar of 4/4.

(b) Nearly all candidates scored this mark.

(c) Most candidates answered some of this correctly. The most common incorrect response was not identifying the Eb in the second chord. Many of the candidates missed the F# on the D6

(d) The main problem that candidates had with "microphone position" and "tremolo rate" was that they just re-worded the question instead of giving new information, e.g. "tremolo rate – the speed of the tremolo".

<u>Drive</u>
The majority of candidates achieved 2 marks with answers related to volume / gain and distortion / drive.

<u>Microphone position</u>
Many of the candidates discussed the actual microphone position and room "noise" but failed to relate the answer to either frequency response or ambience.

<u>Tremolo rate</u>
Many candidates gave answers related to varying volume; some confused tremolo with vibrato.

Question 2

(a) Generally candidates did well on this question, achieving either 3 or 4 marks. Some examples were uncannily identical to the example and candidates are to be praised for this. Often waves were selected that were not square waves and very odd synth timbres resulted. This question was very good for sifting out students who used presets, which often have resonant filter envelope – such candidates could score for the octave, and the waveform if it was close enough, so a maximum of 2 out of 4. There were a handful of pianos, organs

and bass guitars which didn't score unless they were in the correct octave. The most common transposition mistake was an octave too low.

(b) Overwhelming majority got this right. However, careless candidates missed selecting the higher notes, therefore only correcting some of the bar.

(c) Overall this question was a big differentiator. It was often all candidates in an entire centre where it was clear the teaching had not covered editing ranges evidenced by candidates not changing the range from the default to 2 octaves. The slopes were generally smooth and the reset to normal was usually clean. A few candidates affected bar 26 by resetting the pitch bend either too early or late causing a glitch. Quite a few candidates simply didn't attempt the pitch bend at all. This was a great shame because even an attempt would have got some credit.

(d) Most candidates were correct. Some were incorrect: Students should know that quantise should use the smallest note value in the music; a topic that should be clear even for an AS student.

(e) Overwhelming majority got this perfectly correct. However, several candidates identified the pitch correctly but the corresponding velocity value was 1 or 2 out – probably because they were not using list editor, but just guessing the velocity from a graphical editor.

Question 3

(a) The responses to this question were centre dependant reflecting the teaching of technical topics. This was answered poorly by the majority of candidates with very few students gaining full marks. It would seem that some students decided to draw something that was available to view on their screen with no understanding of what they were drawing. It is not appropriate for students to rely on using presets - they must understand the theory behind such processes.

i. Many candidates labelled the axes with gain, compressor and threshold. Some students labelled the axes the wrong way round. Some candidates assumed, because there was dB, they should put a number down for the axes. In lower key stages students are taught that the axes should be labelled with the unit of measurement and with words relating to the values represented.

ii. This was marked correctly by many students. Some decided to draw their own despite the question asking them to label something

already on the graph. Some gave a value which was acceptable within a given range.

iii. Many students were able to write down a correct ratio for this section of the question. Some candidates used incorrect syntax e.g. 4:4:1. Candidates often did not understand the significance of the pre-marked threshold and would draw the curve from a much higher point (probably mirroring the more subtle compression that they are more used to seeing).

(b) The majority responses scored full marks. Students did however, display obvious confusion relating to gating and wider dynamic processing, as many compared gating to compression/limiting, or described the process of gating in relation to filtering frequencies. In such instances, students achieved zero marks.

(c) Most candidates identified the use of Autotune. Full marks were scored by expanding beyond Autotune and describing parameter settings that create the robotic effect. A few candidates incorrectly identified that this was a modulation effect or a vocoder.

(d) No clues were given in this question to test candidates' ability of problem solving; this question was aimed at high grade students. I was very impressed by how many students were successful across the grade range. Generally students understood that they had to use a portion of the vocals from elsewhere in the track. Students that didn't, used a gate or editing to remove the sound inbetween the vocals but noises were still present underneath the singing. A minority of students introduced timing errors when replacing the audio.

Question 4

There are two options for question 4, designed to give all candidates with diverse music technology interests a chance to illustrate their expertise for the subject. This question differentiated well across the cohort. There was a full range of responses ranging from 0 marks where no relevant information had been written, to some excellent responses scoring more than maximum marks. The exhaustive mark scheme gave credit for all relevant knowledge and covered the range of candidate responses.

Lengthy, meandering answers with little or repetitive content failed to secure high marks. Many candidates lost marks simply because they were unclear in their responses - this could be due to a lack of knowledge or terminology, or an inability to communicate in a clear

concise manner. There was the occasional candidate whose writing was very poor and difficult to decipher. Candidates must spell technical terms correctly to gain credit in this question.

A student that had just memorised information without understanding it is unlikely to score top marks in this question because it is designed to test higher levels of understanding. To obtain top marks in question 4, an informative use of technical vocabulary applied to an unfamiliar situation is expected.

The cohort were split roughly 50/50 between (a) and (b).

(a) Many candidates seemed to be able to remember information from their revision, but this often seemed to demonstrate memory ability rather than in-depth understanding therefore their answers were confused. There were many examples of candidates not reading the question carefully enough and going off at a tangent – e.g. wax cylinders / shellac discs / multi-track reel to reel tape / splicing / mp3; no credit was given for descriptions of these technologies. A lack of structure in their answers resulted in them loosing marks - talking in general terms about disadvantages for instance rather than relating it to a specific format (vinyl, cassette or CD).

Only a few candidates thought to mention that both vinyl and cassette are analogue technologies. Nearly all candidates correctly identified the degrading issue for both vinyl and cassette. While some candidates got the portability issue correct, there were many who were wrong because they lumped vinyl and cassette together in this respect.

<u>Vinyl</u>
Many candidates got the more obvious buzzwords (needle, groove, vibration, scratch, dust, warp, etc) and could describe the basic working of the playback technology, but there were very few who mentioned diamond tips, frequency response, rumble, lock groove etc. I am not aware of any candidates having mentioned anything about the EQs for recording/playback of vinyl. Many candidates mentioned playing speeds; there were occasionally some confused facts (e.g. a 45-inch record).

<u>Cassette</u>
Marks were often scored for referring to magnetism and heads. There were very few accurate descriptions of electromagnetic induction, and almost no mention of degaussing or different tape types/tape bias. Regarding disadvantages, the tape snapping/

becoming tangled was mentioned quite often. Tape hiss was identified fairly often, though solutions, such as Dolby, not expanded upon.

CD

Candidates seemed obviously much more familiar with this technology; however they needed to relate it to analogue technology to gain credit. In a few centres all candidates wrote paragraphs about Nyquist's theory which didn't answer the question; therefore they were taught the theory, but not how to relate it to a question.

Many answers concerning the advantages of CDs were just too vague, e.g. 'sound quality is better' (without saying specifically why), or 'holds more data' (without referring to specifically to vinyl. Many candidates identified the ease of cueing.

This part of the question was a basic comparison of analogue and digital audio. There were many straightforward marks here, but most candidates failed to mention them.

(b) The photograph for this question provides an opportunity for candidates to apply their knowledge to an unfamiliar situation by taking cues from the picture. A candidate that correctly linked their practical experience of recording to the controls seen in the photograph could score very high marks. The weakest candidates would simply expand the name of a control into a sentence, for example "the volume knob turns up the volume". No credit is given for candidates rewording the question.

The layout of the picture resulted in mostly well-organised and clear answers. Some concise answers were less than a page long and scored 16. Only identifying the features would limit credit; explaining the controls could lead to marks maxed out at 16.

The most common features that candidates were able to identify were the 4 inputs, XLR (linked to mics), pad switch (often mentioning the reduction of volume), gain, firewire for connecting to computers, jacks (occasionally linked to DI), the power switch/socket and phantom power (often linked to condenser mics). Most candidates identified the meters but did not expand to mention red means distortion; further credit would be given to linking this to gain. Very few candidates wrote about the digital inputs. Often candidates would state that a keyboard could be connected via MIDI. Not many students correctly identified the role of the clock, i.e. "sample rate" and then linked it to the bit depth and went on to describe the resultant sound quality.

Some candidates mistakenly thought this was retro kit because of the word “Analog”.

Question 5

This question had a good range of editing, processing and effects-based tasks to cater for a wide range of student ability and knowledge. Many candidates scored full marks in Question 5.

Candidates should answer the questions and not add other creative panning, dynamic processing, EQ and effects not specified in the question. Otherwise full credit cannot be given because they haven’t answered the question.

(a) The majority of the candidates were able to complete this successfully, although a few lost a mark because of a noticeable volume change. About 10% of candidates got confused with HPF and LPF - thus marking the guitar duller rather than thinner. A further 10% of candidates made no attempt.

(b) This question was set to differentiate between top ability candidates. Some whole centres completed this task correctly indicating good teaching. This question yielded a range of responses. Those who gated the guitar triggered via sidechain input did so very well. Unfortunately, some candidates that had sidechained the gate correctly left in the first few bars ungated; so full credit could not be given. Some candidates gated the guitar without a sidechain input just causing it to be stuttery throughout. Some candidates used volume automation to achieve a different rhythm which was worthy of some credit. Most candidates didn’t attempt to gate the guitar at all.

(c) Candidates generally responded well to the panning task scoring full marks. A small number automated the pan too early or late; it is expected that care is taken with the edit points. Some candidates panned their audio in reverse (Left > Right) which highlights the importance of ensuring candidates have their headphones on the correct way around.

(d) Candidates tended to be more restrained in their application of reverb than in previous years. A few candidates applied too much reverb, or reverb which was too long giving cavernous results.

(e) The tracks are deliberately mastered at wildly varying volumes to ensure that the student need to listen carefully (rather than look at fader positions) to earn credit. Most candidates achieved full marks

for balance. The most common mistake was to have the vocals too quiet compared with the guitar.

(f) Chopped endings continue to be a problem in coursework as well as this exam. This should be an easy 3 marks, but many candidates chopped off reverb tails – though fewer than last year. This is just careless editing especially when candidates had achieved full marks elsewhere and then chopped the ending, resulting in16/18.

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