Subject: GCE Music Technology

Exam Board: Edexcel

Component 3	Component 4
Listening Exam – A Level Past Paper (9MT0 03) *1 hour 30 mins*	Practical Exam – A Level Past Paper (9MT0 04) *2 hours 15 mins*

Sequencing and DAW
• Uses of sequencing in tracks.
• Humanising techniques (e.g. iterative quantize)
• Appropriate quantize values / quantize techniques.
 	
Recording and Capture
• Sources of unwanted noise. How to avoid.
• Identify characteristics of a recording / link to era
• Identify limitations in older recording technology
• Identify specific recording techniques, linked to era
• Identify specific electronic/keyboard instruments
• Understand the development of recording technology and the production practices of different eras, including how production techniques have changed over time.
   ○ Direct to tape mono recording (1930-1963)
   ○ Early multitrack recording (1964-1969)
   ○ Large-scale analogue multitrack (1969-1995)
   ○ Digital recording and sequencing (1980-present day)
   ○ Digital audio workstation and emerging technologies (1996-present day)
 	
Effects and Processing
• Identify effects on individual instruments
• Describe parameters of an effect by ear
• Advanced production techniques e.g. side chain compression, filter sweep.
• Analyse production techniques on a section of music.
• Reverb/delay parameters
• Reverb types and how they work.
• Differentiating tracks in the mix using EQ.
• Mastering – preparing a master for different media
• Understand key mastering processes and how they affect the sound
 	
Synthesis
• Oscillator settings (e.g. wave shape)
• Filter settings (e.g. filter type)
• Envelope settings
• Modulation settings (LFO)
• Other settings (e.g. arpeggiator, portamento)
 	
Audio Editing/Sampling
• Identify/describe sampling techniques.
• Sample rate and bit depth and how they affect sound quality.
	Sequencing and DAW
	● Quantize values.
	● Adjusting rhythm and pitch.
	● Describe/manipulate pitch bend data.
	● Velocity editing.
	● Rhythmic dictation.
	● Import MIDI drums and reassign the drum samples correctly.
	● Understand how MIDI messages are constructed
	● Name and describe different types of MIDI messages.
	
	Recording and Capture
	● Sources of unwanted noise, how to remove
	● Microphone placement
	● Instrument-specific recording techniques
	● DI boxes, audio interface controls, audio cables and their uses.
	● Microphone selection (type, frequency response, polar pattern) – 8 marks
	
	Effects and Processing
	● Identify and describe audio effects, including individual parameters, what they do and how they are set
	   ○ Dynamic processing (compress, noise gate, side chain compression/gate)
	   ○ Frequency (EQ/filter)
	   ○ Reverb/delay
	   ○ Pitch correction/time stretch
	● Listen to a complex effect involving multiple staged processes and recreate it by ear.
	
	Audio Editing/Sampling
	● Correct out of time sections of an audio track.
	● Repair notes/phrases from material elsewhere.
	● Compile a part from multiple audio files, by ear.
	● Compile a part by clipping notes/hits from elsewhere in the part and editing them together (piano roll given).
	● Fade in/out, crossfade.
	● What is a sample/sampler?
	● Map a sample across the keyboard and enter a MIDI part.
	● Use pitch correction to create a backing vocal (piano roll given)
	● Remove intrusive resonance
	● Describe Nyquists theorem
	
	Synthesis
	● Recreate a synthesiser sound from scratch, match
	   ○ Oscillator settings (shape, octave, pitch)
	   ○ Filter settings (LPF, HPF)

Technical Numeracy
- Make frequency calculations.
- Annotate and interpret technical graphs (see C4).

Question 5 - Comparison Question
- Evaluate the production techniques heard in two songs/two versions of a song.
  - Capture
  - Instruments and Style
  - Dynamics
  - Effects Processing
  - Reflection

Question 6: Greater Depth
- You will be given one specific piece of technology (e.g. effect, recording medium, instrument) and will evaluate its use in a track **AND** describe its development over time and how it impacted music production.
- E.g. a specific recording medium
  - Tape
  - Digital
  - DAW
- A specific effect or production technique
  - Reverb
  - Distortion
  - Processing of frequencies
  - Dynamic processing
- An electronic instrument
  - Synthesisers
  - Samplers
  - Sequencers
  - Electric guitar

- Envelope settings (ADSR, amplitude, filter, pitch)
- Modulation settings (LFO)
- Pitch bend range
- Velocity sensitive filtering
- Describe a synthesiser sound by ear (above)

Technical Numeracy
- Analyse MIDI file and record technical details.
- Convert numbers from decimal to binary.
- Annotate and interpret technical graphs.
  - Audio waveforms
  - Oscillator shapes
  - EQ/filter
  - Compression/noise gate
  - Reverb
  - Distortion
- Annotate and interpret plug-in settings.
- Calculate frequencies of notes.
- Understand file types /properties and how they affect the sound quality. Sample rate, bit depth, MP3 bitrate, lossy vs lossless compression.

Question 5 - Mixing
- Produce a final mix, including:
  - Compress, noise gate, side chain compression/gate
  - EQ whole track, EQ specific phrase, filter sweep
  - Automated pan, automatic double tracking
  - Identify an effect and recreate it
  - Balance the levels of the mix
  - Produce a final stereo mix (bounce the track)

Question 6
- Evaluate a recording setup, signal chain, mixing settings, synthesiser sound or effects parameters for a particular task.
  - Recording setup for a particular instrument/genre
  - Mix window for a particular instrument/genre
  - Effects chain for a particular instrument/genre (e.g. guitar pedals)
  - Synthesiser settings for a particular timbre (e.g. 80s lead, pad)

Component 3
- Revision videos (Shared Drive)
- Music Technology revision- Component 3

https://www.youtube.com/watch?v=yAKLguSjD-U

Past Papers – Available on Teams

Component 4
Revision Videos - Practical Skills
- Mixing (Q5) practice tasks and support videos (Shared Drive)
- Synthesis practice tasks and support videos (Shared Drive)
- Audio Editing practice tasks and support videos (Shared Drive)
- Sequencing practice tasks and support videos (Shared Drive)
- Specimen Paper Walkthrough (Teams)
- Past Papers (Teams)
- Component 4 Revision - **https://www.youtube.com/watch?v=LDtV3Pk0sTA**

Revision Tips

Component 3	Component 4
● Take the time to check your equipment fully before the exam starts. Make sure you have your headphones on the right way around! ● Remember the 'CIDER' acronym to help you with Question 5. ● Answer 'explain' questions using the DEE format (describe, explain, example). You can only get so many marks for 'describing' only.	● Take the time to read the instructions during the setup process. Make a note of the tempo and the first track you need to import. Add a stereo master fader at this point too. ● Take a highlighter into the exam and highlight key words, bar numbers etc.