SECTION A

Answer ALL questions in both sections .

1. **The Jimi Hendrix Experiences : All Along the Watchtower** https://youtu.be/TLV4_xaYynY

a. What two types of guitar can be heard before the vocals enter.

1.Acoustic (12 string)

2.Electric (clean Strat) (2)

b. What style/technique of guitar playing is employed at 2:00. (1)

Slide guitar, Bottleneck.

c. How is this section (2:00-2:30) given a psychedelic, 'spaced' feel. (1)

Wide reverb, wide panning.

d. What effect is used on the lead guitar from 2:16 (1)

Wah Wah pedal.

e. What aspect of timbre does this effect change. (2)

Frequencies, Eq, filters frequency range.

f. This track was recorded in 1968. Give three examples that confirm this.

Bleed, lack of clarity of parts due to bouncing, psychedelic feel, loose rhythms, limited clarity in vocals, lack of compression, live feel, audible mistakes. (3)

(Total for question 1= 10 marks)

2. **Ella Fitzgerald and Louis Armstrong : Summertime** https://youtu.be/MIDOEsQL7IA

a. When recording brass instruments which performance feature must you watch out for. (2)

High Sound pressure levels, high volume.

b. How is it best to place the mic to avoid this. (2)

Off axis to avoid main air flow.

c. What is the name for the improvisatory vocal technique employed at 3:29 (1)

Scat singing, scatting.

d. This track was recorded in 1957. Why would the vocal performance have to be of a higher calibre compared to a modern day recording . (5)

Recorded live with band, very limited overdub options,

more takes = more studio time = more money,

no melodyne or vocal effects.

(Total for question 2 = 10 marks)

3. **Grace Jones : Slave to the Rhythm** https://youtu.be/Z0XLzlswl2s

a. What percussion instrument enters at 1:10 (1)

Tambourine.

b. What effect is used on the backing vocals at 2:14. (2)

Tap delay, timed delay.

c. This track features a polyphonic synth. How does a polyphonic synth differ from a monophonic one. (2)

A polyphonic synth can play several notes at once as oppose to a monophonics ability to only play one at a time.

d. This track was recorded in 1985. Give five reasons to support this (5)

Drum machines, gated reverb, synth strings and brass, polished production, overdubbing, multi-tracking, electric bass, timed delay, sequencers, use of MIDI, sequenced rhythmic parts.

Total for question 3 = 10 marks)

4. **Aerosmith featuring Run DMC : Walk this Way**

a. Give two characteristics of rap featured in this song. (2)

Scratching, Rapping, doubling of certain words and phrases, drum machine beat, sampling of guitar riff.

b. Give two characteristics of rock featured in this song. (2)

Distorted guitar, riff, guitar solo, loud vocals, screams.

c. Discuss the advantages of using a drum machine over a live drummer. (6)

One audio output as oppose to several mics, less time consuming, cheaper, reliable,

programmable, different sounding kits, easy to mix, create new sounds (sorry Drummers)

(Total for question 4=10 marks)

Total for section A = 40 marks

Section B

Please note: *For the AS Music Technology Component 3 - Listening and Analysing exam, students only need to answer question 5.*

5. Styx : Mr Roboto https://youtu.be/98o0AJ8cNNk

Kids on Drugs : Mr Roboto https://youtu.be/KGsb7eo2Y1g

Compare the different production and performance techniques used in the two versions.

(15 / 16)

Indicative content guidance: The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:

AO3 (Maximum 5 marks)

Capture

- **Original**
- Vocals recorded with microphones.
- Captured on 24 track analogue tape.
- Epic and wide production.
- Rhythm section recorded live.
- Wide frequency range.
- **New Version**
- Recorded into DAW.
- Heavy use of sequencers and synths.
- Mostly MIDI and D.I. capture.
- Heavy of use of samples from original recording.

Arrangement

- **Original**
- Progressive rock/synth pop style.

- Extended instrumental breaks.
- Long synthesized intro.
- Textural changes within instrumentation.
- Vocal harmonies.
- **New Version**
- Half time feel.
- instrumental breaks as befits dance style.
- Dispense with song structure and uses a series of hooks.

Instrumentation

- **Original**
- Electric guitar.
- Analogue synths.
- Live drum kit, percussion.
- Sequenced bass.
- Vocoder.
- Vocal harmonies.
- **New Version**
- Use of synthesised sounds including MIDI drums, syn drums, sequencers and synthesisers.
- Extensive use of samples.
- Wobble bass.

Synthesis

- **Original**
- Analogue synths .
- Korg Vocoder.
- Electric guitar with effects.
- Feedback on guitar.
- **New Version**

- Drum samples.
- Wobble bass.
- compressed drum machine.
- Gated reverb on snare.
- Samples from original.
- Synthesized sounds.
- New vocal samples added.

Effects and processing

- **Original**
- Vocoder for vocal tag.
- Panned delay on breakdown.
- **New Version**
- Heavily processed, modulation on bass, compression, envelope on synthesised sounds, use of filtering.
- Time and pitch shifting of vocal samples.

A04 (Maximum 10/11 Marks)

Capture

- **Original**
- Live recording of rhythm section.
- Analogue and digtal synths probably D.I.'d.
- Recorded to analogue tape 24/48 tracks (1983)
- Live capture of vocals.
- **New Version**
- Recorded digitally and arranged in a DAW.
- Samples assembled in DAW.
- Vocals recorded live, most synths D.I.'d and sequencers could be connected via MIDI.

Instrumentation

- **Original**
- Electric guitar.
- Sequenced bass.
- Different lead vocalist to backing .
- Digital synths.
- Distorted guitar to maintain rock feel.
- Vocoder used on voice.
- **New version**
- Compressed drum machine to give an electronic feel.
- Synthesized and manipulated wobble bass.
- Heavy use of drum samples and digital sounds.
- Sampled handclaps.

Arrangement

- **Original**
- Extended instrumental intro in keeping with the progressive rock style.
- instrumentation and arrangement reflect the progressive rock style combined with an electronic feel.
- Rhythmic pushes to maintain momentum and emphasize chord changes.
- **New Version**
- Half time feel in keeping with a Dubstep feel.
- Re-organises structure, simplifying it into a selection of hooks.

Synthesis

- **Original**
- Vocoder adds robotic voice to contrast with emotive lead vocal.
- Traditional sounds such as electric guitar with delay and distortion.
- Heavy use of synthesizers and sequenced bass.
- Feedback applied to sustained guitar parts.

- **New Version**
- compressed drum machine.
- Filters applied to samples from original recording.
- Extended use of ADSR envelopes to create synthesized textures.
- Pitch shift on most vocal samples.
- LFO on bass for Dubstep sound.

Effects and Processing

- **Original**
- Epic and wide sound production.
- Original has a narrower frequency range due to distribution on vinyl,
- Use of timed delay to create rhythmic repeats of key phrases.
- Automated panning on keys in breakdown section.
- Filters used on intro to give ethereal feel .
- **New Version**
- Recorded digitally and therefore a wider frequency range is reproduced.
- Drums are heavily compressed to cut through the rest of the texture.
- Use of filter sweeps in keeping with a modern Dubstep style.
- Extensive manipulation of samples.
- Time stretch and pitch shift used to create new melodic hooks.

(Total for Question 5 = 15 for A level 16 for AS marks)

6. **Prince and the Revolution : Purple Rain**

The guitar features a deep chorus effect. Outline the workings and differences of the three main modulation effects : Chorus, Phaser and Flanger . (20)

AO3 (maximum 8 marks)

- Flanger -A flanger takes the source signal and duplicates it.
- A small amounts of delay is added to one copy.
- Phaser - A Phaser also dupilcates the original signal.
- Filters are used to change certain frequencies.
- The two signals are then played together.
- Chorus - Chorus adds some delay to the duplicated signal.
- The delay maintains a consistent rate.
- The second signal is slightly de tuned.

AO4 (maximum 12 marks)

- Flanger -A flanger takes the source signal, duplicates it, then adds a small amounts of delay to one copy, all while altering delay time as you play. The result is something that sounds like a jet engine flying overhead. Compared to a phaser, flangers are far more aggressive and overt. Their effect alters a much larger portion of your tone.

- Phaser- Similar to flangers, phasers also duplicate the signal, alter it by phase shifting one copy, and then fuse both signals back together. The main difference here is that phasers create a Doppler effect, which is the full extent of their capabilities. The reason why so many people confuse phasers with flangers is because a phaser also has a sweeping function at its core. However, the sweeping of phasers and that of a flanger is not the same. Where flangers achieve their sweeps by altering the timing of delay, phaser pedals use filters that block out varying portions of the frequency range.

- Chorus - The idea behind this effect is to give you an impression that several guitars are playing at the same time, when in fact only one instrument is used. The Main reason why some guitar players have trouble discerning choruses from flangers is because both effects multiply the source signal.

- Chorus alters the copies of the source signal differently from a flanger. Both add some delay, but chorus does it consistently. On top of that, a chorus detunes that copy ever so slightly as well. The main difference, however is that chorus doesn't add that sweeping effect

(Total for Question 6 = 20 marks)

Total for section B = 35 / 16 marks

A Level : Total for paper = 75 marks

AS: Total for paper = 56 marks