

**2010 VCE VET Music Industry (Tech Prod) GA 2: Aural and written exam**

**GENERAL COMMENTS**

In general, students seemed to have a superficial knowledge of the concepts and terminology required for this program. Only a small proportion of students could give the correct names of audio concepts (for example, plosives, sibilance, click, pop, etc.) and then go on to give a suitable explanation with a relevant amount of detail to manage or adjust the audio parameters and shape the sound. Students tended to give more than one answer and separate them using slashes; however, this is not good examination practice as only the first answer provided is considered. Students should also explain their answers in some detail. For example, some students wrote 'use EQ', but did not indicate how the EQ would be adjusted.

Students needed to be able to differentiate between live audio and studio work. Many of the questions on the examination were in a live setting and many students answered with a studio setting in mind. This was particularly apparent with the feedback question (Section A, Question 10).

Many students don't understand the difference between 'gain' and 'volume'. This is basic underpinning knowledge and students are urged to revise all aspects of their Unit 3 and 4 program. If students do not have a good understanding of this underpinning knowledge they may experience major difficulties with the more complex principles.

**SPECIFIC INFORMATION**

For each question, an outline answer (or answers) is provided. In some cases the answer given is not the only answer that could have been awarded marks.

**Section A**

**Question 1**

Marks	0	1	2	Average
%	5	19	76	1.7

**1a.**

Either of:

- delay
- echo.

A large number of students confused reverb with delay/echo.

**1b.**

Either of:

- distortion
- overdrive.

Students answered this question capably.

**Question 2a–b.**

Marks	0	1	2	Average
%	42	38	20	0.8

A significant number of students recognised the ducking process, but few had an appreciation of automation and side-chaining.

**2a.**

Ducking

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**2b.**

Any of:

- automation
- volume automation
- side-chain compression
- compression.

**Question 3**

<b>Marks</b>	<b>0</b>	<b>1</b>	<b>Average</b>
<b>%</b>	31	69	<b>0.7</b>

Cross-fade

Many students identified cross fading correctly. Others used fade in/fade out.

**Question 4a–b.**

<b>Marks</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>Average</b>
<b>%</b>	19	41	40	<b>1.2</b>

This question was about digital processing. A large proportion of students answered this question correctly, but there was a significant number of students who made reference to editing tools, such as ‘scrub backwards’.

**4a.**

Reverse

**4b.**

Either of:

- harmoniser
- pitch shift.

**Question 5a–b.**

<b>Marks</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>Average</b>
<b>%</b>	32	24	27	16	<b>1.3</b>

Some students are still not conversant enough with audio language. This was highlighted in this question and in other places throughout the examination. Students should be able to recognise sibilance and that it is dealt with by altering EQ or by using a specific plug-in, not compression.

**5a.**

Sibilance/too much sibilance

**5b.**

Any of:

- de-esser
- equalizer
- notch equalizer.

**Question 6a–c.**

<b>Marks</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>Average</b>
<b>%</b>	27	39	11	23	<b>1.3</b>

Many students recognised that reverb was applied to the drum kit, but their description of what was altered needed improvement. Students needed to articulate the parameters that they use in the various effects. These issues need to be emphasised in much more depth.

**6a.**

Reverb

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## 6b.

Either of:

- decay time
- decay length.

## 6c.

Reverb is shorter; has shorter decay time.

### Question 7a–b.

Marks	0	1	2	Average
%	20	54	25	1.1

## 7a.

Any of:

- digital glitch
- click
- clip.

Students missed out on the mark on this question because a 'click' is not a 'pop'. If they used both words in the answer, they did not receive any marks.

## 7b.

Any of:

- poor editing
- poorly edited loop
- bad loop.

### Question 8a–b.

Marks	0	1	2	3	Average
%	7	14	34	45	2.2

A good number of students could relate to the term 'plosion' or 'popping'. Suggesting ways to minimise this issue was handled well.

## 8a.

Any of:

- plosive
- pop
- thump.

## 8b.

Any two of:

- use a pop filter/shield
- move away from the microphone
- change the angle of the microphone
- lower level/reduce gain.

### Question 9a–d.

Marks	0	1	2	3	4	Average
%	1	4	12	34	50	3.3

Students could identify the muting of various tracks. However, students are still confused between 'delay' and 'reverb'. These processes need to be covered in greater depth as students appear to have the same problems every year.

## 9a.

Either of:

- guitars are muted

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- guitars are removed.

## 9b.

Either of:

- vocals are muted
- vocals are removed.

## 9c.

Backing/harmony vocal is muted/removed.

## 9d.

Vocal has delay/echo added.

### Question 10a–b.

Marks	0	1	2	3	Average
%	2	5	20	73	2.7

This was the best answered question in the listening section and most students were able to address feedback capably.

## 10a.

Feedback

## 10b.

Any two of:

- use a more directional microphone
- turn down level/gain
- move the microphone (further) away from the speaker
- change the angle/direction of the microphone
- use an equalizer.

## Section B

### Question 1a–c.

Marks	0	1	2	3	Average
%	1	9	21	70	2.6

Most students could recognise the various waveforms and identify them correctly.

## 1a.

Sawtooth

## 1b.

Sine

## 1c.

Noise

### Question 2a–c.

Marks	0	1	2	3	Average
%	21	19	29	31	1.7

Most students demonstrated a reasonable recall of the threshold levels; however, when asked for the hearing range, many gave the safe dB level.

## 2a.

0 decibels (dB) SPL is commonly known as the threshold of hearing/silence.

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**2b.**

120–130 decibels (dB) SPL is commonly known as the threshold of pain.

**2c.**

The commonly accepted maximum frequency range for normal hearing in humans is 20 Hz to 20 000 Hz (20 kHz).

**Question 3**

<b>Marks</b>	<b>0</b>	<b>1</b>	<b>Average</b>
<b>%</b>	41	59	

One octave

Some students could identify that the musical interval was an octave. However, it was evident that many did not read the question correctly as they gave an answer involving frequency. Students should ensure that they read questions carefully.

**Question 4a–c.**

<b>Marks</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>Average</b>
<b>%</b>	36	43	18	3	

Knowledge of power usage was a problem in this question and in Question 12. Students demonstrated little knowledge of cable rating or what happens in the wiring of an XLR connector. Students generally knew the difference between passive and active Direct Injection units.

**4a.**

Any one of:

- active direct injection is powered, passive direct injection is not
- active direct injection uses 9V/48V power, passive direct injection does not
- active direct injection uses batteries, passive direct injection does not
- passive direct injection uses no external power supply.

**4b.**

Earth

**4c.**

Either of:

- wrong impedance
- conductor/cable is too thin in instrument cable, possibility of cable overheating and causing damage to either the amplifier or the speaker.

**Question 5a–c.**

<b>Marks</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>Average</b>
<b>%</b>	10	11	7	12	4	8	13	36	

The majority of students were able to work through the maths to determine the storage space required for stated audio files.

**5ai.**

5Mb x 4 tracks x 5 mins = 100Mb

**5aii.**

5Mb x 8 tracks x 4 mins = 160Mb

**5b.**

3 x 150Mb = 450Mb

**5c.**

DVD-recordable

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## Question 6a–b.

Marks	0	1	2	Average
%	2	17	81	1.8

### 6a.

Large diaphragm condenser

### 6b.

Omnidirectional

## Question 7

Marks	0	1	Average
%	28	72	0.7

Circle the other mic in front: A

Students demonstrated a good knowledge of microphone selection and placement for improved capture of sound.

## Question 8

Marks	0	1	2	Average
%	25	23	52	1.3

White and pink

Many students answered this question correctly. Other students related the colours to the wiring colours. Students should read questions carefully to ensure they understand what the question is asking.

## Question 9a–c.

Marks	0	1	2	3	4	5	Average
%	10	20	17	13	19	22	2.8

### 9a.

Any of:

- foldback
- sidefill
- sometimes front of house.

### 9b.

DI Box

### 9c.

Tip ring sleeve

## Question 10

Marks	0	1	2	Average
%	56	35	9	0.6

Any two of:

- stereo audio
- balanced audio
- insert.

Some students were able to nominate the use of the TRS output section of a stage box and the use of a DI/jack to XLR converter; however, many students were not conversant with the meaning of TRS (Tip Ring Sleeve).

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## Question 11a–c.

Marks	0	1	2	3	Average
%	32	8	17	43	1.7

Students were generally able to determine the overall impedance of the speakers connected in parallel and series.

### 11a.

4 ohms

### 11b.

16 ohms

### 11c.

8 ohms

## Question 12a–b.

Marks	0	1	2	3	Average
%	3	53	14	30	1.7

While most students correctly identified the earth pin, very few knew the standard power ratings for the Australian general power outlet.

### 12ai.

10 A

### 12aii.

2400 W

### 12b.

The bottom pin

## Question 13

Marks	0	1	2	Average
%	21	57	21	1

Students needed to know how to assess how the mix will sound on different playback systems and to check that the mix balance is ok on different speakers, especially small and low quality; to check the bass and treble (bottom end/top end) on different speakers, especially small and low quality.

Most students wrote about the EQ aspect of using different speakers. Few noted anything related to the balance of the audio output.

## Question 14a–b.

Marks	0	1	2	Average
%	29	52	19	0.9

Most students could identify that distortion was the audible result, but only a few could explain why.

### 14a.

Either of:

- distortion
- Clipping.

### 14b.

Any of:

- (because it is digital audio) 0dB is the maximum
- 0dB ceiling
- can't go over 0dB.

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## Question 15

<b>Marks</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>Average</b>
<b>%</b>	12	28	29	20	11	

Most students were able to correctly identify two of the four symbols. However, more work needs to be done in this area.

### 15i.

Either of:

- reverse polarity
- reverse phase.

### 15ii.

Ohms

### 15iii.

Infinity (gain)

### 15iv.

Any of:

- High pass filter
- low cut filter
- low cut switch.

## Question 16

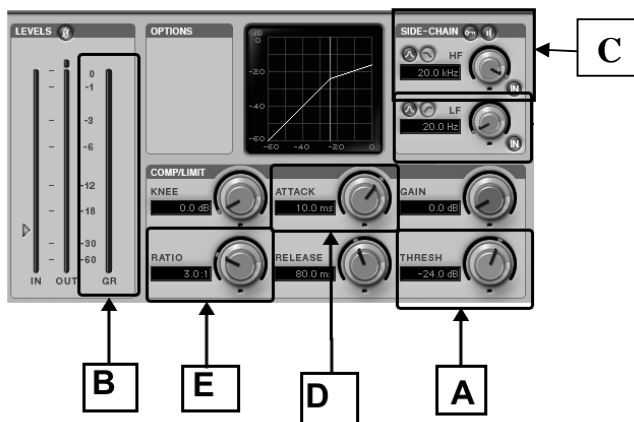
<b>Marks</b>	<b>0</b>	<b>1</b>	<b>Average</b>
<b>%</b>	20	80	

C. – WAV

Most students correctly identified the most commonly used file format.

## Question 17

<b>Marks</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Average</b>
<b>%</b>	0	5	9	25	3	59	



The majority of students correctly identified the components of a compressor, but a significant number of students do not fully understand the functions of the parameters.



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## Question 18a–b.

Marks	0	1	2	3	4	Average
%	3	13	33	39	11	2.4

### 18a.

Any of:

- echo
- delay
- slapback.

### 18b.

Any three of:

- change the position/angle of the band
- hang drapes at both ends of the room
- have the drummer play more softly
- place gym mats around the walls
- place the drums on carpet.

A significant number of students described ‘slapback’ as ‘reverb’. Many others described a solution that was not an acoustic solution, such as providing the drummer with in-ear monitoring.

## Question 19

Marks	0	1	2	3	4	Average
%	13	2	2	9	74	3.3

Attack, decay, sustain, release

Students demonstrated a very good understanding of the terms associated with a sound envelope.

## Question 20a–b.

Marks	0	1	2	3	4	Average
%	24	6	8	20	43	2.5

### 20a.

Any three of:

- zero EQ, mute/turn off channels
- turn down/zero faders
- turn down/zero auxiliaries
- turn off phantom power
- turn down/zero master/control room/monitor levels.

### 20b.

One of:

- to reset the console for the next engineer/user
- to prepare the console for the next session/next day
- to maintain the equipment in good condition.

In general, students’ knowledge of what is required to normalise a mixing desk after use and why it is important was good. However, some students misunderstood the question and tried to explain how to use the desk for recording or mentioned outboard gear.

## Question 21

Marks	0	1	Average
%	49	51	0.5

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Stage plan, technical rider

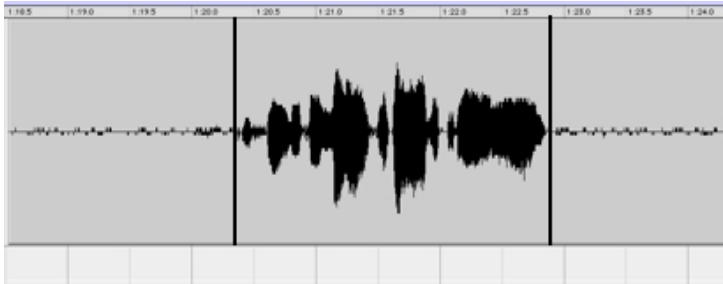
Many students demonstrated a good knowledge of a stage plan.

### Question 22a–b.

Marks	0	1	2	3	Average
%	6	5	37	52	2.4

Almost every student could correctly identify where they would top and tail the audio file, but their knowledge of the names for audio work was poor.

### 22a.



Students needed to place two lines in similar positions to those above.

### 22b.

Any of:

- trim
- truncate
- separate
- split
- top and tail.

### Question 23

Marks	0	1	2	3	4	5	6	7	8	9	10	Average
%	6	6	7	12	11	9	12	13	10	9	5	5.1

With the channel strip examined in most years, the answers many students gave for this question were quite disappointing. The non-specific nature of some answers resulted in low marks.

### 23i.

Item 1 – Insert socket

Input/output connection, used to connect compressors/EQ/effects

### 23ii.

Item 2 – Phase reverse

Inverts polarity of channel; reverses phase of channel

### 23iii.

Item 3 – Low frequency EQ, Low frequency gain pot; low frequency boost/cut; low frequency shelf EQ

Boosts/cuts low frequencies; boosts/cuts low end; boosts/cuts bass

### 23iv.

Item 4 – Post-fade auxiliary send

Sends audio post-fader; sends audio to effects

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**23v.**

Item 5 – Volume/level fader

Raises and lowers the volume/level of the channel