



**2009 VCE VET Music Industry (Tech Prod) GA 2: Aural and written exam**

**GENERAL COMMENTS**

This year's report highlights issues surrounding 'processing'. There appears to be a large number of students who still do not understand different types of 'processing' and the parameters associated with these processes. Students need to have more access to a greater number of processing devices and teachers need to ensure regular revision in these areas. Students do appear to be listening more carefully during Section A of the examination, which is pleasing and giving better results.

The overall student results show an improvement on previous years.

**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**

<b>Marks</b>	<b>0</b>	<b>1</b>	<b>Average</b>
<b>%</b>	23	77	

Reverb

Some students still had difficulty recognising reverb as being different to delay.

**Question 2**

<b>Marks</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>Average</b>
<b>%</b>	0	0	0	0	100	

Due to a technical issue with the audio CD, all students were awarded full marks for this question.

**Question 3**

<b>Marks</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>Average</b>
<b>%</b>	15	30	22	33	

**3a.**

Either of:

- delay
- echo.

**3b.**

Any of:

- delay time
- time
- speed within context.

**3c.**

Any of:

- the second part is shorter
- the second part has shorter delay time
- the delay is twice as fast
- the delay is double-time.

Students performed reasonably well with this question, although some still confused shorter delay time with feedback. Feedback refers to repetitions rather than the length of the delay.

**Question 4**

<b>Marks</b>	<b>0</b>	<b>1</b>	<b>Average</b>
<b>%</b>	24	76	

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Reverse

The majority of students performed well on this question.

## Question 5

Marks	0	1	2	3	4	Average
%	15	22	27	22	14	2

### 5ai.

Either of:

- noise gate
- gate.

### 5aai.

Any one of:

- the microphone spill is removed
- other drums are removed
- the snare drum is cleaner
- the snare drum is isolated.

A number of students confused gates with compression. Greater access to equipment is required, in order to increase students' familiarity with these terms.

### 5bi.

Any one of:

- 50Hz hum
- earth hum
- earth buzz.

### 5bii.

Any one of:

- ground loop
- earth loop
- poorly earthed equipment
- lighting using the same circuit
- different circuits being used across the PA system.

There was some confusion with this question. Some students correctly identified the noise but suggested strange causes for it, whereas others incorrectly identified the noise but indicated the correct cause of it.

## Question 6

Marks	0	1	2	Average
%	3	11	86	1.9

- Song A – vocals removed/muted
- Song B – guitar removed/muted

Students performed well with this question.

## Question 7

Marks	0	1	2	3	Average
%	8	32	18	42	1.9

### 7a.

Square

### 7b.

Noise

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7c.  
Sawtooth

This question was well answered.

## Question 8

Marks	0	1	2	3	4	Average
%	4	8	24	24	40	2.9

### Vocal excerpt 1

8a.

Either of:

- pitch shift
- frequency shift.

8b.

Any one of:

- lower
- lower in pitch
- lower by one octave.

More students recognised the pitch shift this year.

### Vocal excerpt 2

8c.

Either of:

- time stretch
- time compression.

8d.

Any one of:

- faster
- increased tempo
- double speed.

Although many students recognised the pitch shift for Vocal excerpt 1, a large number of students struggled to recognise time stretch or time compression in Vocal excerpt 2.

## Question 9

Marks	0	1	2	3	Average
%	5	26	22	47	2.1

9a.

Either of:

- fade in
- fade.

9bi.

Any one of:

- clipping
- distortion
- overload
- over 0dB.

9bii.

Any one of:

- lower recording levels
- lower playback levels
- ensure levels are below 0dB.

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Students responded well to both parts of this question.

## Section B

### Question 1

Marks	0	1	2	3	Average
%	24	53	19	4	1.1

#### 1a.

48 volts DC

The results for this question were excellent.

#### 1b.

Direct injection

A large number of students did not know what DI stands for.

#### 1c.

Root mean square(d)

Most students answered this part incorrectly.

### Question 2

Marks	0	1	2	Average
%	46	53	1	0.6

#### 2a.

A standing wave

#### 2b.

Any one of:

- silence
- nothing
- cancellation.

Although many students could not identify a standing wave for Question 2a., most students could describe the audible result for 2b.

### Question 3

Marks	0	1	2	Average
%	3	24	72	1.7

#### 3a.

Umpire/sports whistle

#### 3b.

125Hz

Students performed reasonably well with this question.

### Question 4

Marks	0	1	2	3	4	Average
%	1	5	20	30	44	3.1

#### 4a.

3 minutes (answers of up to 4 minutes were accepted)

Students answered this question well.

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## 4b.

Portable hard disk recorder

Students performed well on this question.

## 4c.

Any two of:

- DVD-R
- USB stick
- flash disk
- second/external hard disk
- DAT tape
- magneto-optical (M/O) disk
- mini disc.

CD-R was not accepted, nor were devices such as 'DVD burner' as the question asked for **media**. Students should know the difference between media and devices.

## Question 5

Marks	0	1	2	3	4	Average
%	15	15	22	25	22	2.3

## 5a.

16

## 5b.

Either of:

- 48 ( $\times 6$ )
- 49.92 ( $\times 6.02 + 1.76$ ).

## 5c.

Either of:

- 44.1kHz
- 44 100Hz.

## 5d.

Either of:

- 16 kHz
- 16 000Hz.

Students performed well with all parts of this question.

## Question 6

Marks	0	1	Average
%	25	75	0.8

Audio CD track

Most students answered this question correctly.

## Question 7

Marks	0	1	Average
%	53	47	0.5

85 dB SPL

Students generally answered this question well.

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## Question 8

Marks	0	1	2	3	4	Average
%	23	15	19	12	31	2.1

### 8a.

It removes unwanted noise or microphone spill from an audio channel. It works by setting a threshold. When audio goes below the threshold the gate 'closes' and the audio is muted. When audio goes above the threshold the gate 'opens' and the audio is heard.

### 8b.

Any two relevant examples of removing microphone spill in a recording/track, removing noise/buzz/hum from a recording/track, or making sounds tighter/shorter to improve clarity in a mix were accepted. Answers that were applied to a specific instrument (for example, 'cleaning up spill from snare microphones') were accepted.

Students' knowledge of noise gates appears to be improving.

## Question 9

Marks	0	1	2	3	4	Average
%	28	1	15	1	55	2.5

### 9a.

High pass filter

### 9b.

Any one of:

- it cuts/removes low frequencies
- it cuts bass
- it cuts the bottom end
- you only hear high frequencies
- you only hear the top end.

### 9c.

Low pass filter

### 9d.

Any one of:

- it cuts/removes high frequencies
- it cuts treble
- it cuts the top end
- you only hear low frequencies
- you only hear the bottom end.

Answers that referred to boosting frequencies were incorrect. Only answers that referred to cutting, removing or eliminating frequencies were accepted. Although more than half of the students scored full marks for this question, many others did not know what HPF and LPF were.

## Question 10

Marks	0	1	2	Average
%	15	34	50	1.4

### 10a.

Any one of:

- glitch
- pop
- noise
- distortion.

### 10b.

Any one of:

- fade

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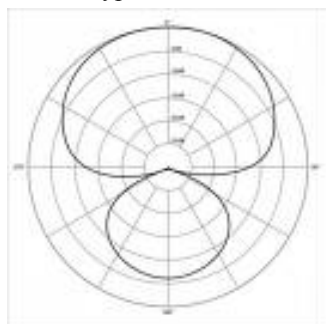
- ‘pencil tool’ (with a suitable explanation)
- small cut/splice
- delete the section
- insert silence
- copy/paste a section from another part of the file
- erase tool (with a suitable explanation).

Most students answered this question well.

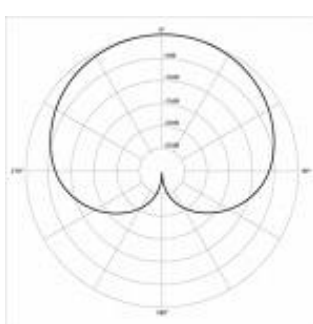
### Question 11

Marks	0	1	2	3	Average
%	17	25	21	36	1.8

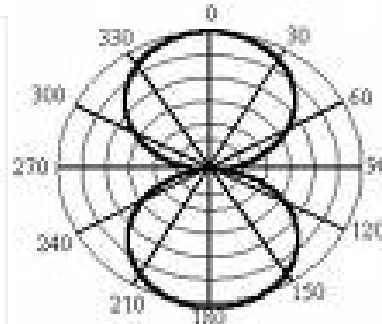
Hypercardioid



Cardioid



Bidirectional



It is concerning that students did not perform well in this question. Students should be able to identify all of these microphones by this stage of their education.

### Question 12

Marks	0	1	2	3	4	5	Average
%	2	3	6	16	0	72	4.2

Either of the following orders was accepted.

- A. bass guitar
- B. effects pedal
- C. preamp with built-in DI
- D. mixing console
- E. sound card
- F. studio monitors

or

- A. bass guitar
- B. effects pedal
- C. preamp with built-in DI
- D. sound card
- E. mixing console
- F. studio monitors

The majority of students could competently patch this system.

### Question 13a.

Marks	0	1	2	3	4	5	6	7	8	9	10	Average
%	1	1	1	5	17	12	15	12	16	9	11	6.4

1.

- Item: microphone input socket
- Explanation: where the microphone lead gets connected/plugged in

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2.
  - Item: phase inversion switch
  - Explanation: switches polarity of the current, eliminating electric buzz or 'thin' signals
3.
  - Item: (low–mid) frequency boost/cut or frequency gain
  - Explanation: boosts or cuts selected frequency/boosts or cuts low–mid frequency
4.
  - Item: pre-fade auxiliary send/pre-fade aux send to any relevant equipment
  - Explanation: sends audio to another output/foldback speakers/effects unit/headphone mix before fader
5.
  - Item: mute switch
  - Explanation: mutes audio/silences audio, mutes channel, mutes output

Students should have performed better in this question. Students should be getting adequate time in front of a mixing console to become more familiar with its functions. Computer recording programs do not necessarily use the same format.

### Question 13b.

<b>Marks</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>Average</b>
<b>%</b>	10	40	50	

Both of:

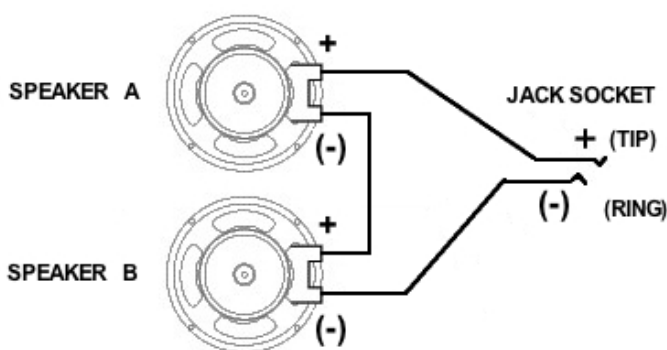
- place sound in the stereo field when mixing
- assign channel to odd/even groups or tracks when mixing or recording, depending on where the pan pot is positioned

Many students were confused with this part of the question.

### Question 14

<b>Marks</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>Average</b>
<b>%</b>	35	17	28	8	13	

14a.



14b.

- If they are wired in series:  $4 + 4 = 8\Omega$
- If they are wired in parallel:  $1/R = 1/4 + 1/4 = 1/0.5 = 2\Omega$

A lot of students did not appear to understand this question. Those who did answered both parts of the question well.

### 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>	41	37	17	3	1	



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**15a.**  
415 Volts

Many students did not seem to know about 3-phase power.

**15b.**  
50Hz

Many students were unaware of the alternating frequency of Australian AC mains electricity.

**15c.**  
Any two of:

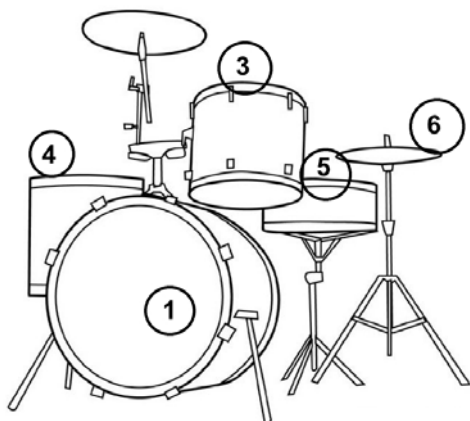
- prevents hum/buzz/noise
- ensures the safety of the user
- ensures protection of equipment.

Students performed reasonably well in this part of the question.

## Question 16

Marks	0	1	2	3	4	5	6	7	8	9	10	11	12	Average
%	2	3	10	3	16	6	16	6	14	3	5	4	12	6.5

2



- 1 – near the bass drum
- 2 – overhead for the whole kit
- 3, 4 and 5 – near either tom or snare
- 6 – near the hi-hat

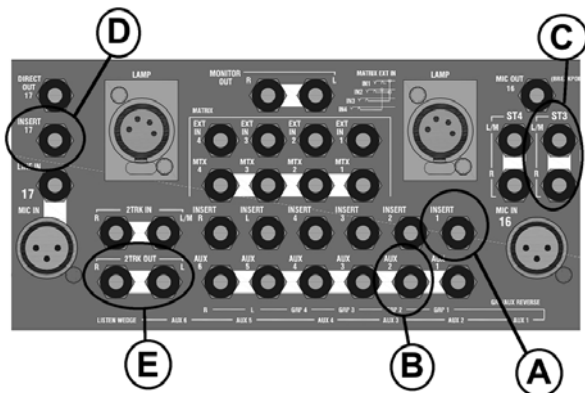
One mark was awarded for the correct microphone number for each drum. A second mark was awarded for correct placement of each microphone, as noted by the circles.

Students need greater access to more types of microphones. Students also need to be more aware of the position of the microphones. It appeared that many students did not read this question correctly.



**Question 17a.**

Marks	0	1	2	3	4	5	Average
%	5	12	20	28	1	34	3.1



Overall, students did not respond very well to this question. Once again, students need more regular access to mixing consoles.

**Question 17b.**

Marks	0	1	2	3	Average
%	15	23	20	42	1.9

**17bi.**

Any two of:

- 27.5Hz
- 55Hz
- 110Hz
- 220Hz.

**17bii.**

Cut the frequency using graphic equalizer on foldback/aux send 1.

Students performed well with this part of the question.