

2015 VCE VET Music Technical Production examination report

General comments

Overall students performed reasonably well on the 2015 examination; however, there were some areas that required improvement. For example:

- Terminology: The language used by many students indicated that they had little practice in articulating their understanding of the concepts, particularly in expanding on single-word responses.
- The relationships between concepts: Very few students have a good grasp of the various aspects and concepts as they relate to understanding the physics of sound at this level or how basic electricity works.
- Aural understanding of processing and effects: Very few students could identify the difference between effects and processing used in Section A of the paper.

Students need to be directed more towards revision and self-assessment. There are many tools available both on the VCAA website and through other sources.

Specific information

This report provides sample answers or an indication of what answers may have included. Unless otherwise stated, these are not intended to be exemplary or complete responses.

The statistics in this report may be subject to rounding resulting in a total more or less than 100 per cent.

Section A

Question 1

Marks	0	1	2	3	4	Average
%	6	19	22	22	32	2.6

- 2 kHz or 2000 Hz
- 250 Hz
- 1 kHz or 1000 Hz
- 4 kHz or 4000 Hz

Question 2

Marks	0	1	2	3	Average
%	29	38	22	10	1.2

- a. square
- b. triangle
- c. pink noise

Many students struggled to identify the waveforms.

Questions 3a.–3c.

Marks	0	1	2	3	Average
%	8	43	22	27	1.7

Question 3a.

Delay

Question 3b.

Delay feedback

Question 3c.

Delay feedback has been increased.

Students need to spend more time experimenting with processors and parameters as there was some confusion between delay and reverb.

Question 4a.

Marks	0	1	Average
%	19	81	0.8

Reverb

Question 4b.

Marks	0	1	Average
%	60	40	0.4

Reverb time, room size or decay

Question 4c.

Marks	0	1	Average
%	51	49	0.5

The reverb time has been shortened/decreased.

Question 5

Marks	0	1	2	Average
%	19	5	76	1.6

a. high pass filter, HPF or low cut

b. low pass filter, LPF or high cut

Students performed very well with this question.

Question 6a.

Marks	0	1	Average
%	75	25	0.3

Crackly sound/noisy and hum, signal loss (both required for one mark)

Question 6b.

Marks	0	1	Average
%	39	61	0.6

Microphone lead, replace the lead

Question 7

On the whole students performed well with this question; however, some students could not differentiate between the different instruments.

Question 7a.

Marks	0	1	Average
%	41	59	0.6

Bass removed/muted

Question 7b.

Marks	0	1	Average
%	13	87	0.9

Drums removed/muted

Question 7c.

Marks	0	1	Average
%	12	88	0.9

Piano removed/muted

Question 7d.

Marks	0	1	Average
%	60	40	0.4

Reverb added to snare/drums

Question 7e.

Marks	0	1	Average
%	36	64	0.7

Strings (or keyboard strings), synth removed or muted

Question 8

Marks	0	1	Average
%	46	54	0.6

Pitch shift

Question 9

Marks	0	1	Average
%	38	62	0.6

Move or turn down one of the microphones

Question 10

Marks	0	1	Average
%	14	86	0.9

Distortion

Section B

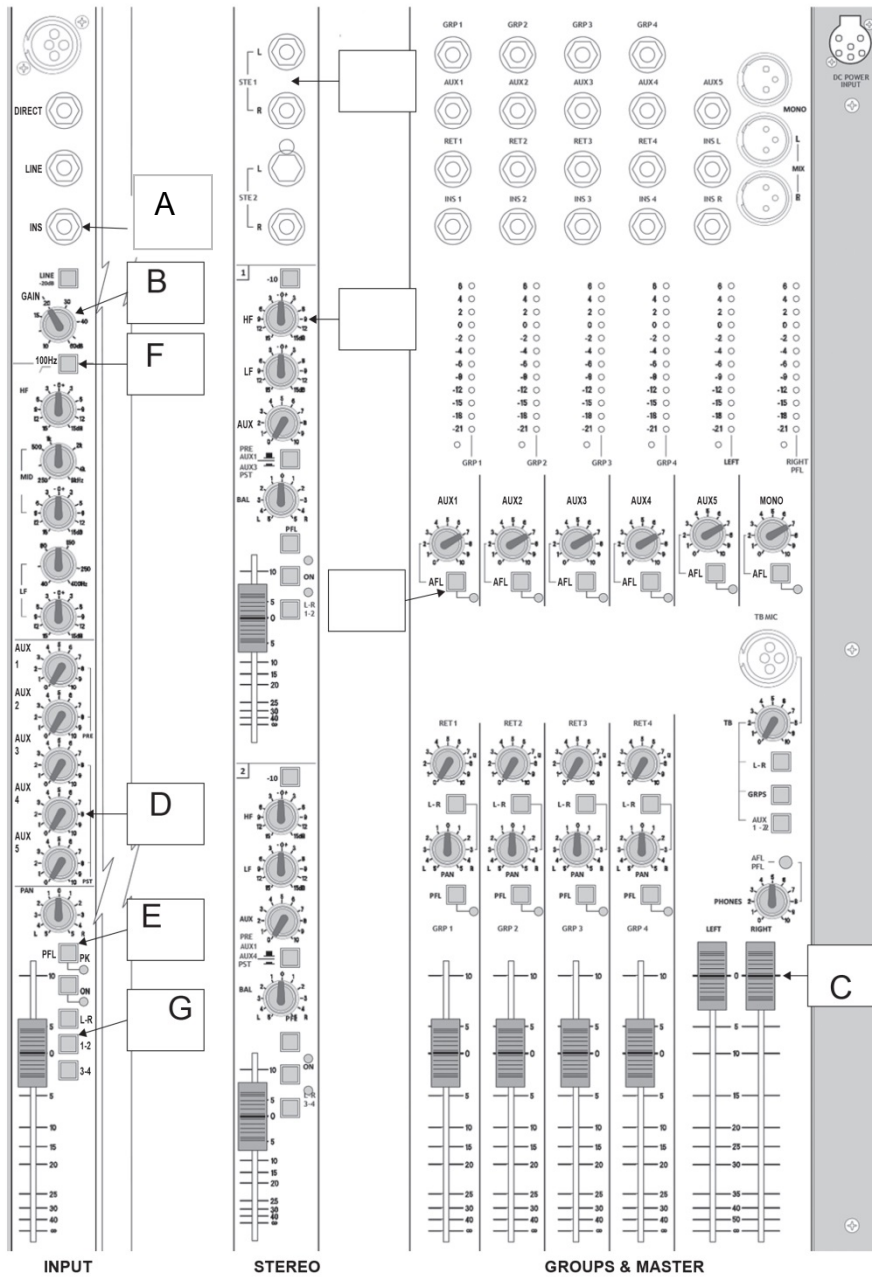
Question 1

Marks	0	1	2	3	Average
%	3	11	32	55	2.4

- Filming on location: shotgun microphone
- Recording vocals in a studio: condenser microphone
- Miking an acoustic bass, with no amplifier, at a live gig: crystal microphone or cardioid microphone

Question 2

Marks	0	1	2	3	4	5	6	7	Average
%	0	2	5	5	8	13	27	40	5.7



Question 3a.

Marks	0	1	2	Average
%	60	33	7	0.5

- a broken earth wire
- when plugged into shared power, two separate circuits, running parallel with lighting cable

Question 3b.

Marks	0	1	Average
%	69	31	

For safety

Many students did not answer this question correctly. If an electrical cable does not have a good earth, a mishap could be life-threatening.

Question 3c.

Marks	0	1	Average
%	51	49	

To minimise noise/avoid interference or signal loss

Question 3d.

Marks	0	1	Average
%	92	8	

Microphone cable is shielded.

Question 4a.

Marks	0	1	Average
%	44	56	

Headphones

Question 4b.

Marks	0	1	Average
%	88	12	

To minimise spill from other tracks/so backing track is not recorded

Question 5a.

Marks	0	1	Average
%	81	19	

Microphone clip with isolation webbing to minimise noise/microphone mount that absorbs vibration

Very few students knew what a shock mount was. Many students thought it was related to electricity.

Question 5b.

Marks	0	1	2	Average
%	65	12	33	

Recording vocals in a studio

To minimise noise such as foot tapping/avoid vibration

Question 6a.

Marks	0	1	2	3	Average
%	29	31	26	13	1.3

- Amp is not required.
- The graphic equaliser and mixing console are in the wrong position.

Question 6b.

Marks	0	1	Average
%	76	24	0.3

microphone → mixing console → graphic equaliser → active speaker

Many students understood the problem and explained the incorrect patching. When listing the correct set-up, many students incorrectly included the amplifier. This is not required with an active speaker.

Question 7a.

Marks	0	1	Average
%	36	64	0.7

Where the microphone is put in close proximity to the instrument

Question 7b.

Marks	0	1	2	Average
%	25	32	43	1.2

For accurate pick-up of signal to ensure clarity/less noise because of more signal on quiet instruments/less spill/to avoid phase cancellation/ease of mix down

Question 8a.

Marks	0	1	Average
%	56	44	0.5

Tinnitus

Many students referred to 'hearing damage' but not to the actual condition.

Question 8b.

Marks	0	1	2	3	Average
%	2	7	35	56	2.5

- wear earplugs
- offset mixing console to FOH speakers
- minimise exposure time
- use a limiter
- reduce sound levels
- acoustic treatment

Some students did well with this question.

Question 9

Marks	0	1	2	3	Average
%	13	13	21	53	2.2

1. omni
2. cardioid
3. bidirectional

Question 10a.

Marks	0	1	Average
%	72	28	0.3

To attenuate the signal level (-20dB)/to reduce the signal

Question 10b.

Marks	0	1	Average
%	22	78	0.8

A high pass filter

Most students did well with this part of the question.

Question 11

Marks	0	1	2	3	Average
%	34	28	23	14	1.2

Any three of:

- stereo interleaved
- 16 bit
- 44.1 kHz
- PCM
- wavefile or .wav
- master to not exceed zero dB
- sample rate, bit depth, dynamic range.

Question 12

Marks	0	1	2	Average
%	47	38	15	0.7

Any two of the following:

- equipment malfunction/blow up
- overheat cabling
- voltage issues
- noise.

This question was not answered well. Students need to understand the potential problems and safety concerns when adjusting equipment.

Question 13

Marks	0	1	2	3	4	Average
%	47	13	17	16	7	1.2

1. Set up a microphone in front-of-house listen position.
2. Raise the level until feedback is functioning.
3. Adjust the frequencies on the graphic equaliser to remove unwanted feedback.
4. Repeat the previous two steps.

No marks were given for answers such as 'mic on stage'.

Question 14a.

Marks	0	1	2	Average
%	7	51	42	1.4

A stage plan speeds up the resetting of the stage between acts/helps monitor foldback requirements/helps to choose appropriate microphones/to locate equipment appropriately/safety, working from same info.

Question 14b.

Marks	0	1	2	3	4	Average
%	7	6	22	30	36	2.8

Document	Information
running sheet	<ul style="list-style-type: none"> • the sequence and timing of the performance(s)/acts/the timing of intervals between performances/acts • the times of the sound checks, the names of the performers/bands
stage plan	<ul style="list-style-type: none"> • the location of the instruments • the location of microphones and other equipment

Many students answered this question well, although some students repeated the same answer twice.

Question 15a.

Marks	0	1	2	Average
%	31	30	39	1.1

A rough recording of a song or bunch of tracks to play to other musicians or prospective agents, managers and record companies

Question 15b.

Marks	0	1	2	3	4	5	Average
%	13	7	18	22	23	17	2.9

- Start by recording drums and bass, three microphones and a DI.
- Record the stereo keyboards – two DIs.
- Record the guitars – mic the amps using two microphones.
- Record lead vocal – one microphone.
- Record backing vocal – one microphone.

Other correct sequences were possible. Students needed to make reference to 4 microphone inputs.

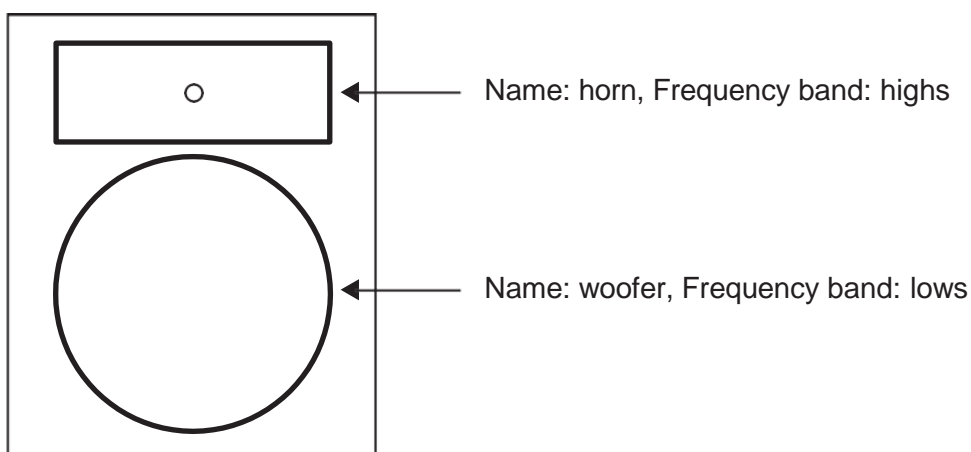
Question 16

Marks	0	1	2	3	4	5	6	Average
%	34	17	20	17	4	4	3	1.7

- Problem 1
Processing device – noise gate
Where to connect the device – insert before DAW
- Problem 2
Processing device – compressor
Where to connect the device – insert before DAW
- Problem 3
Processing device – noise gate (or hum eliminator or EQ)
Where to connect the device – insert before DAW or between amplifier and console

Question 17

Marks	0	1	2	3	4	Average
%	41	20	22	13	4	1.2



- Horn – high frequencies 2 k to 20 kHz (not tweeter), 1 k variation on mid frequency
- Bass driver, woofer – low frequencies, 20 hz to 2k.

Question 18a.

Marks	0	1	Average
%	68	32	0.3

A reverb unit would try to emulate a large, hard-surfaced room; for example, church, stadium, school gym.

Question 18b.

Marks	0	1	Average
%	75	25	0.3

It refers to the amount of time between the original dry sound, and the audible onset of early reflections and reverb tail.

Question 18c.

Marks	0	1	Average
%	86	14	0.2

Controls the amount of reverb fed back in to the next signal.

Question 19

Marks	0	1	2	3	4	Average
%	36	23	23	12	6	1.3

- Safe installation – Install heavy items at the bottom so as not to tip over, ensure all items are screwed in correctly.
- Efficient operation of the equipment – Ease of access to rear for patching, controls at a good height for easy operation.

Students indicated some OH&S knowledge but many repeated the same answer for both parts of the question.