2014 Examination Report

2014 VCE VET Music (Technical Production) GA 2: Examination

GENERAL COMMENTS

Overall, students performed well on the 2014 VCE VET Music (Technical Production) examination.

The ability to name and describe technical roles within the industry needs attention. Some students were unable to use correct terminology. Correctly naming equipment and demonstrating a technical understanding of its use is important.

Some students gave irrelevant information. Students should ensure that the answers they present are relevant to the question asked and follow the question format or layout.

Students should always use the answer space and marks awarded as a guide for the length and depth of response required.

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
%	17	23	18	26	17	**2.1**

1a.
125 Hz

1b.
2 kHz

1c.
630 Hz

1d.
250 Hz

Question 2

Marks	0	1	2	3	Average
%	11	32	24	34	**1.8**

Some students answered all three parts of the question correctly.

2a.
sine

2b.
square

2c.
saw

Question 3

Marks	0	1	2	3	Average
%	18	59	21	2	**1.1**

Question 3a. was generally well answered, Question 3b. was answered correctly by fewer students, but Question 3c. was better answered than 3b. This suggests that most students identified the changes, but weren't familiar with the pre-delay function of a reverb effect.

3a.
reverb

3b.
pre-delay

3c.
increased, longer

Question 4

Marks	0	1	Average
%	41	59	**0.6**

phaser/modulation/flange

Students should be exposed to as much listening as possible to gain a broad understanding of effects currently used in audio production.

Question 5
This question was not well answered. It is important for students to listen to the full frequency range being affected.

5a.

Marks	0	1	Average
%	89	11	**0.1**

resonant filter/band pass/parametric equaliser

5b.

Marks	0	1	Average
%	75	25	**0.3**

frequency

Question 6

Marks	0	1	2	Average
%	35	30	35	**1**

Fault: Loop is the incorrect length/click, incorrect zero crossover point, glitch.
Repair: Re-cut the loop at the correct point in time.

This question asked about a fault in the audio loop. Answers that involved re-recording the loop were not accepted. Students should remember to read the question carefully and give answers that are concise and relevant.

Question 7

Marks	0	1	Average
%	46	54	**0.6**

pitch shift/transpose

Students should note that this question asked for a specific digital process.

Question 8
Question 8a. was well answered. For Question 8b., the parameter was 'delay time' and this was not always identified by name; some answers described the function of delay time but the parameter name was also required.

8a.

Marks	0	1	Average
%	18	82	**0.8**

delay/echo

8b.

Marks	0	1	Average
%	60	40	**0.4**

delay time

8c.

Marks	0	1	Average
%	60	40	**0.4**

increase

Question 9

Marks	0	1	Average
%	84	16	**0.2**

tremolo

Most students were unable to identify this effect.

Question 10

Students provided good responses to most parts of this question.

10a.

Marks	0	1	Average
%	28	72	**0.7**

guitar removed

10b.

Marks	0	1	Average
%	94	6	**0.1**

reverb removed/removed from drums

10c.

Marks	0	1	Average
%	29	71	**0.7**

delay added to snare

10d.

Marks	0	1	Average
%	32	68	**0.7**

shaker removed

10e.

Marks	0	1	Average
%	55	45	**0.5**

high cut/low pass filter over whole track

Section B

Question 1

Marks	0	1	Average
%	46	54	**0.6**

A. 1 kHz

Question 2

Marks	0	1	Average
%	91	9	**0.1**

Pink noise has equal energy per octave, and white noise has equal energy and open frequency range. White noise has equal energy for each frequency and pink noise has 6 dB attenuation per octave.

Very few students answered this question correctly. Some students were able to give part of the answer but were not completely correct.

Question 3

Marks	0	1	2	Average
%	53	24	23	**0.7**

Definition of phase cancellation: When two microphones are too close together they cancel each other out at certain frequencies. This could be due to wiring faults or nodal points within a room.
Example: Mic-ing toms, piano, choir

Question 4

4a.

Marks	0	1	Average
%	70	30	**0.3**

A cardioid microphone has rapid bass roll-off from the rear; the hypercardioid microphone has a sweet spot at the rear – i.e. it has pick-up at the rear as opposed to a cardioid wide-front pick-up.

4b.

Marks	0	1	Average
%	45	55	**0.6**

Either of:

- change the angle of the foldback speakers from cardioid microphone setup to 45 degrees either side of the microphone
- move wedges towards the side, away from behind microphone.

4c.

Marks	0	1	Average
%	68	32	**0.3**

There would be increased bass response, muddy sound, pops and proximity effect, and the bass would be louder.

4d.

Marks	0	1	2	3	4	Average
%	12	14	29	28	16	**2.2**

Students were required to provide the following two advantages.

- better quality/frequency response
- greater sensitivity/dynamic range

Students were required to provide any two of the following risks.

- condenser microphones can be fragile
- condenser microphones can be susceptible to feedback
- condenser microphones can be prone to moisture

- they need phantom power
- they have issues with handling noise
- risk of onstage spill

4e.

Marks	0	1	Average
%	15	85	**0.9**

Turn the phantom power on.

Question 5

Marks	0	1	2	3	4	Average
%	8	8	33	31	21	**2.5**

Any four of:

- front-of-house engineer
- system technician
- monitor engineer
- stage hand
- back line technician
- foldback engineer
- radio microphone technician.

Other possible answers include all professional crewing roles for personnel that set up gigs.

Many students described working duties; however, students needed to list the job title, not the duties of the person.

It is important that students are introduced to professional job titles that are industry relevant.

Question 6

6a.

Marks	0	1	Average
%	29	71	**0.7**

XLR panel mount/XLR canon

XLR connector, either male or female, was accepted.

6b.

Marks	0	1	2	3	Average
%	61	35	2	2	**0.5**

pin 1: earth/shield
pin 2: hot (send), positive
pin 3: cold (return), negative

6c.

Marks	0	1	Average
%	90	10	**0.1**

output L/R (main), aux outputs, insert outputs, group out, mono out

Question 7

Marks	0	1	2	3	4	5	6	Average
%	5	5	13	18	20	21	17	**3.8**

Operation	Explanation
Check the system inputs and outputs.	• check physical patching is correct • conduct a power and line check of all inputs and outputs
Tune the system.	• using a microphone or source material and a graphic equaliser, adjust the frequencies until the sound quality is acceptable • make sure to eliminate unwanted frequencies
Conduct a sound check on the band.	• set levels for instruments and all inputs • balance mix, tone and volume
Mix the sound.	• adjust levels during the performance to ensure tonal and volume levels are correct and clear • adjust the mix to the performance

Some students gave extra points in some boxes and left others unanswered.

While students are not expected to mix large shows independently, it is important that they are able to summarise key roles involved in all set-up and operating procedures.

Question 8

Marks	0	1	Average
%	27	73	**0.8**

D. provide greater power than a than a 240 V GPO

The majority of students answered this question correctly. Electrical safety is important and should be discussed by all students.

Question 9

Students' understanding of A weighting and C weighting could be improved, but many students remembered the 85 dB figure.

9a.

Marks	0	1	Average
%	54	46	**0.5**

C. 85 dB A weighted over 8 hours

9b.

Marks	0	1	Average
%	54	46	**0.6**

20 Hz – 20 kHz

Question 10

Marks	0	1	Average
%	89	11	**0.1**

As the distance doubles, the level drops by 6 dB.

Mention of log or exponential volume attenuation over distance was also acceptable.

Question 11

Marks	0	1	2	Average
%	96	0	4	**0.1**

1000 Hz: 343 mm or approx. depending on room temperature/335 to 345 mm/33.5 to 34.5 cm
100 Hz: 3.41 m or approx. depending on room temperature/3.35 m to 3.45 m

Question 12

Many students answered Question 12a. and 12b. correctly. For Question 12c., students tended to supply more information than required. Students are reminded to keep answers short and relevant to the question.

12a.

Marks	0	1	Average
%	46	54	**0.6**

It regulates or alters the frequency balance of sound; adjusts tone.

12b.

Marks	0	1	Average
%	27	73	**0.8**

Feedback, also room and equipment tonal imbalance or unwanted noise

12c.

Marks	0	1	Average
%	48	52	**0.5**

- change the timbre of the sound of the vocal to make it brighter
- add high equaliser for detail
- remove low equaliser to clean up muddiness
- remove muddiness

Question 13

Marks	0	1	Average
%	35	65	**0.7**

Unity or 0 dB

Question 14

Marks	0	1	2	Average
%	29	33	38	**1.1**

Both of:

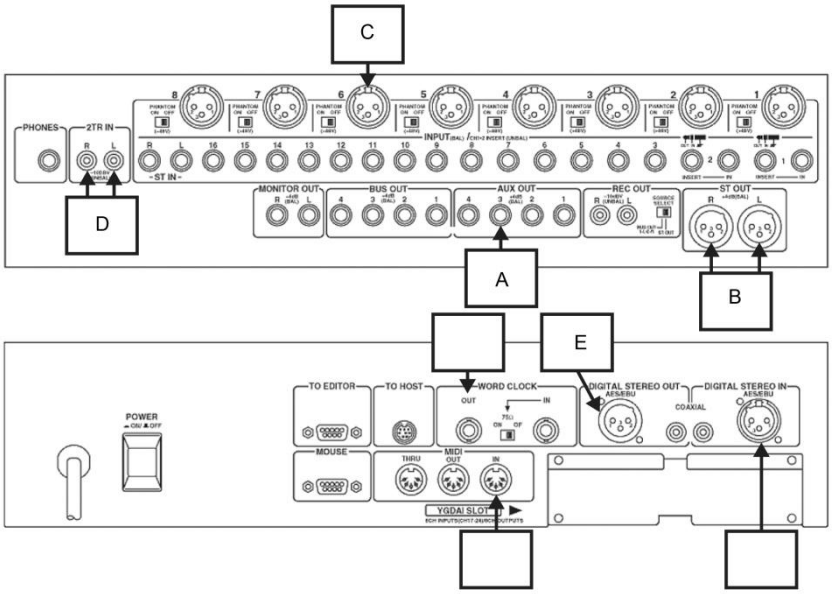
- the role of the foldback or monitor engineer focuses on the band rather than audience and has more mixes to control
- the front-of-house engineer mixes for the audience.

An answer such as ‘foldback is band, front-of-house is audience’ was not enough; students needed to provide more detail to earn full marks.

It was not appropriate to say that one mixes foldback and one mixes front-of-house as this was restating the question.

Question 15

Marks	0	1	2	3	4	5	Average
%	3	17	22	26	17	15	**2.8**



This question was answered reasonably well, but many students did not know what a midi connection was for and some suggested plugging a variety of things into the midi port. Students are expected to have a firm grasp on signal flow.

Question 16

Marks	0	1	2	3	Average
%	9	7	29	55	**2.3**

Any three of:

- WAV
- MP3
- WMA
- AAC
- MPEG-4-AAC
- MPEG
- uncompressed audio formats, such as WAV, AIFF, AU or raw header-less PCM
- formats with lossless compression, such as FLAC, Monkey's Audio (filename extension .ape), WavPack (filename extension .wv), TTA, ATRAC Advanced Lossless, Apple Lossless (filename extension .m4a), MPEG-4 SLS, MPEG-4 ALS, MPEG-4 DST, Windows Media Audio Lossless (WMA Lossless) and Shorten (SHN)
- formats with lossy compression, such as MP3, Vorbis, Musepack, AAC, ATRAC and Windows Media Audio Lossy (WMA Lossy).

The question required students to list file formats; CD, DVD and USB are not file formats.

Question 17

Marks	0	1	Average
%	89	11	**0.1**

Impedance/resistance

Question 18

18a.

Marks	0	1	2	Average
%	17	34	49	**1.3**

Any two of:

- add acoustic absorption material, such as adding hanging drapes or furniture, or laying carpet
- GEQ
- less reverb
- feedback destroyer
- reposition equipment
- play softer/quieter
- fill it with people
- use more speakers at lower volume.

18b.

Marks	0	1	2	3	Average
%	41	10	15	34	**1.4**

Any three of:

- mobile phone
- iPod
- iPad
- MP3 player
- tablet
- CD player
- turntable.

A DVD or CD is not a playback device, nor is it a 'video'. A DVD player or CD player is a playback device.

18c.

Marks	0	1	2	Average
%	79	4	17	**0.4**

Set the foldback to post-fader for the first performer and set the foldback to pre-fader for the second performer.

Question 19

Marks	0	1	2	3	Average
%	13	6	17	64	**2.3**

Any three of:

- reverb unit
- compressor
- noise gate
- graphic equaliser
- soundcard
- feedback suppressor
- any other effects unit.

Playback, drawers, road casing and cabling power were not acceptable answers.

The term 'effects rack' should only detail effects a front-of-house mixer would separate for ease of use; however, the range of acceptable answers was broadened to include anything commonly found in an 'outboard' or 'auxiliary' rack. This included all dynamics processing, signal processing and effects units.

Question 20

Marks	0	1	2	3	4	Average
%	11	5	28	8	49	**2.8**

Any two of the following crew members and reasons were required for full marks.

- Crew member: radio microphone technician
  Reason for selection: to ensure batteries are changed and microphones are fitted correctly
- Crew member: script assistant
  Reason for selection: to follow script and give cues so that, as engineer, I can focus on the mix
- Crew member: sub-mix technician
  Reason for selection: to look after the onstage mix of band so that, as engineer, I can focus on front-of-house mix

Most technical production crewing roles were accepted, but actors and talent were not. Most answers that mentioned a relevant skill and why that skill was useful were accepted. Students could not double up on engineers.

Question 21

Marks	0	1	2	3	Average
%	67	14	10	9	**0.6**

21a.
Being able to separate signals into areas, and hear where things are coming from.

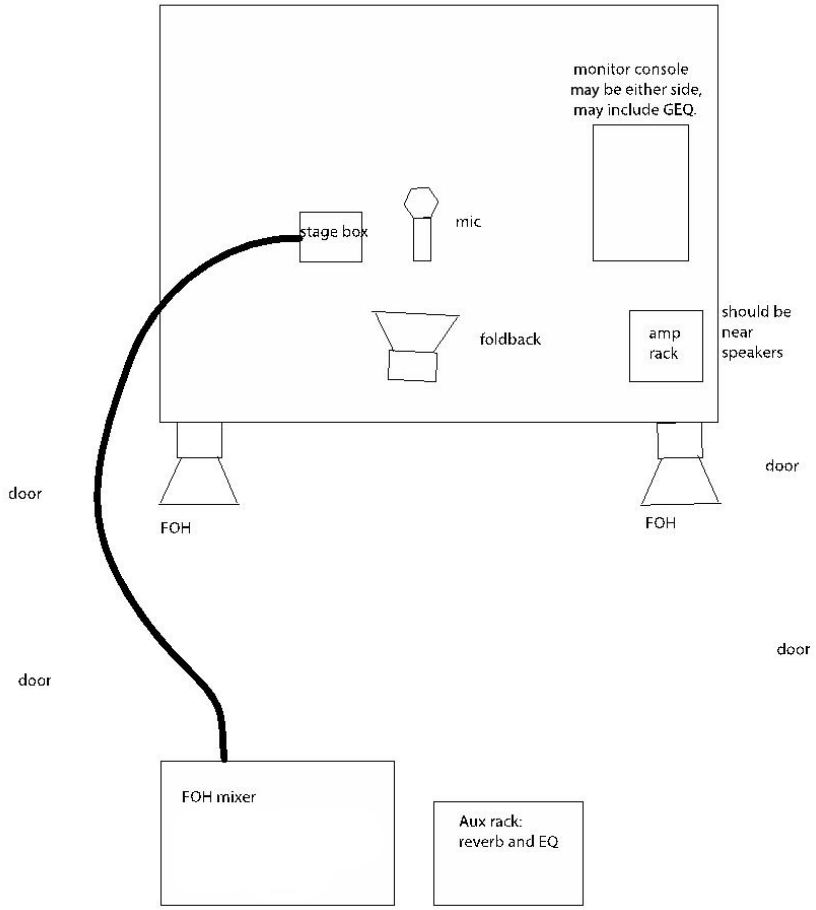
21b.
Any two of the following with reference to pan or reverberation:

- It is important to know where you are in ‘space’ in audio terminology.
- It is important when placing individual tracks in a mix.
- Clarity and attention to psycho-acoustic detail are useful in discerning the appropriate location of sound source.
- Clarity and depth issues may be resolved – spatial hearing may make it easier to locate audio problems in a ‘live’ context.

Correct answers should have referenced pan and reverberation, as these are essential tools for giving sound ‘location’ when mixing.

Question 22

Marks	0	1	2	3	4	5	6	7	8	9	10	Average
%	1	0	1	2	4	7	12	22	22	19	10	7.3



Nine marks were allocated for correct positioning of equipment and one mark for safely installing the multicore. The graphic equalisers should have been with each sound operator, but students were awarded marks if they were in either or both mix positions. If students mixed side of stage then they received one mark for a safe multicore. If students ran multicore anywhere else, they needed to tape it down, hook it above doors or use cable trays. The front-of-house mixer could have been anywhere front-of-house or side of stage.