

**Victorian Certificate of Education
2014**

SUPERVISOR TO ATTACH PROCESSING LABEL HERE

STUDENT NUMBER Letter

**VCE VET MUSIC
TECHNICAL PRODUCTION**

Aural and written examination

Tuesday 18 November 2014

Reading time: 9.00 am to 9.15 am (15 minutes)

Writing time: 9.15 am to 10.45 am (1 hour 30 minutes)

QUESTION AND ANSWER BOOK

Structure of book

<i>Section</i>	<i>Number of questions</i>	<i>Number of questions to be answered</i>	<i>Number of marks</i>
A	10	10	25
B	22	22	75
			Total 100

- Students are permitted to bring into the examination room: pens, pencils, highlighters, erasers, sharpeners and rulers.
- Students are NOT permitted to bring into the examination room: blank sheets of paper and/or white out liquid/tape.
- No calculator is allowed in this examination.

Materials supplied

- Question and answer book of 13 pages.
- An audio compact disc will run continuously throughout Section A of the examination. The audio compact disc will run for 20 minutes 06 seconds.

Instructions

- Write your **student number** in the space provided above on this page.
- You may write at any time during the running of the audio compact disc and after it stops.
- Answer **all** questions in the spaces provided.
- All written responses must be in English.

Students are NOT permitted to bring mobile phones and/or any other unauthorised electronic devices into the examination room.

SECTION A**Instructions for Section A**

The audio compact disc plays throughout Section A. In **Questions 1–10**, audio excerpts are played twice.

The announcer explains how the audio excerpt(s) for each question will be played.

Question 1 (4 marks)

Identify which of the following frequencies are being played:

125 Hz, 250 Hz, 630 Hz, 1 kHz, 2 kHz, 4 kHz, 8 kHz

a. _____

b. _____

c. _____

d. _____

Question 2 (3 marks)

Identify which of the following waveforms are being played:

sine, square, sawtooth, triangle, white noise, pink noise

a. _____

b. _____

c. _____

Question 3 (3 marks)

The following vocal excerpt has two parts. Both parts use the same type of effect.

a. What effect has been used in both parts? 1 mark

b. What parameter has been changed in the second part? 1 mark

c. In what way has the parameter been changed? 1 mark

Question 4 (1 mark)

Identify the type of effect that has been applied to the second part of this vocal excerpt.

Question 5 (2 marks)

a. The following drum excerpt has had a filter applied to it.

What kind of filter has been applied?

1 mark

b. What parameter has been altered to create the effect?

1 mark

Question 6 (2 marks)

The following piano loop contains an audible fault.

Identify the fault and explain how it can be repaired.

Fault _____

Repair _____

Question 7 (1 mark)

The following saxophone excerpt has two parts.

Name the digital process that has been applied to the second part.

Question 8 (3 marks)

The following acoustic guitar excerpt has had an effect added and is in two parts. Both parts use the same type of effect.

a. What effect has been used in both parts?

1 mark

b. What parameter has been changed in the second part?

1 mark

c. In what way has the parameter been changed?

1 mark

Question 9 (1 mark)

The following guitar excerpt has had an effect applied.

Name the effect.

Question 10 (5 marks)

a. The following excerpt is in two parts.

Describe which aspect of the mix has been changed in the second part.

1 mark

b. The following excerpt is in two parts.

Describe which aspect of the mix has been changed in the second part.

1 mark

c. The following excerpt is in two parts.

Describe which aspect of the mix has been changed in the second part.

1 mark

d. The following excerpt is in two parts.

Describe which aspect of the mix has been changed in the second part.

1 mark

e. What kind of filter has been applied to this excerpt?

1 mark

SECTION B**Question 1** (1 mark)

Tick (✓) the correct box.

What is the frequency commonly used for calibrating a sound system?

- A. 1 kHz
- B. 10 kHz
- C. 4 kHz
- D. 500 Hz

Question 2 (1 mark)

What is the difference between pink noise and white noise?

Question 3 (2 marks)

Explain 'phase cancellation'. Give an example of where this may occur in a live gig.

Question 4 (8 marks)

- a. What is the difference between a hypercardioid microphone and a cardioid microphone? 1 mark

- b. A vocalist arrives for a sound check with their own hypercardioid microphone. The previous vocalist used a cardioid microphone. The foldback was set up directly behind the cardioid microphone.

How would you reposition the foldback wedge(s) to suit the second vocalist? 1 mark

- c. What is the effect on a cardioid microphone if it is moved closer to the vocalist? 1 mark

- d. Another performer arrives for a sound check with their own condenser microphone.

Give **two** advantages and **two** risks of using a condenser microphone in a live gig. 4 marks

Advantages _____

Risks _____

- e. What needs to be done to the mixing console to make a condenser microphone work? 1 mark

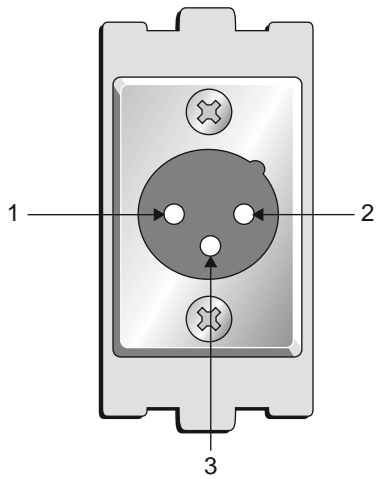
Question 5 (4 marks)

List **four** professional audio crew members you would expect to work on an outdoor gig.

Question 6 (5 marks)

a. Identify the object shown in the image below.

1 mark



b. Identify the three pins as marked on the image.

3 marks

1. _____

2. _____

3. _____

c. Where on an analogue mixing console would you be most likely to find this object?

1 mark

Question 7 (6 marks)

Between setting up and powering down the PA system, the front-of-house engineer completes the following operations.

Explain how each of these operations is carried out.

Operation	Explanation
Check the system inputs and outputs.	<ul style="list-style-type: none"> • _____ _____ • _____ _____
Tune the system.	<ul style="list-style-type: none"> • _____ _____ • _____ _____
Conduct a sound check on the band.	<ul style="list-style-type: none"> • _____ _____
Mix the sound.	<ul style="list-style-type: none"> • _____ _____

Question 8 (1 mark)

Tick (✓) the correct box.

Three-phase power is used to

- A. power active DI boxes.
- B. power headphone amplifiers.
- C. power condenser microphones.
- D. provide greater power than a 240 V GPO.

Question 9 (2 marks)

Tick (✓) the correct box.

- a. What is the safe limit, as advised by WorkCover, for noise exposure in a day? 1 mark
- A. 95 dB over 8 hours
- B. 85 dB C weighted over 8 hours
- C. 85 dB A weighted over 8 hours
- D. 95 dB over 10 hours
- b. What is the frequency range of the average young person's hearing? 1 mark

Question 10 (1 mark)

Explain how the inverse square law affects sound outdoors.

Question 11 (2 marks)

What is the approximate wavelength of the following frequencies in air?

1000 Hz _____

100 Hz _____

Question 12 (3 marks)

- a. Explain the function of the equaliser section on a channel strip on a mixing console. 1 mark

- b. You are working with a vocalist, a microphone and a foldback wedge.

What fault could be fixed by using a graphic equaliser? 1 mark

- c. You are mixing down a song and the vocalist sounds dull.

How could the equaliser section be used to improve this sound? 1 mark

Question 13 (1 mark)

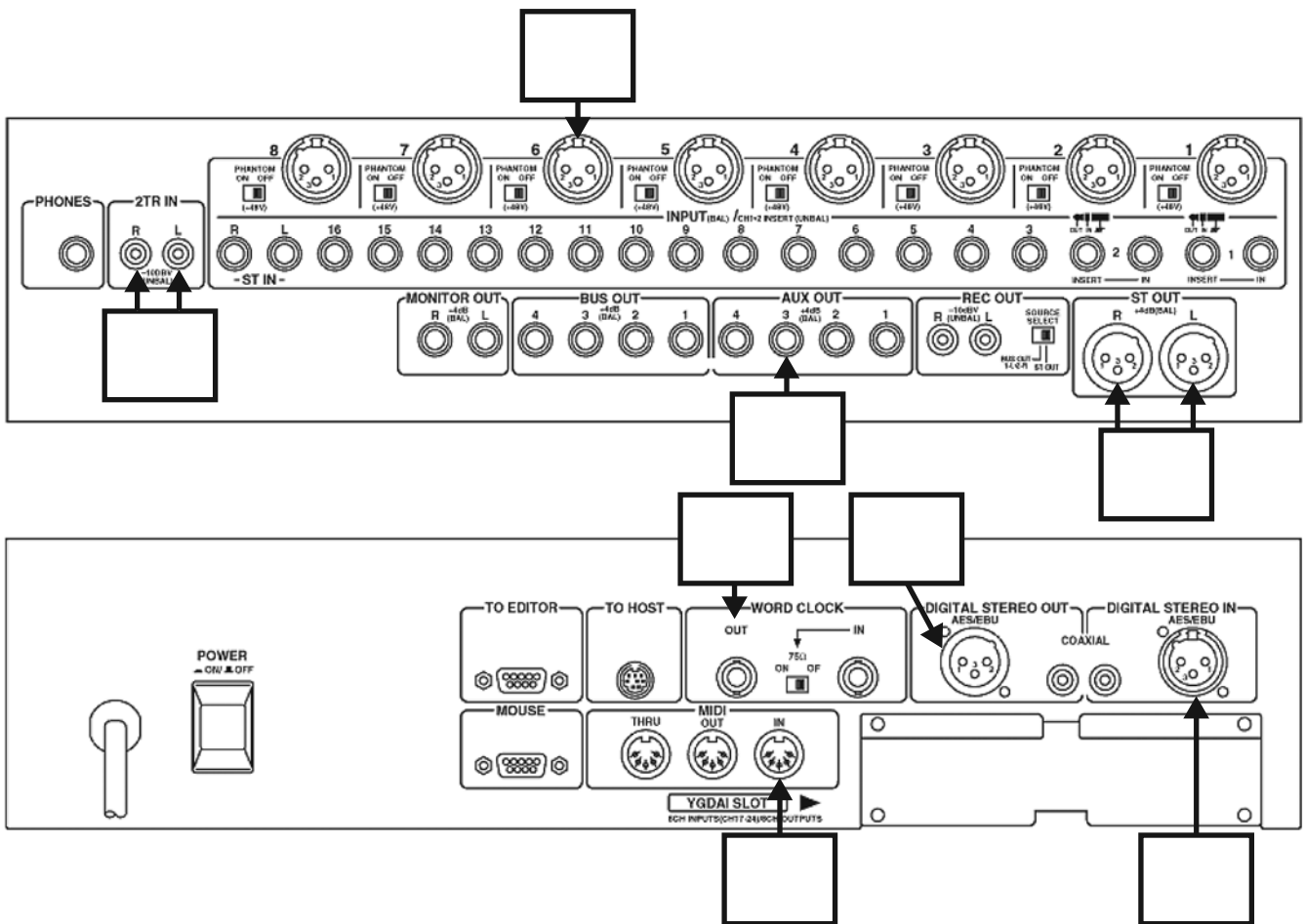
What level is the best audio resolution of a fader on an audio console?

Question 14 (2 marks)

The role of a foldback or monitor engineer differs from that of the front-of-house engineer.

Indicate **two** differences between these roles.

Question 15 (5 marks)



Source: www.gbaudio.co.uk

This diagram shows the rear panel of a mixing console.

Indicate where each of the following would connect to the console by placing a letter in the appropriate box. Not every box will need a letter.

- A. the input of an effects unit
- B. the left and right graphic equaliser inputs
- C. a microphone
- D. a CD player
- E. the input of a digital recorder

Question 16 (3 marks)

List **three** file formats for storage of an audio recording.

Question 17 (1 mark)

When referring to high Z and low Z, what does the 'Z' refer to?

Question 18 (7 marks)

A cabaret club hires a sound operator for the variety cabaret season.

- a. During the set up, the sound operator notices that the venue is very reverberant.

Suggest **two** ways in which this could be overcome.

2 marks

- b. List **three** possible playback devices the sound operator may encounter.

3 marks

- c. The first performer wants the foldback to fade at the same time as the front-of-house. The second performer wants theirs to stay on longer as play-off music.

How would the sound operator facilitate this?

2 marks

Question 19 (3 marks)

Name **three** pieces of processing equipment that may be found in an effects rack.

Question 20 (4 marks)

You are the front-of-house engineer for a school musical.

Name two crew members you would want to have working with you and explain why.

Crew member 1 _____

Reason for selection _____

Crew member 2 _____

Reason for selection _____

Question 21 (3 marks)

a. What is meant by the term 'spatial hearing'? 1 mark

b. In the context of sound production, give **two** reasons why spatial hearing is important. 2 marks

Question 22 (10 marks)

Complete a stage plan on the diagram provided, showing the placement of the equipment listed below:

- one mixing desk
- one amplifier rack
- one multicore and stage box
- one microphone
- one foldback wedge
- two graphic equalisers
- one reverb unit
- two front-of-house speakers
- one monitor console

Indicate correct positions for the multicore cabling, taking into consideration occupational health and safety (OH&S), and the preferred front-of-house mixing position.

