

SECTION A

Answer **ALL** questions in this section.

You should spend approximately 75 minutes on this section.

This section assesses **Criterion 4**.

Question 1

- (a) List **two** microphone directional patterns and then provide an appropriate use for each of these two patterns. (3 marks)

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- (b) Explain what the 'proximity effect' does to the sound from a directional microphone. (2 marks)

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- (c) Given that you have up to three microphones to use, describe **one** method of positioning microphones to gain a **stereo** recording of a string quartet. (3 marks)

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Question 1 continues over the page.

Question 1 (continued)

(d) Where would you place a single microphone to gain the best results:

(i) from a cello? (1 mark)

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(ii) from a trumpet? (1 mark)

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Total: /10 marks

Question 2

- (a) You are using a DI box to bring the output from a guitar amplifier into your mixer. After connecting the guitar, amplifier and DI box to the mixer you hear 'buzz' and 'hum' on that desk channel. What steps do you take to cure this problem? (4 marks)

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- (b) What advantage are you likely to gain from using noise gates when recording a drum kit? (2 marks)

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- (c) Briefly discuss why multi-track/multi-channel cassette record/replay machines benefit from having noise reduction and double speed facilities. (4 marks)

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Total: /10 marks

Question 3

(a) Describe an advantage of using equipment that follows the General MIDI standard. (2 marks)

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(b) What does the OMNI setting on your sound module let you do? (2 marks)

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(c) Describe the difference between the 'MIDI Through' and the 'MIDI Out' sockets on a keyboard. (3 marks)

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(d) In a more complicated MIDI set up, what do you use the 'MIDI clock' signal for? (2 marks)

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Total: /9 marks

Question 4

- (a) Explain the purpose and use of the 'Solo' button as found on a sound mixer. (2 marks)

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- (b) What is the purpose of the '48v' or 'phantom' button on your sound mixer? (2 marks)

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- (c) On a recording device with peak meters, where do we set the level for reference tone? (2 marks)

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- (d) What does the term 'headroom' refer to when given in the specifications of a sound mixer? (2 marks)

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Total: /8 marks

Question 5

- (a) Why is it necessary for a speaker rig to be ‘phased’? Describe a method for ‘phasing’ a FOH setup. (3 marks)

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- (b) What steps would you take to reduce ‘ringing’ and ‘feedback’ in a FOH speaker system? (3 marks)

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- (c) For maximum audio output, how would you connect up two 8 ohm speakers to an amplifier with an output marked as 4 ohms? What is the reasoning for your answer? (3 marks)

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Total: /9 marks

SECTION B

ANSWER ALL QUESTIONS IN THIS SECTIONS

Use a separate answer booklet for this section.

You should spend approximately 30 minutes on this section.

This section assesses **Criterion 6**.

Question 6

A small theatre company has commissioned you to put together a sound system that will be used to take a 20 minute performance to a number of schools around the State. Given that you will travel with them as the sound engineer and technician, what do you think your daily tasks will be and what skills will you need to bring to the project? (10 marks)

Question 7

A small hotel has decided to establish a live music area on a limited but reasonable budget. Your task is to determine, prioritise, purchase and install the equipment you feel is necessary. How do you go about the process and ensure that the hotel gets the facility they want? (10 marks)

Question 8

Given that MIDI control is built into many pieces of equipment, how could you use your knowledge to incorporate MIDI controlled sound and lighting equipment into a modern dance performance? (10 marks)

Question 9

Your local council has commissioned your college to record, edit and produce a master recording of works written and read by local poets. As the engineer for the project, discuss the process and include your thoughts on the equipment you would choose to use. (10 marks)

Total: 20 marks