SCOTTISH QUALIFICATIONS AUTHORITY

2005 Music

Higher – Sound Engineering & Production

Finalised Marking Instructions

These Marking Instructions have been prepared by Examination Teams for use by SQA Appointed Markers when marking External Course Assessments.

SECTION 1

Marks

In this section the questions are related to specific concepts that feature in excerpts of recorded music.

QUESTION 1

Read through the list of features below before hearing the music.

Tick **four** features which are present in the music. You will hear the music **twice** with a pause of ten seconds between playings and a pause of twenty seconds at the end before the next question starts.

☐	coda	✓	sustained strings (synthesiser)
☐	trumpet	✓	repeated delay
✓	fade in	☐	backing vocals
✓	introduction	☐	phase cancellation
☐	feedback		

Here is the music for the first time.
Here is the music for the second time.

Total marks Question 1: (8) ☐

QUESTION 2

Read through the list of features below before hearing the music.

Tick **four** features which are present in the music. You will hear the music **twice** with a pause of ten seconds between playings and a pause of twenty seconds at the end before the next question starts.

☐	sample	☐	pitch shifter
✓	key change	☐	change in frequency range
✓	acoustic guitar	☐	middle eight
☐	mono	✓	solo break
✓	pitch bend		

Here is the music for the first time.
Here is the music for the second time.

Total marks Question 2: (8) ☐

QUESTION 3 *Marks*

This question is concerned with identifying sound engineering faults.

(*a*) (i) Listen to this **solo** saxophone track. There are faults in the recording. Tick **two** boxes to identify the faults.

☐	dynamic range is too wide	☐	proximity effect
✓	too much reverberation	✓	low levels
☐	hum	☐	overload

(ii) Briefly describe a precaution that could be taken to correct each of these faults.

Reduce the reverberation/reverberation time; increase the recording levels/position the microphone closer to the instrument

2 marks for each answer

You are reminded to answer both parts of the question.

Here is the music for the first time.
Here is the music for the second time. **8**

(*b*) Listen to this recording of strings. There are **two** faults that happen **during** the recording. Tick **two** boxes to identify the faults.

✓	noise	☐	stereo image is too wide
☐	wow and flutter	☐	sound spillage
☐	frequency range is too wide	✓	phase cancellation

Here is the music for the first time.
Here is the music for the second time. **4**

QUESTION 3 (continued) *Marks*

(*c*) Listen to this **solo** vocal track. The recording has **two** faults. Tick **two** boxes to identify the faults.

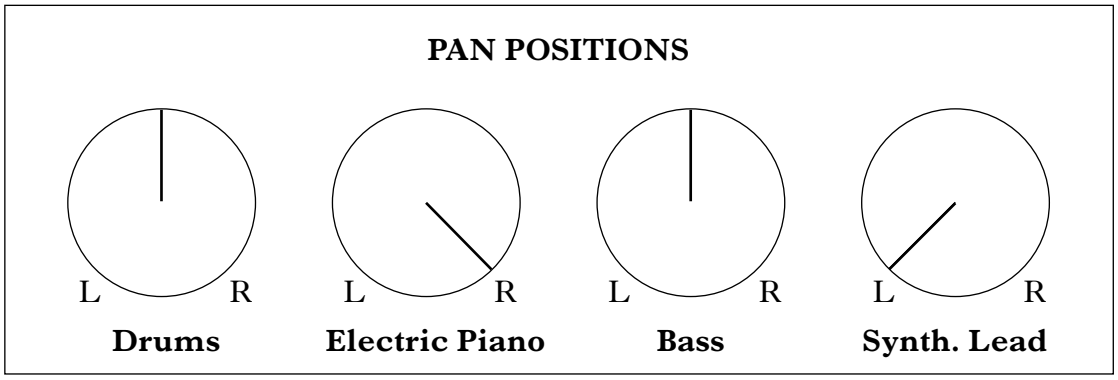
☐	not enough high equalisation	✓	hiss
☐	feedback	☐	popping and blasting
✓	sibilance	☐	too much indirect sound

Here is the music for the first time.
Here is the music for the second time. **4**

Total marks Question 3: (16) ☐

QUESTION 4 *Marks*

(*a*) Listen to this recording of drums, electric piano, bass and synth. lead. The instruments have been panned to certain positions in the stereo image. Show where the drums, electric piano and bass are positioned by filling in the diagram of the pan controls for each track. The pan position of the synth. lead has been completed as an example. (You will hear the music **once** only.)



Here is the music. **3**

(*b*) You will now hear another excerpt from the recording. A control, effect or process has been added to **two** instruments. Name the two controls, effects or processes used and the instrument each is applied to.

Control/Effect/Process: **Chorus**

Instrument: **Electric Piano**

Control/Effect/Process: **High Equalisation (Boost)**

Instrument: **Drums**

2 marks for the Control/Effect/Process
1 mark for the Instrument

6

Here is the music.

(You will hear the music **once** only.)

Total marks Question 4: (9)

QUESTION 5 *Marks*

This question is concerned with the use of controls, effects, processes and recording techniques.

(*a*) Listen to two excerpts of the same piece of music. The **second** excerpt uses two controls, effects, processes or techniques. Tick **two** boxes to identify the controls, effects, processes or techniques heard in the **second** excerpt.

☐	repeated sample	☐	gate
☐	compression	☑	phasing
☐	enhancer/exciter	☑	reverberation

Here is the first excerpt.
Here is the second excerpt. **4**

(*b*) Listen to two excerpts of the same piece of music. The **second** excerpt uses two controls, effects, processes or techniques. Tick **two** boxes to identify the controls, effects, processes or techniques heard in the **second** excerpt.

☑	pitch shifter	☑	distortion
☐	reverberation	☐	panning
☐	compression	☐	echo

Here is the first excerpt.
Here is the second excerpt. **4**

QUESTION 5 (continued) *Marks*

(*c*) Listen to two excerpts of the same piece of music. The **second** excerpt uses two controls, effects, processes or techniques. Tick **two** boxes to identify the controls, effects, processes or techniques heard in the **second** excerpt.

☐	low equalization boost	☐	fade in
☑	delay	☐	gate
☑	pitch bend	☐	feedback

Here is the first excerpt.
Here is the second excerpt. **4**

Total marks Question 5: (12) ☐

[*END OF SECTION 1*]

SECTION 2

Marks

In this section the questions are related to a variety of features that occur in longer excerpts of recorded music.

QUESTION 6

This question is in two parts, (*a*) and (*b*).

It concerns **two** versions of the song "Ticket to Ride" recorded by different artists.

You now have **one minute** to read through the whole question.

(*a*) Listen to two versions of the song recorded by different artists. Compare both recordings and, as you listen, comment on the concepts used under the headings given in **[GRID 1]**.

This grid is for rough work and will not be marked.

Both versions will be played **twice** with a pause of **fifteen** seconds between playings.

After the two playings of the music you will be given **three minutes** to copy/ re-arrange your answers in **[GRID 2]**.

Here is excerpt 1 for the first time. **Remember to write in Grid 1.**
Here is excerpt 2 for the first time.

Here is excerpt 1 for the second time.
Here is excerpt 2 for the second time.

You will now have **three minutes** to complete your answers in **[GRID 2]**. **10**

[GRID 1]

	Excerpt 1	**Excerpt 2**
Controls, effects & processes		
Recording/ production techniques		
Other musical features/ instrumentation/ structure		

[GRID 2]

	Excerpt 1	Excerpt 2
Controls, effects & processes	Different reverb. settings for different instruments. Large amount of reverb. on vocals, fair amount of reverb (natural reverb) on drums. Moderate reverb. on lead elec. Guitar and rhythm guitar. Less reverb on bass and tambourine. Overall wet sound. Panning - lead vocal, drums, percussion, lead guitar centre. Rhythm guitar right of centre, bass left of centre. Backing vocals centre. Some compression on lead vocal, bass; little or no compression on other instruments; drumkit and other instruments fairly naturally recorded; little/gentle use of EQ. Pitch bend -lead elec. guitar.	Different reverb. settings for different instruments. Moderate reverb on lead vocal. More reverb on piano and strings, and electric guitar. Long reverb on backing vocals. Less reverb. on acoustic guitar. Little reverb. on drums, bass, wind chimes. Panning - lead vocals, wind chimes, maracas, drums acoustic guitar and bass centre. Piano hard left, strings hard right. Lead guitar right of centre, Horns left of centre. Backing vocals panned across the stereo image. Pitch bend -lead elec. guitar. Fairly heavy compression on lead vocals, backing vocals, bass, drums. Less compression on piano and strings. Use of gentle EQ on different instruments.
Recording/ production techniques (max 6 ticks for each excerpt in top two sections)	Mix: lead vocals, drums and tambourine at front of mix. Elec lead guitar prominent in mix, rhythm guitar a little further back. Backing vocals back in mix. Mix is fairly clear, but frequency range is somewhat limited. Fairly limited dynamic range. Close microphone techniques used but microphone placements are noticeably further back from drums, backing vocals, rhythm guitar and drums than nowadays. Some sound spillage. Fairly straightforward production, with change with limited use, if any, of multi-track techniques. Excerpt fades out at 3rd verse.	Mix: Lead vocals, backing vocals drums at front of mix. Prominent bass. Strings, piano, horns, slightly further back in mix. Mix is very clear with wide frequency range. Warm sound. Limited dynamic range. Close microphone techniques used with microphones placed closely, with very good sound separation among the instruments. Proximity effect adds richness and warmth to lead vocal. Sophisticated production, with changes of texture and variety of instrumentation. Overdubbing and multi-track recording used to a large degree. Excerpt fades out at 3rd verse.
Other musical features/ instrumentation/ structure (max 4 ticks for each excerpt in this section)	Instruments/voices: male lead vocal, backing vocals, lead elec. guitar, rhythm guitar, bass guitar, drums, percussion (tambourine). Structure: intro, verse (chorus), verse (chorus), middle eight, verse (chorus). Texture - intro starts with elec. Guitar followed by drums and bass with lead vocals and backing vocals entering at verse 1. At Mid. eight tambourine, rhythm guitar and elec. guitar fills feature. Quick, lively tempo. Mersey beat rock style.	Instruments/voices: female lead vocal, backing vocals, piano, elec. guitar, acoustic rhythm guitar, bass, strings, French horns, drums, percussion (wind chimes). Structure: intro, verse (chorus), verse (chorus), middle eight, verse (chorus). Texture: intro. starts with piano followed by strings and bass, cymbal. Verse 1(chorus) lead vocal enters with piano, followed by strings, wind chimes, horns. In Verse 2 drums , maracas, acoustic guitar and backing vocals enter. Mid eight has increase in texture (with elec. guitar fills) followed by a reduction of texture at verse 3. Slow, relaxed tempo. MOR/easy listening style.

½ mark each to a maximum of 10.

Marks

(*b*) Listen to the versions once again and, using your notes for (*a*) above, comment briefly on the main **contrasts/differences** in production between the two versions of the song.

Both versions will be played once more with a pause of **one minute** at the end.

Here is the first excerpt.

Here is the second excerpt.

Contrasts/Differences in production
Both versions have different introductions.
The second excerpt has a longer introduction than the first excerpt.
The second version has strings.
The second version has piano.
The second version has a female lead vocal while the first version has a male lead vocal.
The second version has some different chords during the middle eight and a different melody.
The second version is slower than the first version.
The second version has a more varied texture and a more sophisticated production.
There is more sound separation in the second version, more sound spillage in the first version.
The second version makes more obvious use of multi-track techniques and overdubbing.
The first version has a more limited frequency range while the second version is warmer sounding.
The second version uses more compression generally.
The backing vocals are more prominent in the mix of the second version.
The first version is in beat/rock style while the second version is in MOR/easy listening style.

2 marks for each correct answer to a maximum of 10. **10**

Total marks Question 6: (20)

Marks

QUESTION 7

This question is in two parts, (*a*) and (*b*).

The question is concerned with the structure and production features of the song **"What Can I Do"** by **The Corrs**.

The plan of the song has been laid out with some of the sections already inserted in the table.

There will now be a pause of **two minutes** to allow you to read over the whole question, parts (*a*) and (*b*).

(*a*) The song uses the following sections:

verse **coda** **introduction** **chorus** **middle eight**

Some sections occur more than once.

Insert the missing sections in **COLUMN A** of the table.

(*b*) The following is a list of production features that occur in the song at different points. Insert each feature **once** in **COLUMN B** of the table, at the section where it **first** occurs. More than one feature can appear in a section. It is suggested that to save time, you need write only what is underlined.

strings

backing vocals repeat lead vocal phrase

electric guitar with phasing

reduction in texture

bass guitar

You are reminded that you should attempt both parts of the question.

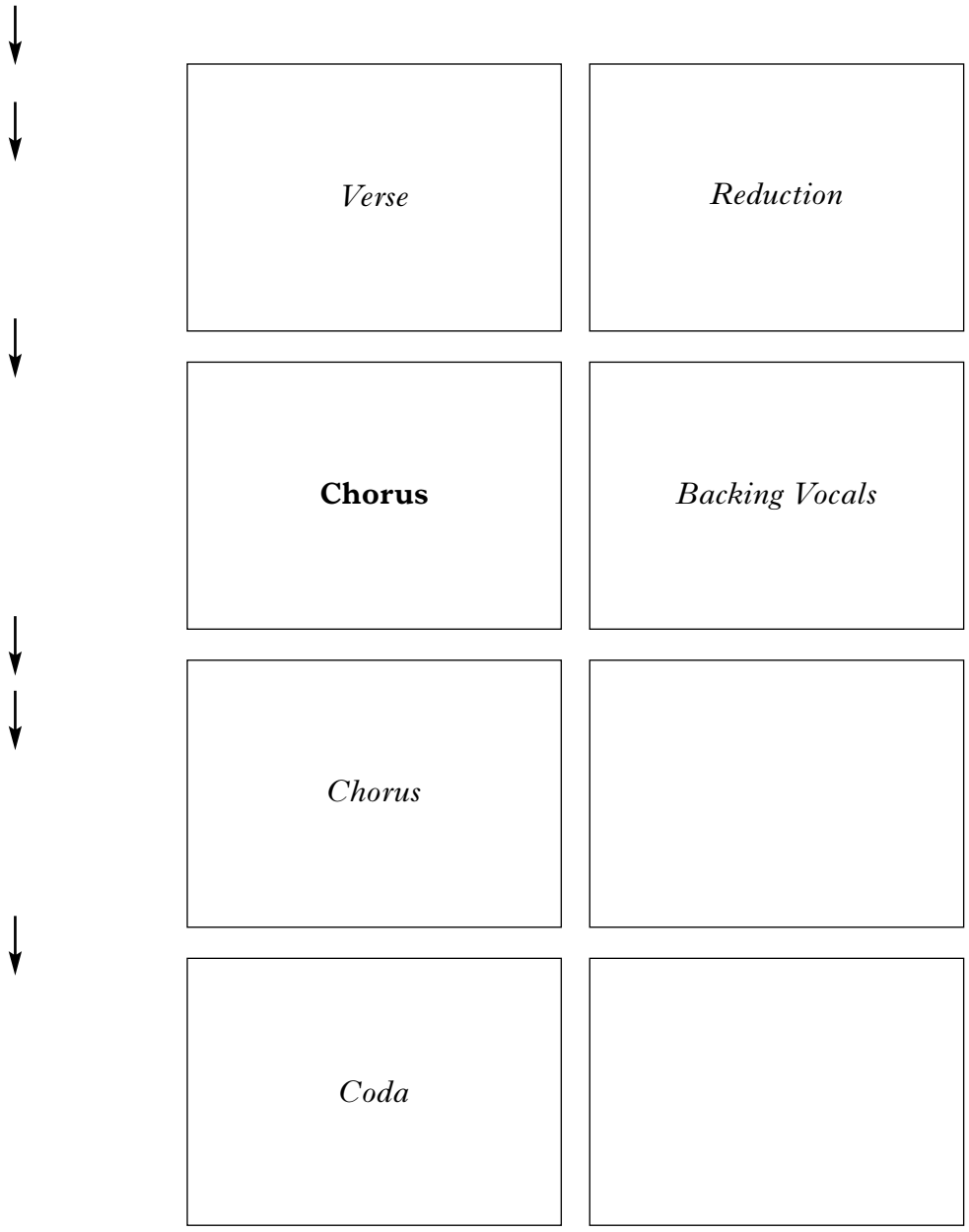
You will hear the music **three** times.

Here is the music for the first time.
Here is the music for the second time.
Here is the music for the third time. **18**

SONG PLAN

	COLUMN A SECTIONS	**COLUMN B FEATURES**
	Introduction	*Phasing*
↓ Start of lead vocal	*Verse*	
↓	*Chorus*	*(Bass Guitar)*
↓	**Verse**	*Bass Guitar*
↓	*Chorus*	*Strings*
↓	*Middle Eight*	

SONG PLAN (continued)



1 mark for each section.
2 marks for each feature.

Total marks Question 7: (18)

[*END OF SECTION 2*]

SECTION 3

Marks

In this section the questions are related to the principles and practices of sound engineering and production. There are **no** excerpts of recorded music. Read the questions carefully before answering them.

You have **five minutes** to complete the remaining questions 8, 9 and 10.

A warning tone will sound **two minutes** before the end of the examination.

QUESTION 8

(*a*) What would be produced by periodic variations in air pressure, radiating away from a sound source? Tick **one** box.

- [✓] soundwave
- [ ] generation loss
- [ ] bouncing
- [ ] noise reduction

1

(*b*) On a mixing desk, what is an auxiliary return and what might it be used for?

An auxiliary return is a mixer input (usually located in the master section of desk) that allows effects from an external effects unit to be added to the mix. It could also be used as an extra input for any other sound source added to the mix.

2

1 mark for definition and 1 mark for use.

Total marks Question 8: (3)

QUESTION 9

(*a*) What could be used to align levels and meters when using different pieces of equipment? Tick **one** box.

- [ ] tuning tone
- [ ] guide vocal
- [✓] reference tone
- [ ] click track

1

QUESTION 9 (continued) *Marks*

(*b*) What is a sample and how might it be used in audio recording?

A sample is a digitised sound that can be used as a musical sound source in a sampler or synthesiser.

2

1 mark for definition and 1 mark for use.

Total marks Question 9: (3)

QUESTION 10

(*a*) What item of equipment would be used with a boom stand? Tick **one** box.

- ☐ acoustic screen
- ☐ multi-effects unit
- ☐ keyboard
- ☑ microphone **1**

(*b*) When recording different instruments at the same time onto different tracks, studio layout is important. Describe **two** problems which can be caused by poor studio layout.

Studio layout is important in obtaining good sound separation and yet maintaining visual contact between the performers.
Problems that can be caused with poor studio layout include: sound spillage/off axis coloration of the sound/standing waves/phase cancellations/masking of certain sounds etc.

2

Total marks Question 10: (3)

[*END OF SECTION 3*]

[*END OF MARKING INSTRUCTIONS*]