

2006 Music

Advanced Higher – Sound Engineering and Production

Finalised Marking Instructions

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SECTION 1

Marks

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

QUESTION 1

(a) 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.

- | | | | |
|-------------------------------------|----------------------|-------------------------------------|--------------|
| <input checked="" type="checkbox"/> | fade-in | <input type="checkbox"/> | mono |
| <input type="checkbox"/> | popping and blasting | <input type="checkbox"/> | pitch bend |
| <input checked="" type="checkbox"/> | multi-tracked vocal | <input type="checkbox"/> | phasing |
| <input type="checkbox"/> | hiss | <input checked="" type="checkbox"/> | introduction |
| <input type="checkbox"/> | feedback | <input checked="" type="checkbox"/> | reverb |

**2 MARKS FOR EACH
CORRECT ANSWER**

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

8

(b) 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.

- | | | | |
|-------------------------------------|--------------|-------------------------------------|----------------------|
| <input type="checkbox"/> | tempo change | <input checked="" type="checkbox"/> | distortion (effect) |
| <input type="checkbox"/> | key change | <input checked="" type="checkbox"/> | instrumental fade-in |
| <input checked="" type="checkbox"/> | compression | <input type="checkbox"/> | change of texture |
| <input type="checkbox"/> | mono | <input type="checkbox"/> | chorus effect |
| <input checked="" type="checkbox"/> | samples | <input type="checkbox"/> | horn section |

**2 MARKS FOR EACH
CORRECT ANSWER**

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

8

Total marks Question 1: (16)

QUESTION 2

Marks

This question is concerned with comparing the quality of different takes of a live recording of “Fields of Gold” by Sting. This arrangement is for electronic keyboard.

(a) You will hear **two** takes of the **same piece**. For **each** take you have been provided with a copy of the music as a guide.

You now have two minutes to read this question.

Neither of the takes is perfect. Each take has bars which have faults in the **musical performance** or in the **sound recording quality**. In each take there are **up to THREE** faults.

Musical faults in these takes could include faults in:

- chords
- notes
- rhythm.

Sound recording faults in these takes could include:

- crackle
- effects
- extraneous noises
- glitching.

For **each** take, put separate brackets above **any bars** where there are faults in the **musical performance** and any **bars** where there are faults in the **sound recording quality**.

Above the bracket, write a **capital letter** to identify the fault as shown below.

M
[] = Musical fault

S
[] = Sound recording fault

Each take will be played **twice**.

Here is Take 1 for the first time.

Here is Take 1 for the second time.

Here is Take 2 for the first time.

Here is Take 2 for the second time.

2 MARKS FOR EACH CORRECTLY IDENTIFIED ERROR

12

QUESTION 2 (a) (continued)

Take 1

Musical score for 'Take 1' in G major, 4/4 time. The score consists of 23 numbered measures across seven staves. Chords are indicated in boxes above the notes. Fingering numbers (1-3) and other markings (M, S, 7) are present.

Measures 1-3: Chords Bm, G. Fingering 1, 2, 3. Marking M above measures 2-3.

Measures 4-6: Chords D, Bm, G, D. Fingering 4, 5, 6.

Measures 7-10: Chords G, A, Bm7, G, D. Fingering 7, 8, 9, 10. Marking 3 below measure 9.

Measures 11-14: Chords Bm, G. Fingering 11, 12, 13, 14. Marking M above measures 13-14.

Measures 15-17: Chords D, Bm, G, D. Fingering 15, 16, 17.

Measures 18-20: Chords G, A, D, G, A. Fingering 18, 19, 20. Marking 3 below measure 19.

Measures 21-23: Chords D, G, A, D. Fingering 21, 22, 23. Marking S above measures 21-22.

QUESTION 2 (a) (continued)

Take 2

Musical score for 'Take 2' in G major, 4/4 time, measures 1-23. The score is written on a single treble clef staff. The key signature has one sharp (F#) and the time signature is 4/4. The music consists of eighth and quarter notes, with some rests and slurs. Chord symbols are placed above the staff at various measures: Bm (1), G (2), D (4), Bm (5), G (6), D (7), A (8), Bm7 (8), G (9), D (10), M (10), Bm (12), G (13), D (15), Bm (16), G (17), D (18), S (18), A (18), D (19), G (20), A (20), D (21), G (22), A (22), D (23). Slurs labeled 'S' and 'M' are present over measures 5-6 and 10-11 respectively. A triplet of eighth notes is marked with a '3' over measures 9 and 20.

QUESTION 2 (continued)

Marks

(b) Now imagine that you have to compile a master recording from the two takes.

You now have one minute to read through this question.

Refer to the scores for each take you used for (a) above to help identify **up to three** sections **of around 4 bars** from **each** take where **both** the musical performance and the sound quality is good.

In the edit list below, identify the take you would use for each section to compile a master recording.

You will hear each take **once** more with a pause of twenty seconds between playings and a pause of thirty seconds at the end before the next question starts.

Here is Take 1 for the last time.

Here is Take 2 for the last time.

ROUGH NOTES

Edit List	
Bar Numbers in Musical Order	Take Number
1-4	2
5-7	1
8-11	1
12-15	2
16-19	1
20-end	2

1 MARK FOR EACH CORRECT ANSWER

OPEN OUT

6

QUESTION 2 (continued)*Marks*

- (c) This question is concerned with identifying different **types** of **musical mistakes**.

You now have thirty seconds to read this question.

You will hear a third take of “Fields of Gold”. There are different **types** of **musical mistakes** made during the performance. The **types** of **musical mistakes** may include:

Pitch **Rhythm** **Chords** **Tempo/Timing**

Listen to the take and follow the score provided. Identify **four** bars where mistakes have been made.

In the table below, enter the **bar number** for each mistake and specify the **type** of mistake made. (eg Bar 2 – Rhythm)

Musical Mistakes	
Bar Number	Type of Mistake
3 or 4	Tempo/Timing
9 or 10	Tempo/Timing
17	Pitch
20	Rhythm

The music will be played **twice** with a pause of twenty seconds between playings and a pause of twenty seconds at the end before the next question starts.

Here is the music for the first time.

Here is the music for the second time.

8

Total marks Question 2: (26)

QUESTION 2 (c) (continued)

Take 3

The musical score for 'Take 3' is written in G major (one sharp) and 4/4 time. It consists of 23 numbered measures across seven staves. The notes are as follows:

- Measure 1: G4, A4, B4, A4, G4
- Measure 2: G4, A4, B4, A4, G4
- Measure 3: G4, A4, B4, A4, G4
- Measure 4: G4, A4, B4, A4, G4
- Measure 5: G4, A4, B4, A4, G4
- Measure 6: G4, A4, B4, A4, G4
- Measure 7: G4, A4, B4, A4, G4
- Measure 8: G4, A4, B4, A4, G4
- Measure 9: G4, A4, B4, A4, G4
- Measure 10: G4, A4, B4, A4, G4
- Measure 11: G4, A4, B4, A4, G4
- Measure 12: G4, A4, B4, A4, G4
- Measure 13: G4, A4, B4, A4, G4
- Measure 14: G4, A4, B4, A4, G4
- Measure 15: G4, A4, B4, A4, G4
- Measure 16: G4, A4, B4, A4, G4
- Measure 17: G4, A4, B4, A4, G4
- Measure 18: G4, A4, B4, A4, G4
- Measure 19: G4, A4, B4, A4, G4
- Measure 20: G4, A4, B4, A4, G4
- Measure 21: G4, A4, B4, A4, G4
- Measure 22: G4, A4, B4, A4, G4
- Measure 23: G4, A4, B4, A4, G4

The guitar chord diagrams are as follows:

- 1: Bm
- 2: G
- 3: (no chord)
- 4: D
- 5: Bm
- 6: G
- 7: D
- 8: G
- 9: A
- 10: Bm7
- 11: G
- 12: D
- 13: Bm
- 14: G
- 15: D
- 16: Bm
- 17: G
- 18: D
- 19: A
- 20: Bm7
- 21: G
- 22: A
- 23: D

QUESTION 3

This question is concerned with the controls, effects and processes used in sound engineering and production.

(a) You will hear **two recordings** of the **same excerpt** of music. In each of the **second excerpts** controls, effects or processes have been added. You will hear each excerpt **twice**.

(i) Name the single control, effect or process used in the second excerpt.

Here is Excerpt 1 for the first time.

Here is Excerpt 2 for the first time.

Here is Excerpt 1 for the second time.

Here is Excerpt 2 for the second time.

The **second** excerpt uses:

Delay (or Echo)

2

(ii) Name the two controls, effects or processes used in the second excerpt.

Here is Excerpt 1 for the first time.

Here is Excerpt 2 for the first time.

Here is Excerpt 1 for the second time.

Here is Excerpt 2 for the second time.

The **second** excerpt uses:

Reverb

and

Compression

4

(iii) Name the two controls, effects or processes used in the second excerpt.

Here is Excerpt 1 for the first time.

Here is Excerpt 2 for the first time.

Here is Excerpt 1 for the second time.

Here is Excerpt 2 for the second time.

The **second** excerpt uses:

Chorus

and

EQ

4

(b) You will now hear a **single** excerpt of music. In this case **two** processes are used on a **dry** recording of a vocal.

In the box provided, name the controls, effects or processes used in the excerpt.

You will hear the excerpt **twice**.

Here is the excerpt for the first time.

Here is the excerpt for the second time.

The excerpt uses

Reverb

and

Phasing

4

QUESTION 3 (continued)

- (c) You will now hear a second **single** excerpt of music. In this case **three** processes and/or effects have been added to a **dry** recording of a guitar.

In the box provided, name the controls, effects or processes used in the excerpt.

You will hear the excerpt **twice**.

Here is the excerpt for the first time.

Here is the excerpt for the second time.

The excerpt uses , and **6**

Total marks Question 3: (20)

QUESTION 4

Marks

This question is concerned with the structure and production features of the song “Karma Police” by Radiohead.

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	chorus	introduction
	middle 8	coda

Some sections occur more than once.

When listening to the piece the missing sections should be inserted in **COLUMN A** of the table. One has been provided on *Page fourteen*.

(b) The following list contains musical and 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.

Delay Effect

Drum Entry

Pitch Bend

Guitar Glissando

Distorted Guitar

Choral Backing

Distorted Backing Line

Loop Fade in

Guitar Feedback

Walking Bass Line (provided)

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.

SONG PLAN

COLUMN A Sections	COLUMN B Musical/Production Features
<i>INTRO</i>	
<i>Verse (1)</i>	<i>Drum (entry)</i>
<i>Verse (2)</i>	<i>(Distorted) Backing (Line)</i>
<i>Chorus</i>	<i>Choral (Backing) (Guitar) Feedback</i>
<i>Verse (3)</i>	<i>(Guitar) Feedback</i>

SONG PLAN (continued)

CHORUS	<i>Distorted (Guitar)</i>
<i>Middle 8</i>	<i>Delay (Effect)</i>
<i>Chorus</i>	WALKING
<i>Chorus</i>	<i>(Guitar) Glissando Loop (Fade in)</i>
<i>Coda</i>	<i>Glissando/Loop Pitch (bend)</i>

Total marks Question 4: (18)

[END OF SECTION 1]

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.

There will be a pause of **six minutes** to complete questions 5, 6, 7 and 8. A warning tone will sound **one minute** before the end of the question paper.

QUESTION 5

Explain briefly **one** function of each of the following parts of a mixing desk.

(a) The **Gain** control

Controls the input to pre-amplifier. Used to adjust/even-out signals from different sources to a suitable level.

1 answer required for 2 marks 2

(b) A **Post-Fade Auxiliary Send**

Used to send signals to effects processors. (2 marks)
A monitored signal determined by the level of the channel fader. (1 mark)

2

(c) An **Insert Point**

A connection in the mixing desk that takes the signal from an input and sends it to an external processor after which it is returned to the mixer channel.

2

Total marks Question 5: (6)

QUESTION 6

Give **one benefit** of utilising the following techniques/processes in a recording session:

(a) **Recording a Click Track**

Metronome provides a guide tempo and count-in for the performers. Ensures that drummers and others keep in time.

1

(b) **Compression**

Automatically controlling the gain of a signal (by setting the threshold and ratio controls). (Attack and release controls are also used.)

1

(c) **Equalisation**

Alters the tone by controlling various ranges of audible frequencies (LF/MF/HF)

1

Total marks Question 6: (3)

QUESTION 7

Marks

When mixing a track, what devices, effects or controls would give you the following processes?

- (a) Automatic gain/level control.

Automated mixing/Compressor

1

- (b) The effect of being in a concert hall.

Reverb

1

- (c) The ability to position the sound left or right.

Panning

1

Total marks Question 7: (3)

QUESTION 8

- (a) Using two or more microphones in a recording session may cause problems with **phasing**. Suggest how such problems may be eliminated, reduced or avoided.

If a swirling sound or a high-pitched whine is heard, the second microphone should be placed more than 3 times the distance from the source as the closer microphone.

3

- (b) Explain why the technique of **overdubbing** is important to studio recording.

In multitrack recordings a new track can be synchronised with previously recorded tracks.

3

- (c) When recording digitally, state what part of the process directly affects the **frequency range**.

**An A/D convertor (analogue to digital)
The sample frequency/Rate**

2

Total marks Question 8: (8)

[END OF SECTION 2]

[END OF MARKING INSTRUCTIONS]