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UNIVERSITI SAINS MALAYSIA

Second Semester Examination
Academic Session 2007/2008

April 2008

QMT213E – Digital Audio and Video
[Audio dan Video Digital]

Duration: 2 hours
(Masa : 2 jam)

Please check that this examination paper consists of **FIVE (5)** pages of printed material before you begin the examination.

*[Sila pastikan bahawa kertas peperiksaan ini mengandungi **LIMA (5)** muka surat yang bercetak sebelum anda memulakan peperiksaan ini]*

Instructions: Answer **FOUR (4)** questions only. (**TWO (2)** questions in each section)

[Arahan : Jawab **EMPAT (4)** soalan sahaja. (**DUA (2)** soalan di setiap bahagian]

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SECTION A (50 marks)

Answer **TWO (2)** questions only

Question 1

- a. The structure of human ears helps us in understanding the development of sound technology. Explain **FIVE (5)** characteristics of sound.

(15 marks)

- b. How does echo affect the quality of sound?

(10 marks)

Question 2

- a. Explain Acoustic Theory as applied in digital audio recording.

(10 marks)

- b. Differentiate between Close Miking and Distant Miking in audio recording. Explain which you would use in an orchestral performance.

(15 marks)

Question 3

- a. Explain **FIVE (5)** types of sound effects suitable for audio post-production.

(10 marks)

- b. Explain **ALL** the processes involved in an audio post-production.

(15 marks)

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SECTION B (50 marks)

Answer **TWO (2)** questions only.

Question 4

In a video production, digital technology has replaced the analog system.

- a. Define analog and digital video formats.

(10 marks)

- b. Explain **FIVE (5)** advantages of digital video over analog video.

(15 marks)

Question 5

Video on Demand (VoD) is an interactive multimedia system where users can select a movie from a large video database and watch the movie at their convenience.

- a. Discuss **THREE (3)** impacts of VoD for instructional purposes.

(15 marks)

- b. Discuss **FIVE (5)** constraints of VoD in the context of teaching and learning.

(10 marks)

Question 6

- a. Explain the meaning of the following terms in the context of audio and video production:-

- i. capture
- ii. firewire
- iii. render
- iv. scene
- v. White Balance

(10 marks)

- b. Elaborate **FIVE (5)** applications of instructional video.

(15 marks)

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TERJEMAHAN

BAHAGIAN A
JAWAB DUA (2) SOALAN

Soalan 1

- a. Struktur telinga manusia membantu kita untuk memahami perkembangan teknologi bunyi. Terangkan **LIMA (5)** ciri-ciri bunyi.
(15 markah)
- b. Bagaimanakah gema memberi kesan kepada kualiti bunyi?
(10 markah)

Soalan 2

- a. Jelaskan Teori Akostik dalam rakaman digital audio.
(10 markah)
- b. Bezakan antara penggunaan mikrofon jarak dekat dengan penggunaan mikrofon jarak jauh. Dalam persembahan orkestra, manakah yang anda pilih untuk digunakan?Jelaskan.
(15 markah)

Soalan 3

- a. Jelaskan **LIMA (5)** jenis kesan bunyi yang sesuai dalam penerbitan pasca audio.
(10 markah)
- b. Huraikan **SEMUA** proses yang terlibat dalam penerbitan pasca audio.
(15 markah)

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BAHAGIAN B
JAWAB DUA (2) SOALAN

Soalan 4

Di dalam penerbitan video, teknologi digital telah mengambil alih teknologi analog.

a. Terangkan format video analog dan video digital. (10 markah)

b. Terangkan **LIMA (5)** kelebihan video digital berbanding video analog. (15 markah)

Soalan 5

Video on Demand (VoD) adalah satu sistem multimedia interaktif di mana para pelanggan boleh memilih movie daripada pangkalan data dan menonton pada masa lapang.

a. Bincangkan **TIGA (3)** kesan VoD untuk tujuan instruksi. (15 markah)

b. Bincangkan **LIMA (5)** kekangan VoD dalam konteks pengajaran dan pembelajaran. (10 markah)

Soalan 6

a. Jelaskan makna dan istilah-istilah di bawah dalam konteks penerbitan audio dan video ;

- i. *capture*
- ii. *firewire*
- iii. *render*
- iv. *scene*
- v. *White Balance*

b. Huraikan **LIMA (5)** jenis aplikasi video pengajaran. (10 markah)

(15 markah)

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