



UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER II
SESSION 2011/2012**

COURSE NAME : AUDIO VIDEO PRODUCTION
COURSE CODE : BIT 3233/BIT 32303
PROGRAMME : BACHELOR OF INFORMATION
TECHNOLOGY
EXAMINATION DATE : JUNE 2012
DURATION : 3 HOURS
INSTRUCTION : ANSWER **ALL** QUESTIONS.

THIS QUESTIONS PAPER CONSISTS OF FOUR (4) PAGES

Instruction: Answer ALL questions.

Q1 Based on the following **Figure Q1**:

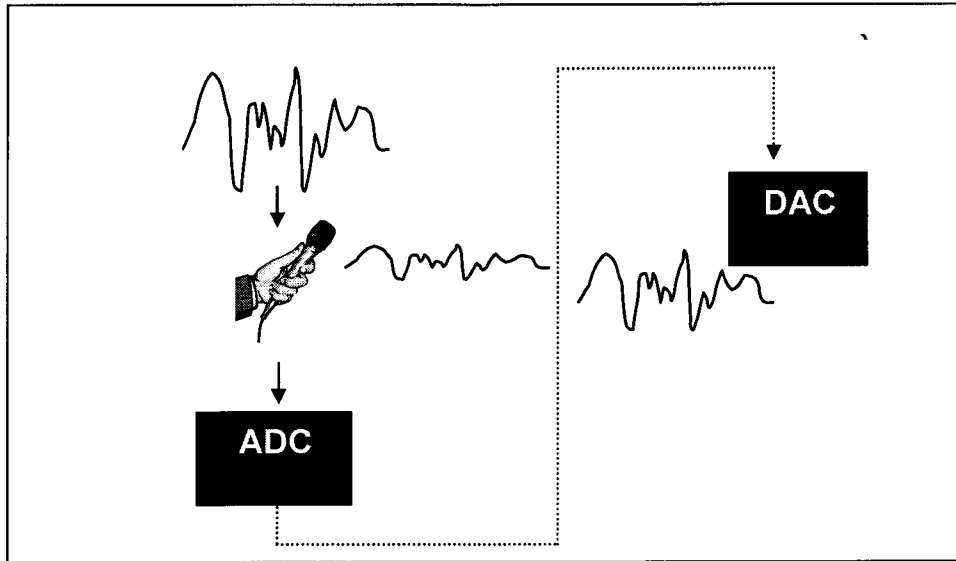


Figure Q1

- (a) Suggest **ONE (1)** audio conversion technique could be applied in the **Figure Q1**.
(4 marks)
- (b) Discuss **TWO (2)** types of stereo microphone placement used during audio recording using appropriate diagrams.
(6 marks)
- (c) Discuss **THREE (3)** differences between analog audio and digital audio.
(12 marks)
- (d) Discuss the process of capturing and playback of a digital audio as depicted in **Figure Q1**.
(12 marks)

Q2 Based on the following **Table Q2**:

Table Q2: Standard Sampling Rate

Quality	Sampling Rate (KHz)	Bits per Sample	Data Rate Kbits/s Kbytes/s	Data Size in 1 minute 1 hour
Telephone	8	8 (Mono)	64Kbps 8	480KB 28.8MB
AM Radio	11.025	8 (Mono)	88.2Kbps 11.0	660KB 39.6MB
FM Radio	22.050	16 (Stereo)	705.6Kbps 88.2	5.3MB 317.5MB
CD	44.1	16 (Stereo)	1.41Mbps 176.4	10.6MB 635MB

- (a) Justify why CD is sampled at 44.1 KHz sampling rate? (4 marks)
- (b) Explain how sampling rate could be applied on different kind of media transmission quality. (4 marks)
- (c) Explain by writing a formula to calculate sampling period for telephone. (6 marks)
- (d) Discuss the important elements need to be considered in calculating an audio file size by referring to the above **Table Q2** if an audio file size for CD quality is 10.6 MB. (10 marks)
- (e) Suggest **FOUR (4)** techniques on how to reduce a large audio file. (8 marks)

Q3 Given the following scenario:

SAVA Unlimited Berhad has been assigned by FSKTM to produce a commercial advertisement video with two minutes duration by May 2012. The requirements for the commercial advertisement video production includes the use of 32 bit color at 1024 x 768 resolution and the video should be played at 25 fps with a CD audio quality (44.1 kHz, 16-bit).

- (a) Calculate the amount of pixels needed to display the video based on the required resolution. (2 mark)
- (b) Produce a formula to calculate the total storage of the corporate video file size. (10 marks)

- Q4** (a) Discuss the processes to acquire digital video in post production. (10 marks)
- (b) Plan the basic steps of creating a final digital video using any digital video-editing software. (8 marks)
- (c) Justify whether it is importance to determine the speed of the target audience's CD-ROM or DVD-ROM. (4 marks)