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UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER II
SESSION 2021/2022**

COURSE NAME : MULTIMEDIA TECHNOLOGY

COURSE CODE : BNF 22202

PROGRAMME CODE : BNF

EXAMINATION DATE : JULY 2022

DURATION : 2 HOURS 30 MINUTES

INSTRUCTION

1. ANSWER ALL QUESTIONS
2. THIS FINAL EXAMINATION IS AN **ONLINE** ASSESSMENT AND CONDUCTED VIA **OPEN BOOK**.

TERBUKA

THIS QUESTION PAPER CONSISTS OF **THREE (3)** PAGES

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- Q1** (a) Describe briefly the definition of:
- (i) Multimedia
 - (ii) Hyper Media
 - (iii) Interactive Multimedia
- (6 marks)
- (b) Differentiate between linear and non-linear multimedia. Give **TWO (2)** examples for each case.
- (6 marks)
- (c) Describe **THREE (3)** advantages and disadvantages of using multimedia in education.
- (6 marks)
- (d) Briefly explain advantages of using live streaming over internet network.
- (2 marks)
- Q2** (a) List **SIX (6)** element of multimedia application.
- (6 marks)
- (b) Describe **THREE (3)** advantages of graphics in multimedia.
- (6 marks)
- (c) Differentiate between time-base authoring tool and card-base authoring tool. Give **TWO (2)** examples for each tool.
- (6 marks)
- (d) Describe **ONE (1)** disadvantages of graphics in multimedia.
- (2 marks)
- Q3** (a) Differentiate between MP3 and MIDI sound files.
- (2 marks)
- (b) Vector and Bitmap are two categories of graphics. Differentiate between Vector graphic and Bitmap graphic.
- (6 marks)
- (c) Explain the differences of animation and video in multimedia.
- (4 marks)
- (d) Website is one of the applications in multimedia technology. A lot of graphics in a website will slow down website loading. Discuss briefly any techniques to reduce graphics website loading.
- (6 marks)
- (e) List **TWO (2)** types of video compression / decompression.
- (2 marks)

- Q4**
- (a) Differentiate between RTSP and HTTP video transfer. (4 marks)
- (b) An audio signal is digitized at a sampling rate of 44.1 kHz, a bit depth of 16 and in stereo mode. Calculate the space occupied by 1 minute of the audio and its data rate for playback. (4 marks)
- (c) A 23-inch monitor with an aspect ratio of 4:3 has a pixel addressability of 1024×800 and a color-depth of 72 bits. Calculate:
- (i) Resolution
 - (ii) Dot-pitch
 - (iii) The minimum amount of display memory required on its adapter card to display image on the screen (6 marks)
- (d) A monitor can display 4 shades of red, 8 shades of blue and 16 shades of green. Analyze the color depth supported by the monitor? (3 marks)
- (e) A CD-ROM contains 433000 block to be played back in 96 minutes. Calculate the data rate and capacity of the CD-ROM when operating in Mode 1. (3 marks)
- Q5**
- (a) Differentiate between sequential and random-access storages. (2 marks)
- (b) Differentiate between volatile and non-volatile memory storage devices. (4 marks)
- (c) Describe **THREE (3)** advantages of cloud storage. (6 marks)
- (d) Differentiate between magnetic and optical storage technologies. (4 marks)
- (e) An IT engineer needs to provide an online data storage for his company backup data. Propose a suitable data storage device for the backup purpose in terms of performance and durability. (4 marks)

- END OF QUESTIONS -