



# UTHM

Universiti Tun Hussein Onn Malaysia

## UNIVERSITI TUN HUSSEIN ONN MALAYSIA

### FINAL EXAMINATION SEMESTER II SESSION 2021/2022

- COURSE NAME : FUNDAMENTALS OF MULTIMEDIA  
COMPUTING
- COURSE CODE : BIM 10103
- PROGRAMME CODE : BIM
- EXAMINATION DATE : JULY 2022
- DURATION : 3 HOURS
- INSTRUCTION : 1. ANSWER ALL QUESTIONS.
2. THIS FINAL EXAMINATION IS  
CONDUCTED VIA **CLOSED  
BOOK.**
3. STUDENTS ARE **PROHIBITED** TO  
CONSULT THEIR OWN  
MATERIAL OR ANY EXTERNAL  
RESOURCES DURING THE  
EXAMINATION CONDUCTED VIA  
CLOSED BOOK.

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

TERBUKA

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- Q1** Image file size reduction is important to save storage space, speed up the upload, download, and transfer process, and provide a better user experience. Explain **THREE (3)** strategies to reduce image file size.  
(9 marks)
- Q2** Calculate the file size of a 1-minute recording audio sampled at 44.100 Hz, 16-bit stereo (two tracks).  
(10 marks)
- Q3** Rods and Cones are visual components that contain light-sensitive pigments. List **FIVE (5)** features that distinguish these two components.  
(10 marks)
- Q4** Questions **Q4(a) – Q4(c)** are based on the following scenario.  
You have been requested to upload a video to your faculty's online learning system for one of the coursework projects. Your video resolution is 1980 x 1080 pixels, 24-bit colour, and 30 frames per second, sampled at 48 kHz, 16-bit stereo.
- (a) Calculate the file size of a single frame from your video.  
(2 marks)
- (b) State the formula for determining the size of the audio component for this video.  
(4 marks)
- (c) Calculate the total file size in Megabyte for this 1-second, uncompressed video.  
(10 marks)
- Q5** State **FOUR (4)** methods of creating animation. Explain each one.  
(12 marks)
- Q6** Explain the storyboarding process in producing 3D animation.  
(10 marks)

**Q7** List **TWO (2)** different ways to classify fonts.

(4 marks)

**Q8** Select and describe **THREE (3)** principles of visual design.

(9 marks)

**-END OF QUESTIONS -**