



UTHM

Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION SEMESTER II SESSION 2023/2024

- COURSE NAME : FUNDAMENTALS OF MULTIMEDIA COMPUTING
- COURSE CODE : BIM 10103
- PROGRAMME CODE : BIM
- EXAMINATION DATE : JULY 2024
- DURATION : 3 HOURS
- INSTRUCTIONS :
1. ANSWER ALL QUESTIONS
 2. THIS TEST IS CONDUCTED VIA
 - Open book
 - 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 SEVEN (7) PAGES

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Q1 Which of the following are the strategies least used for reducing video data rate?

- i. Reduce bit depth
- ii. Reduce sampling rate
- iii. Reduce channel numbers of the audio
- iv. Reduce frame per second

- A. i & ii
- B. ii & iv
- C. i, ii, & iii
- D. All the above

(1 mark)

Q2 The following features are **TRUE** for temporal compression in digital video **EXCEPT**

_____.

- A. it is effective if the change between a frame and its previous key frame is small
- B. it reduces data by discarding or altering some of the original data
- C. it compresses well for video that contains continuous motion
- D. it saves more information for selected frames

(1 mark)

Q3 _____ is a process of drawing the frames in between the keyframes to produce a smooth animation.

- A. Interpolating
- B. Keyframing
- C. Intervening
- D. Tweening

(1 mark)

Q4 Which is an animation principle that can control the size, volume, and proportions of the object in a better way ?

- A. Follow Through and Overlapping action
- B. Slow-in and Slow-out action
- C. Pose-to-Pose action
- D. Exaggeration

(1 mark)

Q5 Which of the following statements are **FALSE**?

- i. Serifs are not good for body text.
- ii. San serif is usually used for printed publication.
- iii. Serifs improve readability by leading the eye along the line of type.
- iv. Script is one of the typeface categories.

- A. i & ii
- B. i & iv
- C. ii & iii
- D. iv

(1 mark)

Q6 A font family refers to the different sizes, weights, and variations of a typeface. The purpose of font families is to _____.

- A. create interest for the reader
- B. enable the reader to read easily
- C. highlight personality
- D. evoke mood and tone of the event

(1 mark)

Q7 Which of the following statements are **FALSE** about visual and interaction design?

- i. Navigational link is one of the basic concepts of grouping in web design.
- ii. Judging the contrast between colours of different hues is easy.
- iii. Information should only be conveyed with colour.
- iv. Focal point principle can be applied with the use of contrast such as colour, size, and placement.

- A. i & ii
- B. ii & iii
- C. iii & iv
- D. All the above

(2 marks)

Q8 Following are part of the unity/harmony principle of design **EXCEPT** _____.

- i. contrast and closure
- ii. continuation and repetition
- iii. rhythm and similarity
- iv. proximity and closure

- A. ii
- B. ii & iii
- C. i & iv
- D. i, iii & iv

(2 marks)

Q9 What is the frame aspect ratio for wide-screen format standard definition if the pixel aspect ratio is 1:2 and the frame size is 720 x 480?

- A. 4:3
- B. 16:9
- C. 3:2
- D. 15:8

(2 marks)

Q10 Which type of 3D computer animation that represents the following statements?

- i. Animator specifies rules and initial conditions and runs simulation.
- ii. Allows for optimization and physical simulation.
- iii. Frees animators from generating complex objects and keyframing many objects.
- iv. Used for effect animation for traditional animation and live action films as well as for 3D computer animation.

- A. Procedural animation
- B. Keyframe animation
- C. Motion capture animation
- D. Stop motion animation

(2 marks)

Q11 Following are the criteria for choosing which font to use **EXCEPT** _____.

- A. use serif display with sans serif body type
- B. use sans serif display with serif body type
- C. use only one typeface with variations in style and size
- D. connotation of a particular font type

(2 marks)

Q12 In one of the Gestalt design principles, human perception tends to complete unfinished or partially obscured objects. The principle is called _____.

- A. focal point
- B. emphasis
- C. contrast
- D. closure

(2 marks)

- Q13** _____ is an effect in which a still or moving image is transformed into another.
- A. Tweening
 - B. Cinematic
 - C. Morphing
 - D. Interpolation
- (2 marks)
- Q14** (a) Explain any **TWO (2)** important aspects in video representation.
- (6 marks)
- (b) Calculate the file size (in MB) of an uncompressed video with the following specifications:
- Frame rate: 640 x 480 pixels
 - Colour: 24-bit color
 - Frame per second: 30 fps
 - Time: 1 second long
 - Audio: stereo (2 channels)
 - Audio: 48 kHz, 16-bit
- (10 marks)
- Q15** (a) Apply **THREE (3)** mapping methods in a 3D animation production.
- (6 marks)
- (b) Differentiate between stop motion animation and path animation.
- (6 marks)
- Q16** (a) Discuss **FOUR (4)** design principles for typography.
- (8 marks)
- (d) Suggest **FOUR (4)** criteria of typographic principles should you apply in deciding which font to use.
- (4 marks)
- Q17** (a) List **FOUR (4)** principles of visual organization when dealing with look and feel for general design considerations.
- (4 marks)
- (b) **Figure Q17.1** shows Joe's Graphics business card. Based on **Figure Q17.1**, redesign the business card by implementing proximity design principle.
- (4 marks)

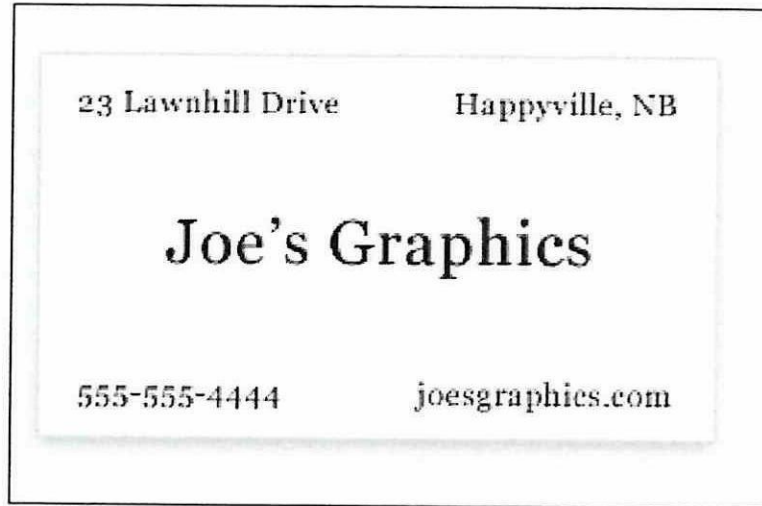


Figure 17.1

- (c) **Figure Q17.2** shows an interface of the FAQ section on a website. Based on **Figure Q17.2**, describe which Gestalt Law applied to this interface. The description must relate to the interface.

(6 marks)

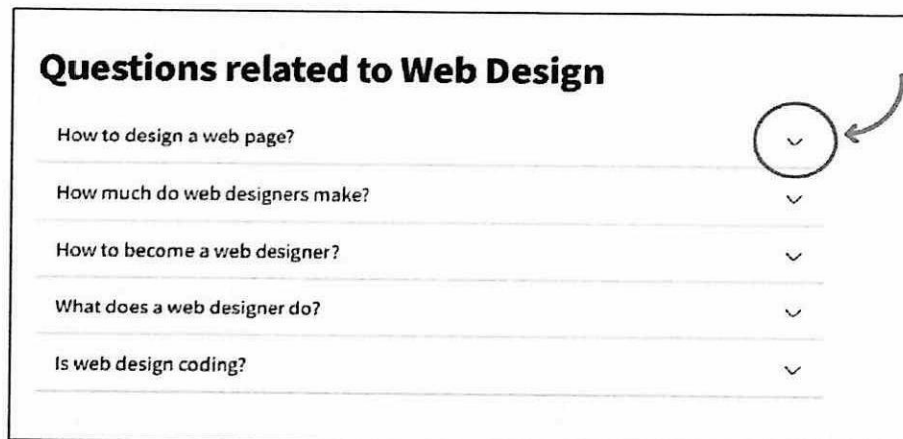


Figure Q17.2

- (d) **Figure Q17.3** shows an interface of a grocery's application. Based on **Figure Q17.3**, describe **THREE (3)** visual design principles applied on the interface. The description must relate to the interface.

(6 marks)

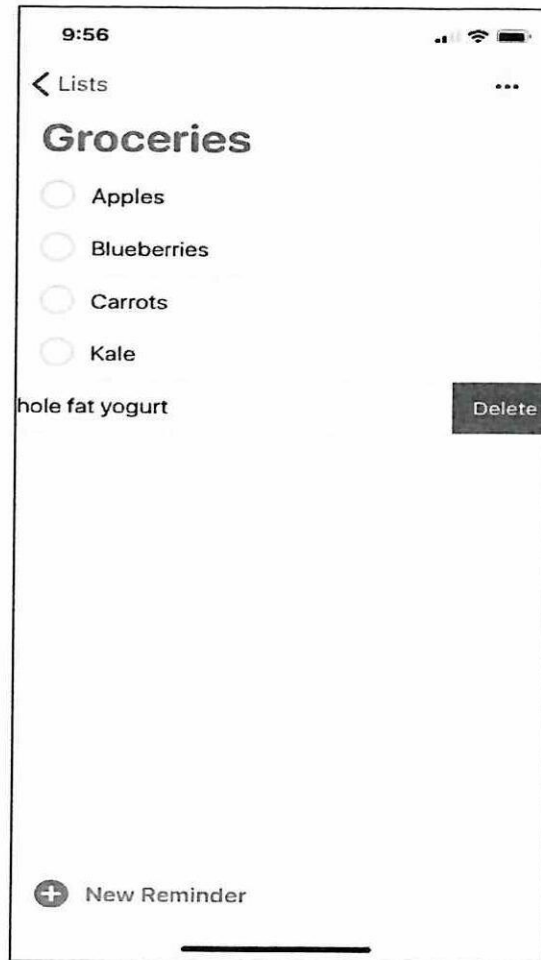


Figure Q17.3

- END OF QUESTIONS -

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