UTHM
Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION
SEMESTER II
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COURSE NAME	:	MULTIMEDIA TECHNOLOGY AND APPLICATION
COURSE CODE	:	BEC 20202
PROGRAMME CODE	:	BEJ
EXAMINATION DATE	:	JUNE / JULY 2018
DURATION	:	1 HOUR 30 MINUTES
INSTRUCTION	:	ANSWER **ALL** QUESTIONS

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THIS QUESTION PAPER CONSISTS OF **TWELVE (12)** PAGES

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Q1 To make a good multimedia you need
(A) Hardware and software
(B) Good ideas
(C) Talent and skills
(D) All of the above

Q2 Multimedia becomes interactive multimedia when:
(A) The user has some control over what information is viewed and when it is viewed
(B) The information is displayed by computer with touchscreen or other input device
(C) Quizzes and tests with evaluations and scoring are included
(D) None of the above

Q3 Choose the requirement for multimedia hardware
(A) Sound card
(B) Video capture card
(C) Large size main memory
(D) All of the above

Q4 Which one is not a multimedia device?
(A) TV system
(B) A book having only text and no diagram
(C) A modern personal computer
(D) None of the above

Q5 VR stands for
(A) Virtual reality
(B) Visual response
(C) Variable rate
(D) None of the above

Q6 Advances in technology brought about, except
(A) Faster desktop computers
(B) Increased working memory capacity in computer
(C) Higher data storage capacity
(D) Bitcoin popularity increased

Q7 Since the late 1980's, multimedia technology and applications took parts in our lives, except
(A) At home, wide variety of games and encyclopedia
(B) At office, a lot of marketing applications
(C) At school, interactive softwares assist students
(D) At hospital, car parking spaces increase drastically.

Q8 Choose an example of hardware or software that is not being used to communicate with others:
(A) Tablet
(B) Disc
(C) CPU
(D) Middleware

Q9 What is the definition of bitmapped graphics?
(A) The image is modelled directly by an array logical pixels value.
(B) The image is modelled directly by an array logical colour value.
(C) The image is modelled directly by an array logical height value.
(D) The image is modelled directly by an array logical width value.

Q10 What is the definition of vector graphics?
(A) The image stored as a mathematical description of a collection of individual lines, curves and shapes making up the image.
(B) The image stored as a mathematical description of a collection of individual lines only making up the image.
(C) The image stored as a mathematical description of a collection of individual curves only making up the image.
(D) The image stored as a mathematical description of a collection of individual shapes only making up the image.

Q11 If a monitor has a pixel addressability of 1280×1024, how big will the image be if displayed on 300 dpi monitor?
(A) Xinch = 4.27 , Yinch = 3.41
(B) Xinch = 4.07 , Yinch = 3.01
(C) Xinch = 4.17 , Yinch = 3.11
(D) Xinch = 4.70 , Yinch = 3.41

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Q12 If a monitor has a pixel addressability of 1280 × 1024, how big will the image be if displayed on 120 dpi monitor?
(A) Xinch = 10.7 , Yinch = 8.53
(B) Xinch = 10.07 , Yinch = 8.55
(C) Xinch = 8.53 , Yinch = 10.7
(D) Xinch = 8.53 , Yinch = 8.53

Q13 If a monitor has a pixel addressability of 1280 × 1024? Calculate the minimum amount of display memory required in kilobytes (KB) on its adapter card to display an image of RGB color mode on the screen.
(A) 3,840 Kbytes
(B) 3,845 Kbytes
(C) 3,800 Kbytes
(D) 31,457,280 bits

Q14 If a monitor has a pixel addressability of 1280 × 1024? Calculate the minimum amount of display memory required in kilobytes (KB) on its adapter card to display an image of 8-bit Grayscale color mode on the screen.
(A) 3,840 Kbytes
(B) 1,280 Kbytes
(C) 1,024 Kbytes
(D) 1,457,280 bits

Q15 What is CMYK colour model based on?
(A) Light-absorbing quality of ink printed on paper
(B) RGB colour brightness
(C) Grayscale intensity
(D) Human perception of printed colour

Q16 You are required to design and develop a web-based application. Propose a software to be used to design and develop the website
(A) Adobe Audition
(B) Internet Explorer
(C) Adobe Dreamweaver
(D) Adobe Premiere

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Q17 The developed multimedia product is evaluated just prior to final release and the product should be relatively bug free and complete. The testing process is called _____ testing.
(A) Alpha
(B) Beta
(C) Gamma
(D) Prototype

Q18 Determine which is NOT the detail of planning phase.
(A) Manage risks that would hinder the project
(B) Establish and monitor a project budget
(C) Allocate personnel and equipment resources
(D) Describing user interaction with content and application

Q19 Determine which is the description of storyboarding.
(A) Process of defining message
(B) Involve screen layouts that describe content, flow and format
(C) Describes what the application is going to do and how it is going to do it in terms of content
(D) All of above

Q20 Step 1 to Step 3 are the flow of educational product development process called _____ .

   Step 1: Starts out with a menu of choices that leads to content
   Step 2: Followed by testing to determine what has been learned
   Step 3: Depending on the testing, the user is led through review material and then directed to the next topic

(A) Storyboarding
(B) Planning
(C) Content Production
(D) Maintenance

Q21 Prototyping is a part of the development process. Determine which statement describes this process
(A) Usually discarded after they have been used
(B) Limited versions of a final product with incomplete features
(C) Ensure that final product is complete and fully functional
(D) All of above

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Q22 You are required to develop a multimedia product which need to link with a particular database. Propose the most suitable authoring tool to develop your product.
(A) Complex interactive authoring tool
(B) Programming language
(C) Simple interactive authoring tool
(D) Simple authoring tool

Q23 What compression method provides some loss of quality?
(A) Lossy
(B) Loss less
(C) Cell based
(D) Object based

Q24 Select which encoding is an example of lossless compression.
(A) RLE
(B) Entropy encoding
(C) Arithmetic encoding
(D) All of above

Q25 Calculate the compression ratio of the run-length encoding for the following sequence.

255 255 258 243 243 244 243 245 243 247
240 242 240 243 240 239 239 239 239 239

(A) 0.714 /1
(B) 1/0.714
(C) 0.5/1
(D) 1/0.5

Q26 Given a run-length encoding for a sequence of data is (5, 10). Produce the original sequence for the following run-length encoding.
(A) 5 10
(B) 5 5 5 5 5 5 5 5 5 5
(C) 10 10 10 10 10
(D) 10 5

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Q27 Given a run-length encoding for a sequence of 20 data is (255, 20). Calculate the file size for the compressed data.
(A) 2 Bytes
(B) 2 bits
(C) 5100 bits
(D) 637.5 Bytes

Q28 Choose the correct statement that provide the similarity of Entropy encoding and arithmetic encoding compression methods.
(A) Both encoding methods are based on a statistical analysis of the repetition of symbols in a file.
(B) Both encoding methods are based on a statistical analysis of the frequency of symbols in a file.
(C) Both encoding methods are based on a statistical analysis of the recurrence of symbols in a file.
(D) All of the above

Q29 Statements below describe the characteristic of the Entropy encoding, except
(A) It achieves compression by encoding more frequently-occurring symbols with shorter code words, while using more bits for symbols that occur infrequently.
(B) One code word will be assigned to each symbol.
(C) It encodes an entire file (or string of symbols) as one entity/value into single floating point numbers between 0 and 1.
(D) None of the above

Q30 Video-on-demand refers to
(A) TV channels that allow consumers to order programs over fiber-optic lines
(B) a service that delivers videotapes to consumers for a monthly fee.
(C) a way to change the content of programs while viewing them.
(D) the ability to order network programming without commercials.

Q31 The following statement is TRUE, except
(A) Composite video combined all video components into one signal.
(B) Component video breaks different components of video such as color, brightness and synchronization in separate signals.
(C) Component video signal is split into audio and video signals.
(D) Component video cables are often paired with audio cables.

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Q32 The term standard digital television refers to
(A) A standard for digital broadcasting that allows six channels to fit in the frequency space occupied by one analog signal.
(B) A standard for high quality digital broadcasting that features a high resolution picture, wide screen format and enhanced sound.
(C) A digital TV broadcast that gives a highly improved signal compared to traditional analog ones.
(D) A set-top box that converts digital signals into analog signals that all sets can play.

Q33 Referring to HDTV, which one of the following statements is FALSE?
(A) HDTV offers significantly better resolution (image definition) than conventional standard definition video signals.
(B) HDTV has big improvement in colour fidelity and lack of colour interference that is such a problem with composite NTSC and PAL video.
(C) HDTV offers at least double the vertical and horizontal resolution of Standard Definition TV.
(D) The termed 720p and 1080i are two format which commonly used in HDTV.

Q34 Which of the following statements describe scanning method in standard television?
    i. Interlaced scan displays the frame by scanning the lines of a frame in two passes.
    ii. Progressive scan displays the frame by scanning the lines of a frame in one pass from top to bottom.
    iii. Interlaced scanning only displays half the number of lines in an image.
    iv. Progressive scanning increase the flickering effect for people to watch television more comfortable.

(A) i and ii
(B) i and iii
(C) ii and iii
(D) i, ii and iii

Q35 If video is sampled at 25 frames per second in duration of 1 hour, calculate the uncompressed video file size in Gbytes (GB) for
    i. Standard video (24 bits) frame size of 640 x 480
    ii. True (full) HD video with frame size 1920 x 1080.

(A) (i) 77.2MB, (ii) 521.4MB
(B) (i) 77.2 GB, (ii) 521.4GB
(C) (i) 56.2 MB, (ii) 56.2 MB
(D) (i) 56.2 GB, (ii) 56.2 GB

Q36 Which of the following statements conclude your finding in (**Q35**)?
    i.   Video file size only affected by the video frame size
    ii.   Higher bit rate will produce high quality video
    iii. Video file size does not affected by the bit rate.
    iv. Higher number of frames displayed per second will affects the smoothness of video playback

    (A) i and ii
    (B) i and iv
    (C) ii and iii
    (D) i, ii and iv

Q37 Which one is the major consideration when selecting a suitable typeface?
    (A) Case
    (B) Purpose
    (C) Visibility
    (D) Readability

Q38 Which part of the letterform image that extends above the x-height?
    (A) Descender
    (B) Ascender
    (C) Baseline
    (D) Beardline

Q39 Which one is the correct HTML for creating a hyperlink?
    (A) uthm
    (B) <a> http://www.uthm.edu.my
    (C) uthm
    (D) uthm

Q40 Why the point size for body text in print is smaller than on the web?
    (A) Because larger font size help to compensate reader who usually read screens from further away than read printed material.
    (B) Because screen fonts are usually rendered with big number of pixels.
    (C) Because smaller point size also reduce the line spacing and line length.
    (D) Because Editors need to control the thickness of newspaper.

Q41 Choose the correct statements that describe the terms of kerning?
  i. The process of adjusting the space between certain character pairs to minimize gap for the best appearance and readability
  ii. Text in the web page can used letter spacing CSS property for letter-by-letter kerning adjustment.
  iii. Long passages of text in the newspapers have minimum amount of kerning.
  iv. Some bad kerning also good for branding and marketing purposes.

(A) i and iii
(B) ii and iii
(C) i and ii
(D) All of the above

Q42 Choose the correct statements that describe about typeface between printed media and online website?
  i. Sans Serif font is good for headings on newspaper, while serif fonts are great for body text in printed media.
  ii. Serif font in printed media help the eye to move forward and easy reading.
  iii. Serif font for online media tends to blur together and making letters difficult to distinguish.
  iv. Serif type is more suitable for body text online also great for website headings.

(A) i and ii
(B) ii and iii
(C) i and iv
(D) i, ii and iii

Q43 Which of the following statements are TRUE in terms of alignment?
  i. The newspaper have justified text to form as line separator, while web version just have standard long lines.
  ii. The newspaper keep long lines so that readers can easily track the track of the line they have to read next.
  iii. Justified text on the web is totally does not practical.
  iv. Reading justified text on a screen is difficult compared to justified text in a newspaper.

(A) i and iv
(B) i and ii
(C) i and iii
(D) i, ii and iii

Q44 Which of the following statements about sounds are TRUE?
  i. A form of energy capable of flowing from one place to another through a material medium.
  ii. It is generated from vibrating objects when part of the energy of vibration is converted to sound energy.
  iii. Sound is perceived through the different sense of hearing.
  iv. A pleasant sound has irregular wave pattern repeated over and over.

  (A) i and ii
  (B) ii and iii
  (C) i and iv
  (D) i, ii and iii

Q45 Which of the following statements about the frequency of sound wave are TRUE?
  i. The number of periodic waveforms that occur in a second.
  ii. The distance between the peaks of a waveform.
  iii. The timing between two similar sound waves.
  iv. The more frequent vibration occurs the higher the pitch of the sound.

  (A) i and ii
  (B) ii and iii
  (C) i and iv
  (D) i, ii and iii

Q46 The process of converting an analog sound to numbers is called _____.
  (A) sound sampling
  (B) sample rate
  (C) binary modulation
  (D) analogous

Q47 The number of bits used to record the value of a sample in a digitized signal is called _____.
  (A) resolution
  (B) quantization
  (C) jitter
  (D) parity bit

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Q48 Which of the following statements describe about the correct steps to produce digital audio?

    i. Microphones translate analog signals into electrical impulses.

    ii. An analog-to-digital converter converts electrical signals to binary numbers that can be stored, understood and manipulated by processor.

    iii. After sound is digitized, it will probably need to be modified to remove noise and pauses.

    iv. Digitization is done so that digital sound can be heard through speakers.

(A) i and ii

(B) i, ii and iii

(C) ii, iii and iv

(D) All of the above

Q49 You are given an audio CD which its sampling is done at 44.1kHz, 2-byte resolution and mono mode. The CD has 4 minutes of sound clip. Calculate the uncompressed audio's file size in MB (megabytes).

(A) 20.2 MB

(B) 20, 671 MB

(C) 21.2 MB

(D) 21, 168 MB

Q50 Some digital sound processing methods change the original sound, thus they are considered destructive. Choose a reason why these methods are considered destructive?

(A) The processing methods destroy the origin source of file.

(B) The processing methods occasionally alter the original file.

(C) The processing methods alter the original file for good.

(D) The processing methods modified the original file by destroying the noise.

- END OF QUESTIONS -