

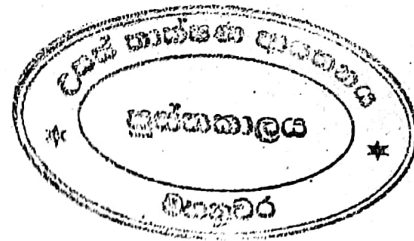


SLIATE

SRI LANKA INSTITUTE OF ADVANCED TECHNOLOGICAL EDUCATION

(Established in the Ministry of Higher Education, vide in Act No. 29 of 1995)

PR



03

Higher National Diploma in Information Technology

First Year, Second Semester – 2017

IT 2002 /HNDIT1210 - Graphics and Multimedia

Instructions for Candidates:

Answer any five questions

All questions carry equal marks

No. of questions : 06

No. of pages : Three pages

Time : Three (03) hours

Q1.

- i. What is meant by 'Multimedia'? (02 Marks)
 - ii. Explain the following terms
 - a. Hypertext
 - b. Hypermedia (04 Marks)
 - iii. "Modalities are the sensory systems through which a multimedia activity occurs"
Mention two(02) types of modalities (04 Marks)
 - iv. Write four (04) components of a multimedia system. (04 Marks)
 - v. There are several features in multimedia systems. Mention and Briefly explain three of them. (06 Marks)
- (Total 20 Marks)

Q2.

- i. What are the two types of multimedia applications? (02 Marks)
 - ii. What are computer graphics? Write two reasons why we need to study graphics? (04 Marks)
 - iii. Explain the purpose of graphic application programs mentioned below
 - a. Paint program (04 Marks)
 - b. CAD software (04 Marks)
 - iv. Briefly explain about raster graphics and vector graphics
 - v. State three(03) advantages and three(03) disadvantages of raster graphics (06 Marks)
- (Total 20 Marks)

Q3.

- i. What is "TYPEFACE" (02 Marks)
 - ii. There are several types of Typeface Spacing. Write four (04) types of typeface spacing. (04 Marks)
 - iii. Multimedia project should be tested and review before delivering it to a customer. Write four (04) things we have to ensure before delivering a multimedia system to the customer (04 Marks)
 - iv. An archive file is a file that is composed of one or more computer files along with metadata. Write four (04) advantages of file archiving (04 Marks)
 - v. Briefly explain about Kerning, Leading and tracking (06 Marks)
- (Total 20 Marks)

Q4.

- i. What is the color theory in multimedia system? (02 Marks)
 - ii. Briefly explain about saturation of colors (04 Marks)
 - iii. What are the four (04) properties of a sound wave (04 Marks)
 - iv. A 4 minutes and 08 seconds stereo song has to be recorded in DVD quality. (Sampling frequency = 44100Hz (44.1 KHz) and sampling depth: 24 bit) How much disk space would be taken by the song?
[Hint : file size (bits) = sampling frequency (Hz) x sampling depth (bits) x length of sound(s) x channels] (04 Marks)
 - v. What is a MIDI file? Write four (04) advantages of a MIDI File (06 Marks)
- (Total 20 Marks)

Q5.

- i. What is video? (02 Marks)
 - ii. What are the differences between digital video and analog video? (04 Marks)
 - iii. Write four (04) things we have to consider when compressing a video? (04 Marks)
 - iv. Briefly explain the animation types mentioned below
 - a. 3D Animation (04 Marks)
 - b. Cell Animation (06 Marks)
 - v. Briefly explain three (03) animation principles (06 Marks)
- (Total 20 Marks)

Q5.

- i. What are the two factors which decide the size of an Image file? (02 Marks)
- ii. Compare Lossless and Lossy Compression (04 Marks)
- iii. Expand following Abbreviations
 - a. BMP
 - b. GIF
 - c. PNG
 - d. PICT
- iv. What is the difference between "jpg" and "jpeg" files? (04 Marks)
- v. Encode the following image using run length method as "0" for white and "1" for black (06 Marks)

