



**NATIONAL OPEN UNIVERSITY OF NIGERIA,
PLOT 91 CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESSWAY, JABI – ABUJA
FACULTY OF SCIENCES**

APRIL 2019, EXAMINATION

COURSE CODE: CIT 735

COURSE CREDIT: 3

COURSE TITLE: APPLICATION SOFTWARE DESIGN AND MULTIMEDIA

TIME ALLOWED: 2½ HOURS

INSTRUCTION: ANSWER QUESTION ONE (1) AND ANY OTHER FOUR (4) QUESTIONS

QUESTIONS

1a. You have just been employed in an Animation firm as an Application Software and Multimedia Designer. You are provided with the following information: a video data file of size 15MB. If after compression, the video size becomes 12.5 MB. Determine the following:

- i. the compression ratio **(3 marks)**
- ii. the figure of merit **(3 marks)**

1b. Enumerate any two (2) challenges of multimedia system design. (2 marks)

1c. State any four (4) tips you would adhere to while maintaining the legibility of the multimedia presentation. (4 marks)

1d. The loop of interaction in Application Software Design and Multimedia encompasses a number of aspects. Name and briefly describe any five (5) of these aspects. (10 marks)

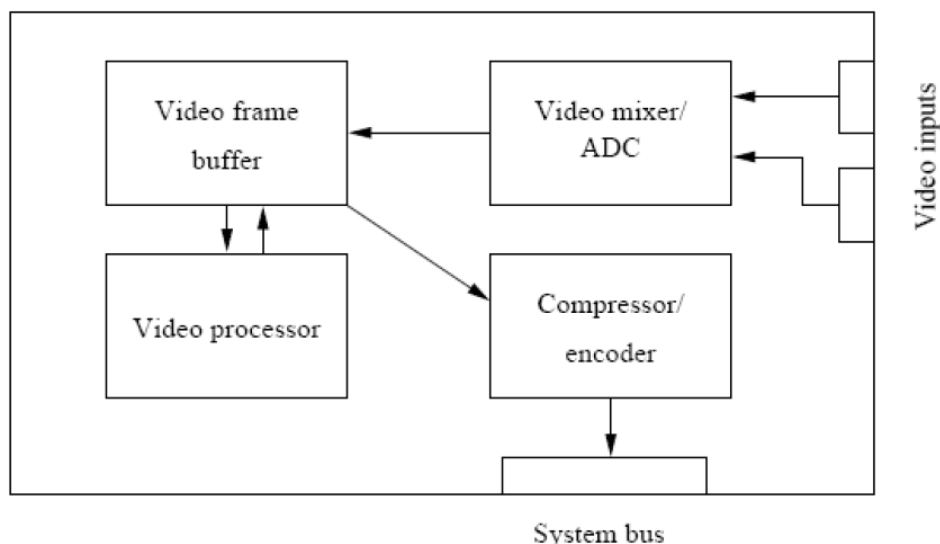
[Total = 22 marks]

2a. E-Learning, which is closely linked with application software design and multimedia, has been found to be valuable for facilitating learning in schools and as a brilliant setting for effective corporate training. Explain five good reasons to support this statement. (10 marks)

2b. State the main rationale for Multimedia Learning. (2 marks)

[Total = 12 marks]

3a. Carefully go through the figure below and answer the questions that follow:



i. Give an appropriate title for the figure. (1 mark)

State the key role/function of the components of the figure:

- ii. the Compressor. (1 mark)
- iii. the Video Frame Buffer. (1 mark)
- iv the Video Inputs. (1 mark)
- v. the Video Processor? (1 mark)
- vi. Video Input Mixer. (1 mark)

3b. Explain the concept of 'Digitization of Video'. (4 marks)

3c. Given a scam video system transmitting at 25 frames/s, with sample taken at 360 x 240 resolutions at 16 bits per pixel. Determine the raw video size. (2 marks)

[Total = 12 marks]

4a. In clear terms, outline how to accomplish the rollover effect in DHTML. (7 marks)

4b. Give the full meaning of the acronym DHTML. (1 mark)

4c. Basically, online collaboration is based on four key principles. State them. (4 marks)

[Total = 12 marks]

5a. The Graphical User Interface (GUI) is generally designed for the precise requirements of a vertical market. Write down five (5) classic forms of GUIs. (5 marks)

5b. State the two (2) critical points that must be considered in the course of designing a user interface. (4 marks)

5c. Give a brief description of the concept of 'Zooming User Interface'. (3 marks)

[Total = 12 marks]

6a. In the context of User-centred design, write short notes on the following:

- i. Audience (2 mark)
- ii. Body storming (2 mark)
- iii. Context. (2 mark)
- iv. Focus group (2 mark)
- v. Rhetorical situation. (2 mark)

- 6b. Compute the dimension of a video having a scan video system transmitting at 44 frames/s with sample taken at 520 x 310 resolutions at 32 bits per pixel. (2 marks)

[Total = 12 marks]