AMIETE - CS/IT (OLD SCHEME)

Code: AC21 / AT12 Time: 3 Hours

Subject: MULTIMEDIA SYS Max. Marks.

DECEMBER 2010

NOTE: There are 9 Questions in all.

- StudentBounts.com • Question 1 is compulsory and carries 20 marks. Answer to Q.1 must be written in the space provided for it in the answer book supplied and nowhere else.
- The answer sheet for the Q.1 will be collected by the invigilator after half an hour of the commencement of the examination.
- Out of the remaining EIGHT Questions answer any FIVE Questions. Each • question carries 16 marks.
- Any required data not explicitly given, may be suitably assumed and stated.

0.1 Choose the correct or the best alternative in the following:

 (2×10)

- a. What are the important format parameters for specification of audio are
 - (A) Sampling rate and Sample Quantization
 - (**B**) Data format and Hardware
 - (C) Synthesizer and channels
 - (D) Amplitude and loudness
- b. Hypermedia includes

(A) Graphics and images	(B) Continuous media
(C) Text	(D) All of them

c. The storage requirement of an uncompressed audio signal of telephone quality for one second playback, when it is sampled at 8kHz and quantized with 8bits/sample is

(A) 64kbits	(B) 128kbits
(C) 256kbits	(D) 64bits

d. Identify the variations not supported by JPEG standard

(A) Sequential mode	(B) Progressive mode
(C) Lossless mode	(D) None of the above

e. A message sent to all nodes in the domain is called in network terminology as

(A) Unicast	(B) Multicast
(C) Broadcast	(D) All of them

- f. Media Control Interface is a service provided by
 - (A) Windows Multimedia Extensions
 - (B) JPEG
 - (C) MIDI
 - (D) Windows Programming environment

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AMIETE $_{-}$ CS/IT (OI D SCHEME)

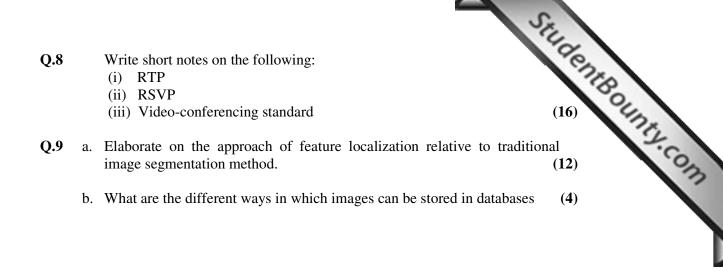
	d by (B) UDP (D) IP d by Real-time Transport Protocol (RTP) (B) Source Identification (D) Resource Reservation	
g. Reliable data transfer is provided	d by	
(A) TCP	(B) UDP	
(C) LAN	(D) IP	
h. Identify the service not provided	l by Real-time Transport Protocol (RTP)	2.0
(A) Error Detection	(B) Source Identification	
(C) Framing	(D) Resource Reservation	
i. The usual bit rate, which ATM s	switches are able to switch, is around	
(A) 150Mbits/s	(B) 100Mbits/s	
(C) 256Mbits/s	(D) 150kbits/s	
j. Recall is		
(A) Desired images returned	(B) <u>All retrieved images</u>	
(A) All retrieved images	(b) $\overline{\text{Desired images returned}}$	
(C) <u>Desired images returned</u>	(D) <u>All desired images</u>	
All desired images	Desired images returned	

Answer any FIVE Questions out of EIGHT Questions. Each question carries 16 marks.

Q.2	a.	Write about the "Notion of Synchronization" in multimedia systems	(8)
	b.	How is Synchronization achieved in a Distributed Environment	(8)
Q.3		Explain JPEG Encoding and decoding. (1	16)
Q.4	a.	List and explain the four major steps of data compression	(8)
	b.	State the need for Global Motion Compensation and write about the four major components	(8)
Q.5	a.	Distinguish between MPEG1 and H.261	(8)
	b.	Explain with neat block diagram various steps of JPEG 2000 compression.	(8)
Q.6	a.	Differentiate between hyper media and hyper text.	(8)
	b.	Compare VOP based coding with Frame based coding.	(8)
Q.7		Justify with respect to storage devices, file structures and placement on disk, multimedia system is different from the conventional system (1	16)

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