CMR Institute of Technology
Department of ECE
17EC741- Multimedia Communication
IAT-3- December 2020
Scheme and Solution

S.no	Question	Answer	Marks	CO	Bloom's Level
1	Three features which determine the perception of a signal by the ear are	Pitch, Period, Loudness	1	CO2	L1
2	A strong signal may reduce the level of sensitivity of the ear to other signals which are near to it in frequency	Frequency masking	1	CO2	L1
3	When the ear hears a loud sound, it takes a short but finite time before it can hear a quieter sound	Temporal masking	1	CO2	L1
4	The number of frame between successive I-frames	GOP	1	CO2	L1
5	A new frame type as such two neighboring are encoded as if they were a single frame	P- and B-frame	1	CO2	L1
6	------------ is only used in a specific type of application like for use in movie/video-on-demand application	D-frame	1	CO2	L1
7	Derive a suitable reordered sequence for the MPEG-1 Frame sequence IBBPBBPBBPBBPBBI….. that ensures firstly, only two frames must be stored in the decoder, and secondly, the required I and/or P frames are available to decode each P- and B-frame as they received	IPBBPBBPBBIBBPBB	2	CO2	L3
8	In MPEG-4 each video frame is segmented into a number of –	Video object planes	1	CO2	L1
9	MPEG-2 supports –levels and –	4 &5	1	CO2	L1

	profiles with each level				
10	A digitized video is to be compressed using MPEG 1 standard. Assuming a frame sequence of IBBPBBPBBPBBI and average compression ratios of 10:1 (I), 20:1 (P) and 50:1 (B). Derive the PAL frame size with compression	41.604 k bits per frame	2	CO2	L3
11	No of macro blocks in a slice are	22	1	CO2	L1
12	Scheme that aims at minimizing the effects of errors on neighboring GOBs	Error tracking, Independent segment decoding, Reference picture selection	1	CO2	L1
13	--------------indicates the offset of the macro block being encoded and the location of the block of pixel in the reference frame that produces close match	Motion vector	1	CO2	L1
14	Reconstruction Scheme that does not use timestamp to determine packet delays through the network	Null timing information	1	CO3	L1
15	Transfer of video signals across Asynchronous time division multiplex networks	Packet Video	1	CO3	L1
16	Video transmissions use	circuit switched channel	1	CO3	L1
17	--------networks provide both flexibility and efficiency of computer networks while providing sufficient guarantees to permit reliable transmission of real time services.	ATM network	1	CO3	L1
18	Compression scheme where multiple data streams / layers are	Layered Video coding	1	CO3	L1

	created when compressing the original video stream.				
19	The sampling rate of the upper subband signal in ADPCM with a operating bit rate of 64 kbps is	16ksps	1	CO2	L1
20	Coding scheme that regenerates a sound that is perceptually comparable with the source audio signal.	Linear predictive coding	1	CO2	L1
21	Model that exploits the limitations of the human ear	Psychoacoustic model	1	CO2	L1
22	The approach for delivering multiple levels of quality across multiple networks connections is to encode the video signal with a set of independent encoders each producing a different output rate is known as	Simulcast	1	CO3	L1
23	Auditory masking is used in _____ Codec	MP3	1	CO2	L1
24	What is the main advantage of Dolby over MPEG	fixed bit allocation	1	CO2	L1
25	Which type of frame is used for MPEG_____	P,I and B Frame	1	CO2	L1
26	Most common compression technique that is used to create CD-quality audio is based on the perceptual encoding technique is called_____	Perceptual Encoding	1	CO2	L1
27	In Audio and Video Compression, each frame is divided into small grids, called picture elements or	Pixels	1	CO2	L1
28	In Audio and Video Compression, voice is sampled at 8000 samples per second with_____	8 bits per sample	1	CO2	L1
29	In real time interactive audio-video, conferencing requires two way communication between_____	Receiver & Sender	1	CO3	L1

30	DPCM is a technique_____	All of the above	1	CO2	L1
31	DPCM encodes the PCM values based on	Difference between the current and predicted value	1	CO2	L1
32	Adaptive DPCM is used to	Decrease bandwidth	1	CO2	L1
33	_____ is about varying the no. of bits used for the difference signal depending on its amplitude.	Adaptive differential PCM	1	CO2	L1
34	Vocal track analysis and waveform extraction is used in _____	Linear predictive coding	1	CO2	L1
35	Psychoacoustic model used to identify those signals that suffer from _____	Masking effects	1	CO2	L1
36	Perceptual encoding is based on science of	Psychoacoustics	1	CO2	L1
37	For speech, we need to compress digitize signals at	64 Khz	1	CO2	L1
38	In Real Time Interactive Audio Video, a sequence number on each packet is required for	real-time traffic	1	CO3	L1
39	In Video Compression, an independent frame that is not related to any other frame is called	I- Frame	1	CO2	L1
40	Dolby AC-2 Audio Compression uses	Backward adaptive bit allocation mode	1	CO2	L1
41	The number of frames between a P-Frame and the immediately preceding I- or P- frame is known as	Prediction Span	1	CO2	L1
42	H.261 makes use of	Both I and P Frames	1	CO2	L1
43	The Language used to describe and modify objects is called as	Binary format for scenes	1	CO2	L1

44	The purpose of FlexMux layer is	To identify and route the PES to the related Synchronization Block	1	CO2	L1
45	To minimize bit errors MPEG-4 makes use of	Reversible Variable Length Codes	1	CO2	L1
46	The structure of the video signal comprises of :	Sequence, Frame, Field, Row, Pixel, Color component, bit	1	CO3	L1
47	Multiresolution coding schemes enables	Both (a) and (b)	1	CO3	L1
48	In packet voice, call blocking facility is a function of	Required average Bandwidth	1	CO3	L1