Seat No.:	Enrolment No.
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## **GUJARAT TECHNOLOGICAL UNIVERSITY**

BE - SEMESTER- VII• EXAMINATION-SUMMER 2015

	U	Code: 173206 Date:06/05/2015	5
Tiı	me:2.	Name: Audio Video Engineering 30 pm to 5.00 pm  Total Marks:	70
ins	2.	ons: Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a)	What is the working principle loud speaker? List different types of loud speaker and write characteristics of a good loudspeaker.	07
	<b>(b)</b>	Draw and explain block diagram of PA system	07
Q.2	(a)	Draw and explain simplified block diagram of monochrome TV transmitter and receiver	07
	<b>(b)</b>	Sketch composite video signal waveform for at least three successive lines and indicate extreme white level , blanking level , pedestal height and sync pulse level on it with brief explanation	07
		OR	
	(b)	(i) What do you understand by compatibility between monochrome and colour TV systems and how is this achieved. Why (G-Y) is not chosen for transmission?	07
		(ii) Justice the choice of 625 lines for TV transmission. Why the total number of lines kept odd in all television systems	
Q.3	(a)	What is acoustics? Discuss architectural acoustics for auditorium design	07
	<b>(b)</b>	Explain the working principle of moving coil microphone with the help of neat sketch. Write its characteristics and applications.	07
		OR	
Q.3	(a)	Write functions of video IF amplifier and draw overall IF response curve of a TV receiver tuned to channel-3 (band-I). Show all frequencies on the curve.	07
	<b>(b)</b>	What are the functions of a typical TV tuner? Draw and explain block diagram of VHF tuner.	07
Q.4	(a)	Give list of Television Receiver Servicing equipments and explain any one in detail with the help of block diagram	07
	<b>(b)</b>	Draw block diagram of PAL-D colour receiver.	07

Q.4	(a)	Explain Briefly : (i) Headphone types (ii) Sound cards and Mixers.	07
	<b>(b)</b>	Briefly explain following terms related to Audio Video Systems	07
		<ul> <li>(i) Loudness</li> <li>(ii) Brightness</li> <li>(iii) Resolution</li> <li>(iv) Contrast</li> <li>(v) Line in/out</li> <li>(vi) Aux. in/out</li> <li>(vii) Sone</li> </ul>	
Q.5	(a)	Give comparison of NTSC , PAL and SECAM colour systems	07
	<b>(b)</b>	Explain the basics of magnetic recording with necessary diagram.	07
		OR	
Q.5	(a)	Explain briefly for television signal transmission and propagation :     (i) Standard channel bandwidth     (ii) Interference suffered by TV signals	07
	<b>(b)</b>	Explain how the luminance and colour difference signals are developed from Camera outputs. Why is it necessary to set $Y = 0.3R + 0.59G + 0.11B$ ?	07