Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
BE – SEMESTER – VI (OLD).EXAMINATION – WINTER 2016

Subject Code: 161002   **Date: 26/10/2016**
Subject Name: Audio - Video Systems
Time: 02:30 AM to 05:00 PM   **Total Marks: 70**
Instructions:
1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	Define scanning. Why it is required? Explain interlaced scanning in detail with its advantages.	**07**
	(b)	List the types of loud speakers used in sound engineering and explain any two in detail.	**07**
Q.2	**(a)**	Define following terms with respect to audio and video systems. 1) Pitch 2) Timber 3) Loudness 4) Hue 5) Saturation 6) Luminance Signal 7) Phon	**07**
	(b)	Draw the block diagram of monochrome TV receiver and explain each block.	**07**
		OR	
	(b)	Explain any two types of microphones with neat diagram and its merits and demerits.	**07**
Q.3	**(a)**	Compare single ended verses push-pull amplifiers. Draw and explain the circuit diagram for class-B push-pull amplifier. Derive the equation of efficiency for the same.	**07**
	(b)	Discuss AGC circuit and comb filter in detail.	**07**
		OR	
Q.3	**(a)**	Explain constant current source and current mirror circuits. Why it is required?	**07**
	(b)	Discuss different types of interference suffered by TV channels in detail.	**07**
Q.4	**(a)**	Draw the composite video signal and explain each part of it.	**07**
	(b)	Discuss in brief digital audio broadcasting and PA system.	**07**
		OR	
Q.4	**(a)**	Write a short note on HDTV.	**07**
	(b)	Compare NTSC, PAL and SECAM colour television systems.	**07**
Q.5	**(a)**	Why video compression is required? Explain any two video compression technique.	**07**
	(b)	Explain and compare LED and LCD TV.	**07**
		OR	
Q.5	**(a)**	Write a short note on cable television network.	**07**
	(b)	Discuss different types of video interfaces in detail.	**07**

****