Seat No.:	Enrolment No.
Seat No.:	Elifolitett No.

## **GUJARAT TECHNOLOGICAL UNIVERSITY**

BE - SEMESTER-VI- EXAMINATION - SUMMER 2016

Subject Code:161002 Date: 21/05/2016 Subject Name: Audio - Video Systems Time: 10:30 AM to 01:00 PM **Total Marks: 70 Instructions:** 1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks. 0.1 (a) Draw the block diagram of color TV transmitter and explain each blocks in 07 detail. **(b)** Write a short note on sound, ear and cochlea with neat diagrams. 07 0.2 What is interlaced scanning? How it is done? What are its merits over **07** simple (progressive) scanning? Define Resolution, Classify it & Discuss about standard channel bandwidth 07 for TV. OR (b) Explain how the luminance and color difference signals are developed 07 from Camera outputs. Why is it necessary to set Y = 0.3R + 0.59G + 0.000.11B? What is the working principle of microphone? List different types of 0.3 07 microphones and write applications of each. **(b)** Draw and explain The Composite Video Signal in detail. **07** OR (a) What is characteristic impedance of loudspeaker? Explain various types of 07 Q.3 loudspeakers with diagram. (b) Explain encoding of color difference signals and phase error cancellation 07 in PAL Television system. 07 0.4 (a) Give comparison of (i) Video CD and DVD (ii) MP3 and Blue ray disc (iii) JPEG and MPEG (b) List the types of Television systems and standard used worldwide and 07 Explain it. OR Explain Vestigial sideband transmission. Discuss advantages of negative **Q.4** 07 modulation in television system. **(b)** Discuss (i) Cross Over network (ii) Audio terminations **07** With reference to audio system explain the following terms. Q.5 07 (1) PMPO (2) Reverberation (3) Directivity of a microphone (4) PA system. (b) Explain digital audio compression? Why is it used? Explain briefly 07 different formats of digital audio compression. OR 0.5 (a) Briefly explain following terms related to Audio Video Systems. 07

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- (i) Aspect Ratio (ii) Brightness (iii) Saturation (iv) Luminance (v) HUE (vi) Compatibility (vii) Resolution
- (b) Compare LED TV, LCD TV & Plasma TV

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