Seat No.: Enrolment No.	
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Subject Code: 161002

## GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI • EXAMINATION - WINTER • 2014

Date: 28-11-2014

**Subject Name: Audio Video Systems** Time: 02:30 pm - 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. 0.1 Write a short note on sound, ear and cochlea with neat diagrams. 07 (a) What are cross over networks? Explain in detail. 07 (a) Explain digital audio compression? Why is it used? Explain briefly different formats **Q.2** 07 of digital audio compression. Explain directivity of a microphone. Draw different directional patterns and specify **07 (b)** their applications. OR List the types of microphones used in audio video engineering and explain any 07 two in detail. **Q.3** List the types of loudspeaker used in audio video engineering and explain any two in 07 (a) What is scanning and why is it required? Explain interlaced scanning and state its **07** advantage. Also discuss factors which determine number of scanning lines in a TV system. OR **Q.3** Draw and explain The Composite Video Signal in detail. **07** (a) Describe with block diagram production of color-difference signal and justify the 07 **(b)** statement "(G-Y) is not chosen for transmission". **Q.4** (a) Draw VSB channel of 7Mhz.and show the position of various carriers. Why **07** VSB rather than DSB or SSB not chosen for transmission? Explain the Separation of U and V colour phasors. 07 **(b) Q.4** (a) State the differences between positive and negative modulation. 07 Describe briefly co-channel interference adjacent channel interference and Ghost **(b)** 07 interference effects. Which TV will you buy, LED/LCD/PLASMA? Justify your answer by showing the **Q.5** 07 (a) comparison between the three. Explain the basics of Video Compression techniques. **(b)** 07 List the types of Television systems and standard used worldwide and **Q.5** 07 (a) explain it. **(b)** Draw the simplified block diagram of PAL-D colour receiver. 07 \*\*\*\*\*\*