

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI • EXAMINATION – WINTER • 2014****Subject Code: 161002****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.

- Q.1** (a) Write a short note on sound, ear and cochlea with neat diagrams. **07**
(b) What are cross over networks? Explain in detail. **07**
- Q.2** (a) Explain digital audio compression? Why is it used? Explain briefly different formats of digital audio compression. **07**
(b) Explain directivity of a microphone. Draw different directional patterns and specify their applications. **07**
- OR**
- (b) List the types of microphones used in audio video engineering and explain any two in detail. **07**
- Q.3** (a) List the types of loudspeaker used in audio video engineering and explain any two in detail. **07**
(b) What is scanning and why is it required? Explain interlaced scanning and state its advantage. Also discuss factors which determine number of scanning lines in a TV system. **07**
- OR**
- Q.3** (a) Draw and explain The Composite Video Signal in detail. **07**
(b) Describe with block diagram production of color-difference signal and justify the statement “(G-Y) is not chosen for transmission”. **07**
- Q.4** (a) Draw VSB channel of 7Mhz. and show the position of various carriers. Why VSB rather than DSB or SSB not chosen for transmission? **07**
(b) Explain the Separation of U and V colour phasors. **07**
- OR**
- Q.4** (a) State the differences between positive and negative modulation. **07**
(b) Describe briefly co-channel interference adjacent channel interference and Ghost interference effects. **07**
- Q.5** (a) Which TV will you buy, LED/LCD/PLASMA ? Justify your answer by showing the comparison between the three. **07**
(b) Explain the basics of Video Compression techniques. **07**
- OR**
- Q.5** (a) List the types of Television systems and standard used worldwide and explain it. **07**
(b) Draw the simplified block diagram of PAL-D colour receiver. **07**
