

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI (OLD) - EXAMINATION – SUMMER 2018

Subject Code:161002

Date:08/05/2018

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.

- Q.1** (a) Define the following terms **07**
i) Pitch ii) Phon iii) Harmonics iv) Baffles v) Hue vi) Kell factor vii) Ghost interference
- (b) How is colour receiver different from monochrome receiver? Explain colour burst in brief **07**
- Q.2** (a) Explain any two types of microphones with neat diagram and its merits and demerits **07**
- (b) Compare the characteristics of Cone Type and Horn type Speakers. Also mention their applications. **07**
- OR**
- (b) What is the directional response of loud speaker and microphone? Describe the general procedure of measuring the directivity of the loudspeaker. **07**
- Q.3** (a) Design the PA system for a Debate Hall. **07**
- (b) Compare single ended verses push-pull amplifiers. Draw and explain the circuit diagram for class-B push-pull amplifier. **07**
- OR**
- Q.3** (a) Explain the working of PA system. What are the essential requirements for good PA installation? **07**
- (b) Compare Moving coil and Ribbon Microphone **07**
- Q.4** (a) Explain the principle of frequency interleaving. Why the color sub-carrier freq. is chosen as the odd multiple of $f_v/2$. **07**
- (b) Write a short note on Colour Difference signals. Briefly explain the concept of Additive Mixing. **07**
- OR**
- Q.4** (a) Write the significance of Vestigial Side band Transmission in Television. Discuss merits and demerits of Positive and Negative Modulation **07**
- (b) Explain the basics of Video compression techniques. **07**
- Q.5** (a) Compare NTSC, PAL and SECAM Television Standards **07**
- (b) Explain with diagram the Y channel of a colour receiver **07**
- OR**
- Q.5** (a) What is LCD? Explain all types of display technology used in LCD. Also give its comparisons. **07**
- (b) How phase error is overcome in PAL standard. Justify -PAL-D is better than PAL-S technique. **07**
