

GUJARAT TECHNOLOGICAL UNIVERSITY
BE SEM-VI Regular Examination May 2011

Subject code: 161002

Subject Name: Audio Video System

Date: 17/05/2011

Time: 10.30 am – 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) Draw the cross section of cochlea. And explain each parts of it. Also explain mental process **07**

(b) Draw the circuit diagram of the class B push pull amplifier **07**
And explain it. Derived the equation for efficiency of it. Also explain all distortion regarding class B push pull amplifier.

Q.2 (a) Draw the figure of video tape recording and video reproduction and explain it. Also explain any one techniques of video compression. **07**

(b) In a two stage audio amplifier, What amount of gain is required for first stage to get total gain of 70.5dB if the second stage gain is 56 ? **07**

OR

(b) What is stereophony ? Explain all stereophonic system and other multi-channel sound system. **07**

Q.3 (a) List the microphones used in audio devices and explain any two in detail. Also classify all microphones according to their application. **07**

(b) Write the principle of loudspeaker and explain it. Also write the characteristics that decides quality of operation of loudspeaker and explain it. Also write significance of enclosure. **07**

OR

Q.3 (a) Draw the dimension of video signal and explain it in detail. Also explain all kind of synchronization in detail. **07**

(b) Write characteristics of colours. Also list the mixing techniques of colour and explain it. Which techniques is best? Why? **07**

Q.4 (a) Which modulation system is used for picture and sound? Why? Explain it in detail also give the comparison of positive and negative modulation which one is mostly used? Why? **07**

(b) List the types of interference take place in Television communication system and explain it. Also give the solution to remove such interferences. **07**

OR

Q.4 (a) Draw the block diagram of colour or monochrome television receiver and explain it in detail. **07**

(b) List the types of picture tubes used for colour reception and explain any one of them. Also give the comparisons of all the picture tubes. **07**

- Q.5 (a)** Classify the Advance Digital Television system and explain it with required figure. **07**
- (b)** What is LCD ? Explain all types of display technology used in LCD and explain it. Also give its comparisons. **07**

OR

- Q.5 (a)** List the types of Television systems and standard used worldwide and explain it in detail **07**
- (b)** Explain all kind of problem occurred in picture tube and gives its solution that can help during servicing. **07**
