

Enrollment No: _____

Exam Seat No: _____

C.U.SHAH UNIVERSITY

Winter Examination-2019

Subject Name: Audio Video Engineering

Subject Code: 4TE06AVE1

Branch: B.Tech (EC)

Semester : 6

Date : 12/09/2019

Time : 10:30 To 01:30

Marks : 70

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
 - (2) Instructions written on main answer book are strictly to be obeyed.
 - (3) Draw neat diagrams and figures (if necessary) at right places.
 - (4) Assume suitable data if needed.
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- Q-1 Define the following terms: (14)**
- a) Hue
 - b) Saturation
 - c) Luminance
 - d) Overtone
 - e) Threshold of pain
 - f) Pitch
 - g) Timbre
 - h) Inverse square law
 - i) Directivity
 - j) Loudness
 - k) Resolution
 - l) Aspect Ratio
 - m) Phon
 - n) Compatibility

Attempt any four questions from Q-2 to Q-8

- Q-2 Attempt all questions (14)**
- (a) Describe interlaced scanning and justify that "For interlaced scanning the total number of lines in any TV system must be odd.
 - (b) List various requirement of a sound pre-amplifier and explain them in detail.
- Q-3 Attempt all questions (14)**
- (a) List the microphones used in audio devices and explain any two in detail. Also classify all microphones according to their application.
 - (b) Draw and explain the Composite Video Signal in detail.
- Q-4 Attempt all questions (14)**
- (a) Explain the Architectural Acoustic. Explain Fletcher Munson Curve.
 - (b) Write the principle of loudspeaker and explain it. Also write the characteristics that decides quality of operation of loudspeaker and explain it.



- Q-5** **Attempt all questions** (14)
- (a) Why vestigial sideband transmission is used in TV? Explain Vestigial sideband transmission in detail. What are the merits & demerits of VSB transmission?
 - (b) What are the functions of a typical TV tuner? Draw and explain block diagram of VHF tuner
- Q-6** **Attempt all questions** (14)
- (a) Draw the block diagram of Monochrome TV Transmitter and explain each block in detail.
 - (b) Describe with block diagram production of Colour-difference signal and justify the statement “(G-Y) is not chosen for transmission.
- Q-7** **Attempt all questions** (14)
- (a) Enlist the characteristics of Digital Audio Broadcasting. Also write its advantages and disadvantages.
 - (b) Which modulation system is used for Picture and Sound in TV? Why? Also explain Positive and Negative modulation. Enlist the advantages of Negative modulation.
- Q-8** **Attempt all questions** (14)
- (a) Which TV will you buy, LED/LCD/PLASMA? Justify your answer by showing the comparison between the three
 - (b) Write a note on: Cable Television Network

