Total No. of Questions : 12]

SEAT No. :

P3384

[Total No. of Pages : 3

[4959]-124

B.E.(Electronics Engineering)

a- AUDIO AND VIDEO ENGINEERING

(2008 Pattern) (Elective-III)(Semester-II)

Time :3Hours] *[Max. Marks : 100*

Instructions to the candidates:

1) ***Answer to the two sections should be written in separate answer books.***
2) ***Answer any three questions from each section.***
3) ***Neat diagram must be drawn wherever necessary.***
4) ***Figures to the right side indicate full marks.***
5) ***Use of calculator is allowed.***
6) ***Assume suitable data if necessary.***

SECTION-I

Q1) a) What do you understand by interlaced scanning. How interlaced scanning reduces flicker & conserves band width. **[6]**

b) Explain the following with reference to TV: **[8]**

i) Brightness or Luminance

ii) Hue or Tint

iii) Saturation

iv) Colour Burst

v) Kell factor

iv) Chromaticity Diagram

c) State the scanning line sequence details for 625 line TV system as per CCIR-B standard. **[4]**

OR

Q2) a) Draw a neat sketch of composite video signal. Indicate the numerical values for different timing for various pulses used in CCIR-B standards. **[6]**

b) Give construction and operation of LED TV screen and TFT displays used for TV. **[6]**

c) Describe principle of a colour chroma with the help of suitable diagram **[6]**

P.T.O.

Q3) a) Draw and explain the Block diagram and working principle of pattern generator. How does it help in TV alignment & fault finding? **[8]**

b) Draw & Explain the Block diagram of PAL encoder. Also explain how colour signals are modulated with suitable diagram. **[8]**

OR

Q4) a) Give advantages and disadvantages of NTSC,PAL and SECAM TV system. **[6]**

b) Explain why(G-Y) is not transmitted in a colour TV transmission? **[4]**

c) Draw and explain Block diagram of field strength meter. **[6]**

Q5) a) What is MAC encoding? Draw and explain MAC DTV Transmitter and Recevier. **[11]**

b) Compare performance of Interlace and progressive scanning used in digital TV. **[5]**

OR

Q6) Write short note on the following: **[4×4]**

a) Analog TV vs Digital TV

b) MPEG-2

c) DTV recording system

d) Video compression

SECTION-II

Q7) a) Draw and explain the Block Diagram of HDTV Transmitter and Recevier. **[12]**

b) Explain the digital broad casting case study on Football match with suitable diagram. **[6]**

OR

Q8) Write short note on the following: **[3×6]**

a) Satellite TV.

b) DTH

c) CCTV

Q9) a) Explain CD recording and reproduction with the help of Block Diagram. **[8]**

b) Explain MP3 Audio compression format. **[4]**

c) Define Phase Delay and 'Acoustic feedback' for PA system. **[4]**

OR

Q10)a) With the help of neat Block diagram, explain Blue-Ray DVD player. **[8]**

b) Enlist and explain the audio compression ITU- T standard. **[8]**

Q11) a) What are the requirements of a good Auditorium for pleasant listening? Give the features of acoustical design of an Auditorium. **[8]**

b) Explain working principle of a chordless microphone PA system. State the types of modulation technique used in this system. **[8]**

OR

Q12) a) Explain concept of Reverberation and Echo. Mention typical Reverberation periods. **[8]**

b) Explain special types of speakers with suitable diagram. **[8]**