

Total No. of Questions : 12]

SEAT No. :

P1410

[4759] - 123

[Total No. of Pages :3

B.E. (Electronics)

AUDIO & VIDEO ENGINEERING

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

Time : 3 Hours]

[Max. Marks : 100

Instructions to the candidates:

- 1) *Answers 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) Explain the construction of picture tube, state the reconstruction of picture in detail. **[8]**
- b) Justify why interlaced scanning is preferred, Explain interlaced scanning in detail also compare progressive and interlaced scanning. **[8]**

OR

- Q2)** a) Draw the composite video signal & explain its vertical details. **[6]**
- b) Describe the working of LCD TV display using schematic diagram. **[6]**
- c) Explain why FM is used for sound & AM is used for picture in TV system. **[4]**

OR

- Q3)** a) Draw the block diagram of PAL TV receiver describe how does it produce R, G & B signals. **[8]**
- b) Compare NTSC, PAL & SECAM TV systems. **[4]**
- c) Explain any two applications of TV pattern generator. **[6]**
- Q4)** a) Explain how wabuloscope is helpful in fault finding. **[6]**
- b) Draw & Explain the block diagram of NTSC colour TV transmitter. **[8]**
- c) Define the terms given below: **[4]**
- i) Aspect ratio
 - ii) Kell factor

P.T.O.

- Q5)** a) What are the objectives of MPEG-2 standard explain the bit print stream scalability. [6]
- b) What is MAC encoding? Explain the general format of MAC signal. [6]
- c) Compare analog & digital TV. [4]

OR

Q6) Write short note on: [4 × 4 = 16]

- a) Image compression
- b) TV camera
- c) MPEG - 4 system
- d) Digital TV Receiver

SECTION - II

- Q7)** a) Explain the satellite TV broadcasting using neat block diagram. [8]
- b) Explain HDTV Standard in detail. [5]
- c) Calculate the bandwidth of HDTV system using 1125 lines and aspect ratio of 16:9, scanning at 60Hz with 2:1 interface. [5]

OR

- Q8)** a) Explain digital broadcasting case study of foot ball. [9]
- b) Explain CATV camera with neat block diagram also give its advantages & applications. [9]

- Q9)** a) Draw & explain the block diagram of a DVD player. Write important specifications of DVD. [8]
- b) Explain audio compression with different techniques and standards. [8]

OR

- Q10)** a) Draw and explain Blue Ray Disc. [6]
- b) Draw and explain the block diagram of mp3 player. [6]
- c) Compare Audio CD versus DVD. [4]

Q11) Write short notes on following:

[4 × 4 = 16]

- a) Cordless microphone system.
- b) Graphic equalizer & Digital filter.
- c) DTH TV system.
- d) PA system.

OR

Q12)a) Explain the concept of reverberation & echo mention typical reverberation period. **[8]**

- b) Explain the necessity of acoustical design for auditorium & how it can be implemented. **[8]**

