

TE Sem VI (Rev) ExTC may - 1 June 2006  
Television and video Engineering

Con. 3023-06.

(REVISED COURSE)

TV - 8556

( 3 Hours)

[Total Marks : 100

- N. B. : (1) Question No. **one** is compulsory.  
(2) Attempt in all **five** questions including question **one**.  
(3) **Figures** to the **right** indicate **full** marks.  
(4) Make **suitable** assumptions wherever **necessary**.
1. (a) State the reason for the following :— 10
    - (i) In TV-system e/m deflection and e/s focussing is used.
    - (ii) All TV system has odd number of lines.
  - (b) Describe the encoding and decoding process in SECAM system. 10
  2. (a) Describe the construction, principle of operation of image orthicon tube. 8  
(b) What is effect of incorrect aspect ratio on the picture ? 4  
(c) Describe the effect of poor horizontal and poor vertical scanning on picture. 8
  3. (a) Explain in brief the following terms with reference to colour television transmission and reception. 2
    - (i) Luminance Signal 1
    - (ii) Chrominance Signal 1
    - (iii) Hue 1
    - (iv) Saturation 1
    - (v) Colour Subcarrier 1
    - (vi) Primary and Secondary Colour. 2
  - (b) What is the EIA test pattern ? Draw standard signal and discuss the utility of this pattern in trouble shooting. 10
  - (c) What are the blanking pulses ? 2
  4. (a) An Antenna is to be used at a place Z for receiving TV broadcast from some TV station X requires nine directors and one reflector alongwith a dipole. Find out the lengths of various elements and inter-element spacing. The broadcast channel ranges from 82 MHz to 89 MHz . 10  
(b) Draw a block diagram to explain the principle of Digital Television. 6  
(c) What is the role of colour killer circuit in television ? 4
  5. (a) Draw a CVS as video output when an Television set is fed with the following standard test signal. 3
    - (i) Colour bar pattern 4
    - (ii) Chess Board 3
    - (iii) White Colour. 3

Indicate time parameters as well as percentage magnitude of voltages.
  - (b) Draw a diagram for describing the principle of operation of PIL tube. 7
  - (c) Briefly describe the drawback of Delta gun picture tube. 3
  6. (a) Discuss briefly the different methods of AGC control in Television. 8  
(b) Draw the block diagram of VHF/UHF tuner in the receiver. 6  
(c) Explain in brief the IF trap circuits used in television receiver. 6
  7. Write short note on the following :— (any four)
    - (a) EHT Section
    - (b) Monochrome Receiver
    - (c) Sync separator circuit
    - (d) CCTV applications
    - (e) Cable TV
    - (f) TV transmitter.