



17537

16172

3 Hours / 100 Marks

Seat No.

--	--	--	--	--	--	--	--

- Instructions :** (1) *All questions are compulsory.*
(2) *Answer each next main question on a new page.*
(3) *Illustrate your answers with neat sketches wherever necessary.*
(4) *Figures to the right indicate full marks.*

Marks

- 1. A) Attempt any three:** **12**
- a) Draw the block diagram of dB meter with neat label.
 - b) Define the following terms :
 - i) Contrast
 - ii) Luminance
 - iii) Hue
 - iv) Saturation.
 - c) Compare stereo amplifier and mono amplifier. (any four points).
 - d) List the different components used in CD player. State their functions.
- B) Attempt any one:** **6**
- a) Draw the block diagram of PAL-D decoder and write function of each block.
 - b) Explain working of camera tube state different types of camera tube.
- 2. Attempt any four:** **16**
- a) Draw the constructional diagram of Yagi Uda Antenna and state the function of each component.
 - b) Draw the three way cross over network also draw its frequency response.
 - c) Draw the block diagram of CD player and explain its working.
 - d) Describe NHK and MUSE system.
 - e) Draw the circuit for EHT generation using diode split technique. Describe its need.
 - f) List the frequencies of TV channel allocation for band I and band III.
- 3. Attempt any four:** **16**
- a) Draw the layout diagram for distribution of cable connection for MATV and describe it.
 - b) Draw the diagram of graphic equalizer and explain it.

P.T.O.



- c) State the requirement of stereo amplifier to be a Hi Fi amplifier (any four).
- d) State the advantages of fluorescent display system.
- e) Distinguish between positive and negative modulation.
- f) Define vestigial side band transmission. State its any two merits and demerits.

4. A) Attempt any three :**12**

- i) Draw the block diagram of transmitter and receiver section of remote control for CD player.
- ii) Draw and explain the block diagram of DTH system.
- iii) With neat sketch describe the working of solid state camera based on CCD.
- iv) Describe with neat sketch how interlaced scanning will help to reduce the bandwidth of the video signal.

B) Attempt any one :**6**

- i) Describe the need of equalizing pulses. Draw the structure of vertical synchronizing pulse.
- ii) Draw the block diagram of colour TV transmitter.

5. Attempt any two :**16**

- a) Draw composite video signal of one line and state the function of following :
 - i) DC level
 - ii) Blanking level
 - iii) Whiter than white
 - iv) Pedestal height.
- b) Draw the block diagram of delta gun colour picture tube and explain its working.
- c) Explain how separation of u and v signal is achieved in colour TV. Draw the circuit of RGB drive amplifier used in colour TV.

6. Attempt any four :**16**

- a) Describe multiplexer and attenuator in cable TV with its need.
 - b) Describe the working of LNBC with the help of block diagram.
 - c) Describe the principle of LCD TV with neat sketch.
 - d) With neat sketch describe the working of pick-up unit of a CD player.
 - e) Distinguish between CATV and CCTV (any four points).
 - f) Draw the block diagram of Hi-Fi amplifier and state the function of controls available on it.
-