



17537

16117

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.*
 - (5) *Assume suitable data, if necessary.*
 - (6) *Use of Non-programmable Electronic Pocket Calculator is permissible.*
 - (7) *Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.*

Marks

1. A) Attempt **any three** : **12**
- a) Compare stereo amplifier and mono amplifier. (Any four points).
 - b) Why dish antenna is having parabolic shape and meshy surface? List any four specifications of dish antenna.
 - c) Define Aspect ratio. Why width of the TV screen is more than height?
 - d) List the different lenses used in CD player. State their functions.
- B) Attempt **any one** : **6**
- a) Describe the working principle and construction of Delta gun picture tube.
 - b) Draw the block diagram of PAL-D decoder. Describe the function of each block.
2. Attempt **any four** : **16**
- a) Describe how separation of U and V signals is achieved in colour T.V. with the help of suitable circuit diagram.
 - b) Draw neat labelled sketch of composite video signal.
 - c) Draw the colour killer circuit. Describe its working. Why and where it is used?
 - d) Describe the working of pick-up assembly of CD player with the help of neat sketch.
 - e) Describe NHK and MOSE system for HDTV.
 - f) Draw the circuit of three way cross over network. Illustrate distribution frequencies of respective speakers.

P.T.O.



- 3. Attempt any four :** **16**
- a) Draw and describe DTH system.
 - b) Draw the circuit diagram of RGB drive amplifier and describe its operation.
 - c) Describe operation of Dolby A system of noise reduction.
 - d) List any four advantages of fluorescent display system used in CD player.
 - e) State any eight CCIR-B standard for colour signal transmission and reception in TV.
- 4. A) Attempt any three :** **12**
- a) Describe interlace scanning in brief. How interlace scanning help to reduce bandwidth of video signal ?
 - b) Describe VSB transmission. State its any four advantages.
 - c) Draw neat labelled block diagram of CD player.
 - d) Compare CATV and CCTV (any four points).
- B) Attempt any one :** **6**
- a) Compare NTSC, PAL and SECAM system (any six points).
 - b) Describe why equalising pulses are required. Draw the vertical synchronising pulse structure.
- 5. Attempt any two :** **16**
- a) Describe the construction and working of PIL picture tube.
 - b) Draw the neat block schematic of MATV system. Describe the function of each block.
 - c) Draw the block diagram of colour TV transmitter. Describe the function of each block.
- 6. Attempt any four :** **16**
- a) Compare additive and subtractive colour mixing.
 - b) List the TV channel allocation for band I and band III.
 - c) Describe the working of LNBC with the help of block diagram.
 - d) Describe the functions of following in Hi-Fi amplifier :
 - i) Balance control
 - ii) Loudness control
 - iii) Bass and treble control
 - iv) Quasi stable control.
 - e) Describe vertical resolution and horizontal resolution in brief.
-