



17537

15116

3 Hours / 100 Marks

Seat No.

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- Instructions :** (1) *All questions are compulsory.*
(2) *Illustrate your answers with neat sketches wherever necessary.*
(3) *Figures to the right indicate full marks.*
(4) *Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.*

Marks

- 1. A) Attempt any three:** **12**
- a) Differentiate between stereo amplifier and mono amplifier (4 points).
 - b) Draw LNBC unit in the dish antenna.
 - c) State the CCIR-B standard for colour TV signal transmission and reception (any eight).
 - d) State any four advantages of fluorescent display system.
- B) Attempt any one:** **6**
- a) What is working principle of TV camera tube ? State different types of camera tube and explain any one.
 - b) Draw and explain the block diagram of PAL-D decoder.
- 2. Attempt any four:** **16**
- a) State working principle of LCDTV with neat diagram.
 - b) Explain the details of horizontal sync pulse.
 - c) Explain how U and V signals are separated in colour TV system.
 - d) Enlist the different types of CD lens used in CD player. Explain any one.
 - e) Describe NHK MUSE system for HDTV.
 - f) Draw the three way cross over n/w with its frequency response graph.
- 3. Attempt any four:** **16**
- a) Explain use of multiplexer in cable TV.
 - b) Draw and explain working of RGB drive amplifier in colour TV.
 - c) Draw the block diagram of Hi – Ri amplifier and explain it in detail.

P.T.O.



- d) Draw the block diagram of CD player. Explain how cross are corrected in ERCO block.
- e) Give frequency range in TV channel allocation for band I and band III.
- f) What is graphic equalizer ? Write its necessity.

4. A) Attempt any three :

12

- a) Explain interface scanning in TV system with neat sketch.
- b) State merits and demerits of negative modulation.
- c) Draw and explain CD pick up assembly in CD player.
- d) Draw and explain the block diagram of DTH system.

B) Attempt any one :

6

- a) What is the need of EHT ? Explain how it is generated.
- b) Draw composite video signal of one line and label it showing.
 - i) DC level
 - ii) Blanking level
 - iii) Whiter than white level
 - iv) Pedestal height and explain it.

5. Attempt any two :

16

- a) Draw the block diagram of colour TV receiver (PALD type). Explain how signal is processed in each block.
- b) Draw the layout diagram for MATV and explain it in detail.
- c) Draw the block diagram of colour TV transmitter and explain the function of each block.

6. Attempt any four :

16

- a) Define the terms :
 - i) Aspect ratio
 - ii) Image continuity
 - iii) Saturation
 - iv) Hue.
- b) Explain PIL picture tube in detail.
- c) Draw the block diagram of dBmeter and explain its working principle.
- d) List various control of Hi-Fi amplifier and explain any one.
- e) State Grassman's law and explain additive colour mixing.