



17537

21718

3 Hours / 100 Marks

Seat No.

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

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|---|--------------|
| 1. a) Attempt any three : | 12 |
| i) Compare mono and stereo amplifier. | 4 |
| ii) List the different types of amplifiers used in cable TV system. State the function of each. | 4 |
| iii) Define : | |
| 1) Aspect ratio | |
| 2) Horizontal resolution | |
| 3) Hue | |
| 4) Saturation. | 4 |
| iv) List different lenses used in CD mechanism. State the function of each. | 4 |
| b) Attempt any one : | 6 |
| i) Draw block diagram of colour TV transmitter. Write function of each block. | 6 |
| ii) Explain EHT generation in colour TV with circuit diagram. | 6 |
| 2. Attempt any four : | 16 |
| a) Describe the principle of LCD with neat diagram. | 4 |
| b) Draw and explain composite video signal. | 4 |
| c) Explain how U and V signals separated in colour TV system. | 4 |
| d) List four advantages of fluorescent display system used in CD player. | 4 |
| e) Describe NHK MUSE system for HDTV. | 4 |
| f) State necessity of crossover network. Draw and explain three way crossover network. | 4 |

P.T.O.



	Marks
3. Attempt any four :	16
a) Draw and describe block diagram of dB meter.	4
b) Differentiate PAL, NTSC and SECAM system.	4
c) Draw and explain Dolby NR recording system.	4
d) Explain CD detection technique used in CD player with a neat sketch.	4
e) State Grassman's law. Explain additive colour mixing.	4
4. A) Attempt any three :	12
a) Describe interlaced scanning with neat sketch.	4
b) Define positive and negative modulation. State any 2 merits and 2 demerits of negative modulation.	4
c) Draw and explain block diagram of CD player.	4
d) Differentiate between CATV and CCTV (any four points).	4
B) Attempt any one :	6
a) Draw and explain colour killer circuit.	6
b) Explain vestigial sideband transmission used in TV transmitter. Draw its frequency response.	6
5. Attempt any two :	16
a) Describe Precision-In-Line (PIL) and delta gun picture tube with neat sketch.	8
b) Draw and describe block diagram of LNBC. List its any two applications.	8
c) Draw block diagram of colour TV receiver. Write the function of each block.	8
6. Attempt any four :	16
a) State any eight CCIR-B standards for colour signal transmission and reception.	4
b) State principle and explain working of plumbicon camera tube.	4
c) Explain DTH system with block diagram.	4
d) Compare Woofer, Tweeter and Squawker depending upon.	
i) Frequency response	
ii) Crossover network	
iii) Cost	
iv) Application.	4
e) List the frequencies used in TV channel allocation for band I and band III.	4