

17537

21819

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.

Marks

1. (A) Attempt any **THREE** of the following :

12

- (a) Differentiate Woofer, Tweeter and Squawker depending on
 - (i) Frequency Range
 - (ii) Size
 - (iii) Weight
 - (iv) Attenuation
- (b) Draw the block diagram of dB meter and explain it's operation.
- (c) List CCIR-B standards for colour TV (any eight).
- (d) State the advantages and disadvantages of fluorescent display system.

(B) Attempt any **ONE** of the following :

6

- (a) Draw the block diagram of colour TV transmitter and write function of any three blocks.
- (b) Draw and explain basic circuit for separation of 'U' and 'V' signals.

- 2. Attempt any FOUR of the following :** **16**
- (a) Draw and explain the circuit diagram of RGB drive amplifier.
 - (b) Describe the interlace scanning in T.V. system. State its advantages.
 - (c) With neat circuit diagram, explain operation of EHT circuit in colour T.V.
 - (d) Explain function of CD-pick up assembly with neat diagram.
 - (e) Describe the operation of Yugi-uda Antenna and draw its radiation pattern.
 - (f) Explain Dolby NR-recording system in brief.
- 3. Attempt any FOUR of the following :** **16**
- (a) Explain the need of multiplexer and attenuator in cable T.V.
 - (b) Write short note on colour killer ckt.
 - (c) Draw and describe the operation of Graphic Equalizer.
 - (d) Explain function of CD player with neat block diagram.
 - (e) Explain VSB transmission with neat sketch.
- 4. (A) Attempt any THREE of the following :** **12**
- (a) Explain the following term with respect to colour signal :
 - (i) Hue
 - (ii) Saturation
 - (iii) Luminance
 - (iv) Brightness
 - (b) Describe solid state camera based on CCD.
 - (c) Describe the function of different motors used in CD player.
 - (d) Compare CATV and CCTV (4 pts)
- (B) Attempt any ONE of the following :** **6**
- (a) Explain the operation of PAL-D decoder with its block diagram.
 - (b) Explain pre and post equalizing pulses with their need.

5. Attempt any TWO of the following :**16**

- (a) Describe the working of vidicon Camera tube with neat sketch. State its Applications.
- (b) Draw the block diagram of MATV and explain function of each block.
- (c) Compare positive and negative modulation and list merits and demerits of negative modulation.

6. Attempt any FOUR of the following :**16**

- (a) Describe Horizontal and Vertical resolution in T.V.
 - (b) AM is preferred for picture and FM for sound signal transmission. Justify.
 - (c) Draw the block diagram of DTH system and explain its operation.
 - (d) Explain different controls available on Hi-Fi amplifier.
 - (e) State and explain Grassman's law.
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