



17547

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) *Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.*

Marks

1. A) Attempt **any three** : **12**
 - i) Describe frequency synthesizer tuning with labelled diagram.
 - ii) Draw the circuit diagram of ACC amplifier. Describe its operation.
 - iii) Draw the schematic diagram of IC 7609 and state its function.
 - iv) Draw the diagram of remote control receiver for TV. Describe its function.

B) Attempt **any one** : **6**

 - i) Draw the block diagram of PALD decoder. Describe the function of each block.
 - ii) Define autostereoscope method of 3D TV. Describe any one method. Write one advantage of it.
2. Attempt **any four** : **16**
 - a) Draw the diagram of ident and colour killer.
 - b) State the merits and demerits of SMPS.
 - c) Explain the principle of 'Diode split addition' technique with the help of diagram.
 - d) Why microcontroller used in TV receiver.
 - e) Draw the block diagram of remote control transmitter and explain its function.
 - f) Draw the diagram of trinitron picture tube. Describe its working.
3. Attempt **any four** : **16**
 - a) Draw the construction of SAW filter. Describe its function.
 - b) Describe the working of subcarrier reference oscillator with the help of diagram.
 - c) Draw the block diagram of sync separator. Describe the function of each block.
 - d) State the advantages and disadvantages of remote control system.
 - e) Describe the process of formulation of picture pixels in Plasma TV. State its features.

P.T.O.



- | | Marks |
|---|--------------|
| 4. A) Attempt any three : | 12 |
| i) Draw the schematic diagram of sound Section IC 1190. | |
| ii) Draw the vertical output amplifier circuit and explain its working. | |
| iii) Describe the features of LCD TV. | |
| iv) Compare Plasma TV and 3DTV. | |
| B) Attempt any one : | 6 |
| i) Draw the schematic of VIF IC 7607 and state its working. | |
| ii) Draw the adder subtractor circuit to generate U and V signal. Describe its operation. | |
| 5. Attempt any two : | 16 |
| a) Draw the block diagram of colour TV receiver. Describe the function of each block. | |
| b) Draw the block diagram of horizontal output. Describe the function of each block. | |
| c) Draw the circuit diagram of Luminance signal processing. Explain its working. | |
| 6. Attempt any four : | 16 |
| a) Draw the block diagram of VIF Section and describe function of each block. | |
| b) State the function of chroma delay line. Why is chroma delay line period chosen to be 63.943 μ sec ? | |
| c) State the need for AGC in TV receiver. | |
| d) Describe the working of LED TV. | |
| e) Describe the controls available in Plasma TV. | |
-