



17547

11819

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) *Assume suitable data, if necessary.*

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|---|--------------|
| 1. A) Attempt any three. | 12 |
| a) Explain Generation of U and V signals using Adder /Subtractor circuit. | |
| b) Draw neat block diagram of IC 7609. | |
| c) State the 2 advantages and 2 disadvantages of remote control system. | |
| d) Draw construction of SAW filter and describe its working. | |
| B) Attempt any one. | 6 |
| a) Draw ckt. of reference oscillator and describe its working. | |
| b) Draw construction of trinitron colour picture tube and describe its working. | |
| 2. Attempt any four. | 16 |
| a) State the merits and demerits of forward SMPS. | |
| b) Draw construction of chroma delay line and describe its working. | |
| c) Draw block diagram of push-pull SMPS and describe its working. | |
| d) Explain the role of microcontroller in TV receiver. | |
| e) State the features and control available in plasma TV. | |
| f) Draw block diagram of remote control transmitter and state function of each block. | |
| 3. Attempt any four. | 16 |
| a) Describe diode split technique for the generation of EHT voltage. | |
| b) Draw block diagram of remote control receiver and state function of each block. | |
| c) Draw schematic diagram of IC 1190 and state its function. | |
| d) Draw circuit diagram of Ident and colour killer ckt. and describe its working. | |
| e) Compare plasma and LCD display technology. | |

P.T.O.



4. A) Attempt **any three**. 12
- a) Describe stereoscopic effect with the aid of special glasses in 3D TV.
 - b) State the requirement of AGC and AFT ckt. in TV receiver.
 - c) Describe Auto stereoscope technique to create a 3D effect.
 - d) Draw vertical output amplifier ckt. and describe its working.
- B) Attempt **any one**. 6
- a) Draw schematic diagram of VIF IC and describe its working.
 - b) Draw circuit diagram of ACC amplifier and describe its working.
5. Attempt **any two**. 16
- a) Draw block diagram of colour TV receiver and describe the function of sweep section.
 - b) Draw horizontal output amplifier circuit and describe its working.
 - c) Draw block diagram of PAL-decoder and state the function of each block.
6. Attempt **any four**. 16
- a) State the advantages of SAW filter.
 - b) Describe the basic principle of formation of picture pixels in plasma TV.
 - c) Draw block diagram of Hyper band tuner with varicap tuning and describe its working.
 - d) Compare CRT and Plasma display technology.
 - e) State need of reference oscillator and colour killer ckt. in TV receiver.
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