17547

11718

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) Use of Non-programmable Electronic Pocket Calculator is ***permissible****.*
(7) Mobile Phone, Pager and any other Electronic Communication devices are ***not*** *permissible in Examination Hall.*
(8) Use of Steam tables, logarithmic, Mollier's chart is ***permitted****.*

Marks

1. A) Attempt **any three** : **(4×3=12)**

a) Describe generation of U and V signals in TV Receiver.

b) State necessity of adder and subtracter circuit in PAL-D decoder.

c) Why micro controller is used in TV Receiver ?

d) With neat block diagram explain working of AFT in colour TV.

B) Attempt **any one** : **(6×1=6)**

a) What is meant by auto stereoscope method of 3D TV ? Write its one advantages. Name the different methods and describe any one.

b) Draw construction of trinitron picture tube and describe its working.

2. Attempt **any four** of the following : **(4×4=16)**

a) Draw block diagram of SMPS. State the function of each block.

b) Draw ckt. diagram of ACC amplifier and describe its working.

c) State purpose of remote control system in TV. Write its advantages and disadvantages (any two of each).

d) List any eight major controls available in plasma TV. State function of any two controls.

e) Describe orientation of liquid crystal to form matrix of picture pixels in TV.

f) Draw diode split technique for generation of EHT.

P.T.O.

Marks

3. Attempt **any four** : **(4×4=16)**

a) Draw and describe basic structure of SAW filter.

b) Draw schematic diagram of IC-CA-7607 and state its function.

c) Draw schematic diagram of Colour Killer Circuit and state its function.

d) Compare plasma and LCD display technology (any 4 points).

e) Draw ckt diagram of reference oscillator and state its need in PAL-D decoder.

4. A) Attempt **any three** of the following : **(4×3=12)**

a) State need of AGC in Colour TV Receiver.

b) Draw ckt diagram of vertical output amplifier and describe its working.

c) Draw the block diagram of sweep section and elaborate the function of any two blocks.

d) Draw Luminance signal processing ckt diagram and describe its working.

B) Attempt **any one** of the following : **(6×1=6)**

a) Illustrate with suitable ckt diagram how the IDENT and Killer o/p's are obtained from the burst phase discriminator output.

b) Draw neat diagram of PAL decoder and state function of each block.

5. Attempt **any two** : **(8×2=16)**

a) Draw neat block diagram of Colour TV receiver and state function of each block.

b) Draw neat circuit diagram of horizontal output amplifier and describe its operation.

c) Draw schematic diagram of IC 7609 and state the function of each block.

6. Attempt **any four** of the following : **(4×4=16)**

a) Draw construction of croma delay line and describe its working.

b) What is 3D TV Technology ? Why it is necessary to use special glasses for watching 3D programmers ?

c) Illustrate with diagram working of frequency synthesizer tuning.

d) Draw neat block diagram of sound section of TV and explain it.

e) Draw block diagram of hyper band tuner state different types of tunning.
