

**Q.2** a. Explain with the block diagram, the working of TV broadcasting System.

**Answer:** Page Number 4 to 6 of Text Book 1

b. Explain the horizontal and vertical synchronization.

**Answer:** Page Number 32 of Text Book 1

**Q.3** a. Explain the basic construction of electron gun.

**Answer:** Page Number 82-83 of Text Book 1

b. Describe briefly an arrangement for projection television. Why is brightness the main problem?

**Answer:** Page Number 93 of Text Book 1

**Q.4** a. Define:

- |                      |                            |
|----------------------|----------------------------|
| (i) Scanning raster  | (ii) The pincushion effect |
| (iii) Line pairing   | (iv) Interline flicker     |
| (v) The noise effect |                            |

**Answer:** Page Number 125-135 of Text Book 1

b. Explain why the synchronizing pulses inserted during blanking time.

**Answer:** Page Number 160 of Text Book 1

**Q.5** a. How does colorplexed video signal indicate hue, saturation and luminance of the picture information.

**Answer:** Page Number 194 of Text Book 1

b. Show the calculation for Y luminance values of blue, red, green and white.

**Answer:** Page Number 195 of Text Book 1

**Q.6** a. Explain the following terms:

- |                  |                  |
|------------------|------------------|
| (i) Luminance    | (ii) Hue         |
| (iii) Saturation | (iv) Chrominance |

**Answer:** Page Number 169 of Text Book 1

b. Explain the types of colour video signals.

**Answer:** Page Number 164 of Text Book 1

**Q.7** a. Explain the Ball Chart for checking camera linearity.

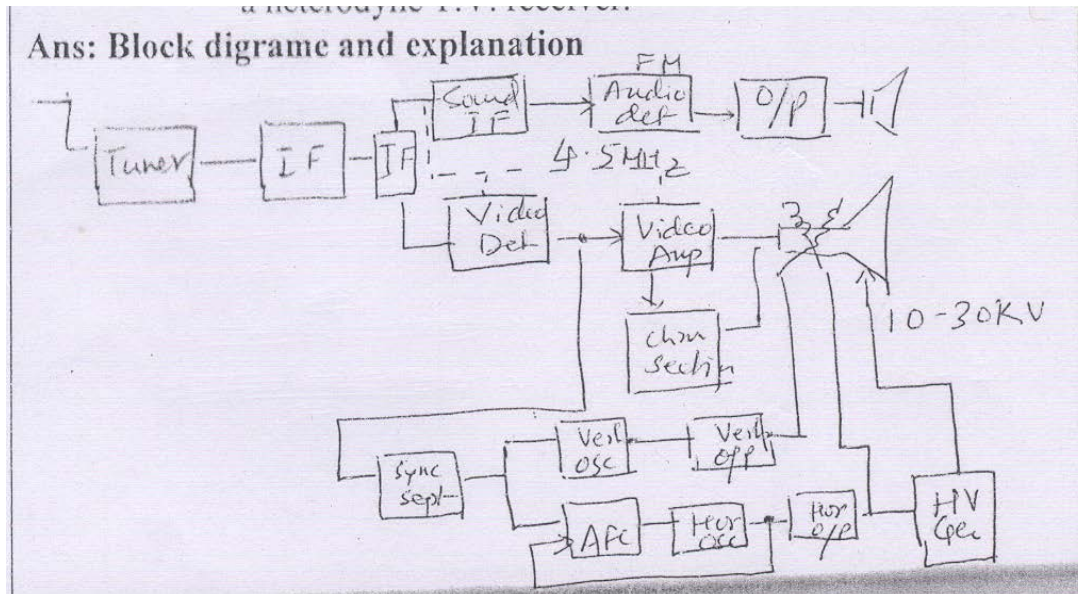
**Answer:** Page Number 202-203 of Text Book 1

b. Define the following sine squared test signals: T, 2T, 12.5T and 20T

**Answer:** Page Number 220 of Text Book 1

**Q.8** a. With the help of a block diagram explain the working of a heterodyne T.V. receiver.

**Answer:**



- b. With the help of a diagram give details of color bandpass amplifier with Automatic Color Control (ACC).

**Answer:** Page Number 346 of Text Book 1

**Q.9** Write short notes on the following:-

- (i) Interference patterns in the picture
- (ii) Safety during TV servicing

**Answer:** Page Number 426-429 and 398 of Text Book 1

### TEXT BOOK

Basic Television and Video Systems, Bernard Grob and Charles E. Herndon, Sixth Edition, 1999, McGraw Hill International Edition.