

[REVISED COURSE]

CON/4671-05.

PR-4862

(3 Hours)

[Total Marks : 100

- N.B. : (1) Question No.1 is compulsory.
 (2) Attempt any four questions from Q. Nos. 2 to 7.
 (3) Draw figures wherever necessary.
 (4) Figures to right indicate full marks.

1. Answer the following questions : 4x
 - (a) Describe Principle of HDTV.
 - (b) Define the compatibility in TV systems.
 - (c) Describe the principle CCD Camera using neat diagram.
 - (d) State the merits of negative picture modulation.

2. (a) Draw a block diagram B/W TV transmitter and explain its working. 10
 (b) Give reason : 10
 - (i) 4:3 is the aspect ratio for TV.
 - (ii) All TV standards have odd number of lines.
 (c) Describe the Primary and Secondary Colour. 10

3. (a) Describe the working principle of TV tuner circuits. 8
 (b) Compare the following standard "SECAM standard with NTSC standard" 8
 (c) What are synchronising pulses ? What is the necessity of using horizontal synchronising and vertical synchronising pulses ? 4

4. (a) What is a chromicity diagram ? For what purpose is this used ? What is C.I.E. colour triangle. 10
 (b) Describe in brief internal and external control of TV receiver. 10

5. (a) Calculate the amplitudes of the chrominance signals for following hues : 8
 - (i) Yellow, (iii) Magenta,
 - (ii) Cyan, (iv) White (Consider NTSC system).10
 (b) Describe in brief the AGC methods used in TV circuits. 10
 (c) What are the main functions of an RF amplifier in a television receiver ? 2

6. (a) Describe construction, working principle of Vidicon Camera tube, giving neat diagram. 8
 (b) Why is the (G-y) Signal not used for transmission of video signal in TV ? 4
 (c) Draw a CVS signals, giving all details on it. 8

7. (a) Describe the equipments used during TV servicing. 8
 (b) List any six common faults in TV receiver and suggest the remedy. 8
 (c) Describe the meaning of Ghost image and suggest its remedy. 4