

**Time: 3 Hours**

**Maximum Marks:80**

Note:

1. Question no. 1 is compulsory.
2. Out of remaining questions, attempt any 3 questions.
3. In all 4 questions to be attempted.
4. All questions carry equal marks.
5. Answer to each new question to be started on a fresh page.
6. Figure in brackets on the right hand side indicate full marks for a question.
7. Illustrate answer with neat diagrams wherever necessary.

Q1. Attempt **any 4** from the following:-

[20]

- a) Draw and explain receiver block diagram of monochrome television.
- b) Why (G-Y) signal is not transmitted in color television signal?
- c) Explain why Chroma is subsampled in digital TV system?
- d) Explain satellite television by using suitable diagrams.
- e) What are advantages and disadvantages of MAC?

Q2 a) Draw and explain composite video signal by labeling different parts. Give the details of vertical blanking and sync pulse.

[10]

b) Explain the concept Frequency Interleaving in color television.

[10]

Q3 a) Draw and explain NTSC encoder block diagram.

[10]

b) List the advantages of digital television over analog television system.

[10]

Q4 a) Write short note on DCT.

[10]

b) Write a short note on LCD display.

[10]

Q5 a) What are DVB standards? Explain the characteristic features of DVB-T, DVB-C, DVB-S, and DVB-H.

[10]

b) Explain HDTV in detail.

[10]

Q6 a) Write a short note on **any two**:

[10]

- i. Chromcast
- ii. Set top box
- iii. Compatibility considerations in monochrome and color television
- iv. NTSC system characteristics

b) Explain the working of LED display.

[10]

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