

[Time: Three Hours]

[Marks:80]

Please check whether you have got the right question paper.

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

- Q.1 Attempt any four 20
- a. What is VSB transmission? Draw channel bandwidth diagram in PAL system
 - b. List electrical characteristics of PAL system
 - c. Explain why chroma is subsampled in digital TV system?
 - d. Which principle is used in vidicon camera tube? Draw vidicon camera tube and label parts.
 - e. What is Smart Television? Explain the features.
 - f. Explain what is IPTV?
- Q.2 a. Draw and explain composite video signal by labelling different parts. Give the details of vertical blanking and 12 sync pulse 12
- b. Explain how monochrome and colour television are made compatible? 8
- Q.3 a. What is interlaced scanning? Explain with appropriate diagrams 10
- b. List the advantages of digital television over analog television 10
- Q.4 a. Write short note on DCT 10
- b. Write a short note on image compression in MPEG2 10
- Q.5 a. What are DVB standards? Explain the characteristic features of DVB-T,DVB-C,DVB-S,DVB-H 10
- b. write a detailed note on satellite television communication system 10
- Q.6 a. What is MAC ?Explain how time compression is achieved in MAC?Draw and explain D2 MAC signal 10
- b. Explain working principle of LCD displays 10