[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
 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
 b. Explain how monochrome and colour television are made compatible?

Q.3 a. What is interlaced scanning? Explain with appropriate diagrams
 b. List the advantages of digital television over analog television

Q.4 a. Write short note on DCT
 b. Write a short note on image compression in MPEG2

Q.5 a. What are DVB standards? Explain the characteristic features of DVB-T,DVB-C,DVB-S,DVB-H
 b. write a detailed note on satellite television communication system

Q.6 a. What is MAC? Explain how time compression is achieved in MAC? Draw and explain D2 MAC signal
 b. Explain working principle of LCD displays

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