Television Engg
ELTL/CBGS/VI/TV Engg. /14-12-16

Q.P. Code : 588602

(3 Hours) **[Total Marks : 80**

N.B. : 1. Question no.1 is compulsory.
2. Answer any three question out of remaining questions.
3. Assume suitable data if required.

1 a) An odd number of lines are chosen in television system for scanning. Justify 5
b) What is compatibility in TV transmission? What are the requirements to be met to make the colour system fully compatible? 5
c) Compare Plasma, LED and LCD displays. 5
d) Explain in brief Direct-to-home TV (DTH). 5

2 a) Explain with the help of suitable sketch, how is video signal developed in a vidicon camera tube? How is different from other camera tubes and what are its special applications? 10
b) Draw the block diagram of PAL TV receiver and explain the working and functions of each block. 10

3 a) What is the difference between component video and composite video? Give the main features of CCIR Rec.601 for digital video standards 10
b) Describe new TV standards and compatibility adopted for HDTV. Explain MUSE system and its advantages. 10

4 a) Sketch composite video signal waveform for at least three successive line and indicate: 5
i. Extreme white level
ii. Blanking level
iii. Pedestal height
iv. Sync. pulse level
b) Only (R-Y) and (B-Y) colour difference signals along with luminance signal is chosen for transmission. Justify the statement. Also explain why it is necessary to weight down the chrominance signal. 10
c) What are the technical advantages of using digital technology in television systems? 5

TURN OVER

5. a) What is the need of MAC encoding? Explain the general format of MAC signals for transmitting colour TV signals. 10

   b) Explain the following terms of Digital video. 10

      i. Digitization

      ii. Viewing distance and angle

      iii. Aspect ratio

6. a) Explain Interlace Scanning? Calculate the percentage of interlace error when the second field is delayed by 16 microseconds. Retrace time may be assumed to be negligible. 10

   b) Write a note on Wide Dimension High Definition Television and its standards. 10