

Please check whether you have the right question paper.

N.B.:

- 1) Question No.1 is compulsory.
- 2) Answer any Three out of remaining five questions
- 3) Draw the neat diagrams wherever necessary.

1. (a) Explain frame rate and refresh rate in digital TV. 05
 (b) Explain when and why the horizontal sweep oscillator step out of synchronism. 05
 (c) Give CCIR-B standards. 05
 (d) Explain merits and demerits of LED display. 05
2. (a) Draw and explain Horizontal sync details compared to horizontal deflection sawtooth wave. 10
 (b) Explain D2-MAC packet format and state D2-MAC characteristics. 10
3. (a) Why are serrations needed in vertical sync pulses and how it solves the problem of half-line discrepancy? Explain with diagram. 10
 (b) Draw and explain Image orthicon camera tube. What is the function of the electron multiplier section? 10
4. (a) Draw and explain NTSC decoder along with the explanation for phasor diagrams of the signals in the NTSC system. 10
 (b) Explain MAC signals its compression technique and scanning frequency. 10
5. (a) Explain with diagram wide dimension HDTV. 10
 (b) What is the need of MUSE system? Explain its technical specifications, advantages and disadvantages. 10
6. Write short notes on (any two):-- 20
 (a) EBU MAC system
 (b) VSB transmission for TV, how much frequency is allocated for attenuation slope and why?
 (c) Sync pulse separation and generation of vertical and horizontal sync pulses.