

J-21-0110

B. Tech. EXAMINATION, 2021

Semester VI (CBCS)

TV ENGINEERING

EC-608

Time : 2 Hours

Maximum Marks : 60

The candidates shall limit their answers precisely within 20 pages only (A4 size sheets/assignment sheets), no extra sheet allowed. The candidates should write only on one side of the page and the back side of the page should remain blank. Only blue ball pen is admissible.

Note : Attempt *Four* questions in all, selecting *one* question from any of the Sections A, B, C and D. Q. No. **9** is compulsory.

Section A

1. Explain the following :

- | | |
|-------------------|----|
| (a) Charge image | 7½ |
| (b) Aspect ratio. | 7½ |

2. (a) Explain the comparison between positive and negative modulation. 7½
- (b) Why is the number of scanning lines in a frame always odd numbers ? 7½

Section B

3. Explain any *two* from the following :
- (a) Turnstile array antenna system. 7½
- (b) Explain light transfer characteristics and application of image orthicon. 7½
- (c) Explain plumbicon in detail. 7½
4. Explain the monochrome TV transmitter with appropriate diagram in detail. 15

Section C

5. (a) What is three colour theory of colour television ? 7½
- (b) Explain the Precision-in-line colour picture tube. 7½
6. (a) What are the drawbacks of delta gun picture tube ? 7½

- (b) How pincushion error can be corrected in colour picture tube ? 7½

Section D

7. (a) Draw PAL encoder block diagram and explain in detail. Also explained how phase-error gets cancelled in PAL system ? 7½
- (b) List electrical characteristics of NTSC system. 7½
8. (a) Why is FM used in Satellite TV system ? 7½
- (b) What do you mean by ED-TV ? 7½

(Compulsory Question)

9. Answer the following :
- (a) How interlaced scanning is different from sequential scanning ? 4
- (b) List the requirements of receiving antenna. 4
- (c) Draw the chromaticity diagram. 4
- (d) Explain the working of LCD display. 3