

**Television & Video Engineering Paper - I**

P. Pages : 2

Time : Three Hours



**KNT/KW/16/7452**

Max. Marks : 80

- Notes :
1. All questions carry marks as indicated.
  2. Solve Question 1 OR Questions No. 2.
  3. Solve Question 3 OR Questions No. 4.
  4. Solve Question 5 OR Questions No. 6.
  5. Solve Question 7 OR Questions No. 8.
  6. Solve Question 9 OR Questions No. 10.
  7. Solve Question 11 OR Questions No. 12.
  8. Due credit will be given to neatness and adequate dimensions.
  9. Illustrate your answers wherever necessary with the help of neat sketches.

1. Explain with neat block diagram IF modulated T.V. Transmitter. 14

**OR**

2. a) Explain production of colour difference signal. 7

b) Draw composite video signal and mention following details. 7

- i) White level
- ii) Black level
- iii) Dark level
- iv) Pedestal height
- v) D. C level
- vi) Pedestal level
- vii) Darker than dark level.

3. a) Explain with block diagram NTSC encoder. 6

b) Explain how phase error is overcome in PAL T.V system. 7

**OR**

4. Write short note on **any two**. 13

- i) Remote control
- ii) T. V pattern generator
- iii) T. V Transmitting antenna.

5. a) Explain with block diagram principle of Digital T.V. 6

b) Explain different sampling structure in digital T.V. 7

**OR**

6. a) Explain in detail MAC technique. 5  
b) Write note on Advance MAC signal. 8
7. a) Explain HDTV transmitter and receiver. 10  
b) Give application of CC T.V 4

**OR**

8. Write short note on 14
- i) C A T V  
ii) 3D T.V system.  
iii) Digital T. V. satellite system.

9. a) Explain IP TV system. 7  
b) Explain mobile T. V. 6

**OR**

10. a) Explain time-slicing on DVB-H 6  
b) Draw and explain video processing path in video projector with the help of block diagram. 7
11. a) Compare CD, DVD, Blue ray. 6  
b) Explain rotation speed in DVD with respect to construct lines velocity (CLV) and constant angular velocity (CAV) 7

**OR**

12. a) Explain the functional block diagram of Camcodes system. 6  
b) Explain principles of operation of liquid crystal cell. 7

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