

22425

24225

3 Hours / 70 Marks

Seat No. 

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- Instructions* – (1) All Questions are *Compulsory*.  
(2) Answer each next main Question on a new page.  
(3) Illustrate your answers with neat sketches wherever necessary.  
(4) Figures to the right indicate full marks.  
(5) Assume suitable data, if necessary.  
(6) Use of Non-programmable Electronic Pocket Calculator is permissible.  
(7) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.  
(8) Use of Steam tables, logarithmic, Mollier's chart is permitted.

**Marks**

1. **Attempt any FIVE of the following :** **10**
- a) Explain impedance matching of PA system.
  - b) Describe the function of MUSE system for HDTV.
  - c) State important specification of Washing Machine (Any four).
  - d) Explain the function of exposor in photocopier machine.
  - e) List the different components used in CD player.
  - f) List the types of loudspeakers.
  - g) Define :
    - i) Fidelity
    - ii) Pitch

P.T.O.

- 2. Attempt any THREE of the following :** **12**
- a) Describe the operating principle of condenser type of Microphones with neat diagram.
  - b) Draw the block diagram of PAL-D decoder and writer function of colour killer circuits.
  - c) Explain working of Digital camcoder.
  - d) Explain VSB transmission. State its any four advantages.
- 3. Attempt any THREE of the following :** **12**
- a) Explain any four basic characteristics of sound signal.
  - b) Draw block diagram of CD player and state the function of EFM demodulator.
  - c) Draw and describe DTH system.
  - d) State Grassman's law. Draw the sketch of additive mixing.
- 4. Attempt any THREE of the following :** **12**
- a) Sketch the block diagram of MP3 player.
  - b) State any eight CCIR-B standard for colour signal transmission and reception.
  - c) Explain the block diagram of OLED.
  - d) Digital camcoder are best for video recording than digital camera "Justify".
  - e) Explain the working of Microwave oven with neat block diagram.

**5. Attempt any TWO of the following :****12**

- a) Draw labelled diagram of composite video signal and state the function of following
  - i) Blanking level
  - ii) Pedestal height
- b) State four electrical specifications with valves for Microwave oven.
- c) Describe with the help of block diagram the operation of colour TV receiver.

**6. Attempt any TWO of the following :****12**

- a) Draw and explain the block diagram of colour TV transmitter.
  - b) Draw the block diagram of photocopier and explain its principle of working.
  - c) Draw and explain block diagram of Hi-fi amplifier.
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