

17668

15116

3 Hours / 100 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) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. a) Attempt any THREE of the following: 12
- (i) State the working principle of video phone.
 - (ii) State any four applications of CCTV.
 - (iii) Write any eight advantages of compact disc.
 - (iv) Differentiate DVD and BD on the basis of:
 - 1) Laser operating wavelength
 - 2) Data storage capacity per layer
 - 3) Compression Technique
 - 4) Full form
- b) Attempt any ONE of the following: 06
- (i) Draw the block diagram of two-way cable system and state the function of each block.
 - (ii) Describe how CD encoding is done with the help of neat block diagram.

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- 2. Attempt any TWO of the following:** **16**
- a) Draw the block diagram of camcorder and state the function of each block.
 - b) Describe the function of each block of DVD player with neat block diagram. State any four advantages of DVD.
 - c) Illustrate MUSE system with respect of HDTV. Draw block diagram of HDTV and state the function of each block.
- 3. Attempt any FOUR of the following:** **16**
- a) State any four applications of CATV.
 - b) Describe the working of projection TV to get large screen.
 - c) Describe operation of Jumbo TV screen with suitable diagram.
 - d) Draw the block diagram of LED monitor and describe its working.
 - e) State the working principle of interactive T.V.
- 4. a) Attempt any THREE of the following:** **12**
- (i) Describe how bandwidth reduction is achieved in HDTV.
 - (ii) Define plasma used in TV. State two advantages of plasma TV.
 - (iii) List different video editing techniques.
 - (iv) Explain signal processing in HDTV.
- b) Attempt any ONE of the following:** **06**
- (i) List different motors used in VCD/DVD player. Explain function of any two motors with suitable diagram.
 - (ii) 1) Draw the block diagram of signal distribution for CATV system.
2) State the function of conditional access built in scrambling system.

- 5. Attempt any FOUR of the following:** **16**
- a) Draw the block diagram of Blu-ray player. State the function of each block.
 - b) Describe colour SVGA system with block diagram.
 - c) State any four applications of projection TV.
 - d) Draw block diagram of Transponder for DTH and explain its working.
 - e) State the function of following related to CATV:
 - (i) Head end
 - (ii) Single processing and Distribution.
- 6. Attempt any FOUR of the following:** **16**
- a) Describe with suitable diagram MPEG-4 video compression technique.
 - b) Draw block diagram of DTH receiver and state the function of each block.
 - c) Describe the function of spindle motor servo system in CD player.
 - d) State the types and specifications of monitor.
 - e) State the function of inside display gas, electrode and phosphor in plasma TV.
 - f) Describe the working of CCTV with the help of block diagram.
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