

17668

16172

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 : 12

- (i) State the feature of JPEG 2000 video compression technique.
- (ii) Define Pay TV. State the need of scrambling and descrambling.
- (iii) State different motors used in DVD player. State functions of any two.
- (iv) Compare DVD and BD on the basis of (a) Laser operating wavelength
(b) Data storage/capacity per layer (c) compression technique.

(B) Attempt any ONE : 6

- (i) Draw the block diagram of two-way cable systems and illustrate the function of each block.
- (ii) With the help of neat diagram, show how optical arrangement in three beam linear tracking pick-up assembly is used.

- 2. Attempt any TWO :** **16**
- (i) Illustrate the working of camcorder with the help of block diagram.
 - (ii) Draw the constructional and block diagram of blue ray disc (BD). Illustrate the function of each block.
 - (iii) Draw the block diagram of HD TV and illustrate how signal processing takes place in HD TV.
- 3. Attempt any FOUR :** **16**
- (i) State any two value added features of
 - (a) CC TV
 - (b) CA TV
 - (ii) Explain the working principle of projection TV to get large screen.
 - (iii) How is a plasma screen colour television different from conventional CRT TV ?
 - (iv) Compare LED and LCD monitor.
 - (v) List any four applications of projection TV.
- 4. (A) Attempt any THREE :** **12**
- (i) Explain muse system in HD TV.
 - (ii) Illustrate the working of LED module in Jumbo TV Screen.
 - (iii) List equipment used in production studio with their function.
 - (iv) Describe how bandwidth reduction is achieved in HD TV.
- (B) Attempt any ONE :** **6**
- (i) Draw the block diagram of MP4 player and illustrate the function of each block.
 - (ii) Draw the block diagram of plan for CA TV system. How signal processing and distribution takes place ?

5. Attempt any FOUR :**16**

- (i) State any four advantages of DVD. How data storing capacity is enhanced ?
- (ii) Illustrate how a basic LCD can be created. Why application of electric charge across it either blocks or permits passage of light through its layers ?
- (iii) Illustrate the difference between normal TV and projection TV on the basis of (a) aspect ratio, (b) resolution (c) number of lines (d) application.
- (iv) Describe why (a) CC TV is wired system (b) Audio signal is not transmitted in CC TV.
- (v) Draw the block diagram of transponder for DTH.

6. Attempt any FOUR :**16**

- (i) What are commonly used file formats ? Explain any one in brief.
 - (ii) Draw the block diagram of DTH receiver. State the function of front end unit.
 - (iii) Compare tracking servo system with carriage servo system.
 - (iv) Classify CRT monitors and state three specifications of monitor.
 - (v) Illustrate the role of computer system and power control system in plasma TV.
 - (vi) Draw and explain block diagram of CC TV.
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