

# 314327

**12526**

**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 answer 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.

**Marks**

- 1. Attempt any FIVE of the following: **10****
- a) List the types of loudspeakers.
- b) List the advantages of OLED.
- c) What is the use of pick-up device in digital camera.
- d) List any two wiring and safety instructions for use of microwave oven.
- e) State any two applications of smart wrist bands.
- f) State any four specifications of a smart interactive board.
- g) State the components of paper shredding machine.

P.T.O.

- 2. Attempt any THREE of the following: 12**
- a) Draw the block diagram and explain the operation of washing machine.
  - b) Draw the block diagram of Hi-Fi audio amplifier. State four characteristics of Hi-Fi amplifier.
  - c) Draw and explain the functional block diagram of a Virtual Reality (VR) headset.
  - d) List any four E-waste recycling regulations.
- 3. Attempt any THREE of the following: 12**
- a) Explain the working of photocopier with its block diagram.
  - b) Differentiate between LCD and LED TV.
  - c) Explain the functional block diagram of laser printer with neat sketch.
  - d) Explain the block diagram of Augmented Reality (AR) device with neat sketch.
- 4. Attempt any THREE of the following: 12**
- a) Explain working procedure of Video Conferencing System (VCS) with neat diagram.
  - b) Explain the construction of wearable antenna system with neat sketch.
  - c) State the specifications of LED projector. (Any four)
  - d) Explain the working procedure of Biometric Attendance System (BAS).
  - e) Compare augmented reality and virtual reality. (Any four points)

- 5. Attempt any TWO of the following: 12**
- a) State with suitable diagram the function of each block of QLED TV.
  - b) State the different types of microphones and explain the operating principle of condenser type of microphone with neat diagram.
  - c) Explain working principle of Barcode Reader with neat diagram. State any two advantages and disadvantages of Barcode Reader.
- 6. Attempt any TWO of the following: 12**
- a) Explain the working of Direct to Home Receiver (DTH) with its indoor and outdoor unit.
  - b) Explain working of microwave oven with neat block diagram. State any four electrical specifications of microwave oven.
  - c) Draw and explain the functional block diagram of LED projector. State the features of LED projector.
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