Q.1) Attempt any FIVE of the following 10 Marks

(a) Identify block "A" given in figure 1, and predict the output signal of block A.

(b) State 4 Parameters of Public Address System.

(c) List out four technical specifications of Hi-fi Audio Amplifier system.

(d) "Back Lit LED TV is better than edge Lit LED TV" Justify.

(e) List any two wiring and Safety Instructions for use of microwave Oven.

(f) For Woofer and Tweeter comment on the following factors.
   i. Frequency Range.
   ii. Size of Speakers.

(g) Explain the Function of Exposer in Photocopier Machine.
Q.2) Attempt any THREE of the following: - 12 Marks

(a) State the function of Equilizer with the block diagram of Hi-fi audio amplifier.
(b) Identify blocks "A" and "B" given in figure 2, and state its function.

![Figure 2](image)

(c) Define:
   i. Positive Modulation.
   ii. Negative Modulation.
(d) Explain the NHK MUSE encoding system.

Q.3) Attempt any THREE of the following. 12 Marks

(a) "Digital Camcorders are best for video recording then digital camera" Justify.
(b) State four Electrical specifications with values for Washing Machine.
(c) Identify the missing block in given diagram (Figure 3). Describe the working of this system.

![Figure 3](image)
(d) List any eight specifications of CCIR-B Standards for Color signal transmission and reception.

Q.4) Attempt any THREE of the following. 12 Marks
(a) Describe with the help of diagram Front porch, Back porch and Line Sync Pulse in Horizontal Sync Pulse.
(b) Explain with the help of diagram the Function of Sync Separator.
(c) Explain the working of photocopier with its block diagram.
(d) Describe with the help of diagram the working principle of carbon type microphone.
(e) Sketch the block diagram of MP3 Player.

Q.5) Attempt any TWO of the following. 12 Marks
(a) State with suitable diagram the function of each block of OLED TV.
(b) Draw the Block diagram of Washing Machine. State and Justify type of Washing machine having more advantages.
(c) Draw labelled Diagram of Composite Video Signal and state the function of Line Sync Pulse.

Q.6) Attempt any TWO of the following. 12 Marks
(a) Define Vertical and Horizontal Resolution. Calculate vertical and horizontal resolution for 625 line system.
(b) i. Name the Block diagram shown in Figure 4.
ii. Identify the block “A” and “B” in given block diagram,
iii. State the functions block “A” and “B”.

(c) Describe with the help of block diagram, Operation of CD Player.
Instructions:

(1) All questions are compulsory.
(2) Illustrate your answers with neat sketches wherever necessary.
(3) Figures to the right indicate full marks.
(4) Assume suitable data if necessary.
(5) Preferably, write the answers in sequential order.

Q.1 Attempt any FOUR. 08 Marks

a) Define with respect to Sound System
   i. Sensitivity
   ii. Selectivity
b) List four Types of Microphones used in Sound System.
c) List types of CD lens used in CD player.
d) Define with respect to TV System
   i. Aspect Ratio
   ii. Image Continuity
e) State the functions of drive motors used in CD player.

Q.2 Attempt any THREE. 12 Marks

(a) Describe with the help of diagram working principle of Electrostatic speaker.
(b) Explain with the help of diagram the function of each Block of Hi-Fi amplifier.
(c) Draw the block diagram of CD player.
(d) Describe with the help of neat diagram Vestigial Side band transmission.
Instructions:

(1) All questions are compulsory.
(2) Illustrate your answers with neat sketches wherever necessary.
(3) Figures to the right indicate full marks.
(4) Assume suitable data if necessary.
(5) Preferably, write the answers in sequential order.

Q.1 Attempt any FOUR. 08 Marks

(a) "LED TV is more Energy efficient than LCD TV", Justify.
(b) State time periods of horizontal and vertical sync detail
(c) Draw the block diagram for separating U and V signal in Colour TV.
(d) State the types of Washing Machine.
(e) State the need of equalizing pulses in colour TV.

Q.2 Attempt any THREE. 12 Marks

a) Describe with the help of block diagram the function of color TV transmitter.
b) Explain with the help of block diagram the operation of PAL-D decoder.
c) Describe using suitable diagram the single chip controllers.
d) Explain with the help of block diagram the construction of LED TV.