

22425

21222

3 Hours / 70 Marks

Seat No.

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15 minutes extra for each hour

- 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.

Marks

1. Attempt any FIVE of the following:

10

- a) i) Name the Block diagram.
- ii) Identify the block “A” and “B” in given Figure No. 1.

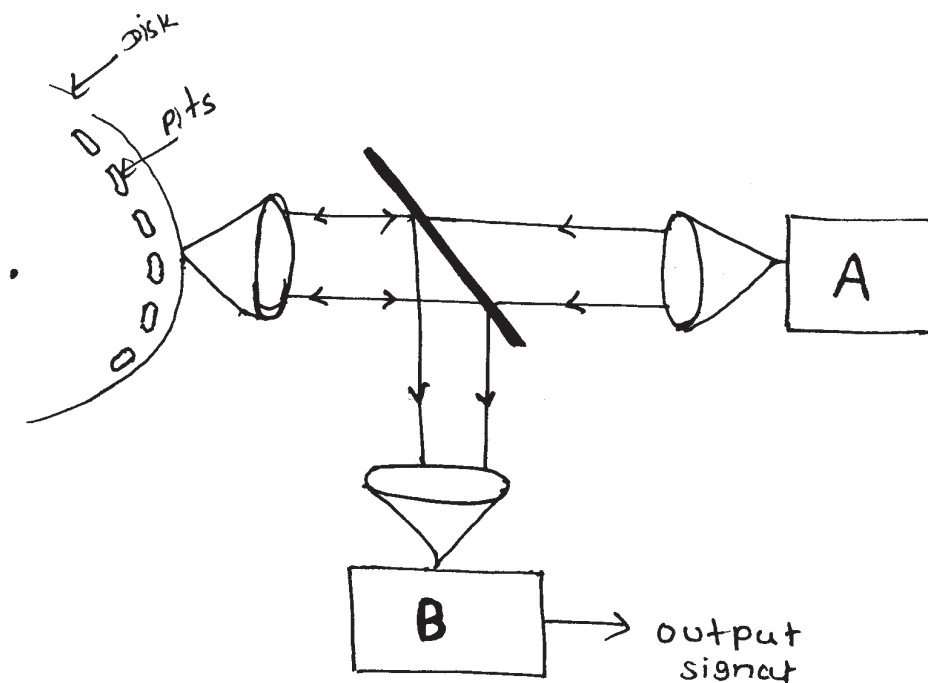


Figure No. 1.

P.T.O.

- b) List various control of Hi-Fi amplifier.
- c) Compare mono amplifier and stereo amplifier. (Any two point)
- d) Draw block diagram of Direct to Home receiver.
- e) State important specification of washing machine. (Any four)
- f) Draw frequency response of woofer, midrange tweeter.
- g) Explain the concept of Bayer's filter.

2. Attempt any THREE of the following: 12

- a) Describe with the help of the diagram the working principle of carbon type microphone.
- b) Draw block diagram of CD player.
- c) Define the following terms
 - i) Contrast
 - ii) Luminance
 - iii) Hue
 - iv) Saturation
- d) Explain interlaced scanning with label diagram.

3. Attempt any THREE of the following: 12

- a) Digital camcorders are best for video recording than digital camera. Justify.
- b) Describe the operation of washing machine and state its types.
- c) Back Lit LED TV is better than edge Lit LED TV. Justify.
- d) State any Eight CCIR-B standard for colour signal transmission and reception.

4. Attempt any THREE of the following: 12

- a) Distinguish between positive and negative modulation.
(Any four)
- b) Explain the NHK MUSE encoding system.
- c) Explain the wiring and safety instruction for a microwave oven.
- d) State and explain characteristics of microphone.
- e) State troubleshooting procedure of audio system.

5. Attempt any TWO of the following: 12

- a) Describe with the help of block diagram the operation of colour TV receiver.
- b)
 - i) Name the block diagram shown in Figure No. 2.
 - ii) Identify the block "A" and "B" in given block diagram.
 - iii) State the functions of block "A" and "B".

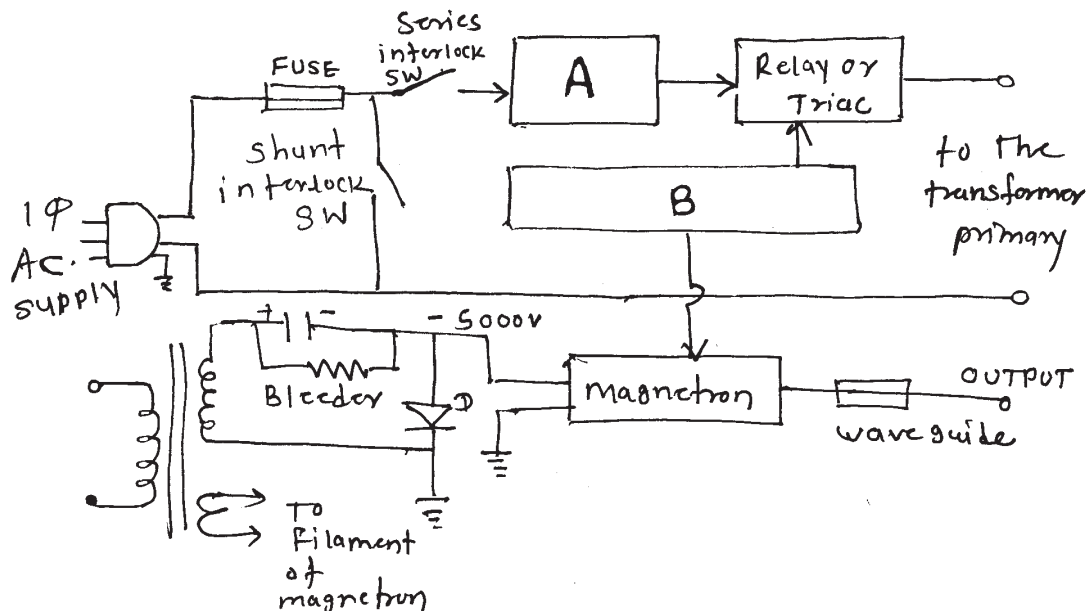


Figure No. 2.

- c) Explain vestigial sideband transmission. State its any two merits and demerits.

6. 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)
 - i) State the important features of CMOS devices.
 - ii) Compare CCD and CMOS sensors.
 - c) Draw and explain working of MP3 player.
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