

**DIPLOMA-VIEP
(DECVI)
Term-End Examination
December, 2012**

BIEL-034 : AUDIO AND VIDEO ENGINEERING

Time : 2 hours

Maximum Marks : 70

Note : Attempt any five questions in all. Question No. 1 is compulsory. All questions carry equal marks.

1. Choose Correct Answer : **7x2=14**
- (a) Mono signifies
- (i) Two sound sources and two channels.
 - (ii) One sound source and one channel.
 - (iii) Two sound sources and one channel.
 - (iv) One sound source and two channels.
- (b) High Fidelity (Hi-Fi) reproduction is required for a :
- (i) Public Address System
 - (ii) Intercom System
 - (iii) Sound Reinforcement System
 - (iv) Paging System
- (c) It is common practice to scan the image from :
- (i) left to right and top to bottom
 - (ii) right to left and top to bottom
 - (iii) left to right and bottom to top.
 - (iv) right to left and bottom to top.

- (d) Aspect ratio of 4 : 3 is :
- (i) most pleasing to the eye and least fatiguing to the eye
 - (ii) most pleasing to the eye and most fatiguing to the eye.
 - (iii) least pleasing to the eye and most fatiguing to the eye.
 - (iv) least pleasing to the eye and least fatiguing to the eye.
- (e) Which Television system is used in India ?
- (i) PAL-N
 - (ii) PAL-B
 - (iii) CCIR-B
 - (iv) CCIR-B and PAL-G
- (f) In the NTSC system, two colour difference signals are :
- (i) Transmitted together
 - (ii) Not transmitted together
 - (iii) Transmitted in quadrature
 - (iv) Transmitted in anti-phase
- (g) A loud speaker converts :
- (i) Electrical energy to Mechanical energy.
 - (ii) Acoustic energy to electrical energy.
 - (iii) Mechanical energy to electrical energy.
 - (iv) Electrical energy to acoustic energy.

2. (a) Explain with the help of block diagram the working of a Hi-Fi amplifier. 7
(b) Compare different types of speakers in terms of their performance characteristics. 7
3. (a) Explain the working principle of CD player. 7
(b) Describe various parts and functions of a remote control. 7
4. (a) What is interlaced scanning and why it is preferred ? 7
(b) Sketch a composite video signal waveform showing
(i) Pedestal Height
(ii) Blanking pulse
(iii) Equalizing pulse
(iv) Horizontal and vertical sync. pulses. 7
5. (a) Discuss various merits and demerits of Negative modulation. 7
(b) Briefly explain the general block diagram of a monochrome TV Receiver. 7
6. Describe the operation of colour TV Receiver (PAL-D type) with the help of block diagram. 14
7. (a) Compare MATV, CATV and CCTV. 7
(b) What do you mean by Direct To Home (DTH) ? Briefly explain its working. 7

8. Write short notes on (*Any four*) : 4x3½=14

- (a) Graphic Equalizer
 - (b) Aspect Ratio
 - (c) Difference between hue and saturation
 - (d) Vidicon camera Tube
 - (e) EHT Generation
 - (f) Attenuators
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