

01560

**DIPLOMA-VIEP
(DECVI)**

Term-End Examination

June, 2013

BIEL-034 : AUDIO AND VIDEO ENGINEERING

Time : 2 hours

Maximum Marks : 70

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

1. Choose correct answer : 7x2=14
- (a) Tweeters are speakers designed to reproduce :
- (i) low frequencies
 - (ii) high frequencies
 - (iii) mid frequencies
 - (iv) both (i) and (iii)
- (b) The conversion of entire picture area to a video signal is accomplished by :
- (i) Scanning process
 - (ii) Deflection process
 - (iii) Photo Electric effect
 - (iv) Photo Emissive effect
- (c) For 625 lines T.V. system the highest fundamental frequency permitted is :
- (i) 6 MHz (ii) 7 MHz
 - (iii) 5 MHz (iv) 8 MHz

- (d) The horizontal retrace in a T.V. receiver is also known as :
- (i) Ringing (ii) Burst
 - (iii) Damper (iv) Flyback
- (e) Velocity of sound in dry air at normal temperature is approximately :
- (i) 334 m/s (ii) 330 m/s
 - (iii) 332 m/s (iv) 340 m/s
- (f) Highest capacity in an optical disc can be obtained by using a laser beam of :
- (i) Green light (ii) Red light
 - (iii) Blue light (iv) Infrared light
- (g) Why is a picture frame projected twice on the screen ?
- (i) To strengthen the image
 - (ii) To have good focussing
 - (iii) To have good resolution
 - (iv) To eliminate flicker
2. (a) What do you mean by cross-over network and why it is used ? 7
- (b) Differentiate between mono and stereo amplifier. 7
3. (a) Briefly explain the working of a CD player with the help of a block diagram. 7
- (b) Discuss various components used for CD mechanism. 7

4. (a) What do you mean by primary and secondary colours ? State Grassman's law. 7
(b) Explain Vestigial Side Band (VSB) transmission. Why it is especially used in TV ? 7
5. (a) Describe the working principle of a colour picture tube. 7
(b) Explain the General block diagram of a colour TV transmitter. 7
6. Compare NTSC, PAL and SECAM systems. 14
7. (a) Explain the working principle of a dB meter. 7
(b) Describe the design concept of a cable TV network. 7
8. Write short notes on (*Any four*) $4 \times 3\frac{1}{2} = 14$
(a) Dolby Noise Reduction (NR) system
(b) Image continuity
(c) Differentiate brightness and contrast
(d) PAL - D decoder
(e) Colour Killer Control
(f) LNBC
-