

**DIPLOMA - VIEP - ELECTRONICS AND
COMMUNICATION ENGINEERING (DECVI)**

Term-End Examination

00698

June, 2015

BIEL-034 : AUDIO AND VIDEO ENGINEERING

Time : 2 hours

Maximum Marks : 70

*Note : Question no. 1 is **compulsory**. Answer any **four** questions from the rest.*

1. (a) Which of the following camera tubes uses lead oxide (PbO) for the photoconductive target plate ?
- (i) Vidicon
 - (ii) Plumbicon
 - (iii) Saticon
 - (iv) Image Orthicon
- (b) Camera signal output without sync is called
- (i) Black burst
 - (ii) Generator lock video
 - (iii) Composite video
 - (iv) Non-composite video

- (c) The gamma of the picture tube is
- (i) 0.4545
 - (ii) 1.0
 - (iii) 1.4
 - (iv) 2.2
- (d) The correct sequence of colour model in television is
- (i) GRB
 - (ii) BRG
 - (iii) RGB
 - (iv) None of these
- (e) Indicate which of the signals is *not* transmitted in colour TV.
- (i) Y
 - (ii) Q
 - (iii) R
 - (iv) I
- (f) Number of picture frames displayed per second in TV as per CCIR B-system is
- (i) 16
 - (ii) 25
 - (iii) 50
 - (iv) 60

- (g) Interleaving in colour TV system implies
- (i) Mixing colour information with the black and white signals
 - (ii) Extracting black and white signals from colour signals
 - (iii) Converting black and white signals into colour signals
 - (iv) Producing I and Q signals 7×2=14
2. (a) How is high voltage generated by EHT circuit in Colour TV receiver ? 7
- (b) With a neat block diagram, explain PAL-D decoder. 7
3. (a) Draw the block diagram of a black and white TV receiver and explain each block in brief. 7
- (b) Draw and explain the diagram of PIL picture tube. 7
4. (a) Why is FM used for sound and AM used for picture in TV system ? 7
- (b) Explain the need of horizontal sync pulse and vertical sync pulse. 7
5. (a) List the types of amplifiers used in Cable TV network and explain any one of them. 10
- (b) What is the need of pre-equalising and post-equalising pulses in composite video signals ? 4

6. Write short notes on the following :

- (a) Difference between stereo amplifier and mono amplifier 5
- (b) Advantages of fluorescent display system 5
- (c) Solid state camera based on CCD 4

- 7.**
- (a) Discuss the concept of vertical resolution and horizontal resolution. 7
 - (b) With a neat diagram, explain the working of ACC amplifier. 7
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