

**DiplETE – ET**

Time: 3 Hours

**DECEMBER 2012**

Max. Marks: 100

**PLEASE WRITE YOUR ROLL NO. AT THE SPACE PROVIDED ON EACH PAGE IMMEDIATELY AFTER RECEIVING THE QUESTION PAPER.**

**NOTE: There are 9 Questions in all.**

- Question 1 is compulsory and carries 20 marks. Answer to Q.1 must be written in the space provided for it in the answer book supplied and nowhere else.
- The answer sheet for the Q.1 will be collected by the invigilator after 45 minutes of the commencement of the examination.
- Out of the remaining EIGHT Questions answer any FIVE Questions. Each question carries 16 marks.
- Any required data not explicitly given, may be suitably assumed and stated.

**Q.1 Choose the correct or the best alternative in the following: (2×10)**

a. For a 51 cm monochrome picture tube, the value of final anode voltage is about

- (A) 16 KV (B) 25 KV  
(C) 5 KV (D) 10 KV

b. The horizontal line blanking period is as per CCIR B standards

- (A) 64  $\mu$ s (B) 4.7  $\mu$ s  
(C) 12  $\mu$ s (D) 5.8  $\mu$ s

c. Which of the following is used to remove the magnetic flux from metal parts of picture tube that have become magnetized

- (A) Tracking (B) Degaussing  
(C) Scanning (D) Blanking

d. The difference in intensity between black parts and white parts of the reproduced picture is known as

- (A) Brightness (B) Resolution  
(C) Contrast (D) Hue

e. Which of the following distortion in the picture tube is corrected by mounting small permanent magnets on the deflection yoke of the monochrome picture tube

- (A) Pincushion (B) Trapezoidal  
(C) Line pairing (D) Fishtailing



**Code: DE68****Subject: TELEVISION ENGINEERING**

- b. Explain the working of Additive color Mixtures & Adding color-voltages. (8)
- Q.6** a. Why is the color subcarrier frequency made exactly 3.579545 MHz? (8)
- b. Explain various types of colour video signals. (8)
- Q.7** a. Explain, with a neat diagram, how EIA test pattern can be used for checking the TV receiver. (8)
- b. Explain how window signal can be used for testing overshoot, ringing, streaking and smear. (8)
- Q.8** a. Draw and explain color band-pass amplified with ACC. (8)
- b. Explain the need for luminance delay in video detectors. (8)
- Q.9** Write short notes on any **TWO** of the following:
- (i) TV safety measures.
- (ii) Signal Tracing & Injection.
- (iii) Interference Patterns in the pictures.
- (8+8)**