

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
Diploma Engineering Semester –IV Examination Dec. - 2011

Subject code: 341105

Date: 05/12/2011

Subject Name: Television Engineering

Time: 10.30 am – 1.00 pm

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. English version is considered Authentic.

Q.1 (a) (i) What is scanning? Explain Interlace Scanning. **03**

(ii) Define the following terms. **04**

(a) Compatibility (b) Hue (c) Saturation (d) Aspect Ratio

(b) Give the reasons: **07**

- (i) (G-Y) Colour difference Signal is not transmitted.
- (ii) Colour Burst Signals are transmitted along with composite video signal.
- (iii) Sync pulses are provided in blacker than black area.
- (iv) EHT Stage is connected with Horizontal Stage.
- (v) Vestigial Side band transmission is used in TV.
- (vi) Hue control is not used in PAL TV receiver.
- (vii) Colour picture tube requires more EHT Voltage.

Q.2 (a) Draw the block diagram of PAL-D colour TV Receiver & explain the function of each block. **07**

(b) Explain PAL Encoder **07**

OR

(b) Draw the neat sketch of a colour camera and explain how luminance signal 'Y' & colour difference signal are produce. **07**

Q.3 (a) (i) Explain composite Video signals. **04**

(ii) Explain CCIR-B standard's **03**

(b) Explain Quadrature Amplitude Modulation. **07**

OR

Q.3 (a) Describe block diagram of a TV Transmitter. **07**

(b) Describe Television transmission Antennas with neat sketch & explain how both picture and sound signals are combined before feeding to the antenna network. **07**

- Q.4** (a) Draw the neat sketch of a PIL colour picture tube & Explain it. **07**
- (b) Explain Synchronous de-modulators ckts. **07**
- OR**
- Q. 4** (a) Explain sub carrier generator with necessary ckt. Diagram **07**
- (b) Explain switch mode power supply (SMPS) for T.V. receiver with its merits and demerits. **07**
- Q.5** (a) Explain common faults in tuner & sound section of a TV receiver. **07**
- (b) Explain Digital T.V. receiver. **07**
- OR**
- Q.5** (a) Explain common faults in colour picture tube & power supply Section of T.V. receiver. **07**
- (b) Explain Direct to Home (DTH) system. **07**
