

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**
