

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- VIth SEMESTER-EXAMINATION – MAY- 2012****Subject code: 161704****Date: 17/05/2012****Subject Name: Analog and Digital Communication****Time: 10:30 am – 01:00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

Q.1 (a) Write a note on data correction using longitudinal redundancy check and vertical redundancy check. **07**

(b) Describe frequency division multiplexing groups and group formation in detail. **07**

Q.2 (a) Explain optical detectors with neat sketch. **07**

(b) Calculate bit-error rate and error free seconds for a system that experienced five errors in 25Mbytes of data transmitted in 20 seconds. Three errors occurred in ninth second of transmission and the two errors in the last second of transmission. **07**

OR

(b) Explain UART receiver using timing/data relationship. **07**

Q.3 (a) Write about RS 422 and RS 423 interface standards. **07**

(b) Describe quadrature phase shift key modulator. **07**

OR

Q.3 (a) Explain adaptive delta modulation. **07**

(b) Mention about synchronous data-link control protocol. **07**

Q.4 (a) Introduce Ethernet interface device and describe serial interface adapter in detail. **07**

(b) Write a note on fiber distributed data interface. **07**

OR

Q.4 (a) Explain IEEE 802.6 Metropolitan Area Network. **07**

(b) Describe SONET topology and its frame. **07**

Q.5 (a) Explain shot noise and transit –time noise briefly. **07**

(b) Describe satellite networking in detail. **07**

OR

Q.5 (a) Compare frequency modulation with phase modulation. **07**

(b) Describe power relation in AM wave. **07**
