

**2005-GURU GOBIND SING INDRAPRASTHA UNIVERSITY**

**V SEMESTER B.TECH SECOND TERM EXAMINATION**

**TELECOMMUNICATION NETWORKS**

TIME-11/2HOUR

MARKS-40

**Note: Answer all questions. Each question carries 10 marks.**

Q1 ( a ) Define signal to noise ratio of an amplifier? What is the significance of S/N ratio being -3dB? [

( b ) Explain companding and why it is necessary?

( c ) The signal input to an amplifier is 10dBm and the noise input power is 1mW. Find the signal to noise ratio at the input of the amplifier.

( d ) Why are line codes required and what is DC wander? What is the difference between Walsh1 and Walsh2 codes?

( e ) Differentiate between a mid tread and mid riser scheme of quantization.

Q2 What is step by step switching? What are the basic approaches to the design of subscriber access to Strowger system. Describe them.

Q3 What are Vocoders and where can they be used? Discuss the utility of Vocoders in present day communication networks. Explain LPC type of Vocoder.

Q4 What is the difference between the micro programmed control and hardwired control unit? What do you understand by exchange environment? Discuss the various levels of processing functions as applicable to a switching processor.