Total No. of Questions : 5] [Total No. of Printed Pages : 3

Roll No. .....

EC–501(N)

B. E. (Fifth Semester) EXAMINATION, June, 2011

(Electronics & Communication Engg. Branch)

VOICE COMMUNICATION

[EC – 501(N)]

Time : Three Hours

Maximum Marks : 100

Minimum Pass Marks : 35

Note : Attempt all questions. All questions carry equal marks.

1. (a) Briefly explain the local subscriber loop and explain the telephone circuit for it.

   (b) Describe "two-wire" and "four-wire" voice frequency circuits.

Or

   (a) Explain the following :

   (i) Channel noise

   (ii) Cross talk

   (iii) Loop resistance

   (iv) Side tone

   (b) Explain cordless telephone system in detail.

2. (a) Describe the following :

   (i) Local loop

(ii) Instrument

(iii) Trunk circuit

(iv) Exchange

(b) Explain the hierarchy of switching offices.

Or

(a) Explain common channel signalling system no 7. Also give its network functions.

(b) Describe frequency division multiplexing in detail.

3. (a) Draw the block diagram of PCM system and explain its working.

(b) Briefly explain T and T1 carrier systems.

Or

(a) Describe statistical time division multiplexing. Also compare synchronous and statistical TDM.

(b) Explain the following :

(i) Quantization

(ii) Granular noise

(iii) Voice digitization

4. (a) Explain pulse transmission in detail.

(b) Calculate the maximum data-rate for a voice grade line with a bandwidth of 4 kHz and S/N ratio of 10000 : 1. Also find maximum data rate if the S/N ratio is now enhanced to 50 dB.

Or

(a) Describe asynchronous transmission control scheme with their frame structure.

(b) What is line coding ? Explain RZ, NRZ and Manchester coding.

5. (a) Write a short note on space division sw

(b) Explain in detail the common contro

dialling system.

Or

(a) Explain digital cross-connect system in

(b) Write a short note on time-space switc