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Council for Technical Education and Vocational Training

Office of the Controller of Examinations

Sanothimi, Bhaktapur

Regular/Back Exam-2078/2079, Chaitra/Baishakh

Program: Diploma in Computer Engineering

Full Marks: 80

Year/ Part: II/II (2018 New)

Pass Marks: 32

Subject: Data Communication

Time: 3 hrs.

Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks.

Attempt Any Five Questions.

1. a) What do you mean by PSTN? Explain digital communication system model with block diagram. [2+6]
b) List and explain transmission impairment. Differentiate asynchronous and synchronous transmission; with example. [4+4]
2. a) Define channel capacity. Classify the different types of transmission media and explain one of them in brief. [2+2+4]
b) What is wireless propagation? Explain different types of network topology. [2+6]
3. a) What is multiplexing and its requirements in data communication. Explain TDM and its types briefly. [2+6]
b) What is multiple access techniques? Explain FDMA in brief with proper diagram. [2+6]
4. a) What is line coding? Explain pulse code modulation with block diagram. [2+6]
b) What do you mean by PCM transmission format (T1 & E1)? Explain in brief. [2+6]
5. a) Define switching techniques. Compare message switching, circuit switching and packet switching. [2+6]
b) Classify the different types of switching system used in communication system. Explain manual switching in brief. [4+4]
6. Write short notes on : **(Any Four)** [4x4=16]
 - i) Analog Vs Digital data transmission
 - ii) Time division switching
 - iii) Quantization
 - iv) Companding
 - v) Electronic switching

Good Luck !

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