10. Write short notes on the following:-

a) Satellite communication

b) Repeaters

c) Duality principal

d) Loops in Pascal

[4]

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2006

Time: 3 Hours

Full Marks: 75

Candidate is required to give their answers in their own words as far as practicable.

Answer any **Five** questions.

Question no.1 is compulsory

All Questions have equal marks.

Q.1 Write a Pascal or C program to compute simple interest on Rs. 'R' for a period of 'P' years at annual interest rate 'r'.

Q.2 Differentiate between a LAN and a WAN. What is a communication protocol? What are normal functions performed by these protocols?

Q.3. Explain the principal of duality in Boolean algebra. Construct logic circuit diagram for the Boolean expression using AND, OR/NOT gate.

i) A .B + A.B

ii) (A + B). (A .B)

Q4. Explain the store – and – forward method of message switching. Give the advantages and disadvantages of this message switching technologies. What is packet switching?

Q5. Describe the program flowchart. Why are they sometimes called as ‘logic Diagrams? What program flowchart is used to represent the following:-

i) Input/output

ii) Decision

iii) Processing

Q6. Write a Pascal program to find the average of the numbers entered through the keyboard.

Q7. What are half adder and Full adder? Construct logic diagram for a half adder using only either NAND or NOR gate.

Q8. a) What is a repeater?

b) What are encoder and decoder?

Q9. Write notes on any two of the following:

a) Optical fiber

b) ISO-OSI reference model.

c) Structural Programming

d) Method of documentation