

10. Write short notes on the following :-

- a) Satellite communication
- b) Repeaters
- c) Duality principal
- d) Loops in Pascal

[4]

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2005

Time : 3 Hours

Full Marks :75

Candidate are 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 Explain the following terms in brief:

- a) Simplex and Duplex
- b) Topologies

[1]

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- c) Canonical equations.
- d) Protocol
- e) Don't care term in k-map.

- Q.2
- a) What are universal gates? Discuss them with truth table?
 - b) What is De- Morgan's law? Prove it using truth table?
 - c) Explain 4- variables k-map.

Q.3. What is encoder? differentiate between encoder and decoder

- 4.
- a) Define Boolean algebra and simplify the following
 - i) $x'y'z' + x'yz' + xy'z' + xyz'$
 - ii) $(x'yz') + (x'yz) + (xyz')$

- b) What are the factors while selecting a topologies?

[2]

[Continued]

5. Write a Pascal program to calculate the number of even or odd numbers entered from a keyboard and also calculate the sum of all even numbers and sum of all odd numbers.

6. Write a Pascal program to print the number of vowels and consonants in an entered string.

7. What are transmission media? Discuss the microwave communication.

8. Draw TCP/IP reference model and describe the working of various layers of the model.

9. Define structured programming? Differentiate between structured programming and object oriented programming

[3]

[Turn-over]