

## Communication Networks

1st Half-13-Mina - (d)-4

Con. 8964-13.

(REVISED COURSE)

GS-5743

(3 Hours)

[ Total Marks : 100

- N. B. :** (1) Question No. 1 is **compulsory**.  
 (2) Attempt any **four** questions from remaining **six** questions.  
 (3) Assume **suitable** data if **necessary**.

1. Attempt any **four** :— 20
    - (a) Give reasons for using layered protocols ?
    - (b) Explain how microwave communication work.
    - (c) Explain various LAN Topologies.
    - (d) What is sliding window protocol ? Where it is applicable ?
    - (e) Explain general principles of congestion control.
  
  2. (a) Explain circuit switching, packet switching and message switching. 10  
 (b) Compare the performance characteristics of co-axial, twisted pair and fiber optic transmission media. 10
  
  3. (a) Explain in detail O.S.I. model. 10  
 (b) What is DSL technology ? Explain various DSL technologies and compare. 10
  
  4. (a) Draw the block diagram of SONET and explain its operation. Also explain SONET frames. 10  
 (b) State and explain various frame types in HDLC. 10
  
  5. (a) What is ethernet ? Explain fast ethernet specifications. Also explain CSMA-CD in detail. 10  
 (b) What are the different types of routing ? Explain link state routing. 10
  
  6. (a) Explain the following network connecting devices :— 10
    - (i) Switches
    - (ii) Routers
    - (iii) Gate way
    - (iv) hub
    - (v) Bridge.
  - (b) Explain different ARQ techniques. 10
  
  7. Explain the following :—
    - (a) TCP-IP Model 5
    - (b) Leased Line Concept 5
    - (c) ISDN 5
    - (d) Ipv4. 5
-