Question bank of Computer Networks for PT1(C1/C2/C3)

1. Explain what is a computer network? Explain its applications.
2. Explain LAN MAN WAN.
3. What is the ISO OSI reference model? Explain with suitable diagrams how data flows through the OSI model with headers and trailers.
4. Describe hardware and software components required for computer networks.
5. Explain all interconnecting devices in details with appropriate diagrams along with its working and layer at which it works.
6. What are different topologies used in a computer network. Explain each with diagrams and advantages and disadvantages.
7. Explain design issues of layers.
8. Explain the following layered structure along with its functions.
   a. OSI   b. TCP/IP
9. What are logical , physical and port addresses? Explain each with the help of examples and diagrams and layers where they are used.
10. Difference between TCP/IP and OSI model.
11. Explain different types of guided(wired) media with the help diagrams.
12. Compare twisted pair, coaxial cable and optical fiber.
13. What are different framing methods. Explain with the help of examples.
14. Explain with examples the following error control methods
    a. Hamming code (Single bit, double bit).
    b. CRC
    c. Checksum
15. Explain the 3 types of stop and wait protocols
16. Explain the following sliding window protocols with the justification of sender's and receiver's window size.
    a. One bit – stop and wait
    b. Go back –n
    c. Selective repeat
17. Numerical on
    a. Framing methods
    b. Hamming code
    c. CRC
    d. Checksum
    e. Go back N
    f. Selective repeat