Gowsia, William Stalling. TASK 2 & 3.

Q. Explain the frame format of 80.2.3. (ethernet)
Q. Explain point coordination fn in wireless LAN.
Q. Explain basic service (BSS) set and extended service set (ESS). Explain hidden node and exposed node problem.
Q. Frame format 802.11 wireless lane.
Q. Explain FDDI.
Q. Explain the structure of LLC PDU.
Q. Explain the frame transmission in the following:
Bus topology, Ring, Star.
Q. Explain Giga bit ethernet and fast ethernet.
Q. Describe the characteristics of BC LAN.
Q. Explain IEEE 802 LAN STANDARDS.
Q. Choice of transmission medium and protocol.
Q. Explain the MAC sublayer and LLC sublayer of data link layer.
Q. 802.3 reference model.

for frame format: draw structure, write one - line explanation.

UNIT 3

↳ Degital to Analog
ASK, FSK, PSK (BPSK), QPSK, QAM. Explain → block diagram or to code data.
↳ Multiplexing : FDM, WDM, TDM, (Block diagram)
↳ Constellation :
diagram for ASK, PSK, FSK.
↳ Refer problems on slide
↳ Spread spectrum (Bss > B) FHSS, DHSS. block diagram.
↳ Hierarchy of Analog / Degital.

UNIT - 4

↳ Peer to peer network protocol
- SDU and PDU
- service models
- ARQ protocols. (Stop and wait, Senplust, Go back N,)
↳ M. Aloha, Sloted Aloha, Multiple Accen comm.
↳ Controlled Accen: Reservation, Polling, Token
↳ Channelisation: FDMA, CDMA, TDMA
chip sequence Walsh table CDMA.
↳ Vulnerable Time.
↳ CSMA: with collision detection
with collision avoidance.

IMP: PCM: Pulse code Modulation.
Performance. (formulas, problems)
Problems on signal rate.

IMPORTANT TOPICS:

UNIT - 1 :

Communication Networks :

↳ Essential services provided.

↳ connection oriented and connectionless.

↳ Telephone is connection oriented example and explain, connection release.

↳ Topology and comparison.

✓ ↳ OSI Layer / Architecture (functionalities) — OSI reference model.

✓ ↳ TCP/IP Architecture (Protocols of each layer) — implement Internet model. — model.

↳ Why layering is required (Postman example).

↳ Performance.

UNIT - II :

↳ Analog and Digital data problems on given slides

↳ Analog → sine wave → parameters
Frequency, bandwidth, block digram

↳ Baseband and Broadband.
→ Narrow.
→ Wide

CV.IMP) ↳ Transmission impairments
def, block diggram, formulas.

↳ Five types of Noise (and formulas)
SNR.

↳ Problems related to attenuation and noise.

↳ factors that affect data level. rate unit.

↳ Nyquist Bitrate and Shannon Channel capacity.

✓ ↳ Digital to Digital conversion
Line coding, - RZ, NRZ, Manchester, Differential Manchester, Bipolar, AMI, (convert to data) prob
✓ Scrambling: long sequence of 0.

↳ Block coding : 4B/5B.

✓ ↳ Characteristics of line coding. (9 points)

↳ CRC. (Problems)

↳ Internet Checksum. (Problem)
Syndrome values.