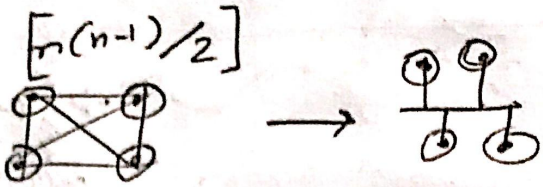
Quiz-3 Preparation

@AN



[Point-to-point Wiring] → CAN

Defn: Embedded protocal for vehicle bus standard designed to allow microcontrollers and devices to communicate with each other without a host computer.

Controller Area Network

Scope: Primarily automative but used in aerospace, marrine, industrial automation and medical equipments.

Connection: Not directly to the bus but through a host processor and a CAN controller.

Dericeso are usually sensors, actuators and control devices

Layers: i) Physical
ii) Protocal
iii) Message filtering

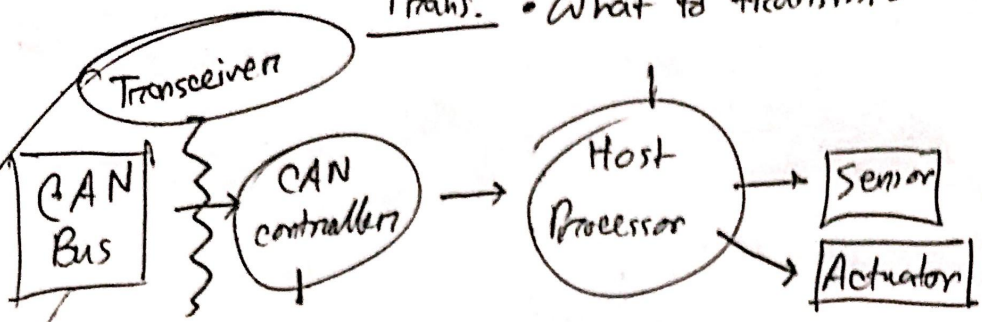
CAN Bus → CAN controller → host interface → sensors

CAN Bus: Broadcast type bus with local filtering

→ Insensitive to EMI because of differential nature of transmission. Can be aditionally shielded.

Rec: • Received message meaning

Trans: • What to transmit



Rec: stores received bits serially until entire message is form and then sends to host processor.

Trans: ~~Host sends~~ Stores message of host processor and serially sends it to the bus.

Rec: Adapts bus signal levels for CAN controllers and has protective circuitry.

Trans: converts transmit-bit signal received from CAN controllers into signal sent to bus.