



Subject: SPA

Semester: II

Q.P. NOV-DEC 2017 (Q.P.: 24644)

Q1① Explain the need of layered design for communication & networking. Compare the OSI reference model & TCP/IP.

→ The first computer networks were designed with the hardware as the main concern & the software as an afterthought. This strategy no longer works. Network software is now highly structured. To reduce their design complexity, most networks are organized as a stack of layers or levels, each one built upon the one below it.

The number of layers, the name of each layer, the contents of each layer, & function of each layer differ from n/w to n/w. The purpose of each layer is to offer certain services to the higher layers while hiding those layers from the details of how the offered services are actually implemented. In a sense, each layer is a kind of virtual machine, offering certain services to the layer above it.

Example: Given below is layer network. When layer n on one machine carries on a conversation with layer n on another machine, the rules & conversations used in this conversation are collectively known as layer n protocol.



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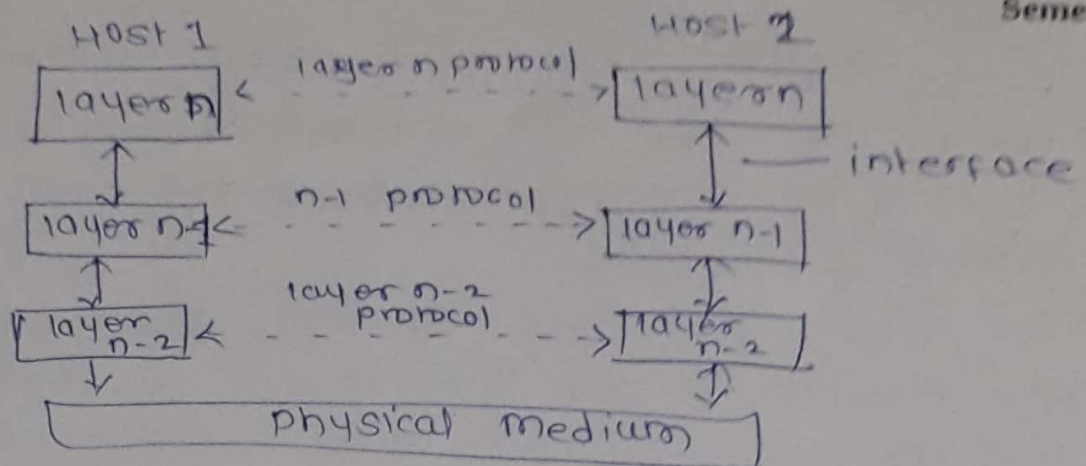


Fig: layers, protocols, interfaces.