

Solved Question Paper

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Write the basic purpose and name the OSI layer where the following devices will be operating:

It is the hardware/ software device that is used to interconnect LANs and WANs. Gateways are more powerful and complex than a router. They are slower than a router and are expensive.

Gateway incorporates the functions of routers and bridges, but it can translate the instruction set on sending network into corresponding instruction set of the receiving network. Gateways make communication possible between different architectures and environments.

Often, the router that is used to connect a LAN to the Internet will be called a gateway.

It has the capability to direct and filter higher layer protocols to specific devices(such as web servers, ftp servers and email servers).

A gateway links two systems that do not use the same communication protocols, data formatting structures, languages and architecture, which cannot be done by a router. Gateways perform protocol and data conversion.

Gateways OSI operating layer :

Gateways operate at the transport layer and above. It typically translates each source layer protocol into the appropriate destination layer protocol. Gateways use all the seven layers of the OSI model. A mainframe gateway may translate all OSI model layers. Example, IBM's SNA (System Network Architecture) does not readily conform to the OSI model, and requires a gateway to translate between the two architectures.