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WEEK-END ASSIGNMENT-02

Computer Networking Workshop (CSE 4541)

Publish on: 17-03-2023 **Submission on:** 20-03-2023
Course Outcome: CO_1 **Program Outcome:** PO_1 **Learning Level:** L_5

Judge the role of Layers in Internetwork Models and Experiment with Collision Domain & Broadcast Domain in Ethernet

1. Rearrange the following in order of encapsulation:
packets, frames, bits and segments
Segments, packet frames, bits
2. Which layer chooses and determines the availability of communicating partners along with the resources necessary to make the connection, coordinates partnering applications, and forms a consensus on procedures for controlling data integrity and error recovery?
Application layer
3. Which layer ensures the trustworthy transmission of data across a physical link and is primarily concerned with physical addressing, line discipline, network topology, error notification, ordered delivery of frames, and flow control?
Data Link layer
4. Which layer manages logical device addressing, tracks the location of devices on the internetwork, and determines the best way to move data?
Network layer
5. Which layer specifies voltage, wire speed, and cable pinouts and moves bits between devices?
Physical Layer
6. Which layer is responsible for creating, managing, and terminating sessions between applications?
Session layer
7. Which layer defines how data is formatted, presented, encoded, and converted for use on the network?
presentation layer
8. Which layer is used for reliable communication between end nodes over the network and provides mechanisms for establishing, maintaining, and terminating virtual circuits; transport-fault detection and recovery; and controlling the flow of information?
Transport Layer
9. Which layer is responsible for keeping the data from different applications separate on the network?
Session layer
10. Select the device/OSI layer for the followings:

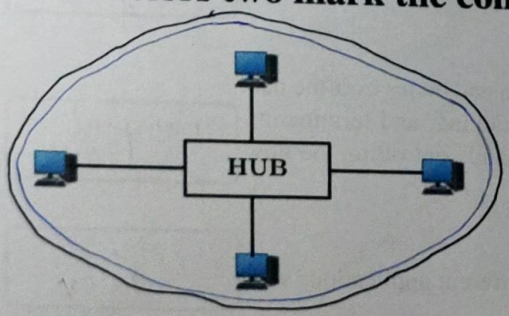
Description	Device or OSI Layer
This device sends and receives information about the Network layer.	The modem
This layer creates a virtual circuit before transmitting between two end stations.	Transport layer

This device uses hardware addresses to filter a network.	A layer 3 switch
Ethernet is defined at these layers.	Data Link & physical
This layer supports flow control, sequencing, and acknowledgments.	Transport Layer
This device can measure the distance to a remote network.	Router
Logical addressing is used at this layer.	Network layer
Hardware addresses are defined at this layer.	Data Link Layer
This device creates one collision domain and one broadcast domain.	Hub
This device creates many smaller collision domains, but the network is still one large broadcast domain.	Switch or bridge
This device can never run full-duplex.	Hub
This device breaks up collision domains and broadcast domains.	Routers

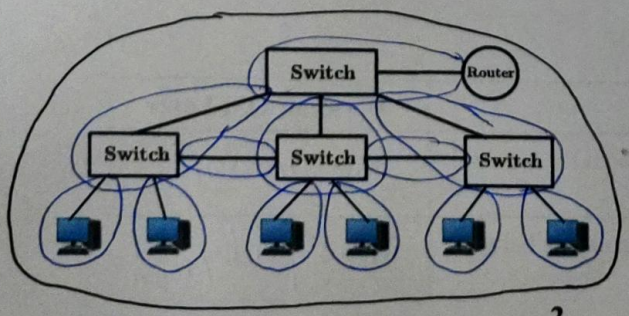
11. The IEEE Ethernet Data Link layer has two sublayers, Write their names.

Logical Link Control & Media Access control

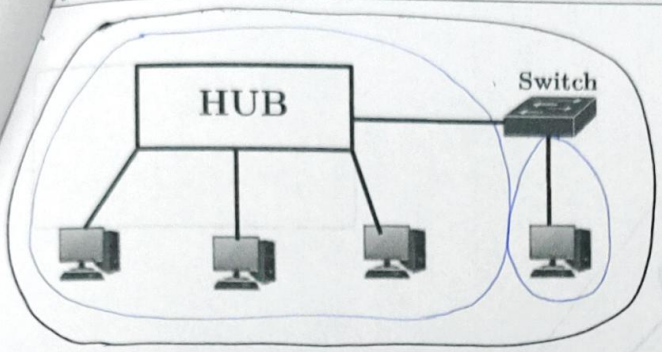
Identify number of collision domains and broadcast domains. Use Two different colors two mark the collision domain and broadcast domain



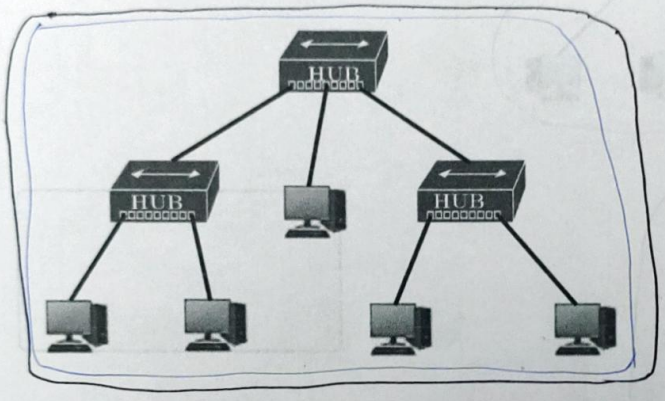
1 collision domain
1 broadcast domain



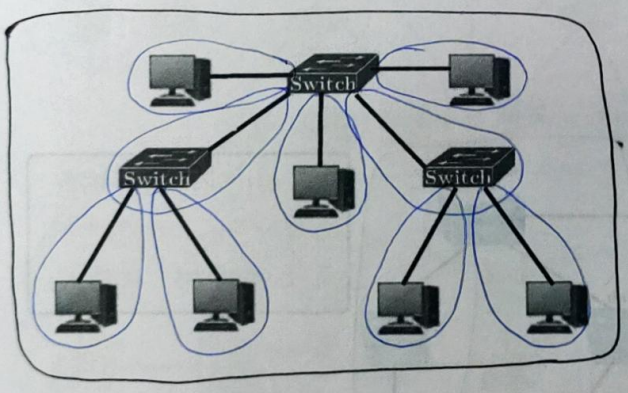
12 collision domain and 1 broadcast domain



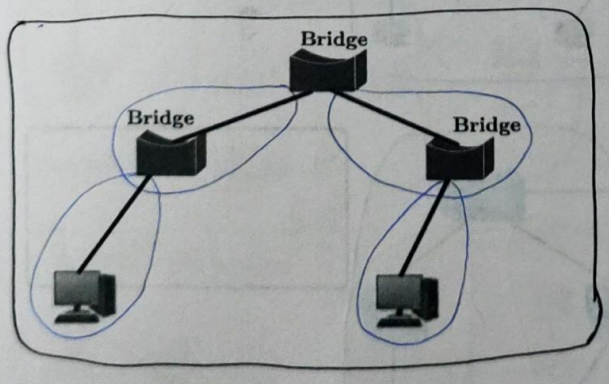
2 collision domain
and
1 broadcast domain



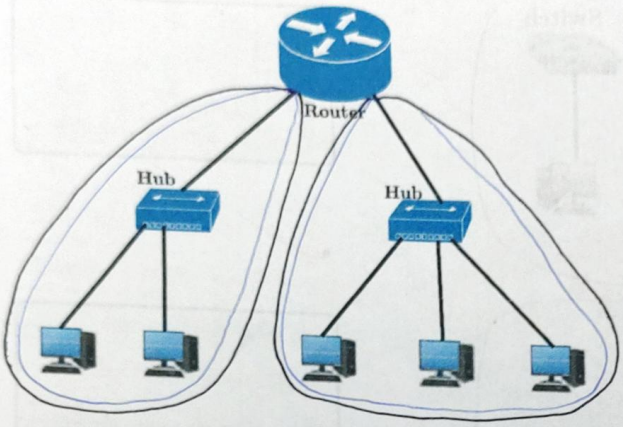
1 collision domain
and
1 broadcast domain



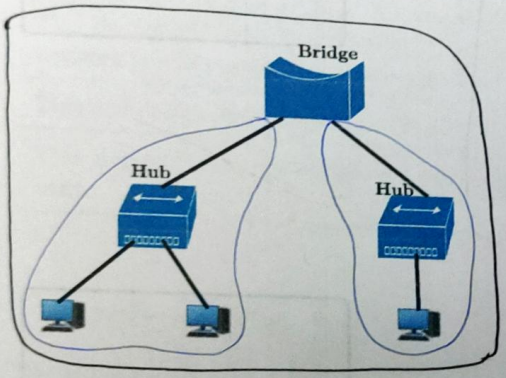
9 collision domain
and
1 broadcast domain



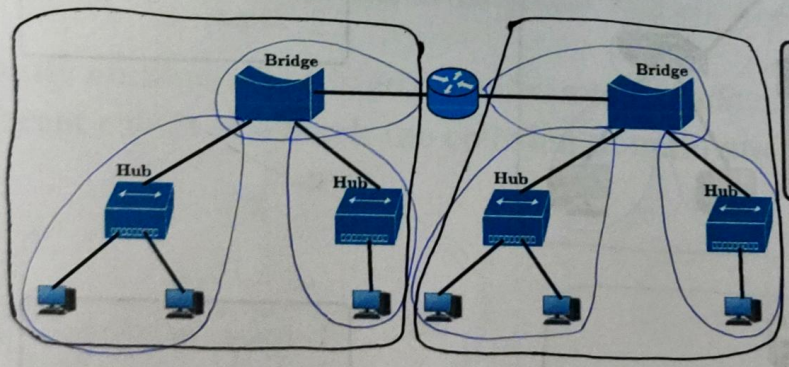
4 collision domain
and
1 broadcast domain



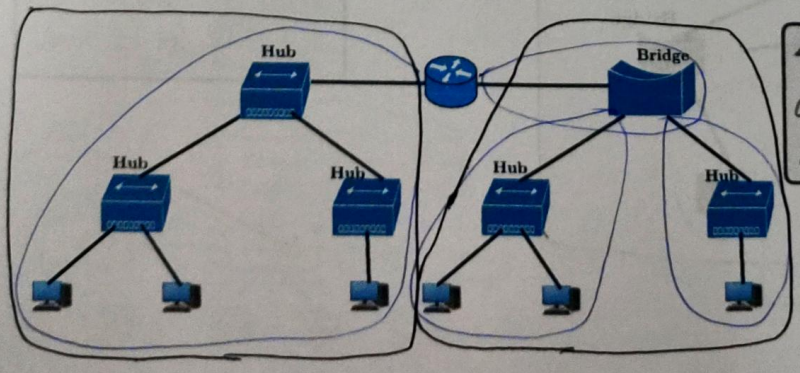
2 collision domain
and
2 broadcast domain



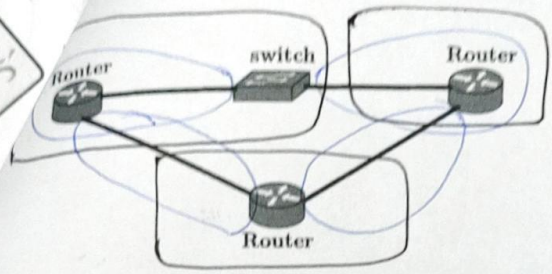
2 collision domain
and
1 broadcast domain



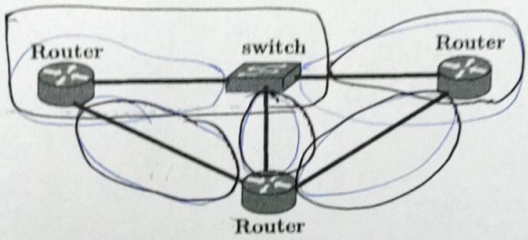
6 collision domain
and
2 broadcast domain



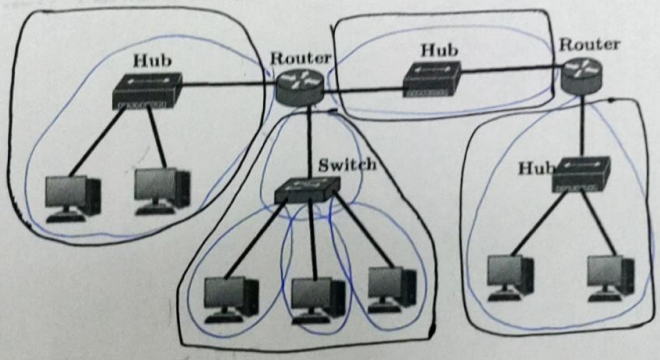
4 collision domain
and
2 broadcast domain



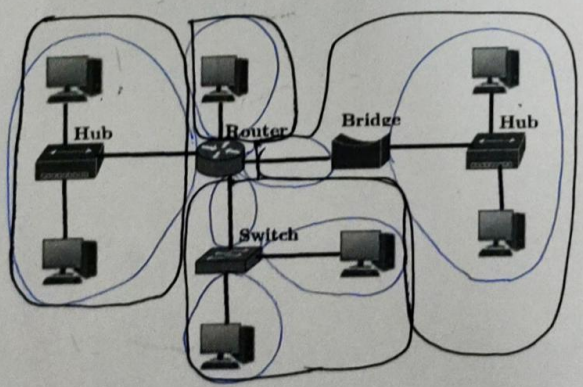
4 collision domain
3 broadcast domain



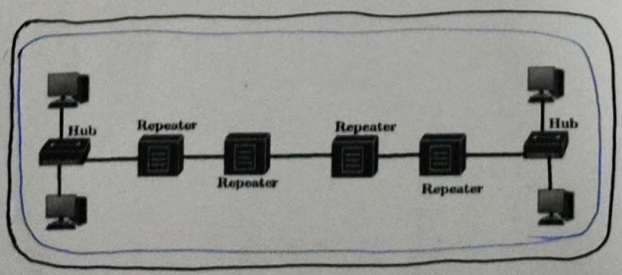
5 collision domain
and
5 broadcast domain



7 collision domain
and
4 broadcast domain



7 collision domain
and
4. broadcast domain



1 collision domain
and
1 broadcast domain

Very good
S. Pattnaik
28.03.23