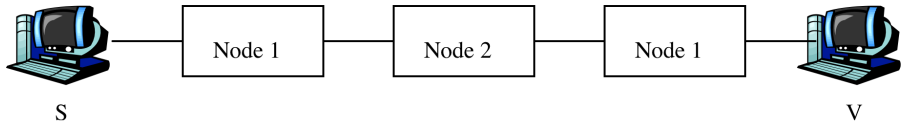
Past Exam Questions

- In this problem we will compare the performance of circuit switching with packet switching. Figure below shows a source host S and a destination host V connected by a switching network consisting of three nodes. We will make the following assumptions:



- The transmission rate of all the links is 9600 bits per second.
- The propagation delay in each hop is 0.001 seconds.
- The size of the message that needs to be sent from S to D is 3200 bits.
- The end-to-end connection setup time for circuit switching is 0.2 seconds.
- For packet switching the packet size is 824 (this includes 24 bits of header).
- Assume that for packet switching there is no queuing and processing delay at the intermediate nodes.
- Assume that no acknowledgements are required.

Question (contd.)

- Find the time to send the message from source to destination when the network uses –
  - Circuit switching
  - Packet switching