Readable name: _____ Neptun ID: _____

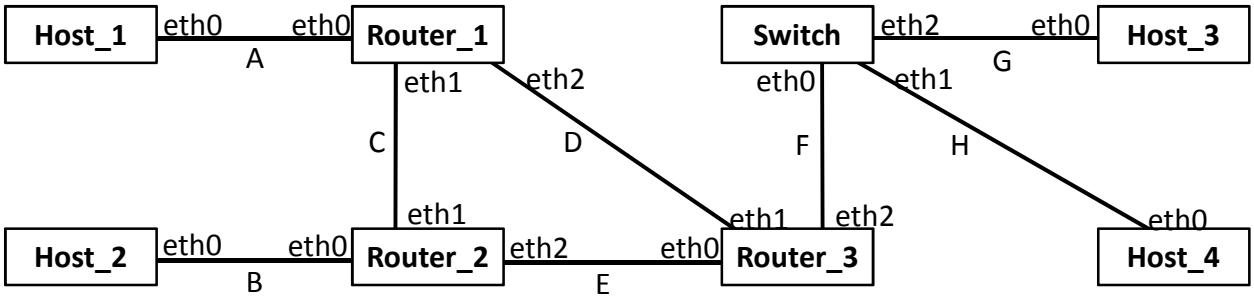
Computer network architectures and protocols

Theoretical test sample

1. Network overview *(15 points)*

Look at the following network configuration. Write letter **T** into the box before *true* statements on the next side and write letter **F** before *false* ones. Wrong answer means negative point.

Host_1	eth0:	IP: 192.168.0.1/24	MAC: 74:DE:2B:03:E3:AF
Host_2	eth0:	IP: 192.168.1.1/25	MAC: 74:DE:2B:54:03:21
Host_3	eth0:	IP: 172.16.0.10/16	MAC: 1C:6F:65:AF:34:C1
Host_4	eth0:	IP: 172.16.0.20/16	MAC: 14:DA:E9:11:01:F2
Router_1	eth0:	IP: 192.168.0.2/24	MAC: 00:22:CE:34:C0:92
	eth1:	IP: 10.0.0.1/8	MAC: 00:22:CE:34:C0:93
	eth2:	IP: 192.168.4.65/30	MAC: 00:22:CE:34:C0:94
Router_2	eth0:	IP: 192.168.1.2/25	MAC: 00:22:CE:23:8A:D8
	eth1:	IP: 10.0.255.255/8	MAC: 00:22:CE:23:8A:D9
	eth2:	IP: 192.168.1.130/25	MAC: 00:22:CE:23:8A:DA
Router_3	eth0:	IP: 192.168.1.201/25	MAC: 00:17:47:A2:E1:24
	eth1:	IP: *???*	MAC: 00:17:47:A2:E1:25
	eth2:	IP: 172.16.12.3/16	MAC: 00:17:47:A2:E1:26



Look at the network configuration on the previous side. Write letter **T** into the box if a statement is *true*, but otherwise write letter **F**. Wrong answer means negative point.

☐ If Host_1 sends a packet to Host_3 the destination MAC address of the frame in the line A is 1C:6F:65:AF:34:C1.

☐ If Host_3 sends an ARP question Router_3 will receive it.

☐ Host_1 and Host_3 are in different networks (different network ID).

☐ If a new node is connected to the switch its IP address cannot be 192.168.100.1.

and further 11 statements…

2. Classification of concepts *(15 points)*
   Put the following concepts after the layer of Hybrid model they belongs to.

   ~~*IP address*~~*, slotted ALOHA, FDDI, Network Address Translation (NAT), Top Level Domain (TLD), RARP, and further 10 concepts…*

Physical layer (L1):
Data-link layes (L2):
Network layer (L3): *IP address*
Transport layer (L4):
Application layer (L5):