DCNK-C Practical Test Practice

Part 1: IP Subnet Design

Internet Protocol (IP) address: _____ **213.30.25.0** _____

Number of Subnets required: _____ **14** _____

Workout the followings:

1.   Number of bits needed to be borrowed for subnets: _____ 4 _____

2.   Custom Subnet Mask: _____ 255.255.255.240 _____

3.   Complete the following Table 1.

Subnet	Subnet Address	Usable Host Address Range	Broadcast Address
0	213.30.25.0	.1 to .14	.15
1	213.30.25.16	.17 to .30	.31
7	213.30.25.112	.113 to .126	.127

Table 1

Part 2: Router Configuration and Network Setup

With the subnets you have worked out in Part 1, use Packet Tracer software to setup the network topology as follows. Complete Table 2.
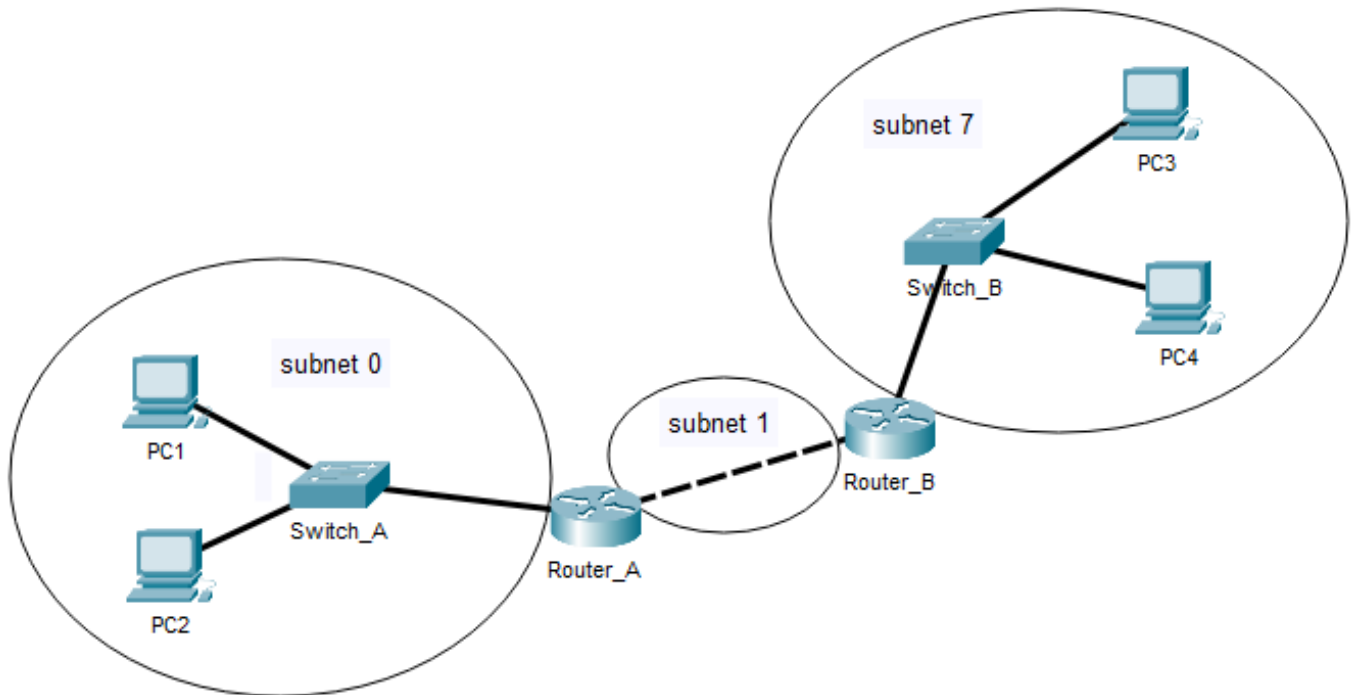
Network Topology

Device	IP Address / Subnet Mask	Default Gateway Address
PC_1	*subnet 0 -* 213.30.25.11 / 255.255.255.240	213.30.25.1
PC_2	*subnet 0 -* 213.30.25.12 / 255.255.255.240	213.30.25.1
Router_A	subnet 0 - 213.30.25.1 / 255.255.255.240	---
Router_A	*subnet 1 -* 213.30.25.17 / 255.255.255.240	---
Router_B	subnet 1 - 213.30.25.18 / 255.255.255.240	---
Router_B	*subnet 7 -* 213.30.25.113 / 255.255.255.240	---
PC_3	*subnet 7 -* 213.30.25.123 / 255.255.255.240	213.30.25.113
PC_4	*subnet 7 -* 213.30.25.124 / 255.255.255.240	213.30.25.113

Table 2

1. Configure Enable password *dcnk2021* on all routers.

2. Configure IP address on the routers and hosts.

3. Configure routing protocol RIP on both Router_A & Router_B so that all hosts connected to Switch_A can ping to hosts connected to Switch_B and vice versa.

4. Carry out the following Ping test results after you have completed the configuration:

Ping Test	Yes / No
PC_1 ping to PC_2	yes
PC_3 ping to PC_4	yes
PC_1 ping to PC_3	yes
PC_4 ping to PC_2	yes