Q. Compare between static and dynamic routing with respect to router configuration, flexibility, performance and security.

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|  | Static | Dynamic |
| Configuration | Easy to Implement in small networks. However configuration complexity increases dramatically as the network grows. | Initially it’s more complex to implement. However, it’s independent of the network size.  |
| Flexibility | Not flexible at all. | Good flexibility. |
| Performance | No traffic control. However requires no CPU and memory. | Require additional CPU and memory, however it can control traffic. Better in General. |
| Security | Extremely secure since there is no adv. Between routers. | Less secure than static since there will be adv. Between routers among networks. |

Q. Why do we need sub netting? Discuss three reasons?

* To divide a large network into smaller segments to reduce traffic and speed up the sections of your network.
* To connect networks across geographical areas.
* To connect different topologies such as Ethernet, Token Rind, and FDDI together via routers.
* To avoid physical limitations such as max cable lengths or exceeding the max number of computers on a segment.