Q1:

| Subnet Name | Number of Host needed | Subnet Address | Prefix/CIDR | 1st usable | Last Usable | Broadcast |
| --- | --- | --- | --- | --- | --- | --- |
| Academic Office | 48 | 195.161.4.0 | /26 | 195.161.4.1 | 195.161.4.62 | 195.161.4.63 |
| Computer Lab | 30 | 195.161.4.64 | /27 | 195.161.4.65 | 195.161.4.94 | 195.161.4.95 |
| Administration Office | 16 | 195.161.4.96 | /27 | 195.161.4.97 | 195.161.4.126 | 195.161.4.127 |
| Sport Centre | 6 | 195.161.4.128 | /29 | 195.161.4.129 | 195.161.4.134 | 195.161.4.135 |
| Link#1 | 2 | 195.161.4.136 | /30 | 195.161.4.137 | 195.161.4.138 | 195.161.4.139 |
| Link#2 | 2 | 195.161.4.140 | /30 | 195.161.4.141 | 195.161.4.142 | 195.161.4.143 |

Q2:

| Number of Host needed | Subnet Address | Prefix/CIDR | 1st usable | Last Usable | Broadcast |
| --- | --- | --- | --- | --- | --- |
| 40 | 193.3.6.0 | /26 | 193.3.6.1 | 193.3.6.62 | 193.3.6.63 |
| 30 | 193.3.6.64 | /27 | 193.3.6.65 | 193.3.6.94 | 193.3.6.95 |
| 14 | 193.3.6.96 | /28 | 193.3.6.97 | 193.3.6.110 | 193.3.6.111 |
| 14 | 193.3.6.112 | /28 | 193.3.6.113 | 193.3.6.126 | 193.3.6.127 |
| 6 | 193.3.6.128 | /29 | 193.3.6.129 | 193.3.6.134 | 193.3.6.135 |
| 2 | 193.3.6.136 | /30 | 193.3.6.137 | 193.3.6.138 | 193.3.6.139 |

(i) 193.3.6.0 /26

(ii) 193.3.6.64 /27

(iii) 193.3.6.96 /28

(iv) 193.3.6.112 /28

(v) 193.3.6.128 /29

(vi) 193.3.6.136 /30

Q3

**Given IP address: 200.150.80.0/24**

| **Subnet** | **Number of Host needed** | **Subnet Address** | **Prefix/CIDR** | **1st usable** | **Last Usable** | **Broadcast** |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | 35 | 200.150.80.0 | /26 | 200.150.80.1 | 200.150.80.62 | 200.150.80.63 |
| 2 | 22 | 200.150.80.64 | /27 | 200.150.80.65 | 200.150.80.94 | 200.150.80.95 |
| 3 | 12 | 200.150.80.96 | /28 | 200.150.80.97 | 200.150.80.1110 | 200.150.80.111 |
| 4 | 7 | 200.150.80.112 | /28 | 200.150.80.113 | 200.150.80.126 | 200.150.80.127 |
| 5 | 5 | 200.150.80.128 | /29/ | 200.150.80.129 | 200.150.80.134 | 200.150.80.135 |
| 6 | 2 | 200.150.80.136 | /30 | 200.150.80.137 | 200.150.80.138 | 200.150.80.139 |