### IPv4 Assignment 11

1. You are working for a school division and using provided with Class B public address 181.18.0.0 for entire school division. Using VLSM, provide address range (include network and broadcast addresses) and CIDR for following schools in school division. (18 Marks)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | School/Office | No of addresses | Address Range(include network and broadcast addresses) | CIDR |
| 1 | High School A | 3100 | 181.18.0.0-181.18.15.255 | 20 |
| 2 | High School B | 2040 | 181.18.16.0-181.18.23.255 | 21 |
| 3 | Middle School C | 1100 | 181.18.24.0-181.18.31.255 | 21 |
| 4 | Middle School D | 980 | 181.18.32.0-181.18.35.255 | 22 |
| 5 | Elementary E | 620 | 181.18.36.0-181.18.39.255 | 22 |
| 6 | Elementary F | 470 | 181.18.40.0-181.18.41.255 | 23 |
| 7 | Head Office G | 440 | 181.18.42.0-181.18.43.255 | 23 |
| 8 | Branch Office H | 325 | 181.18.44.0-181.18.45.255 | 23 |
| 9 | Branch Office I | 290 | 181.18.46.0-181.18.67.255 | 23 |

1. Assuming that Head Office G has been allocated 512 with address range of 181.18.42.0/23, using VLSM, provide answers for address ranges and masks for each area described below: (10 Marks)

|  |  |  |  |
| --- | --- | --- | --- |
| Department/Area | No of addresses | Address Range(inc. subnet and broadcast addresses) | CIDR |
| Students | 250 | 181.18.42.0-181.18.42.255 | 24 |
| Staff | 100 | 181.18.43.0-181.18.43.127 | 25 |
| Printers | 60 | 181.18.43.128-181.18.43.191 | 26 |
| Routing Devices | 30 | 181.18.43.192-181.18.43.223 | 27 |
| Administration | 13 | 181.18.43.224-181.18.43.239 | 28 |

Total Marks \_\_\_\_\_\_\_\_  
 38