INTER - VLAN ROUTING (ROUTER ON A STICK)
- PROJECT 02

Starting IP Address : 192.168.10.0/24

FINANCE — 30 hosts
IT — 20 hosts
HR — 10 hosts

FINANCE — 30 hosts
———o

192.168.10.0/24

Subnet Mask :

255.255.255.0

|||||||| . |||||||| . |||||||| . 00000000

net ← → host

$30 = 11110_2 \rightarrow 5$ bits $\rightarrow 2^5 = \boxed{32}$

New Subnet

|||||||| . |||||||| . |||||||| . 11100000

OR /27

IP Range for FINANCE

192·168·10·0/27 — 192·168·10·31/27

USABLE IP RANGE

193·168·10·1/27 → 192·168·10·30/27
   Router (Gateway) :- 192·168·10·1/27

192·168·10·32/27

IT – 20 hosts

subnet

$$|||||||| \cdot |||||||| \cdot |||||||| \cdot 000\,00000$$

$$20 = 10100_2 = 2^5 \;\boxed{32}$$

IP Range for IT

192·168·10·032/27 — 192·168·10·63/27

USABLE IP RANGE
192·168·10·33 – 192·168·10·62/27
   /27
         Gateway:- 192·168·10·33/27

192.168.10.64/27

HR — 10 hosts.

$10 = 1010_2 = 2^4 = \boxed{16}$

network →← →hosts

11111111 . 11111111 . 11111111 . 11100000

NEW SUBNET

11111111 . 11111111 . 11111111 . 11110000

OR

/28.

IP RANGE

192.168.10.64/28 — 192.168.10.79/28

USABLE IP RANGE

192.168.10.65/28 — 192.168.10.78/28

Gateway:- 192.168.10.65/28.