

Banaras Hindu University, Varanasi

Department of Computer Science

Midterm Examination, Session 2024-2025

Subject Code & Name: CS-206, Computer Networks

Class: MCA & MSc I Semester

Time: 1 hour

Maximum Marks: 20

- 1) An ISP is granted a block of addresses starting with 150.80.0.0/16. The ISP wants to distribute these blocks to 2600 customers as follows. [5]
- The first group has 200 medium-size businesses; each needs 128 addresses.
 - The second group has 400 small businesses; each needs 16 addresses.
 - The third group has 2000 households; each needs 4 addresses.

Design the sub-blocks and give the slash notation for each sub-block. Find out how many addresses are still available after these allocations.

- 2) Compare and contrast the fields in the main headers of IPv4 and IPv6. Make a table that shows the presence or absence of each field. [5]
- 3) What is Address Resolution Protocol (ARP)? Describe ARP packet format. [5]
- 4) Describe Distance Vector Routing protocol with suitable diagram. [5]

END