Time: 1 hour 30 min.   Maximum Marks: 40 / 30

INSTRUCTIONS:			
1. Answer **ALL** questions. Each question carries 20 Marks.			
2. Subdivision (a) (i) and (ii) carries 2 marks each, subdivision (b) carries 6 marks each and subdivision (c) carries 10 marks each.			
3. Course Outcome Table : Qn.1	CO.1	Qn.2	CO.2

1.a.(i) List the security mechanisms used to provide security services.

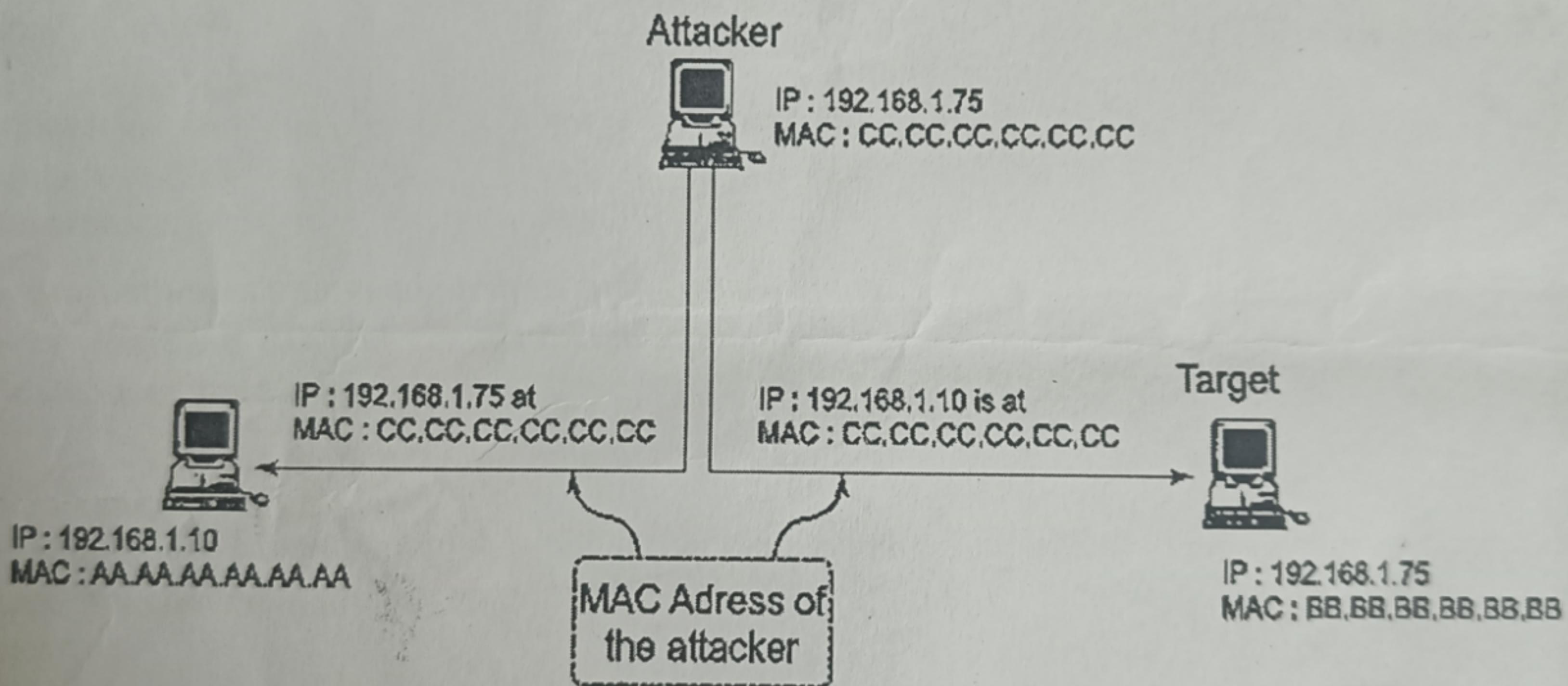**a.(ii)** Differentiate TUN and TAP interface. –2

b. Brief on how to execute these attacks and give its mitigations
  (i) Double tagging attack in a switch.(3)
  (ii) STP manipulation attack.(3)

c. (i) Identify the below attack. Give the Scapy code and also its mitigations. Can we launch this attack from a remote computer? Justify why. Suggest some techniques of how to make it possible from remote.(8)

–3

(ii) How Gratuitous ARP can be misused ? Give the spoofed ARP packet for the same in scapy. (2)

2.a.(i) What is Smurf attack? Give the hping command.

a.(ii) What are the two ways to bring down a website with 10kbps link. Discuss with respect to packet size and packet rate.

b) Discuss on the Memory Exhaustion DOS attack using IP Fragmentation. Give an implementation for the same.   –3

c) Tunnel mode is more secure than transport mode. What is the Problem with NAT and Tunnel Mode in IPSec? Differentiate AH and ESP. Discuss these two modes on ESP.