American University of Beirut
Department of Electrical and Computer Engineering
EECE 350 – Computer Networks
Homework 5
Spring 2015

Due Wednesday April 8 in class.

1. A host A, with IPv4 address 172.20.21.22 connected to Network-1 sends one 1460-Byte IPv4 datagram (with a 1440-Byte IP payload and a no-options 20-Byte header) to another host B, with IPv4 address 192.168.1.3, two networks (Network-2 and Network-3) away. One router connects to Network-1 and Network-2, and another router connects to Network-2 and Network-3. The MTU on Network-2 is 1000 Bytes, while the MTU on Network-3 is 680 Bytes. The application on host A uses UDP as its transport layer.

At host A, the outgoing datagram departs with a TTL value of 128, a DSCP+ECN (or ToS) Byte of 0, and an identification field equal to X,
where X = (your ID number considered as a decimal number) mod 65536
example: for ID number 2014 12345, X = 201412345 mod 65536 = 20217

Show the values, in decimal, of all header fields of all datagrams that arrive at host B as a result of the above.

2. Wireshark IP exercise posted on Moodle.