Assignment 02

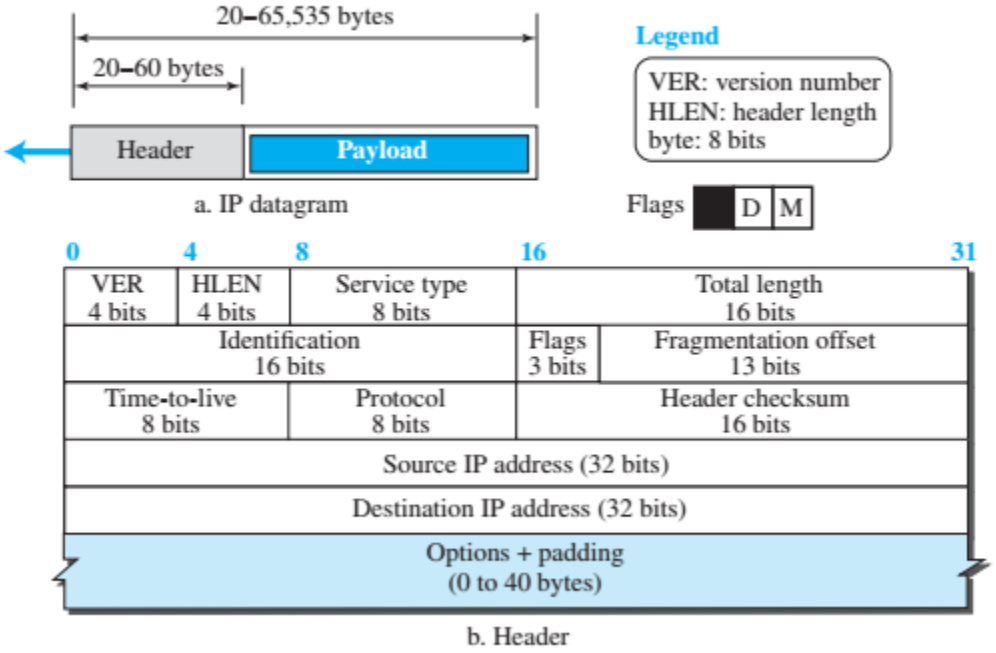
Total Marks: 10 **Computer Networks**

- Start your web browser and clear the browser's cache memory, but do not access any site yet.
- Open Wireshark and start capturing.
- Go back to your web browser and retrieve any file from a site. Wireshark starts capturing packets.
- After enough packets have been captured, stop Wireshark and save the captured file.
- In the packet list pane, select any packet. In the packet detail pane, select the **Internet Protocol**. The hexdump of the IP header will be highlighted in the packet byte lane.

Questions

From the captured information, answer the following questions in your lab-report sheet.

Figure 19.2 *IP datagram*



1. Using the hexdump and consulting Figure 19.2, determine

- **a.** IP version.
- **b.** header length and number of bytes in the header.
- **c.** service type.
- **d.** total length.
- **e.** identification.
- **f.** set flags.
- **g.** fragmentation offset.
- **h.** TTL value.
- **i.** upper-layer protocol.
- **j.** checksum.
- **k.** source IP address.
- **l.** destination IP address.

2. Are answers to question 1 verified by information in packet detail pane?

3. If the checksum field in the packet detail pane is marked correct, can we conclude that the IP payload is not corrupted? Explain.

4. Is the datagram fragmented? Explain.

5. Does source or destination address belong to one of the special addresses? If yes which one?

6. How many bytes of data are in IP payload?