1. Among the following statements on IPv4 and IPv6 packets, which is correct? **1 / 1 point**

- ○ Several functional fields of the IPv4 packet were removed when making the IPv6 packets, resulting in a simpler IPv6 header structure, and therefore, IPv4 packets are datagrams but IPv6 packets are not datagrams
- ○ In order to assist a computer sending an IP packet in to the Internet, the default gateway is the only gateway/router that checks errors of the IP Header Checksum such that the IP packet properly arrives at the destination system
- ◉ The 'Total Length' field in an IPv4 packet represents the length of the entire IPv4 packet (in units of octets), where the maximum possible IPv4 packet length is 65,535 octets
- ○ In a Wi-Fi (IEEE 802.11 WLAN standard) network and Ethernet (IEEE 802.3 LAN standard) network, the IPv4 packet size can be set to the maximum IPv4 packet size 65,535 octets

✓ **Correct**
This is correct

2. IPv6 addresses are 128 bits long, and therefore use Hexadecimal (0x) numbering for efficient address representation. Among the following Binary = Hexadecimal = Decimal mapping, which is incorrect? **1 / 1 point**

- ○ 1000 = 0x8 = 8
- ○ 1001 = 0x9 = 9
- ○ 1010 = 0xa = 10
- ○ 1011 = 0xb = 11
- ○ 1100 = 0xc = 12
- ○ 1101 = 0xd = 13
- ○ 1110 = 0xe = 14
- ○ 1111 = 0xf = 15
- ◉ 0000 = 0xg = 16

✓ **Correct**

3. Among the following statements on IPv4 and IPv6 addresses, which is correct? **1 / 1 point**

- ○ CIDR (Classless Inter-Domain Routing) notation was used in the early Internet, but due to its too large IP subnet sizes that resulted in IP address wastes, a new classful address structured is used in the Internet such that the right size subnet sizes can be assigned based on network class
- ○ The IPv4 Jumbo Payload Option extension header can be used to make IPv4 Jumbogram packets with sizes much larger than 65,535 octets
- ○ Classful address subnets use VLSM (Variable-Length Subnet Masking) in assigning IPv4 and IPv6 address blocks to organizations based on actual number of IP addresses needed
- ◉ The 16 bit Header Checksum field of IPv4 packets protects the IPv4 source and destination addresses fields and other header fields from errors, but does not check for errors that may have occurred in the payload part of the IPv4 packet

Correct
This is correct

4. Among the following statements on TCP (Transmission Control Protocol) and UDP (User Datagram Protocol), which is correct? **1 / 1 point**

- ○ The TTL (Time to Live) field used in the UDP and TCP header prevent time delayed data segments from showing up late at the destination computer/server and messing up the data segment sequence reordering process
- ◉ TCP and UDP both provide port information of the source and destination computers/servers for application connection
- ○ TCP is a connectionless protocol, but UDP is a connection oriented protocol that maintains end-to-end flow control of data segments
- ○ UDP, which is a 'User Datagram Protocol' uses the PSH Flag, URG (Urgent) Flag, and UP (Urgent Pointer) in order to inform the 'User' of the computer/server that a security attack has been detected and urgent care is needed

Correct
This is correct