INFS310
Test 1 Review Guide
Test Date – Wednesday, October 4 2023

Topics   Chapters 1,2,5 assignments,

- Basic Network Terminology: know the elements of a network and how they connect and communicate. Internet of Things.
- Distinguish between physical links, data links, routes; frames, packets, segments; switches, routers; mac addresses, ip addresses. Trace a message through an internet. Encapsulation/de-capsulation
- Addressing
- Standards/protocols, why necessary, definition - particularly what is ordering, syntax.
- Connectionless vs. connection-oriented
- Example of ordering (HTTP/ TCP connection)
- TCP Segment, IP Packet, Ethernet Frame
    - Ports, Sequence number, Acknowledgement number, Checksum, Data Field
    - IP addresses, Header Checksum, Data Field, ttl
    - EUI-48 (MAC) Addresses, Frame Check Sequence
- Layering TCP/IP model, functions of the layers. OSI model.   Examples of protocols on the different layers of TCP/IP model. Vertical communication on hosts. Know common port numbers e.g. 80, 443, 25, 21, 22, 23. Ephemeral ports. sockets
- Review number system conversions, masking
- Encoding
- Troubleshooting commands: ping, tracert, pathping, nslookup, arp, ipconfig,
- Ethernet frame
- Switched networks
- Reports

Test format

- Objective section: Multiple choice with possibly multiple answers or multipart answers AND/OR matching AND/OR blanks
- Short answers
- Design and management question