

## **LANSING EASTERN HIGH SCHOOL CNAP SEMESTER I FINAL REVIEW SHEET**

Directions: Before attempting the Semester One Final Exam you should be familiar with the following concepts.

- Binary Numbers, decimal to binary conversions, binary to decimal conversions.
- Bandwidth & throughput
- Protocols - What are they?
- OSI Model / TCP Model. Know all layers and their functions.
- Addressing - Source vs. Destination, MAC vs IP, Physical vs. Logical
- Networking Devices and their functions. Repeaters, Hubs, Bridges, Switches, Routers.
- Alternating Current and Direct Current - similarities and differences.
- Current, resistance, voltage - what are they and how are they measured.
- Crosstalk, Electromagnetic Interference, Signal Degradation - Causes & Effects
- Encoding Processes
- Collisions and collision domains
- Segmentation
- Topologies. Ex. Star, Mesh, Extended Star
- Hexadecimal Numbering System, Hex-Decimal Conversions, Decimal-Hex Conversions
- What are the two parts of a MAC Address?
- Ethernet & Token Ring Standard Numbers - 802.?
- Advantages and various uses of Fiber Optic Cable
- List several power related problems and safety procedures relating to electricity.
- What is the guideline for determining the number of MDFs and IDF's?.
- RJ-45s, Patch Panels, Cat 5 Cable - What are each of these used for?
- Class A, B, & C Networks, Subnetting in Class B & C Networks
- Know the two parts of an IP Address.
- Basic information about routing protocols.
- TCP vs. UDP - Which is more reliable?
- Window Size, handshakes, acknowledgments.
- Presentation layer formats, ASCII, EBCDIC JPG, MP3, etc.
- DNS / DHCP
- Clients / Servers / Terminals
- LANs, MANs, WANs
- ARP & RARP, Which is which? What do they do?
- Static vs. Dynamic Routing - Similarities & Differences