**COSC175 Data HW: 20 points. Work with a partner and submit one copy per pair. Check your work with a calculator, but turn in a separate page (with both names on it) that shows all work.**

**Partner 1: Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Partner 2: Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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|  Convert the following octal numbers to binary. |
| 1. | 766 |  |
| 2.  | 101 |  |
| 3. | 202 |  |
| 4. | 889 |  |
| Convert the following binary numbers to octal. |
| 5. | 111110110 |  |
| 6. | 1000001 |  |
| 7. | 1100010 |  |
| Convert the following binary numbers to hexadecimal. |
| 8. | 111110110 |  |
| 9. | 1000001 |  |
| 10. | 1100010 |  |
| Convert the following decimal numbers to binary. |
| 11. |  45 |  |
| 12. | 69 |  |
| 13. | 99 |  |
| 14. | 1 |  |
| Convert the following binary numbers to decimal. |
| 15. | 110110 |  |
| 16. | 111 |  |
| 17. | 1110 |  |
|  |  |  |
| 18. | A byte contains how many bits? |  |
| 19. | Possible value of a bit |  |
| 20 |  |

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| Refer to the ASCII chart (www.asciitable.com) and give the ASCII equivalent values for the word Towson. |
| 21. | T | Hex |  |
| 22. | Binary |  |
| 23. | o | Hex |  |
| 24. | Binary |  |
| 25. | w | Hex |  |
| 26. | Binary |  |
| 27. | s | Hex |  |
| 28. | Binary |  |
| 29. | o | Hex |  |
| 30. | Binary |  |
| 31. | n | Hex |  |
| 32. | Binary |  |

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|  **Declaring Variables** |
|  | **Data item** | **Data Type (int, float string, char, Boolean)** | **Variable Name****(no spaces, lowercase, camel case)** |
| exa. | Name of the company | *string* | *companyName;* |
| 33. | Inventory item name |   |   |
| 34. | Quantity on items on hand |   |   |
| 35. | Item Price |   |   |
| 36. | Address of company |  |  |
| 37. | Obsolete item (true/false) |   |   |
| 38. | hourly pay rate |   |   |
| 39. | Number of employees |   |   |
| 40. | Employee phone number |   |   |
|  |  |  |  |
| **exa.** | Maryland Tax Rate                        | *constant float MD\_TAX\_RATE = .05* |
| **41.** | The value for pi |  |
| **42.** | Legal drinking age |  |
| **43.** | Maximum number of students in a class |  |
| **44.** | College name |  |

