1. All home works listed on my website: www.cse.sc.edu/~penumarp/index1.html

2. Convert the following numbers into different bases

| DECIMAL | HEXA-DECIMAL | BINARY |
|---------|--------------|---|
| 512 | 200 | 100000000 |
| 256 | 100 | 10000000 |
| 170 | AA | 10101010 |
| 2 | 2 | 10 |
| 0 | 0 | 000000000000000000000000000000000000000 |

| 3. Fkdk4. Fill the following truth Tables for Variable Z: | | | | |
|--|---|-------------|--|--|
| X | Y | Z= X AND Y | | |
| 0 | 0 | 0 | | |
| 0 | 1 | 0 | | |
| 1 | 1 | 1 | | |
| | * | • | | |
| Х | Υ | Z= X OR Y | | |
| 0 | 0 | 0 | | |
| 0 | 1 | 1 | | |
| 1 | 0 | 1 | | |
| | | | | |
| Х | Υ | Z= X NAND Y | | |
| 0 | 0 | 1 | | |
| 0 | 1 | 1 | | |
| 1 | 0 | 1 | | |
| <u> </u> | | | | |
| Х | Υ | Z= X NOR Y | | |
| | | | | |

| Х | Υ | Z= X NOR Y |
|---|---|------------|
| 0 | 0 | 1 |
| 0 | 1 | 0 |
| 1 | 0 | 0 |

- 5. Write Pseudo Code for an Algorithm that takes 3 numbers as input, and calculates an average of all the three numbers. Average for 3 numbers is defined as (n1+n2+n3)/3.
- 6. Why are binary numbers important in computing?
- 7. Which notation is used to write numbers?
- 9. What will be printed by the code snippets below?

```
If (Sun rises in east) print("True")
```

Else

print("False")

10. Set x to 25

while(x>0)

print(x)

Set x to x-1

11. Set x to 25

while(false AND x>0)

print(x)

Set x to x-1

12. Set x to 25

while(true AND x>0)

print(x)

Set x to x-1

13. Set x to 25

while(FALSE OR x>0)

print(x)

Set x to x-1

14. Set x to 25

while(TRUE OR x>0)

print(x)

Set x to x-1

15. Set x to 25

while(TRUE NAND x>0)

print(x)

Set x to x-1

16. Set x to 25

while(TRUE NOR x>0)

print(x)

Set x to x-1