




# ECEN Academy

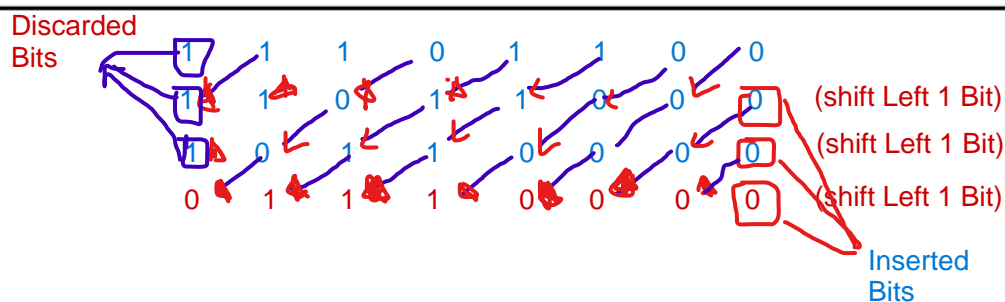
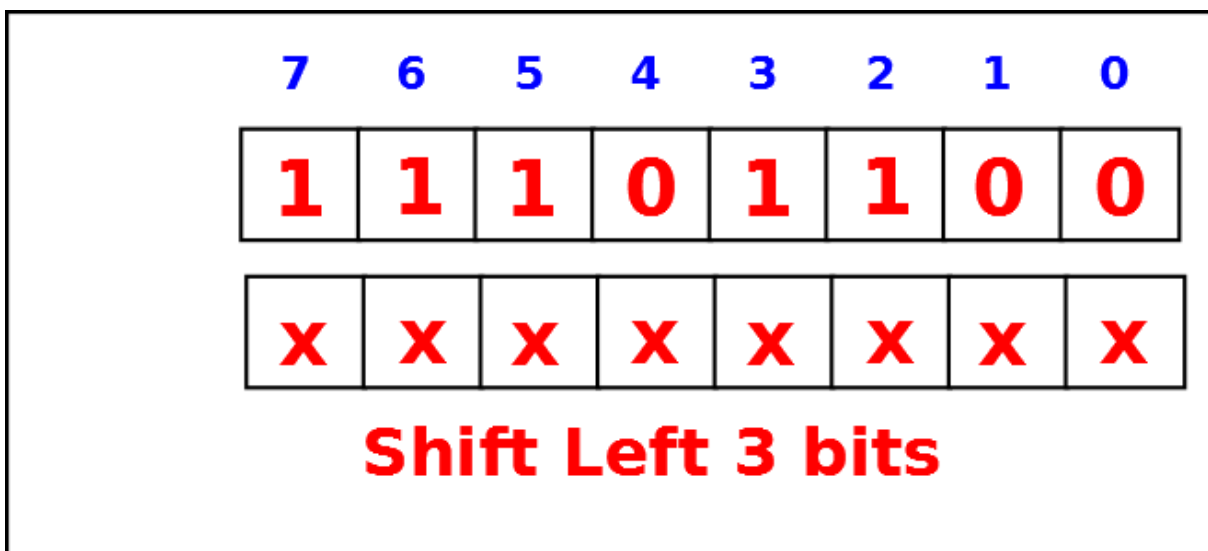
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## Number System Problem – 81

### Instructions:


1. Do not discuss with any one while solving the problems
2. Do not use internet while solving the problems
3. Do not use books while solving the problems
4. Do not try to copy from others
5. Do the problems in an easy way.





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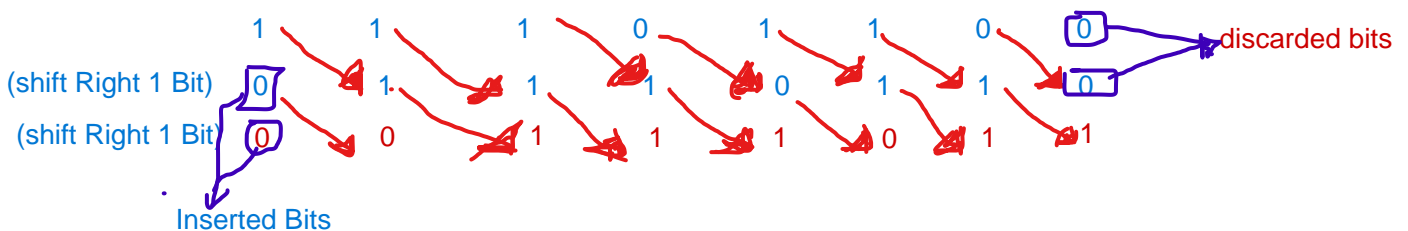
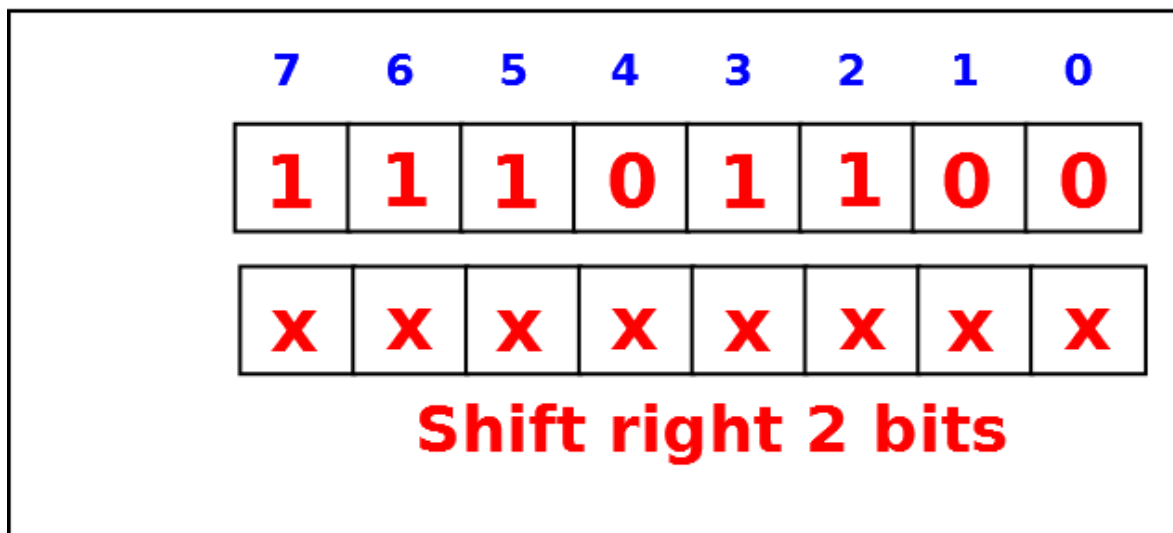
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## Digital Electronics Problem – 82

### Instructions:


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## Digital Electronics Problem – 83

### Instructions:

1. Do not discuss with any one while solving the problems
2. Do not use internet while solving the problems
3. Do not use books while solving the problems
4. Do not try to copy from others
5. Do the problems in an easy way.

7	6	5	4	3	2	1	0
1	1	1	0	1	1	0	0
X	X	X	X	X	X	X	X

**Rotate Left 3 bits**

0 1 1 0 0 1 1 1



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## Digital Electronics Problem – 84

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1. Do not discuss with any one while solving the problems
2. Do not use internet while solving the problems
3. Do not use books while solving the problems
4. Do not try to copy from others
5. Do the problems in an easy way.

7	6	5	4	3	2	1	0
1	1	1	0	1	1	0	0
x	x	x	x	x	x	x	x

**Rotate right 2 bits**

1	0	0	1	1	1	0	1
---	---	---	---	---	---	---	---



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## Digital Electronics Problem – 85

### Instructions:

1. Do not discuss with any one while solving the problems
2. Do not use internet while solving the problems
3. Do not use books while solving the problems
4. Do not try to copy from others
5. Do the problems in an easy way.

7	6	5	4	3	2	1	0
1	1	1	0	1	1	0	0
X	X	X	X	X	X	X	X

**Shift right 3 bits and  
shift left 3 bits**

1	1	1	0	1	0	0	0
---	---	---	---	---	---	---	---



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## Digital Electronics Problem – 86

### Instructions:

1. Do not discuss with any one while solving the problems
2. Do not use internet while solving the problems
3. Do not use books while solving the problems
4. Do not try to copy from others
5. Do the problems in an easy way.

7	6	5	4	3	2	1	0
1	1	1	0	1	1	0	0
X	X	X	X	X	X	X	X


**Shift left 2 bits and  
shift right 3 bits**

0	0	0	1	0	1	1	0
---	---	---	---	---	---	---	---



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## Digital Electronics Problem – 87

### Instructions:

1. Do not discuss with any one while solving the problems
2. Do not use internet while solving the problems
3. Do not use books while solving the problems
4. Do not try to copy from others
5. Do the problems in an easy way.

7	6	5	4	3	2	1	0
1	1	1	0	1	1	0	0
x	x	x	x	x	x	x	x


**Mask the Lower nibble**

Masking the Lower Nibble:  
Original Binary: 1110 1100  
Mask: xxxxxxxx = 1111 0000  
Masking Operation:  
1110 1100 (Original)  
& 1111 0000 (Mask)  
-----  
1110 0000 (Result)



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## Digital Electronics Problem – 88

### Instructions:

1. Do not discuss with any one while solving the problems
2. Do not use internet while solving the problems
3. Do not use books while solving the problems
4. Do not try to copy from others
5. Do the problems in an easy way.

7	6	5	4	3	2	1	0
1	1	1	0	1	1	0	0
x	x	x	x	x	x	x	x

**Mask the Upper nibble**

Masking the Upper Nibble:  
Original Binary: 1110 1100  
Mask: xxxxxxxx = 0000 1111  
Masking Operation:  
1110 1100 (Original)  
& 0000 1111 (Mask)  
-----  
0000 1100 (Result)





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## Digital Electronics Problem – 89

### Instructions:

1. Do not discuss with any one while solving the problems
2. Do not use internet while solving the problems
3. Do not use books while solving the problems
4. Do not try to copy from others
5. Do the problems in an easy way.

7	6	5	4	3	2	1	0
0	0	1	0	1	1	0	0
x	x	x	x	x	x	x	x


**Multiply this number by 4  
using binary operator**

Left Shift Binary Operator is used to Multiply this number by 4.



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## Digital Electronics Problem – 90

### Instructions:

1. Do not discuss with any one while solving the problems
2. Do not use internet while solving the problems
3. Do not use books while solving the problems
4. Do not try to copy from others
5. Do the problems in an easy way.

7	6	5	4	3	2	1	0
0	1	1	0	1	0	0	0
x	x	x	x	x	x	x	x

**Divide this number by 8  
using binary operator**

Right Shift Binary Operator is used to divide this number by 8.