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Question 1:

Output:

(Conjunction)

run:

Consider number for every proposition..

1. (True)Sunbla is the student of Discrete structure
2. (True)Sunbla get an A in DS
3. (False)Sunbla is not the student of Discrete structure
4. (False)Sunbla doesn't get an A in DS

Conjunction Truth Table

p	q	p AND q
1	1	1
1	0	0
0	1	0
0	0	0

True

Sunbla is the student of Discrete structure And Sunbla get an A in DS

(Disjunction)

Consider number for every proposition..

1. (True)Sunbla is the student of Discrete structure
2. (True)Sunbla get an A in DS
3. (False)Sunbla is not the student of Discrete structure
4. (False)Sunbla doesn't get an A in DS

Disjunction Truth Table

p	q	p OR q
1	1	1
1	0	1
0	1	1
0	0	0

True

Sunbla is not the student of Discrete structure OR Sunbla doesn't get an A in DS

(Exclusive OR)

Consider number for every proposition..

1. (True)Sunbla is the student of Discrete structure
2. (True)Sunbla get an A in DS
3. (False)Sunbla is not the student of Discrete structure
4. (False)Sunbla doesn't get an A in DS

Exclusive OR Truth Table

p	q	p XOR q
1	1	0
1	0	1
0	1	1
0	0	0

True

Sunbla get an A in DS XOR Sunbla doesn't get an A in DS

(Conditional)

Consider number for every proposition..

1. (True)Sunbla is the student of Discrete structure
2. (True)Sunbla get an A in DS
3. (False)Sunbla is not the student of Discrete structure
4. (False)Sunbla doesn't get an A in DS

Conditional Truth Table

p	q	p $\rightarrow$ q
1	1	1
1	0	0
0	1	1
0	0	1

False

If Sunbla is the student of Discrete structure then Sunbla doesn't get an A in DS

(Biconditional)

Consider number for every proposition..

1. (True)Sunbla is the student of Discrete structure
2. (True)Sunbla get an A in DS
3. (False)Sunbla is not the student of Discrete structure
4. (False)Sunbla doesn't get an A in DS

Biconditional Truth Table

p	q	p $\leftrightarrow$ q
1	1	1
1	0	0
0	1	0
0	0	1

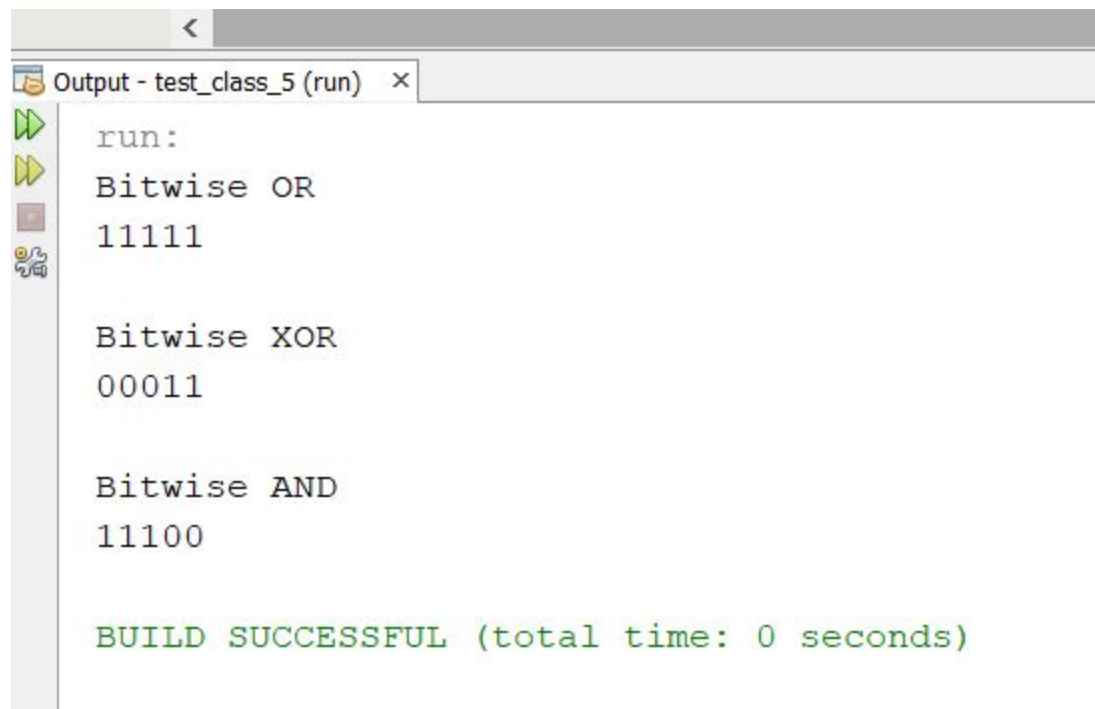
False

If and only if Sunbla get an A in DS then Sunbla is not the student of Discrete structure

BUILD SUCCESSFUL (total time: 0 seconds)

Question 2:

Output:



The image shows a terminal window titled "Output - test\_class\_5 (run)". The window contains the following text:

```
run:
Bitwise OR
11111

Bitwise XOR
00011

Bitwise AND
11100

BUILD SUCCESSFUL (total time: 0 seconds)
```

The terminal window has a standard macOS-style title bar with a back button and a close button. On the left side of the terminal, there are several icons: a green double arrow, a yellow double arrow, a red square, and a magnifying glass.

Question 3 & 4:

Output:

```
5. Output - test_class_5 (run) x
run:
One-to-one
a ----> 1
b ----> 2
c ----> 3
d ----> 4
e ----> 5
        6

Onto
a ----> 1

b ----> 2

c ----> 3

d ----> 4
    ^
    /
   /
  /
 /
/
d

BUILD SUCCESSFUL (total time: 0 seconds)
```