A

Quiz-2

Answer to the question no 1

1(a)

Basic components of module:

Basic components of modules are module name, Port list, Port declarations, reg, variables, Data flow, Parameters. ~~Declar~~ Declaration of wires, Instantiation ~~ation~~ of lower level modules, block, task and functions.

Mandatory components:

~~module~~ Mandatory components are module, module name, end module.

1 (b)

Depending on direction port modules are input, output, inout.

∴ The process of connecting the port is called the port connection technique.

(1) connection by order list

(2) connecting ports by name

Port connection rules

Module ~~comm~~ communicat with external world with ports. There are some technique ~~for~~ for declaring the ports and some rules. They are given below.

(1) inputs : Always it will be wire.
Externally they can be connected to variable.

(2) Outputs Output can be of reg or net type.
Externally they must be connected to a net type variable.

(3) Bidirectional ports: Always of type net
Externally, they must be connected to net type variable.

Answer to the questions no2

2 (a)

NAND

	0	1	x	z
0	1	1	1	1
1	1	0	x	x
x	1	x	x	x
z	1	x	x	x

XNOR:

	0	1	x	z
0	1	0	x	x
1	0	1	x	x
x	x	x	x	x
z	x	x	x	x

(b)

(5)

```
module Subtractor ( D, B, a, b, c)
  output D, B ;
  input a, b, c ;
  wire w1, w2, w3 w4

XOR #(t1:t4:t7)x1(a,b,c);

And                a1(
not                n1(a);
and #(t1:t4:t7) a1(b, w1);
and #(t1:t4:t7) a2(c, w1);
and #(t1:t4:t7) a3(b, c);
OR  #(t1:t4:t7) o1(w2, w3, w4)
```