6 Lecture - CS410

Important Mcqs

1. Which bitwise operator in C sets a bit at a specific position?
a) &
b)
c) ^
d) <<
Solution: d) <<
2. What does the bitwise AND operator $(\&)$ do when applied to two integers?
a) Returns the minimum value
b) Returns the maximum value
c) Performs a bitwise OR operation
d) Performs a bitwise AND operation
Solution: d) Performs a bitwise AND operation
3. Which bitwise operator is used to toggle a specific bit in a number?
a) &
b)
c) ^
d) <<
Solution: c) ^

4. What will be the result of the expression 12 9 in binary?
a) 11
b) 12
c) 9
d) 13
Solution: d) 13
5. Which bitwise operator is used to check if a specific bit is set in a number?
a) &
b)
c) ^
d) <<
Solution: a) &
6. What is the result of the expression $5 \ll 2$?
a) 10
b) 20
c) 15
d) 25
Solution: b) 20
7. What will be the value of x after the operation: $x = (1 << 3)$?
a) 0
b) 1
c) 8
d) 16

Solution: c) 8

8. What does the #define directive do in C?

- a) Defines a new function
- b) Declares a variable
- c) Defines a new data type
- d) Defines a macro

Solution: d) Defines a macro

9. What is the purpose of the #ifdef preprocessor directive?

- a) To check if a function is defined
- b) To include a header file
- c) To define a new macro
- d) To conditionally compile code

Solution: d) To conditionally compile code

10. How can you unset a specific bit in an integer variable 'num' using a macro?

- a) #define UNSET_BIT(num, bit) num |= (1 << bit)
- b) #define UNSET_BIT(num, bit) num &= \sim (1 << bit)
- c) #define UNSET_BIT(num, bit) num ^= (1 << bit)
- d) #define UNSET_BIT(num, bit) num = (1 << bit)

Solution: b) #define UNSET_BIT(num, bit) num &= ~(1 << bit)