## 1 Lecture - CS302

## Important Subjective

1. What is a number system? Answer: A number system is a system of symbols and rules for representing quantities.
2. What is the base or radix of a number system? Answer: The base or radix of a number system is the number of symbols used in that system.
3. What is the decimal number system? Answer: The decimal number system is a base-10 number system that uses ten symbols ( $0-9$ ) to represent quantities.
4. What is the binary number system? Answer: The binary number system is a base-2 number system that uses two symbols ( 0 and 1 ) to represent quantities.
5. What is the octal number system? Answer: The octal number system is a base-8 number system that uses eight symbols ( $0-7$ ) to represent quantities.
6. What is the hexadecimal number system? Answer: The hexadecimal number system is a base-16 number system that uses sixteen symbols ( $0-9$ and A-F) to represent quantities.
7. What is the significance of number systems in computing? Answer: Number systems are significant in computing as they form the basis of digital data storage and processing.
8. What is the process of converting a decimal number to a binary number? Answer: The process of converting a decimal number to a binary number involves repeatedly dividing the decimal number by 2 and recording the remainders until the quotient is zero.
9. What is the process of converting a binary number to a decimal number? Answer: The process of converting a binary number to a decimal number involves multiplying each digit of the binary number by the corresponding power of 2 and summing the products.
10. What is the process of converting a hexadecimal number to a binary number? Answer: The process of converting a hexadecimal number to a binary number involves converting each hexadecimal digit to its 4-bit binary equivalent.
