Explain how addition and subtraction are performed in fixed point number ?

To perform addition and subtraction in fixed-point arithmetic, you first align the decimal points of the two numbers. Then you add or subtract the two numbers digit by digit, starting from the rightmost digit and moving left. If there is a carry from one digit to the next, you add it to the next digit. If there is a borrow from one digit to the next in subtraction, you borrow from the next digit.

For example, consider the addition of two fixed-point numbers with three digits after the decimal point:

```
123.456 + 789.012
```

To add these numbers, you first align the decimal points:

```
123.456
789.012
```

Then you add the two numbers digit by digit:

```
123.456
789.012
-------
912.468
```

So the sum of these two numbers in fixed-point arithmetic is 912.468.

Subtraction is performed in a similar way.

For example, consider the subtraction of two fixed-point numbers with three digits after the decimal point:

```
789.012 - 123.456
```

To subtract these numbers, you first align the decimal points:

```
789.012
123.456
```

Then you subtract the two numbers digit by digit:

```
789.012
123.456
-------
665.556
```

So the difference between these two numbers in fixed-point arithmetic is 665.556.

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35. Explain signed magnitude, signed l's complement and signed 2's complement representation of numbers. Find the range of numbers in all three representations for 8 bit register.
36. If cache access time is lOOns, main memory access time is 1000 ns and the hit ratio is 0.9. Find the average access time and also define hit ratio.
37. Explain hardwired microprogrammed control unit ? What is address sequencer circuit ?
38. Explain how a stack organized computer executes instructions? What is Stack?
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47. Define the following: a) Flynn's taxonomy b) Replacement algorithm
48. Explain the various pipeline vector processing methods ?
49. Describe the language features for parallelism ?

50. What are different addressing modes? Explain them.
51. Explain any page replacement algorithm with the help of example ?
52. What is mapping? Name all the types of cache mapping and explain anyone in detail.
53. Explain arithmetic pipeline ?
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