

Answer to the question no. 1

~~Given that, $x^6 + x^5 + x^3 + x^2$~~

Given that, $x^6 + x^5 + x^3 + x^2$ and Divisor = $x^4 + x^2 + 1$

$$\begin{array}{r} \text{Now, } x^4 + x^2 + 1 \mid x^{10} + x^9 + x^7 + x^6 \\ \underline{x^{10} + x^8 + x^6} \\ x^9 + x^8 + x^7 \\ \underline{x^9 + x^7 + x^5} \\ x^8 + x^5 \\ \underline{x^8 + x^6 + x^4} \\ x^6 + x^5 + x^4 \\ \underline{x^6 + x^5 + x^2} \\ x^4 + x^2 \\ \underline{x^4 + x^2 + x} \\ x^3 + x^2 + x \end{array}$$

So, the sent codeword in CRC polynomial format
is - $x^{10} + x^9 + x^8 + x^7 + x^6 + x^5 + x^3 + x^2 + x$.

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