

Indian Institute of Technology Bombay
Department of Electrical Engineering

Handout 11
Quiz 5 : 10 points

EE 706 Communication Networks
February 11, 2010

Please READ THE QUESTIONS CAREFULLY before answering.

1. Show that $X^3 + X + 1$ is a primitive polynomial. [3 points]
2. Show that $X^3 + 1$ is not a primitive polynomial. [3 points]
3. Does $X + 1$ divide $X^{2^n} + X^{2^n-1} + X^{2^n-2} + \dots + X + 1$ where n is a non-negative integer? [4 points]