

ECE 302 Midterm 1

Reference Formula

$$\Pr(A|B) = \frac{\Pr(B|A)\Pr(A)}{\Pr(B)}$$

$$\Pr(B) = \sum_i \Pr(B|A_i)$$

$$p_n(k) = \binom{n}{k} p^k (1-p)^{n-k}$$

$$p(m) = (1-p)^{m-1} p$$

$$F_Y(y) = \int_{x:g(x)\leq y} f_X(x) dx$$

$$f_Y(y) = \sum_i^n f_X(x_n) \left| \frac{dx_n}{dy} \right|$$

$$\frac{d}{dy} \int_{a(y)}^{b(y)} f(x) dx = f(b(y)) \frac{db(y)}{dy} - f(a(y)) \frac{da(y)}{dy}$$