

**North South University**

**Mat361**

**Quiz 1**

**Total Marks-10 (Time – 20 min + 10 min)**

1) If you roll one dice, what is the probability of getting an even number or a six? Are the events mutually exclusive? Explain why? [3]

2) A card is drawn at random from a pack of cards. Calculate:  $P(\text{diamond} \mid \text{black picture card})$  [3]

3) The probability density function is  $f(x) = c(1-x^2)$   $-1 < x < 1$

Find the value of  $c$ . [4]