

## TUTORIAL ASSIGNMENT:-II

### Unit-IV: PROBABILITY & RANDOM VARIABLES

1. A cubic die is rolled down. What is the probability of getting,  
a) No of dots  $< 4$       b) no of dots as multiple of 3
2. A group of 3 coins is tossed up at a time. Find the probability that,  
a) Only 1H turns up    b) there are more H than T
3. A pair of unbiased dice is rolled down. Find the probability that,  
a) sum of the dots is  $< 6$     b) the sum of the dots is 7 or 11
4. 3 cards are drawn from the pack of 52 cards. Find the probability that,  
a) all 3 are Ace cards    b) all are of same suit    c) there are 2 kings & 1 queen
5. Given  $P(A) = 0.5$ ,  $P(B) = 0.6$  &  $P(A \cap B) = 0.4$  Find, i)  $P(A \cup B)$  ii)  $P(A/B)$  iii) (only A)
6. For 2 independent events A & B,  $P(A) = \frac{1}{2}$ ,  $P(B) = \frac{3}{4}$ .  
Find, i)  $P(A \cup B)$  ii)  $P(\text{only B})$  & iii) (only A) iv)  $P(\text{Only One})$
7. A problem on Mathematics is given to 2 students A, B who attempt it independently. What is the probability that, i) the problem is solved ? ii) it is solved by only one? Given that their chances of solving are  $\frac{1}{3}$ , &  $\frac{3}{4}$  respectively.