

## Probability

## Test No. 1

1. If seven squares are chosen at random on a chess board, the probability that they lie on a diagonal line is
- (a)  $\frac{10}{{}^{64}C_7}$  (b)  $\frac{12}{{}^{64}C_7}$   
(c)  $\frac{20}{{}^{64}C_7}$  (d)  $\frac{24}{{}^{64}C_7}$
2. Out of 40 consecutive natural numbers, two are chosen at random. Probability that the sum of the numbers is odd, is
- (a)  $\frac{14}{29}$  (b)  $\frac{20}{39}$   
(c)  $\frac{1}{2}$  (d) none of these
3. A student appear for test I, II and III. The student is successful if he passes either in tests I and II or test I and III. The probabilities of the student passing in tests I, II and III are p, q and  $\frac{1}{2}$  respectively. If the probability that the student is successful is  $\frac{1}{2}$ , then
- (a)  $p = q = 1$  (b)  $p = q = 1\frac{1}{2}$   
(c)  $p = 1, q = 0$  (d)  $p = 1, q = \frac{1}{2}$
4. The least number of times a fair coin must be tossed so that the probability of getting at least one head is at least 0.8 is
- (a) 7 (b) 6  
(c) 5 (d) none of these
5. A natural number x is chosen at random from the first 100 natural number. The probability that  $x + \frac{100}{x} > 50$  is
- (a)  $\frac{1}{10}$  (b)  $\frac{11}{50}$   
(c)  $\frac{11}{20}$  (d) none of these
6. A card is drawn at random from a well shuffled pack of 52 cards. The probability of getting heart or diamond is
- (a)  $\frac{3}{13}$  (b)  $\frac{1}{26}$   
(c)  $\frac{1}{2}$  (d) 1

