

**Probability – Test 4**

1. I forgot the last digit of a 7 digit telephone number. If one randomly dial the final three digits after correctly dialling the four, then what is the chance of dialling the correct number?  
A)  $\frac{1}{1000}$                       B)  $\frac{1}{1001}$                       C)  $\frac{1}{999}$                       D)  $\frac{1}{990}$
  
2. A person starting with 64 rupees and making 6 bets, wins three times and loses three times, the wins and losses occurring in random order. The chance for a win is equal to the chance for a loss. If each wager is for half the money remaining at the time of the bet, then the final result is:  
A) A gain of Rs 27                      B) A loss of 37                      C) Neither gain or a loss  
D) A gain or a loss depending upon the order in which the wins and losses occur
  
3. A magician holds one six-sided die in his left hand and two in his right. What is the probability the number on the dice in his left hand is greater than the sum of the dice in his right?  
A)  $\frac{7}{108}$                       B)  $\frac{5}{54}$                       C)  $\frac{1}{9}$                       D)  $\frac{2}{17}$
  
4. In a single throw of two dice , find the probability that neither a doublet nor a total of 8 will appear.  
A)  $\frac{7}{15}$                       B)  $\frac{5}{18}$                       C)  $\frac{13}{18}$                       D)  $\frac{3}{16}$
  
5. A division of a company consists of seven men and five women. If two of these twelve employees are randomly selected as representatives of the division, what is the probability that both representatives will be female?  
A)  $\frac{1}{6}$                       B)  $\frac{2}{5}$                       C)  $\frac{2}{9}$                       D)  $\frac{5}{33}$
  
6. There are 10 items in a box, out of which 3 are defective. 2 items are taken one after the other. What is the probability that both of them are defective?  
A)  $\frac{4}{60}$                       B)  $\frac{3}{60}$                       C)  $\frac{2}{60}$                       D) Both A and B
  
7. Sam and Joan are playing a tennis match. If the probability of Sam's win is 0.59, then find the probability of Joan's win.  
A. 0.47                      B. 0.36                      C. 0.41                      D. 0.25

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8. Let A and B be events on the same sample space, with  $P(A) = 0.6$  and  $P(B) = 0.7$ . Can these two events be disjoint?
- A. Yes    B. No    C. None of the above    D. All the above
9. A family has two children. find the probability that both the children are girls given that at least one of them is a girl?
- A.  $1/4$     B.  $2/3$     C.  $1/3$     D.  $1/4$
10. In a lottery, there are 10 prizes and 25 blanks. A lottery is drawn at random. What is the probability of getting a prize?
- A.  $1/10$     B.  $2/5$     C.  $2/7$     D.  $5/7$
11. Determine the probability that a digit chosen at random from the digits 1, 2, 3, ...12 will be odd.
- A.  $1/2$     B.  $1/9$     C.  $5/9$     D.  $4/9$
12. Tickets numbered 1 to 20 are mixed up and then a ticket is drawn at random. What is the probability that the ticket drawn has a number which is a multiple of 3 or 5?
- A.  $1/2$     B.  $2/5$     C.  $8/15$     D.  $9/20$
13. Which of these numbers cannot be a probability?
- A. -0.00001    B. 0.5    C. 1.001    D. 1
14. A pack contains 4 blue, 2 red and 3 black pens. If 2 pens are drawn at random from the pack, NOT replaced and then another pen is drawn. What is the probability of drawing 2 blue pens and 1 black pen?
- A.  $2/14$     B.  $1/14$     C.  $6/17$     D.  $8/12$
15. In a throw of dice what is the probability of getting number greater than 5.
- A.  $1/2$     B.  $1/3$     C.  $1/5$     D.  $1/6$
16. The probability that Soumya will get marry within 365 days is 'a' and the probability that her colleague Alma get marry within 365 days is 'b'. Find the probability that only one of the two gets marry at the end of 365 days.

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- A.  $a-b-2ab$     B.  $a+b-2ab$     C.  $a-b+2ab$     D.  $ab-a-b$
17. Three unbiased coins are tossed. What is the probability of getting at most two heads?
- A.  $3/4$     B.  $1/4$     C.  $3/8$     D.  $7/8$
18. Tickets numbered 1 to 20 are mixed up and then a ticket is drawn at random. What is the probability that the ticket drawn has a number which is a multiple of 3 or 5?
- A.  $1/2$     B.  $3/5$     C.  $9/20$     D.  $8/15$
19. In a lottery, there are 10 prizes and 25 blanks. A lottery is drawn at random. What is the probability of getting a prize?
- A.  $2/7$     B.  $5/7$     C.  $1/5$     D.  $1/2$
20. A bag contains 12 white and 18 black balls. Two balls are drawn in succession without replacement. What is the probability that first is white and second is black?
- A.  $18/145$     B.  $18/29$     C.  $36/135$     D.  $36/145$
21. A bag contains 5 red and 3 green balls. Another bag contains 4 red and 6 green balls. If one ball is drawn from each bag. Find the probability that one ball is red and one is green.
- A.  $19/20$     B.  $17/20$     C.  $8/10$     D.  $21/40$
22. If a number is chosen at random from 1 to 100, then the probability that the chosen number is a perfect cube is
- A.  $4/13$     B.  $1/25$     C.  $1/2$     D.  $1/10$
23. What is the probability of getting a sum 9 from two throws of dice?
- A.  $1/3$     B.  $1/9$     C.  $1/12$     D.  $2/9$
24. A card is drawn from a pack of 52 cards. The probability of getting a queen of club or a king of heart is
- A.  $1/13$     B.  $2/13$     C.  $1/26$     D.  $1/52$
25. A coin is tossed five times. What is the probability that there is at the least one tail?
- A.  $31/32$     B.  $1/16$     C.  $1/2$     D.  $1/32$