**Q. 1: Two dice are thrown at the same time. Find the probability of getting**

**(i) the same number on both dice.**

**(ii) different numbers on both dice.**

**Q. 2: A bag contains a red ball, a blue ball and a yellow ball, all the balls being of the same size. Kritika takes out a ball from the bag without looking into it. What is the probability that she takes out the**

**(i) yellow ball?**

**(ii) red ball?**

**(iii) blue ball?**

**Q.3: One card is drawn from a well-shuffled deck of 52 cards. Calculate the probability that the card will**

**(i) be an ace,**

**(ii) not be an ace**

**Q.4: Two dice are numbered 1, 2, 3, 4, 5, 6 and 1, 1, 2, 2, 3, 3, respectively. They are thrown, and the sum of the numbers on them is noted. Find the probability of getting each sum from 2 to 9 separately**

**Q.5: A coin is tossed two times. Find the probability of getting at most one head.**

**Q.6: An integer is chosen between 0 and 100. What is the probability that it is**

**(i) divisible by 7?**

**(ii) not divisible by 7?**

**Q. 7: If P(E) = 0.05, what is the probability of ‘not E’?**

**Q. 8: 12 defective pens are accidentally mixed with 132 good ones. It is not possible to just look at a pen and tell whether or not it is defective. One pen is taken out at random from this lot. Determine the probability that the pen is taken out is a good one.**

**Q. 9: A die is thrown twice. What is the probability that**

**(i) 5 will not come up either time? (ii) 5 will come up at least once?**

**Q. 10: The probability that a non-leap year selected at random will contain 53 Sundays is**

**Q11.A bag contains 5 red balls and some blue balls. If the probability of drawing a blue ball is double that of a red ball, find the number of blue balls in the bag.**

**Q12.Find the probability of getting a number less than 5 in a single throw of a die.**

**Q13 A card is drawn from an ordinary pack and a gambler bets that it is a spade or an ace. What are the odds against his winning this bet?**

**Q14A bag contains 12 balls out of which x are white. (i) If one ball is drawn at random, what is the probability that it will be a white ball? (ii) If 6 more white balls are put in the bag, the probability of drawing a white ball will be double than that in case (i). Find x.**

**Q15Five male and three female candidates are available for selection as a manager in a company. Find the probability that a male candidate is selected.**

**Q16A box contains cards numbered 6 to 50. A card is drawn at random from the box. Calculate the probability that the drawn card has a number which is a perfect square.**

**Q17In a single throw of a pair of different dice, what is the probability of getting  
(i) a prime number on each dice?  
(ii) a total of 9 or 11?**

**Q18. A dice is thrown. Find the probability of getting an even number.**

**Q19. Two coins are thrown at the same time. Find the probability of getting both heads.**

**Q20. Two dice are thrown simultaneously. The probability of getting a sum of 9 is:**

**Q21. 100 cards are numbered from 1 to 100. Find the probability of getting a prime number.**

**Q22. A bag contains 5 red balls and some blue balls .If the probability of drawing a blue ball is double that of a red ball, then the number of blue balls in a bag is:**

**Q23.  A box of 600 bulbs contains 12 defective bulbs. One bulb is taken out at random from this box. Then the probability that it is non-defective bulb is:**

**Q24. Cards marked with numbers 2 to 101 are placed in a box and mixed thoroughly. One card is drawn from this box randomly, then the probability that the number on card is a perfect square.**

**Q25. What is the probability of getting 53 Mondays in a leap year?**

**Q26. A card is drawn from a well shuffled deck of 52 cards. Find the probability of getting a king of red suit.**

**Q27. A game of chance consists of spinning an arrow which is equally likely to come to rest pointing to one of the number 1,2,3……12 ,then the probability that it will point to an odd number is:**

**Q28. A game consists of tossing a one rupee coin 3 times and noting its outcome each time. Aryan wins if all the tosses give the same result i.e. three heads or three tails and loses otherwise. Then the probability that Aryan will lose the game.**

**Q29. Riya and Kajal are friends. Probability that both will have the same birthday isthe same birthday is:**

**Q30. A number x is chosen at random from the numbers -2, -1, 0 , 1, 2. Then the probability that x2 < 2 is?**

**Q31. A jar contains 24 marbles. Some are red and others are white. If a marble is drawn at random from the jar, the probability that it is red is 2/3, then the number of white marbles in the jar is:**

**Q32. A number is selected at random from first 50 natural numbers. Then the probability that it is a multiple of 3 and 4 is:**

**Q33 Two dice are thrown simultaneously. Find the probability that the sum of the two numbers appearing in the top is less than or equal to 10.**

**Q34 The king, queen and jack of diamonds are removed and then the pack is well-shuffled.A card is drawn from the remaining cards. Find the probability of getting a card of:**

**(i)Diamonds (ii)A jack**

**Q35 A bag contains 5 red,4blue and 3 green balls. A ball is taken out of the bag at random.Find the probability that the selected ball is:**

**(i)Of red color (ii)Not of green color**

**Q36 A card is drawn at random from a well-shuffled deck of playing cards. Find the probability of drawing a:**

**(i)face card (ii)card which is neither a king nor a red card.**

**Q37 A box contains cards bearing numbers from 6 to 70. If one card is drawn at random from the box, find the probability that it is:**

**(i) A one digit number**

**(ii) A number divisible by 5.**

**Q38 What is the probability of having 53 Mondays in a leap yeat?**

**Q39 From a bag containing 5 red, 8 black and 7 blue balls, a ball is selected at random. Find the probability that:**

**(i) It is not a red ball**

**(ii)It is not a blue ball**

**Q40 A die is thrown once. Find the probability of getting:**

**(i) A prime number (ii) A number divisible by 2**

**Q41 A die is thrown once. Find the probability of getting:**

**(i) An even number (ii) A number multiple of 3**

**Q42 Two dice are thrown simultaneously. What is the probability that:**

**(i) 5 will not come up on either of them?**

**(ii) 5 will not come up on atleast one?**

**(iii)5 will come up at both dice?**

**Q43 The king, queen and jack of clubs are removed from a deck of 52 playing cards and the remaining cards are shuffled. A card is drawn from the remaining cards. Find the probability of getting a card of:**

**(i)Heart (ii)Queen (iii)Clubs**

**Q44 a die is thrown once. What is the probability of getting a number greater than 4?**

**Q45 A bag contains cards which are numbered from 2 to 90. A card is drawn at random from the bag. Find the probability that it bears:**

**(i)A two-digit number**

**(ii) A number which is a perfect square.**

**Q46 A card is drawn at random from a well-shuffled pack of 52 playing cards. Find the probability of getting a red face card.**

**Q47 Cards bearing numbers 1,3,5,.....,35 are kept in a bag. A cards is drawn at random from the bag. Find the probability of getting a card bearing**

**(i) A prime number less than 15**

**(ii) A number divisible by 3 and 5**

**Q48 Saurabh’s class made a project about pets. There were 30 students in the class. Fifteen had dogs, five had cats, three had parrots and the rest had no pets at all. The randomly picked our a name.**

**(a)What is the probability that student had a dog?**

**(b)What is the probability that the student had a four-legged pet?**

**(c) What is the probability that the student had no pet?**

**(d)What is the probability that the student had a pet which can fly?**

**Q.49     From a well shuffled pack of cards, a card is drawn at random. Find the probability of getting a black queen.**

**Q.50     A bag contains 4 red and 6 black balls. A ball is taken out of the bag at random. Find the probability of getting a black ball.**

**Q.51     A dice is thrown once. Find the probability of getting a number less than 3.**

**Q.52     Cards bearing numbers 3 to 20 are placed in a bag and mixed thoroughly. A card is taken out from the bag at random. What is the probability that the number on the card taken out is an even number ?**

**[Delhi 2008 C]**

**Q.53     (i) Two friends were born in the year 2000. What is the probability that they have the same birthday ?  
                                                                                                                      [AI 2008 C]  
OR  
            Two coins are tossed simultaneously. Find the probability of getting exactly one head.  
                                                                                                                         [AI 2008]  
            (ii) A card is drawn at random from a well shuffled pack of 52 playing cards.Find the probability of getting a red face card.  
                                                                                                                    [Delhi 2010]  
            (iii) A dice is thrown once. What is the probability of getting a number greater than 4 ?  
                                                                                                                                                [AI 2010]  
               (iv) A dice is thrown twice. What is the probability that the same number will come up either time ?  
                                                                                                               [Foreign 2010]**

**Question 54.  
State true or false and give the reason. If I toss a coin 3 times and get head each tir ne, then I should expect a tail to have a higher chance in the 4th toss.**

**Question 55.  
A bag contains slips numbered from 1 to 100. If Fatima chooses a slip at random from the bag, it will either be an odd number or an even number. Since, this situation has only two possible outcomes, so the probability of each is****1****/2 Justify.**

**Question 56.  
In a family, having three children, there may be no girl, one girl, two girls or three girls. So, the probability of each is****1****/4. Is this correct? Justify your answer.**

**Question 57.  
Two coins are tossed simultaneously. Find the probability of getting exactly one head.**

**Question 58.  
From a well shuffled pack of cards, a card is drawn at random. Find the probability of getting a black queen.**

**1.   A bag contains 9 black and 12 white balls. One ball is drawn at random. What is the probability that the ball drawn is black?**

**2.   Find the probability that a number selected from the numbers 1 to 25 which is not a prime number when each of the given number is equally likely to be selected.**

**3.   A bag contains 10 red, 5 blue and 7 green balls. A ball is drawn at random. Find the probability of this ball being not a blue ball.**

**4.   Two dice are thrown at the same time and the product of numbers appearing on them is noted. Find the probability that the product is less than 9.**

**Two Marks Questions**

**Q.59      A dice is thrown once. Find the probability of getting :  
            (i) a prime number                   (ii) a number divisible by 2**

**[Delhi 2008]**

**Q.60      Cards, marked with numbers 5 to 50, are placed in a box and mixed thoroughly. A card is drawn from the box at random. Find the probability that the number on the taken card is -  
               (i) a prime number less than 10.  
               (ii) a number which is a perfect square.**

**[AI 2008]**

**Q.61      A pair of dice is thrown once. Find the probability of getting the same number on each dice.**

**[Foreign 2008]**

**Q.62      A bag contains 5 red, 4 blue and 3 green balls. A ball is taken out of the bag at random. Find the probability that the selected ball is -  
            (i) of red colour.  
            (ii) not of green colour.  
OR  
A card is drawn at random from a well-shuffled deck of playing cards. Find the probability of drawing a -  
            (i) face card  
            (ii) card which is neither a king nor a red card.**

**[Delhi 2008C]**

**Q.63      Two dice are thrown simultaneously. Find the probability that the sum of the two numbers appearing on the top is less than or equal to 10.  
OR  
The king, queen and jack of diamonds are removed from a pack of 52 cards and then the pack is well-shuffled. A card is drawn from the remaining cards. Find the probability of getting a card of -  
               (i) diamonds  
               (ii) a jack**

**Q.64      A coin is tossed two times. Find the probability of getting at least one head.**

**[Delhi 2011]**

**Q.65      A ticket is drawn at random a bag containing tickets numbered from 1 to 40. Find the probability that the selected ticket has a number which is a multiple of 5.**

**[AI 2011]**

**Q.67      A card is drawn at random from a well-shuttled pack of 52 cards. Find the probability of getting -  
            (i) a red king  
            (ii) a queen or a jack**

**[AI 2012]**

**Q.68      A child has a dice whose 6 faces shows**

**[](https://www.dronstudy.com/wp-content/uploads/2014/02/circes.jpg)The dice is thrown once. Find the probability of getting (i) A (ii) D**

**[AI 2012]**

**Q.69     Three cards of spades are lost from a pack of 52 playing cards. The remaining cards were well shuffled and then a card was drawn at random from them. Find the probability that the drawn card is of black colour.**

**Three Marks Questions**

**Q.70    A bag contains 5 white balls, 7 red balls, 4 black balls and 2 blue balls. One ball is drawn at random from the bag. What is the probability that the ball drawn is  
            (i) White or blue  
            (ii) Red or black  
            (iii) not white  
            (iv) neither white nor black**

**Q.71     A card is drawn at random from a well- shuffled deck of playing cards. Find the probability that the card drawn is -  
            (i) a king or a jack  
            (ii) a non-ace  
            (iii) a red card  
            (iv) neither a king nor a queen**

**Q.72     A card is drawn at random from a well- shuffled deck of playing cards. Find the probability that the cards drawn is**

**[Delhi 2006]**

**(i) a card of spade or an ace  
(ii) a red king  
(iii) neither a king nor a queen  
(iv) either a king or queen**

**Q.73     A box contains 19 balls bearing numbers 1, 2, 3, ……….. 19. A ball is drawn at random from the box. What is the probability that the number of the ball is  
               (i) a prime number  
               (ii) divisible by 3 or 5  
               (iii) neither divisible by 5 nor by 10  
              (iv) an even number**

**[Delhi 2006]**

**Q.74     Find the probability that a number selected at random from the numbers 1, 2, 3, … 35 is a  
               (i) prime number  
               (ii) multiple of 7  
               (iii) multiple of 3 or 5**

**[Delhi 2006 C]**

**Q.75     From a pack of 52 playing cards, jacks, queens, kings and aces of red colour are removed. From the remaining a card is drawn at random. Find the probability that the card drawn is -  
              (i) a black queen  
              (ii) a red card  
              (iii) a black jack  
              (iv) a picture card (jacks,queens and kings are picture cards)**

**[AI 2006 C]**

**Q.76     Cards marked with number 3, 4, 5, ...., 50 are placed in a box and mixed thoroughly. One card is drawn at random from the box. Find the probability that number on the drawn card is  
               (i) Divisible by 7  
               (ii) a number which is a perfect square.**

**[Delhi 2007]**

**Q.77     A bag contains 5 red balls and some blue balls. If the probability of drawing a blue ball from the bag is thrice that of a red ball, find the number of blue balls in the bag.**

**[Delhi 2007]**

**Q.78     All the three face of spades are removed from a well-shuffled pack of 52 cards. A card is then drawn at random from the remaining pack. Find the probability of getting  
                (i) a black face card,  
                (ii) a queen,  
                (iii) a black card.**

**[AI 2007]**

**Q.79      The king, queen and jack of clubs are removed from a deck of 52 playing cards and the remaining cards are shuffled. A card is drawn from the remaining cards. Find the probability of getting a card of  
                  (i) heart  
                  (ii) queen  
                 (iii) clubs.**

**[Delhi 2009]**

**Q.80      Two dice are thrown simultaneously. What is the probability that  
              (a) 5 will not come up on either of them ?  
              (b) 5 will come up on at least one ?  
              (c) 5 will come up at both dice ?**

**[AI 2009]**

**Q.81     A box has cards numbered 14 to 99. Cards are mixed thoroughly and a card is drawn from the bag at random.Find the probability that the number on the card, drawn from the box is  
                (a) an odd number  
                (b) a perfect square number  
                (c) a number divisible by 7.**

**[Foreign 2009]**

**Q.82     Cards bearing numbers 1, 3, 5, ........, 35 are kept in a bag. A card is drawn at random from the bag. Find the probability of getting a card bearing  
                (a) a prime number less than 15.  
                (b) a number divisible by 3 and 5.**

**[Delhi 2010]**

**Q.83     A bag contains cards which are numbered from 2 to 90. A card is at random from the bag. Find the probability that it bears  
                (a) a two digit number,  
                (b) a number which is a perfect square.**

**[AI 2010]**

**Q.84     From a well-shuffled pack of playing cards, black jacks, black kings and black aces are removed. A card is then drawn at random from the pack. Find the probability of getting  
              (a) a red card,  
              (b) not a diamond card.**

**[Foreign 2010]**

**Q.85     Two dice are rolled once. Find the probability of getting such numbers on two dice, whose product is a perfect square.  
OR  
A game consists of tossing a coin 3 times and noting its outcome each time. Hanif wins if he gets three heads or three tails, and loses otherwise. Calculate the probability that Hanif will lose the game.**

**[Delhi 2011]**

**Q.86     Two dice are rolled once. Find the probability of getting such numbers on the two dice, whose product is 12.  
OR  
A box contains 80 discs which are numbered from 1 to 80. If one disc is drawn at random from the box, find the probability that it bears a perfect square number.**

**[AI 2011]**

**Q.87     Cards marked with numbers 5, 6, 7, ......, 74 are placed in a bag and mixed thoroughly. One card is drawn at random from the bag. Find the probability that the number on the card is a perfect square.**

**[Foreign 2011]**

**Q.88     All kings, queens and aces are removed from a pack of 52 cards. The remaining cards are well shuffled and then a card is drawn from it. Find the probability that the drawn card is  
                (i) a black face card.  
               (ii) a red card.**

**[AI 2012]**

**Q.89     Card marked with numbers 1, 3, 5, ...., 101 are placed in a bag and mixed thoroughly. A card is then drawn at random from the bag. Find the probability that the number on the drawn card is (i) less than 19. (ii) a prime number less than 20.**

**[Foreign 2012]**

**Long answer type questions : -**

**Q.90   A box contains cards numbered 3, 5, 7, 9, ......, 35, 37. A card is drawn at random from the box. Find the probability that the number of the drawn card is a prime number.**

**[AI 2013]**

**Q.91    A group consists of 12 persons, of which 3 are extremely patient, other 6 are extremely honest and rest are extremely kind. A person from the group is selected at random. Assuming that each person is equally likely to be selected, find the probability of selecting a person who is  
              (i) extremely patient  
             (ii) extremely kind or honest. Which of the above values you prefer more.**

**Q.92    A dice is thrown twice. Find the probability that  
               (i) 5 may not come either time.  
               (ii) same number may not come on the dice thrown two times.**

**[Foreign 2013]**

**Multiple Choice Questions : -**

**Q.93    Which of the following cannot be the probability of an event ?  
            (a) 1.5         (b)****3****5           (c) 25%       (d) 0.3**

**[Delhi 2011]**

**Q.94    A card is drawn from a well-shuffled deck of 52 playing cards. The probability that the card will not be an ace is -  
               (a)****1****13    (b)****1****4     (c)****12****13         (d)****3****4**

**[AI 2011]**

**Q.95   The probability of throwing a number greater than 2 with a fiar die is  
               (a)****2****3     (b)****5****6         (c)****1****3      (d)****2****5**

**[Foreign 2011]**

**Q.96    Cards bearing numbers 2, 3, 4, ......, 11 are kept in a bag. A card is drawn at random from the bag. The probability of getting a card with a prime number is  
               (a)****1****2     (b)****2****5          (c)****3****10         (d)****5****9**

**[AI 2012]**

**Q.97    The probability of a non-leap year having 53 Mondays is  
            (a)****2****7   (b)****1****7      (c)****5****7     (d)****6****7**

**[Foreign 2012]**

**Q.98   A box cntains 90 discs, numbered from 1 to 90. If one disc is drawn at random from the box, the probability that it bears prime-number less than 23 is :  
             (a)****7****90     (b)****10****90  (c)****4****45     (d)****9****89**

**[Delhi 2013]**

**Q.99    A box contains cards numbered 6 to 50. A card is drawn at random from the box. The probability that the drawn card has a number which is a perfect square, is  
 (a)****1****45 (b)****2****15 (c)****19 (d)****4****45**

**[AI 2013]**

**Q.100 A coin is tossed twice. The probability of getting both heads is   
 (a)****1****2 (b)1****3 (c)****1****4 (d) 1**

**[Foreign 2013]**