| 1. The probability of a leap year selected at random contain 53 | | | | | | | |
|--|---------------|----------------------|-----------------------|--|--|--|--|
| Sunday is: | Sunday is: | | | | | | |
| - | • • | (c) 2/7 | * * | | | | |
| _ | | | marble is drawn at | | | | |
| random. The pro | _ | _ | | | | | |
| • • | , , | (c) 0/5 | • • | | | | |
| 3. The probability | • | |).85. What is the | | | | |
| probability that is | | | | | | | |
| | | | (d) none of these | | | | |
| • | • | | ed from the numbers | | | | |
| (1, 2, 3,,15 | - | | (1) 4 (0 | | | | |
| | | (c) 2/15 | | | | | |
| 5. What are the | | | | | | | |
| * * | * * | (c) 8 | • • | | | | |
| - | - | e number selecte | ed at random from the | | | | |
| numbers (1,2,3, | | () 10/05 | (1) | | | | |
| * * | | | (d) none of these | | | | |
| 7. The sum of th | • | | | | | | |
| | |) 0 (d) non | | | | | |
| | | are given; choos | se the correct answer | | | | |
| for that which is | not possible. | () 7 /F | (1) | | | | |
| | | | (d) none of these. | | | | |
| | | nuitaneousiy, tha | an the probability of | | | | |
| getting at least to | wo neads, is: | (- \ 1 ₁ | (-1) 1 (0 | | | | |
| | | (C) ½ | | | | | |
| 10. A letter is cl | | | | | | | |
| | | | letter chosen has: | | | | |
| (a) 6/13 | (b) // 13 | (C) I | (d) none of these. | | | | |
| 11 A diaa ia thua | Final the w | wahahilitu af wat | *: | | | | |
| | - | • | ting an even number. | | | | |
| (A) 2/3 | (D) I | (C) 5/6 | (D) 1/Z | | | | |
| 12. Two coins are thrown at the same time. Find the probability of getting both heads. | | | | | | | |
| (A) $3/4$ (B) $1/4$ | | (D) U | | | | | |
| (1) 0/ - (D) 1/2 | (0) 1/2 | (5) 0 | | | | | |
| 13. Two dice are thrown simultaneously. The probability of getting a | | | | | | | |

sum of 9 is:

| (A) 1/10 | (B) 3/10 | (C) 1/ ⁹ | (D) | 4/9 | | | |
|---|-------------------------------|----------------------|---------------|---|---|--|--|
| 14. 100 cards are numbered from 1 to 100. Find the probability of getting a prime number. | | | | | | | |
| (A) 3/4 | (B) 27/50 | (C) 1/4 | (| (D) 29/100 | | | |
| of drawing a blue balls in | a blue ball is o a bag is: | louble that o | f a red ball, | s .If the probabilit then the number o | - | | |
| (A) 5 | (B) 10 | (C) 15 | (D) 20 | | | | |
| 16. 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: | | | | | | | |
| (A) 143/150 | (B) 147 | <mark>7/150</mark> (| C) 1/25 | (D) 1/50 | | | |
| 17. 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. (A) 9/100 (B) 1/10 (C) 3/10 (D) 19/100 | | | | | | | |
| 18. What is (A) 1/7 | the probabili (B) 53/366 | | - | s in a leap year?) 7/366 | | | |
| 19. A card is drawn from a well shuffled deck of 52 cards. Find the probability of getting a king of red suit. (A) 1/26 (B) 3/26 (C) 7/52 (D) 1/13 | | | | | | | |
| 20. A game of chance consists of spinning an arrow which is equally likely to come to rest pointing to one of the number 1,2,312 ,then the probability that it will point to an odd number is: (A) 1/6 (B) 1/12 (C) 7/12 (D) 5/12 | | | | | | | |
| 21. 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. (A) 3/4 (B) 1/2 (C) 1 (D) 1/4 | | | | | | | |

| 22. Riya and Kajal are friends. Probability that both will have the same birthday is the same birthday is: | | | | | | | | |
|---|---|-------------------|------------------------------|--|--|--|--|--|
| (A) 364/365 | (B) 31/365 | (C) 1/365 | (D) 1/133225 | | | | | |
| 2. Then the pr | r <i>x</i> is chosen at ra robability that x² < 2/5 (C) 3/5 | 2 is? | umbers -2, -1, 0 , 1, | | | | | |
| a marble is dr red is 2/3, the | 24. 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: (A) 10 (B) 6 (C) 8 (D) 7 | | | | | | | |
| 25. A number is selected at random from first 50 natural numbers. Then the probability that it is a multiple of 3 and 4 is: (A) 7/50 (B) 4/25 (C) 1/25 (D) 2/25 | | | | | | | | |
| 26. Consider a dice with the property that that probability of a face with n dots showing up is proportional to n. The probability of face showing 4 dots is? | | | | | | | | |
| a) $\frac{1}{7}$ | b) $\frac{5}{42}$ | c) $\frac{1}{21}$ | d) $\frac{4}{21}$ | | | | | |
| | red by batsman in ne standard devia | <u>-</u> | nes are 50, 70, 82, | | | | | |
| | b) 25.49 | | d) 25.69 | | | | | |
| 28. Find median and mode of the messages received on 9 consecutive days 15, 11, 9, 5, 18, 4, 18, 13, 17. | | | | | | | | |
| | b) 13, 18 | | d) 13, 16 | | | | | |
| 29. A coin is tossed up 4 times. The probability that tails turn up in 3 cases is | | | | | | | | |
| a) $^{1}/_{2}$ | b) $^{1}/_{3}$ | | d) $\frac{1}{6}$ | | | | | |
| | ate between 0 and b) 7 c | | E(X²) is <mark>) 9</mark> | | | | | |
| 31. The random variables X and Y have variances 0.2 and 0.5 respectively. Let Z= 5X-2Y. The variance of Z is? | | | | | | | | |

| probability? | • | | one is not pos | sible in | | | | |
|--|---|------------------------------------|--------------------|-----------------|--|--|--|--|
| a) $P(x) = 1$ c) $P(x) = 0.5$ | b) ∑ x <mark>d) P(</mark> | P(x) = 3 P(x) = -0.5 | | | | | | |
| 33.If E(x) = a) 2 | 2 and E(z) = 6 b) 6 | 4, then E(z - c) 0 | • | sufficient data | | | | |
| 34.The cova | ariance of two | independer | nt random varial | ble is | | | | |
| a) 1 | b) 0 | c) - 1 | d) U | ndefined | | | | |
| 35.If Σ P(x) a) 0 | e k² – 8 then b) 1 | , the value o <mark>c) 3</mark> | | sufficient data | | | | |
| , , | 0.5 and x = 4, b) 0.5 | • • | ? d) 2 | | | | | |
| 37.In a disc is always? | 37.In a discrete probability distribution, the sum of all probabilities | | | | | | | |
| a) 0 | b) Infinite | c) 1 | d) Un | defined | | | | |
| 38.If the pr | obability of h | itting the tar | get is 0.4, find r | nean and | | | | |
| | b) 0.6, | 0.24 | c) 0.4, 0.16 | d) 0.6, 0.16 | | | | |
| 39.If the probability that a bomb dropped from a place will strike the target is 60% and if 10 bombs are dropped, find mean and variance? a) 0.6, 0.24 b) 6, 2.4 c) 0.4, 0.16 d) 4, 1.6 | | | | | | | | |
| 40. Find the mean of tossing 8 coins. a) 2 b) 4 c) 8 d) 1 41. What is the mean and variance for standard normal distribution? | | | | | | | | |

c) 5

<mark>d) 7</mark>

a) 3

b) 4

| | | | | | | nd variance and varian | | | | |
|---|-----------------------------------|---------|-------------------------|----------|-------------------------|---------------------------|------------|--|--|--|
| | | | | | s given b (2) - (E(X | y ())2 | d) (E(X))2 | | | |
| 43.I a) E(| d) (E(X))2 | | | | | | | | | |
| | 44.Mean of a constant 'a' is a) 0 | | | | | | | | | |
| 45.Variance of a constant 'a' is . a) 0 | | | | | | | | | | |
| 46.F | ind the | mean ar | nd variand | ce of X? | | | | | | |
| | Х | 0 | 1 | 2 | 3 | 4 | | | | |
| | f(x) | 1/9 | 2/9 | 3/9 | 2/9 | 1/9 | | | | |
| | 4/3 ind the | · |) 3, 4/3 tion of a ı | random | c) 2, 2/3 variable) | | d) 3, 2/3 | | | |

| | Х | 0 | 1 | 2 | 3 | | |
|------|------|-----|--------|-----|-----|--------|--------|
| | f(x) | 1/6 | 2/6 | 2/6 | 1/6 | | |
| a) (|).5 | | b) 1.5 | | | c) 2.5 | d) 3.5 |

48. In a Binomial Distribution, if p, q and n are probability of success, failure and number of trials respectively then variance is given by

b) npq

c) np2q

d) npq2

- 49. If 'X' is a random variable, taking values 'x', probability of success and failure being 'p' and 'q' respectively and 'n' trials being conducted, then what is the probability that 'X' takes values 'x'? Use **Binomial Distribution.**
- a) P(X = x) = nCx px qx
- b) P(X = x) = nCx px q(n-x)
- c) P(X = x) = xCn qx p(n-x)
- d) P(x = x) = xCn pn qx
- 50. If 'p', 'q' and 'n' are probability pf success, failure and number of trials respectively in a Binomial Distribution, what is its Standard **Deviation?**

- a) \sqrt{np} b) \sqrt{pq} c) (np)2 d) \sqrt{npq}