SHIKSHA CLASSES

Subject : Algebra | **Question Paper** | **Total Marks : 20**
Class : X | **5. Probability** | **Time : 1 Hour**

Q.1 : A) Choose the correct alternatives of the following questions. 2

1) Result of a random experiment is known as.

a) Probability b) Outcome

c) Event d) None of the above.

2) In a pack of 52 playing cards total face cards are

a) 10 b) 11

c) 13 d) 12

B) Define sample space with suitable example. 1

Q.2 : A) Attempt any ONE of the following. 2

1) How many possibilities are there in each of the following.

i) Any day of a week is to be selected.

ii) Select one card from the pack of 52 cards.

2) Two coins are tossed simultaneously write the sample space (s) and number of sample (p) and n(s). Also write it in set form the condition that getting no head.

Two coins are tossed.

S = $\square$

$\therefore$ n(S) = 4

$\therefore$ By given condition

we have no head outcome

$\therefore$ A = $\square$

$\therefore$ n(A) = 1

: B) Attempt any ONE of the following. 2

1) There are 15 tickets in a box, each bearing one of the numbers from 1 to 15. One ticket is drawn at random from the box. Find the probability of event that the ticket drawn.

i) Shows an even number. ii) Shows a number which is a multiple of 5.

2) One die is rolled then find the probability of each of following events.

i) No. on upper face is prime

ii) No. on upper face is even

Q.3 : A) Attempt any ONE of the following. 3

1) Write sample space 's' and number of sample point n(s) for the following experiment. Also write events A, B, C in the set form and write n(A), n(B) and n(C).

One die is rolled.

Event A : Even number on the upper face

Event B : Odd number on the upper face

Event C : Number greater than 4

2) Find the probability of the following when a coin is tossed.

i) Getting head ii) getting tail

Space space

$S = \{H, T\}$

$\therefore \quad n(S) = \square$

i) Let A be event of getting head.

$A = \square$

$\therefore \quad n(A) = 1$

$\therefore \quad P(A) = \frac{\square}{\square} = \frac{1}{2}$

ii) Let B be event of getting tail.

$B = \square$

$\therefore \quad n(B) = 1$

$\therefore \quad P(B) = \frac{\square}{\square} = \frac{1}{2}$

: B) Attempt any ONE of the following. 3

1) Two digit numbers are formed using digits, 0,1, 2, 3, 4, 5 without repetition of the digits.

Event A : The number formed is even.

Event B : The number formed is divisible by 3

Event C : The number formed is greater than 50. Write n(A), n(B) and n(c).

2) A card is drawn from a well shuffled pack of 52 playing cards. Find the probability of each event. The card drawn is

i) A red card ii) A face card.

Q. 4 : Attempt any ONE of the following. 4

1) A card is drawn from a well shuffled pack of 52 playing cards. Find the probability of each event. The card drawn is.

i) A red card

ii) a face card

iii) A diamond card

iv) A spade card.

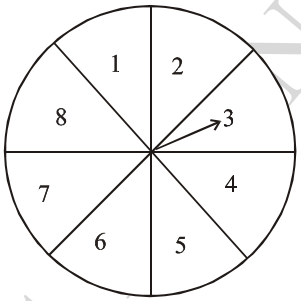
2) A game of a chance, a spinning arrow comes to rest at one of the numbers 1, 2, 3, 4, 5, 6, 7, 8. All these are equally likely outcomes find the probability that if will rest at.

i) 8

ii) An odd number

iii) A number greater than 2

iv) A number less than 9



Q. 5 : Attempt any ONE of the following. 3

1) If a card is drawn from a pack of 52 cards. Find the probability of the following events.

i) Event A : Getting a black card.

ii) Event B : Not getting a black card

iii) Events C : Getting a card bearing number between 2 to 5 including 2 and 5.

2) A sanitation committee of two members is to be formed from 3 boys and 2 girls. Write sample space 's' and number of sample pts n(s). Also find the probability that.

i) At least one girl must be member of the committee.

ii) Committee must be of one boy and one girl.

iii) Committee must be of boys only.

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