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DPM CLASSES

6th to 10th (Math's & Science), 11th & 12th (Physics, Chemistry, Math's)

TEST - PAPER (CBSE/NCERT)

PROBABILITY PART -1

SESSION -2024-25

CLASS - 12th

JOIN TODAY FOR ADVANCE CONCEPTS

ONLY IN ₹3000 PER MONTH

MRP: ₹ 100/- ONLY

ALSO, BASIC CONCEPTS CLASSES IN SUMMER VACATION Apr, May & Jun (Every Year)

Add: Block -B, Near Glory Villa, 60 feet Road (Nearest land mark Scindia Statue), Shatabdipuram, Gwalior

Time : 1.00 hr -; Test - Probability :- mm : 50

Q.1. The probability that atleast one of the two events A and B occurs is 0.6. If A and B occur simultaneously with probability 0.3. Evaluate $P(\bar{A}) + P(\bar{B})$.

Q.2. Two dice are thrown together and the total score is noted. The events E, F and G are 'a total of 4', 'a total of 9 or more' and 'a total divisible by 5' respectively. Calculate P(E). P(F) and P(G) and decide which pairs of events, if any are independent.

Q.3. If A and B are two events such that :-

$P(A) = \frac{1}{2}$, $P(B) = \frac{1}{3}$ and $P(A \cap B) = \frac{1}{4}$

then find :-

(i) $P(A/B)$, (ii) $P(B/A)$

(iii) $P(A'/B)$ (iv) $P(A'/B')$

Q.4. A discrete random variable X has the probability distribution as given below :-

X	0.5	1	1.5	2
P(x)	K	K^2	$2K^2$	K

(i) Find the value of K.

(ii) Determine the mean of the distribution

Q.5. Three dice are thrown at the same time. Find the probability of getting three two's, if it is known that the sum of the numbers on the dice was six.

Q.6. If ten coins are tossed, then what is the probability of getting atleast 8 heads ?

Q.7. The probability of a man hitting a target is 0.25. If he shoots 7 times, then what is the probability of his hitting atleast twice ?

Q.8. A die is thrown three times. Let x be the 'number of twos seen'. Find the expectation of x.

Q.9. The random variable x can take only the values 0, 1, 2. If

$P(x=0) = P(x=1) = p$ and $E(x^2) = E[x]$

then find the value of p.

Q.10. A die is tossed twice. If a 'success' is getting an even number on a toss, then find the variance of the number of sucesses.