Model Question Paper

Probability - Part III

10th Standard

Maths

Reg.No. : | | | | | | |

I.Answer all the questions.
II.Use Blue pen only.
III.Question number 15 is compulsory.

Time : 01:00:00 Hrs

Total Marks : 40

Part-A

5 x 1 = 5

1) A bag contains 5 black balls, 4 white balls and 3 red balls. If a ball is selected at random, the probability that it is not red is

(a) $\frac{5}{12}$ (b) $\frac{4}{12}$ (c) $\frac{3}{12}$ (d) $\frac{3}{4}$

2) Two dice are thrown simultaneously. The probability of getting a doublet is

(a) $\frac{1}{36}$ (b) $\frac{1}{3}$ (c) $\frac{1}{6}$ (d) $\frac{2}{3}$

3) A fair die is thrown once. The probability of getting a prime or composite number is

(a) 1 (b) 0 (c) $\frac{5}{6}$ (d) $\frac{1}{6}$

4) Probability of getting 3 heads or 3 tails in tossing a coin 3 times is

(a) $\frac{1}{8}$ (b) $\frac{1}{4}$ (c) $\frac{3}{8}$ (d) $\frac{1}{2}$

5) A card is drawn from a pack of 52 cards at random. The probability of getting neither an ace nor a king card is

(a) $\frac{2}{13}$ (b) $\frac{11}{13}$ (c) $\frac{4}{13}$ (d) $\frac{8}{13}$

Part-B

5 x 2 = 10

6) Three rotten eggs are mixed with 12 good ones. One egg is chosen at random. What is the probability of choosing a rotten egg?

7) Two coins are tossed together. What is the probability of getting at most one head.

8) One card is drawn randomly from a well shuffled deck of 52 playing cards. Find the probability that the drawn card is

(i) a Diamond

9) A bag contains 6 white balls numbered from 1 to 6 and 4 red balls numbered from 7 to 10. A ball is drawn at random. Find the probability of getting

(i) an even-numbered ball

10) A number is selected at random from integers 1 to 100. Find the probability that it is

(i) a perfect square

Part-C

5 x 5 = 25

11) A card is drawn from a deck of 52 cards. Find the probability of getting a King or a Heart or a Red card.

12) A bag contains 10 white, 5 black, 3 green and 2 red balls. One ball is drawn atrandom.Find the probability that the ball drawn is white or black or green.

13) If P(A) = $\frac{1}{2}$,P(B) = $\frac{7}{10}$, P(A $\bigcup$ B) =1. Find (i) P(A $\bigcap$ B) (ii) P(A' $\bigcup$ B') .

14) If a die is rolled twice, find the probability of getting an even number in the first time or a total of 8 .

15) a) One number is chosen randomly from the integers 1 to 50. Find the probability that it is divisible by 4 or 6.

(OR)

b) A bag contains 50 bolts and 150 nuts. Half of the bolts and half of the nuts are rusted. If an item is chosen at random, find the probability that it is rusted or that it is a bolt.

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