Question 5:
When 3 coins are tossed simultaneously all possible outcomes are
HHH, HHT, HTH, THT, HTT, THH, TTT, TTH
Total number of possible outcomes = 8
Let E_1 be the event of getting at least 2 heads
Then, E_1= event of getting 2, 3 heads
So, the favorable outcomes are HHH, HHT, HTH, THH
Number of favorable outcomes = 4
P(getting of favorable outcomes = P(E_1) = 4/8 = 1/2

Question 6:
Total number of bulbs = 200
Number of defective bulbs = 16

(i) Let E_1 be the event of getting a defective bulb

Total number of defective bulbs = 16

$\therefore$ P(getting defective bulbs) = P(E_1) = $\dfrac{16}{200}$ = $\dfrac{2}{25}$

(ii) Let E_2 be the event of "getting non - defective bulb"

$\therefore$ P(getting non defective bulb) = P(E_2) = $1 - \dfrac{16}{200}$ = $\dfrac{184}{200}$ = $\dfrac{23}{25}$

Question 7:
Total number of tickets sold = 250
Number of prizes = 5
Let E be the event getting a prize
Number of favorable outcomes = 5
P(getting a prize) = P(E) = 5/250 = 1/50

Question 8:
Total number of balls = (white + red + green) balls
= 5 + 6 + 4 = 15 balls

(i) Number of green balls = 4

P(getting a green ball) = $\dfrac{4}{15}$

(ii) Number of white balls = 5

P(getting a white ball) = $\dfrac{5}{15}$ = $\dfrac{1}{3}$

(iii) Number of non - red = 1 - P(getting red)

= $1 - \dfrac{6}{15}$ = $\dfrac{9}{15}$ = $\dfrac{3}{5}$

Question 9:

Total number of balls = 3 + 5 + 7 = 15
(i) Total number of white balls = 7

$$P(\text{getting a white ball}) = \frac{7}{15}$$

(ii) Total number of Red balls = 3

$$P(\text{getting a red ball}) = \frac{3}{15} = \frac{1}{5}$$

(iii) P(getting no red ball) = 1 - P(getting a red ball)

$$= 1 - \frac{1}{5} = \frac{4}{5}$$

(iv) Total number of red and white balls = 10

$$P(\text{getting a red or white ball}) = \frac{10}{15} = \frac{2}{3}$$

Question 10:
Total number of balls = 7 + 5 + 3 = 15
(i) Total number of red balls = 5

$$P(\text{getting a red ball}) = \frac{5}{15} = \frac{1}{3}$$

(ii) Total number of black or white balls = 10

$$P(\text{getting a black or white balls}) = \frac{10}{15} = \frac{2}{3}$$

(iii) P(getting not a black ball) = 1- P(getting a black ball)

$$= 1 - \frac{7}{15} = \frac{8}{15}$$

********** END *********