SECTION A   2 x 4 = 8

1) In a play zone, Nishtha is playing claw crane game which consists of 58 teddy bears, 42 pokemons, 36 tigers and 64 monkeys. Nishtha picks a puppet at random. Now, find the probability of getting

(i) a tiger

(a) $\frac{3}{50}$ **(b)** $\frac{9}{50}$

(c) $\frac{1}{25}$ **(d)** $\frac{27}{50}$

(ii) a monkey

(a) $\frac{8}{25}$ **(b)** $\frac{4}{25}$

(c) $\frac{16}{25}$ **(d)** $\frac{1}{5}$

(iii) a teddy bear

(a) $\frac{41}{50}$ **(b)** $\frac{29}{50}$

(c) $\frac{29}{100}$ **(d)** $\frac{41}{100}$

(iv) not a monkey

(a) $\frac{1}{25}$ **(b)** $\frac{8}{25}$

(c) $\frac{13}{25}$ **(d)** $\frac{17}{25}$

(v) not a pokemon

(a) $\frac{27}{100}$ **(b)** $\frac{43}{100}$

(c) $\frac{61}{100}$ **(d)** $\frac{79}{100}$

Answer : Total number of puppets in claw crane = 58 + 42 + 36 + 64 = 200

(i) (b): P(picking a tiger) = $\frac{36}{200} = \frac{9}{50}$

(ii) (a): P(picking a monkey) = $\frac{64}{200} = \frac{8}{25}$

(iii) (c) : P(picking a teddy bear) = $\frac{58}{200} = \frac{29}{100}$

(iv) (d) : P(not picking a monkey) = 1 - P(picking a monkey)
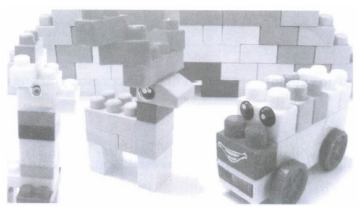
$= 1 - \frac{8}{25} = \frac{17}{25}$

(v) (d): P(picking a pokemon) = $\frac{42}{200} = \frac{21}{100}$

P(not picking a pokemon) = 1 - P(picking a pokemon)

$= 1 - \frac{21}{100} = \frac{79}{100}$

2) Prateek goes to a toy shop to purchase a building block kit for his son. He found that the kit contains 120 blocks, of which 40 are red, 25 are blue, 30 are green and the rest are yellow. His son picks up a block at random. Find the probability that the block is

(i) of red colour
(a) 0   **(b) 1**
(c) $\frac{1}{2}$ **(d)** $\frac{1}{3}$

(ii) not of yellow colour
(a) $\frac{1}{6}$ **(b)** $\frac{1}{4}$
(c) $\frac{19}{24}$ **(d)** $\frac{19}{25}$

(iii) of green colour
(a) $\frac{1}{8}$ **(b)** $\frac{1}{10}$
(c) $\frac{1}{4}$ **(d)** $\frac{1}{12}$

(iv) of yellow colour
(a) $\frac{15}{118}$ **(b)** $\frac{5}{24}$
(c) $\frac{17}{24}$ **(d)** $\frac{19}{50}$

(v) not of blue colour
(a) $\frac{1}{8}$ **(b)** $\frac{19}{24}$
(c) $\frac{19}{31}$ **(d)** $\frac{16}{55}$

Answer : Total number of blocks in the kit = 120
Number of red blocks = 40
Number of blue blocks = 25
Number of green blocks = 30
Number of yellow blocks = 120 - (40 + 25 + 30)
= 120 - 95 = 25

(i) (d): P(block is red) $= \frac{40}{120} = \frac{1}{3}$

(ii) (c): P(block is not yellow) = 1 - P(block is yellow)
$= 1 - \frac{25}{120} = 1 - \frac{5}{24} = \frac{19}{24}$

(iii) (c) : P(block is green) = $\frac{30}{120} = \frac{1}{4}$

(iv) (b) : P(block is yellow) = $\frac{5}{24}$

(v) (b): P(block is not blue) = 1 - P(block is blue)
$= 1 - \frac{25}{120} = 1 - \frac{5}{24} = \frac{19}{24}$