Permutations Ex 16.2 Q6

Since toss of each coin can result in 2 ways.

When coin is tossed five times, the total number of outcomes

$= 2 \times 2 \times 2 \times 2 \times 2$

$= 32$

Hence, required number of ways is 32

Permutations Ex 16.2 Q7

The number of ways to examinee answer a true/false type question is 2.

$\therefore$ the number of ways for an examinee to answer a set of ten true/false type questions $= 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2$

$= 1024.$

Hence, the required number of ways is 1024.

Permutations Ex 16.2 Q8

The total number of ways to make attempt to open the lock $= 10 \times 10 \times 10 = 1000.$

The number of ways to successfuly open the lock = 1

$\therefore$ The number of ways to make an unsuccessful attempt to open the lock $= 1000 - 1 = 999.$

Hence,required number of ways to make an unsuccessfuly attempt to the open the lock is 999.

Permutations Ex 16.2 Q9

Each one of the first three questions can be answered in 4 ways.

$\therefore$ The total number of ways to answered the first three question $= 4 \times 4 \times 4$

$= 64$

Each of the next three question can be answered in 2 ways.

$\therefore$ The total number of ways the answered the next three questions $= 2 \times 2 \times 2 = 8$

so, total number of sequences at answers $= 64 \times 8 = 512$

Permutations Ex 16.2 Q10

There are 5 books on mathematics and 6 books on physics in a book shop.

The number of ways to select a mathematics book = 5
The number of ways to select a physics book = 6

Now,

(i) Number of ways in which a student can buy a mathematics book and a physics book $= 5 \times 6 = 30$

(ii) Number of ways in which a student buy either a mathematics book or a physics book $= 5 + 6 = 11$

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