

Sets Ex 1.4 Q4(i)

The given statement is 'True'.

If  $m \in \mathbb{Z}$ , then m can be written as  $\frac{m}{1}$ , which is of the form  $\frac{p}{q}$ , where p and q are relatively prime integers and  $q \neq 0$ .

This implies that  $m \in Q$ , the set of rational numbers.

Thus,  $m \in Z \Rightarrow m \in Q$ 

Hence  $Z \subseteq Q$ 

Sets Ex 1.4 Q4(ii)

The given statement is 'True'.

· Crows are also Birds.

Sets Ex 1.4 Q4(iii)

The given statement is 'False'.

· A rectangle need not be a square.

Sets Ex 1.4 O4(iv)

The given statement is 'True'.

If z is a complex number, then it can be written as z=x+iy, where x and y are real numbers and are called the real and imaginary parts of the complex number z.

If x is a real number, then

 $x = x + i.0 \in C$ 

where C is the set of complex numbers.

Thus  $x \in R \Rightarrow x \in C$ 

Hence, the set of all real numbers is contained in the set of all complex numbers.

Sets Ex 1.4 Q4(v)

False, ∵ a∈P buta∉B

Note that  $\{a\}$  is an element of B which is different from the element 'a'.

Sets Ex 1.4 Q4(vi)

 $A = \{L,I,T,E\} & [\because repetition is not allowed] \\ B = \{T,I,L,E\} & [\because repetition is not allowed] \\ = \{L,I,T,E\} & [\because the manner in which the elements are listed does not matter]$ 

 $\sqrt{2}$  Each element of A is an element of B and vice-versa

A = B

Hence, the given statement is true.

\*\*\*\*\*\*\*\*\*\* END \*\*\*\*\*\*\*