

## **Solutions to Assignment-1 Session-1 (Introduction)**

### **5.1 True or False**

1. Prescriptive Analytics used to predict the future outcomes? : False
2. Base R packages installed automatically? : True

### **5.2 What is Recycling of elements in a vector?**

The automatic lengthening of vectors in certain settings is called recycling.

When applying an operation to two vectors that require them to be of the same length, R automatically repeats the shorter one until it is long enough to match the longer one.

### **5.3 Example of recycling of elements.**

```
> c(1,2,3,4,5) + c(1,2,3,4,5,6,7,8,9)
[1] 2 4 6 8 10 7 9 11 13
Warning message:
In c(1, 2, 3, 4, 5) + c(1, 2, 3, 4, 5, 6, 7, 8, 9) :
  longer object length is not a multiple of shorter object length
```

The shorter vector was recycled for operation as,

```
> c(1,2,3,4,5,1,2,3,4) + c(1,2,3,4,5,6,7,8,9)
Now bot vector are of same length to produce output as:
[1] 2 4 6 8 10 7 9 11 13
```