**Guided Solution for Tutorial 5**

Q3-1 Find the *z*-transform of the following sequences:

1. *x*(*n*) = {1, –2, 0.5, 0, –3}
2. *x*(*n*) = 2*u*(*n*) – 3(0.5)*nu*(*n*)

**Hint:** Use Table 3.1, page 126 of the textbook.

For Q3.1(a), it can be rewritten as

 before the z-transform.

Table 3.1 Z-transform of some common sequences

|  |  |  |
| --- | --- | --- |
| Sequence | Transform | ROC |
|  | 1 | everywhere |
|  |  |  |
|  |  |  |
|  |  |  |

Q3-2 Find the inverse *z*-transform of:

1. 
2. 
3. 

**Hint:** Use Table 3.1, page 126 of the textbook and for part c, we need to divide the numerator and denominator by z to convert to z-1.

