

Ex 5.3 NCERT Solutions by Dev Anoop (Bathinda)

$$\textcircled{11} \quad S_n = 4n - n^2$$

$$S_1 = 4 \times 1 - 1^2$$
$$= 4 - 1$$

$$= 3$$

$$\therefore a_1 = 3$$

$$S_2 = 4 \times 2 - 2^2$$

$$= 8 - 4$$

$$= 4$$

$$S_2 = 4$$

$$a_1 + a_2 = 4$$

$$3 + a_2 = 4$$

$$\Rightarrow a_2 = 4 - 3$$
$$= 1$$

$$d = a_2 - a_1$$

$$= 1 - 3$$

$$= -2$$

$$a_3 = a + 2d$$

$$= 3 + 2 \times (-2)$$

$$= -1$$

$$a_{10} = a + 9d$$

$$= 3 + 9(-2)$$

$$= 3 - 18$$

$$= -15$$

$$a_n = a + (n-1)d$$

$$= 3 + (n-1)(-2)$$

$$= 3 - 2n + 2$$

$$= 5 - 2n$$