

**Q1. 23 January Shift 1**

Number of solutions of  $\sqrt{3} \cos 2\theta + 8 \cos \theta + 3\sqrt{3} = 0, \theta \in [-3\pi, 2\pi]$  is:

(1) 0

(2) 5

(3) 3

(4) 4

**Q2. 24 January Shift 2**

The number of elements in the set  $\{x \in [0, 180^\circ] : \tan(x + 100^\circ) = \tan(x + 50^\circ) \tan x \tan(x - 50^\circ)\}$  is \_\_\_\_\_.

**ANSWER KEYS**

1. (1)

2. 4