**Q1.** If $n$ is an odd integer then $(1+i)^{6n}+(1-i)^{6n}$ is equal to

(a) 0

(b) 2

(c) -2

(d) none

**Q2.** If $a+ib=\sum_{k=1}^{101} i^k$ then $(a,b)$ equals

(a) (0,1)

(b) (0,0)

(c) (0,-1)

(d) (1,1)

**Q3.** The smallest positive integer $n$ for which $\frac{(1+i)^n}{(1-i)^{n-2}}$ is a real number.

(a) 2

(b) 1

(c) 3

(d) 4

**Q4.** If one root of the equation $z^2+(a+i)z+b+ic=0$ be real when $a,b\in R$ then

$c^2+b-ac=$

(a) 0

(b) -1

(c) 1

(d) none