**Q1. 28 January Shift 2**

Let $f(x)=\lim_{\theta\to 0}\left(\frac{\cos\pi x-x^{\left(\frac{2}{\theta}\right)}\sin(x-1)}{1+x^{\left(\frac{2}{\theta}\right)}(x-1)}\right), x\in\mathbf{R}$. Consider the following two statements :

(I) $f(x)$ is discontinous at $x=1$.

(II) $f(x)$ is continous at $x=-1$.

Then,

(1) Only (II) is True

(2) Neither (I) nor (II) is True

(3) Both (I) and (II) are True

(4) Only (I) is True

## ANSWER KEYS

**1.** (2)