# PROBABILITY

UDAY KUMAR - FWC22086

**13.1.6** [1]**If P(A) = $\frac{1}{2}$,P(B)=0,then** $P(A|B)$ **is**

a)0 b)$\frac{1}{2}$

c)not defined d)1

**Solution:**
From the defnition of conditional probability

$$P(A|B) = \frac{P(AB)}{P(B)}$$

given P(B) = 0 implies B = $\emptyset$

$$\text{A.B} = \emptyset$$

$$P(A, B) = 0$$

$$P(A|B) = \frac{P(A.B)}{P(B)}$$

$$P(A|B) = \frac{0}{0}$$

$\therefore P(A|B)$ is not defined

[1]Read question numbers as (CHAPTER NUMBER).(EXERCISE NUMBER).(QUESTION NUMBER)