

A seven digit number is formed using digits 3, 3, 4, 4, 4, 5, 5. The probability, that number so formed is divisible by 2, is :

(1) $\frac{6}{7}$

(2) $\frac{1}{7}$

(3) $\frac{3}{7}$

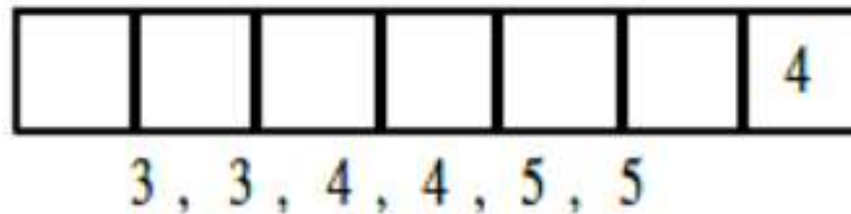
(4) $\frac{4}{7}$

Digits = 3, 3, 4, 4, 4, 5, 5

$$\text{Total 7 digit numbers} = \frac{7!}{2!2!3!}$$

Number of 7 digit number divisible by 2

⇒ last digit = 4



Now 7 digit numbers which are divisible by 2

$$= \frac{6!}{2!2!2!}$$

$$\text{Required probability} = \frac{\frac{6!}{2!2!2!}}{\frac{7!}{3!2!2!}} = \frac{3}{7}$$