#### 1

# AI1103: Assignment 2

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Download all python codes from

https://github.com/Santosh-Dhaladhuli2003/ AI1103/blob/main/Assignment%202/ Assignment%202.py

and latex codes from

https://github.com/Santosh-Dhaladhuli2003/ AI1103/blob/main/Assignment%202/ Assignment%202.tex

## 1 GATE EE 2013 Question No. 61

What is the chance that a leap year, selected at random, will contain 53 Saturdays?

(A) 
$$\frac{2}{7}$$
 (B)  $\frac{3}{7}$  (C)  $\frac{1}{7}$  (D)  $\frac{5}{7}$ 

#### 2 Solution

Let X be a random variable

We Define,  $X \in 0,1$ 

 $Pr(X = 0) \longrightarrow denotes for 52 Saturdays$ 

 $Pr(X = 1) \longrightarrow denotes for 53 Saturdays$ 

$$\implies$$
 Remaining Days = 366 - (52 ×7) = 2

$$\implies$$
 Pr  $(X = 1) = \frac{2}{7}$ 

... The correct answer is **Option A** 

