IMPORTANT FACTS AND FOAMULAE

Under this heading we mainly deal with finding the day of the week on a particular given date the process of finding it lies on obtaining the number of odd days.

Odd Days : Number of days more than the complete number of weeks in a given

Period ., is the number of odd days during that period.

LeapYear: Every year which is divisible by 4 is called a leap year.

Thus each one of the years 1992, 1996, 2004, 2008, 2012, etc. is a leap year. Every 4th century is a leap year but no other century is a leap year.thus each one of 400, 800, 1200,' 1600, 2000, etc. is a leap year.
None of 1900, 2010, 2020, 2100, etc. is a leap year.

An year which is not a leap year is called an ordinary year.

(I)An ordinary year has 365 days. (II) A leap year has 366 days.

Counting of Odd Days:

i)1 ordinary year = 365 days = (52 weeks + 1 day).
:. An ordinary year has 1 odd day.
ii)1 leap year = 366 days = (52 weeks + 2 days).
:. A leap year has 2 odd days.
iii)100 years = 76 ordinary years + 24 leap years
= [(76 x 52) weeks + 76 days) + [(24 x 52) weeks + 48 days]
= 5200 weeks + 124 days = (5217 weeks + 5 days).
:. 100 years contain 5 odd days.
200 years contain 10 and therefore 3 odd days.
300 years contain 15 and therefore 1 odd day.
400 years contain (20 + 1) and therefore 0 odd day.
Similarly, each one of 800, 1200, 1600, 2000, etc. contains 0 odd days.
Remark: (7n + m) odd days, where m < 7 is equivalent to m odd days.
Thus, 8 odd days ≡ 1 odd day etc.

No of odd days	0	1	2	3	4	5	6
Day	Sun.	Mon.	Tues.	Wed.	Thur.	Fri.	Sat.