Chapter 7

# Time Sequence, Number & Ranking Test

# TIME SEQUENCE

In time sequence, we have to defect exact time from the given time sequence. To solve problems related to time sequence, let us gather first the following informations :

- 1 Minute = 60 seconds
- 1 Hour = 60 minutes
- 1 Day = 24 hours
- 1 Week = 7 days
- 1 Month = 4 weeks
- 1 Year = 12 months
- 1 Ordinary year = 365 days
- 1 Leap year = 366 days
- 1 Century = 100 years

### Remember

- A day is the period of the earth's revolution on its axis.
- A 'Solar year' is the time taken the earth to travel round the sun. It is equal to 365 days, 5 hours, 48

minutes and  $47\frac{1}{2}$  seconds nearly.

• A 'Lunar month' is the time taken by the moon to travel round the earth. It is equal to nearly 28 days.

### Leap Year

- If the number of a given year is divisible by 4, it is a leap year. Hence, the years like 1996, 2008, 2012 are leap years. But years like 1997, 1991, 2005, 2007 are not divisible by 4 and therefore, such years are not leap years.
- In a leap year, February has 29 days.
- A leap year has 52 weeks and 2 days. Therefore, a leap year has 2 odd days.

### **Ordinary year**

- An ordinary year has 12 months.
- An ordinary year has 365 days.
- An ordinary year has 52 weeks and 1 day. Therefore, an ordinary year has 1 odd day.

### **CENTURY (100 YEARS)**

- A century has 76 ordinary years and 24 leap years.
- A century has 5 odd days.

### **Odd days**

Odd days in an ordinary year = 1 Odd days in a leap year = 2 Odd days in 100 years = 5 Odd days in 200 years =  $(5 \times 2)$ = 1 week + 3 days = 3 Odd days in 300 years =  $(5 \times 3)$ = 2 weeks + 1 day = 1 Odd days in 400 years =  $(5 \times 4 + 1)$ = 21 days = 3 weeks + 0 day = 0 Similarly, each 800, 1600, 2000, 2004, etc. has 0 odd days.

**EXAMPLE** 1. Neena returned home after 3 days earlier than the time she had told her mother. Neena's sister Veena reached five days later than the day Neena was supposed to return. If Neena returned on Thursday, on what day did Veena return ?

Sol. Neena returned home on Thursday. Neena was supposed to return 3 days later, i.e., on Sunday. Veena returned five days later from Sunday. i.e., on Friday.

#### Time Sequence, Number & Ranking Test

# NUMBER TEST

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In such test, generally you are given a long series of numbers. The candidate is required to find out how many times a number satifying the conditions specified in the question occurs.

# **EXAMPLE** 2. How many 8s are there

in the following number sequence which are immediately preceded by 5 but not immediately followed by 3?

**38584583988588893** Sol. Let use see the following :

3 8 8 4 5 **8** 3 9 8 8 5 **8** 8 8 9 3

Clearly, two such 8s are there.

### Remember

There is no rule as how to attempt these questions but we can practice these questions :



# **RANKING TEST**

In such problems, the ranks of a person both from the top and from the bottom are given and on the basis of this the total number of persons is asked. Sometimes question is twisted also and position of a particular person is asked.

# 🗆 Shortcut Ápproach

Formulas to determine the positioning of a person

- (1) Left + Right = Total + 1
- (2) Left = Total + 1 -Right
- (3) Right = 1 + 1 left
- $(4) \quad \text{Total} = \text{left} + \text{Right}$

# **Note :** *The above formulas are only for a single person's position*

### EXAMPLE



## Shortcut Approach

### Same for Vertical & Horizontal

- (1) Total + 1 = Top + Bottom
- (2) Top = Total + 1 Bottom
- (3) Botom = Total + 1 Top
- (4) Total = Top + Bottom

### **EXAMPLE** 3. In a row of 40 students,

A is 13th from the left end, find the rank from right end.



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