

# Calendar

## Concepts

- 1 day = 24 hours
- 1 week = 7 days
- Normal year = 365 days  
= 52 weeks and 1 day

• Leap year = 366 days  
= 52 weeks and 2 days.

- Number of days in a month:- century year

January = 31 days

February = 28 or 29 days

March = 31 days

April = 30 days

May = 31 days

June = 30 days

July = 31 days

August = 31 days

September = 30 days

October = 31 days

November = 30 days

December = 31 days

To check leap year, divide by 400. And the remainder should be zero.

- To check leap year, divide by 4 and remainder should be zero.

Ques: If today is Wednesday, what is the day after 25 days?

Ans: 7)  $25 \mod 7 = 4$  Wednesday + 4 = Sunday.

Ques: If today is Wednesday, what was the day 16 days earlier?

Sol: 7)  $16 \mod 7 = 2$  Wednesday - 2 = Monday.

Ques: If 3<sup>rd</sup> day of a month is Monday, which one of the following will be the 5<sup>th</sup> day from 21<sup>st</sup> of this month?

Ans: 3<sup>rd</sup> day  $\rightarrow$  Monday } Difference = 23 days  
26<sup>th</sup> day  $\rightarrow$  ?

7)  $23 \mod 7 = 2$  Monday + 2 = Wednesday.

Ques: If the last day of a month is Monday, which one of the following will be the fifth day from 21<sup>st</sup> of this month?

Ans: None of these

\* Leap years in 400 years time period = 97

\* Leap years in 100 years time period = 25 or 24

\* Sunday = 1, Monday = 2, Tuesday = 3  
 Wednesday = 4, Thursday = 5, Friday = 6  
 Saturday = 0

* January = 1	July = 0	For leap year
February = 4	August = 3	January = 0
March = 4	September = 6	February = 3
April = 0	October = 1	
May = 2	November = 4	
June = 5	December = 6	

\* 2000 → -1

1900 → 0

1800 → +2

1700 → +4

Ques: What was the day when India got independence?

Ans: 15 August 1947

$$\left(\frac{15}{7}\right) \Rightarrow \text{Rem} = 1$$

$$\left(\frac{47}{4}\right) = \text{Rem} = 3 \quad \text{Quotient} = 11$$

$$\text{August} = 3$$

$$\left(\frac{47}{7}\right) = \text{Rem} = 5$$

$$(1900) = 0$$

$$\text{Quotient} = 6$$

$$\Rightarrow 1 + 3 + 0 + 11 + 5 = 20 \Rightarrow (20 \div 7) = \text{Rem} = 6 = \text{Friday}$$

Ques: What was the day on 28 July 2023?

Sol:  $\frac{28}{7} = \text{Remainder} = 0$

$$\text{July} = 0$$

$$2000 = -1$$

$$4) 23 \quad (\text{Quotient} = 5)$$

$$\frac{23}{7} = \text{Remainder} = 2$$

$$\therefore 0 + 0 + (-1) + 5 + 2 = 6$$

$$\therefore \frac{6}{7} \Rightarrow \text{Remainder} = 6 = \text{FRIDAY.}$$

Ques: What was the day on 2<sup>nd</sup> November 1989?

Ans: 2 November 1989

$$\downarrow \quad \downarrow \quad \downarrow \quad \downarrow$$

$$2 + 4 + 0 + 2 + 5 = 16$$

$$7) 16(2)$$

$$- 28$$

Thursday.

$$5$$

Ques: Which day is 10<sup>th</sup> October, 2027?

Sol: 7) 10 (October 2000 did not have a leap year)

$$\frac{3}{4) 27(6}$$

$$- 24$$

$$3$$

$$7) 27(3)$$

$$- 21$$

$$6$$

$$= 3 + 1 + 6 + 6 = 15$$

$$\rightarrow \frac{15}{7} \Rightarrow \text{Remainder} = 1$$

Sunday. Ans.

Ques 1: Sunday will fall on which dates of February 1900?

- (A) 3rd, 10th, 17th, 24th
- (B) 2nd, 9th, 16th, 23rd
- (C) 5th, 12th, 19th, 26th
- (D) 4th, 11th, 18th, 25th

Ans: 3<sup>rd</sup> February 1900

$$\text{Remainder} = 3$$

$$\text{February} = 4$$

$$1900 = 0$$

$$00 = 0$$

$$00 = 0$$

$$\therefore 3+4-7 \Rightarrow \left(\frac{-1}{7}\right) \text{ Remainder} = 0$$

$\therefore$  Saturday.

If it's Saturday on 3.

Then it will be Sunday on 4, 11<sup>th</sup>, 18<sup>th</sup>, 25<sup>th</sup>

Ques: Which of the following 2 months in a year will have the same calendar in normal year?

- (A) March : August
- (B) July : December
- (C) January : October
- (D) April : September.

Sol.: Take any normal year and assume it starts with Monday.

January 1 = Monday

February 1 = Thursday

March 1 = Thursday

April 1 = Sunday

May 1 = Tuesday

June 1 = Friday

July 1 = Sunday

August 1 = Wednesday

September 1 = Saturday

October 1 = Monday

November 1 = Thursday

December 1 = Saturday

Ques: Select the odd pair :-

(a) March : April

(b) May : June

(c) July : August

(d) October : November

Ques: Second day of a month which has 30 days is Thursday. What will be the last day of the next month?

Sol.: 28 of a 30 month is Thursday.

$$\text{Difference} = 33 + 28 = 59$$

$$\therefore \begin{pmatrix} 59 \\ 7 \end{pmatrix} \Rightarrow \text{Remainder} = 3$$

$$7) 33(4 \\ - 28 \\ \hline 5$$

$$\text{Thursday} + 3 = \text{Sunday}$$

Ques: Question below is followed by 2 statements, read the statements, and then answer the question.

Question: Is it Friday today?

Statement I: February 11 is Saturday.

Statement II: Today is 21<sup>st</sup> April.

Ans: Both the statements are not sufficient to answer the question.

Ques: Amit celebrated his birthday on Wednesday (15 February 2012). In which of the following year, he will celebrate his birthday on same day.

Ans: 15 February 2012 → Wed.  
2013 → Thurs  
2014 → Friday  
2015 → Saturday  
2016 → Sunday  
2017 → Tuesday  
2018 → Wednesday

He will celebrate his birthday on the same day in the year 2017.

Ques: Friday will fall on which of the following dates of February 1972?

Ans: 4<sup>th</sup>, 11<sup>th</sup>, 18<sup>th</sup> and 25<sup>th</sup>.

Ques: The day on 7<sup>th</sup> March of a year is the same day on which of the following dates of the same year?

Ans: Since any date in March is the same day of the week as the corresponding date in November of that year, so the same day falls on 7<sup>th</sup> November.

Ques: Friday was a holiday for Independence Day. Children's Day will be celebrated on?

Ans: 15 August  $\rightarrow$  Friday.

Time gap:-

$$16 + 30 + 31 + 14 = 91$$

$$\therefore \left( \frac{91}{7} \right) = \text{Remainder} = 0$$

$$\text{Friday} + 0 = \text{Friday}$$

$$7) 91(13$$

$$\begin{array}{r} - 7 \\ \hline 21 \\ - 21 \\ \hline 0 \end{array}$$

Ques: What was the day of the week on 10<sup>th</sup> May 1857?

Sol: 10 May 1857

$$7) 10(1 \quad \text{May} \rightarrow \text{Tuesday. 2}$$

$$- 7$$

$$\underline{-}$$

$$9$$

$$4) 57(14$$

$$- 4$$

$$\underline{-}$$

$$17$$

$$- 16$$

$$\underline{-}$$

$$1$$

$$1800 \rightarrow +2$$

$$\Rightarrow 3 + 2 + 14 + 2 + 1$$

$$7) 57(0$$

$$- 56$$

$$\underline{-}$$

$$1$$

Remainder = 1

Sunday //

Ques: If today is Saturday, then what will be the day after 255 days?

Ans:

$$7) 255(36$$

$$\quad \quad - 21 \\ \quad \quad \quad 8$$

$$7) 45(6 \\ \quad \quad - 42 \\ \quad \quad \quad 3$$

$$7) 3(1$$

Saturday + 3

= Tuesday. Ans. //

Ques: If 11<sup>th</sup> October 1994 was Tuesday, then what was the day on 11<sup>th</sup> October 1998?

Ans: 11<sup>th</sup> October 1994

$$7) 11(1 \quad 11^{\text{th}} \text{ October} = 1$$

$$- 7 \\ \quad \quad \quad 4$$

$$7) 94(13 \quad 94 = 13 \times 7 + 4$$

$$- 7 \\ \quad \quad \quad 2$$

$$1900 \rightarrow 0$$

$$243 = 14 + 1814$$

$$- 21 \\ \quad \quad \quad 3$$

$$- 12 \\ \quad \quad \quad 2$$

$$\Rightarrow 4 + 1 + 0 + 3 + 23$$

$$\Rightarrow 31$$

$$7) 31(4 \quad 11^{\text{th}} \text{ October} \rightarrow \text{Tuesday})$$

$$- 28 \\ \quad \quad \quad 3$$

$$- 2 \\ \quad \quad \quad 1$$

$$11^{\text{th}} \text{ October 1998} \rightarrow 7) 98(14 \quad 98 = 14 \times 7 + 0$$

$$\rightarrow 11 \rightarrow \text{Remainder} = 4 \quad 4 = 4 \times 1 + 0$$

$$\text{October} = 14 \quad 14 = 14 \times 1 + 0$$

$$1900 = 0 \quad 0 = 0 \times 1 + 0$$

$$7) 90(14 \quad 90 = 14 \times 6 + 6$$

$$- 84 \\ \quad \quad \quad 6$$

$$- 20 \\ \quad \quad \quad 2$$

$$- 20 \\ \quad \quad \quad 2$$

$$= 4 + 1 + 0 + 94 + 0 \equiv 29 \pmod{7}$$

$$\frac{29}{7} \rightarrow \text{Remainder} = 1 \text{ (day after yesterday)}$$

Sunday.

Ques: In the given option, which year is a leap year?

- (a) 1982    (b) 1958    (c) 1966    (d) 1972

Sol: 1972

Ques: How many days will be there from 1<sup>st</sup> August 2001 to 17<sup>th</sup> November 2001? (both days included).

- (a) 116    (b) 109    (c) 115    (d) 99

Sol August - 30 + 1

September - 30

October - 31

November - 17

$$1 + 30 + 30 + 31 + 17 = 108 \text{ days.}$$

$$\begin{array}{r} (108) \\ - 7 \\ \hline 108 \end{array}$$

Ques:- If one day before the previous day was Monday, then what will be the fourth day after today?

Sol:- Today is Wednesday.

1            2            3            4

Sunday      Monday      Tuesday      Wednesday      Thursday      Friday      Saturday      Sunday

∴ Fourth day after today will be Sunday.

Ques:- Today is Thursday. On the last Monday the date was 27<sup>th</sup> December, 1975. So what is the date today?

Sol:- 27 — Mon      { . (bathukai)  
28 — Tues.      } 30<sup>th</sup> December 1975! (6)  
29 — Wed  
30 — Thurs

Thursday / A. 10

Ques:- Today is Sunday. On the last Tuesday the date was 30<sup>th</sup> December, 2000, what is the date today?

Ans:-

Tuesday - 30<sup>th</sup> Dec. 2000

Wednesday - 31<sup>st</sup> Dec. 2000

Thursday - 1 January 2001

Friday - 2 January 2001

Saturday - 3 January 2001

Sunday - 4 January 2001

∴ Today is 4 January 2001. Ans.

Ques: If there was Wednesday on 20 November 2019. Then what will be the day On 20 Nov. 2067?

Sol.: 20 November 2019

$$\begin{array}{r} 7) 20(2 \\ -14 \\ \hline 6 \end{array} \quad \begin{array}{r} \text{November} \\ \downarrow \\ 4 \end{array} \quad \begin{array}{r} 2000 \\ \downarrow \\ -1 \end{array}$$

$$\begin{array}{r} 4) 19(4 \\ -16 \\ \hline 3 \end{array} \quad \begin{array}{r} 7) 19(2 \\ -14 \\ \hline 5 \end{array} \quad \begin{array}{r} 11) 5(5 \\ -5 \\ \hline 0 \end{array}$$

$$\therefore 6+4+2+5 = 15 \Rightarrow \left(\frac{15}{7}\right) = \text{Remainder} = 1$$

Sunday + 3 = Wednesday

20 November 2067

$$\begin{array}{r} \downarrow \\ 7) 20(2 \\ -14 \\ \hline 6 \end{array} \quad \begin{array}{r} \text{November} \\ \downarrow \\ 4 \end{array} \quad \begin{array}{r} 2000 \\ \downarrow \\ -1 \end{array}$$

$$\begin{array}{r} 4) 67(16 \\ -4 \\ \hline 27 \\ -24 \\ \hline 3 \end{array} \quad \begin{array}{r} 7) 67(9 \\ -63 \\ \hline 4 \end{array}$$

$$\rightarrow 6+4-1+16+4 = 29$$

$$\Rightarrow \left(\frac{29}{7}\right) = \text{Remainder} = 1 = \text{Sunday}$$

$$\text{Sunday} + 3 = \text{Wednesday} //$$

Ques: If there was Sunday on 2 January 2022 then what will be the day on 20 March 2022?

Ans:

$$\begin{array}{l}
 \text{January} = 29 \\
 \text{February} = 28 \\
 \text{March} = 20 \\
 \hline
 & 77
 \end{array}$$

$$\begin{array}{r}
 7) 77(11 \\
 -7\downarrow \\
 x7 \\
 -7
 \end{array}$$

Sunday + 0 (= Sunday)

Ques: If there was Wednesday on 2 January 2019, then what will be the day on 31 May 2019?

Ans:

$$\begin{array}{l}
 2^{\text{nd}} \text{ January } 2019 \longrightarrow \text{Wednesday} \\
 \text{January} = 29 \\
 \text{February} = 28 \\
 \text{March} = 31 \\
 \text{April} = 30 \\
 \text{May} = 31 \\
 \hline
 & 149
 \end{array}$$

$$\begin{array}{r}
 7) 149(21 \\
 -14\downarrow \\
 9
 \end{array}$$

$$\begin{array}{r}
 9 \\
 -7 \\
 \hline
 2
 \end{array}$$

Wednesday + 2 = Friday.

Ques:- Which day is 10 October, 2027?

Sol:- 1) 10 (1 October 2000)

$$\begin{array}{r} -7 \\ \hline 3 \end{array}$$

1

-1

II badha

2) 27 (6 + 7)

$$\begin{array}{r} -24 \\ \hline 3 \end{array}$$

6

(Y + U)

F

T

W

T

F

S

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

M

T

W

T

F

S

U

D

Ques: The day on August 15, 2021 was Sunday. What was the day on 15 August, 1947 when India got Independence?

Method I :-

Ans:

$$\frac{(\text{Difference} + \text{Leap Year})}{7}$$

$$\Rightarrow \frac{(74 + \text{L.Y})}{7}$$

Method II:

$$\rightarrow 7) 15(2 \quad \overline{14} \quad \text{August} \quad 025036146$$

$$2000 \rightarrow -1$$

$$7) 21(3 \quad \overline{-21} \quad 0 \quad \text{August} \quad 20$$

$$\times \quad \overline{1}$$

$$\therefore 1 + 3 - 1 + 0 + 5 = 8$$

$$\therefore 7) 8(1 \quad \overline{-7} \quad 1 = \text{Sunday.}$$

$$\underline{1}$$

$$\therefore 15 \text{ August 1947}$$

$$\begin{array}{r} \therefore 7) 15(2 \quad \text{August} = 3 \quad 4) 47(11 \quad 7) 47(6 \\ -14 \quad \overline{1} \quad 1900 \rightarrow 0 \quad \overline{-41} \quad \overline{-42} \\ \underline{1} \quad \underline{\underline{1}} \quad \underline{\underline{5}} \\ \underline{1} \quad \underline{4} \\ \underline{\underline{3}} \end{array}$$

$$\Rightarrow 1+3+0+11+5 = 20 \text{ remainder } 6$$

$$\therefore 7) 20(2 \text{ remainder } 6)$$

$$-14$$

$$\underline{6}$$

FRIDAY. Ans

Ques: The day on February 25, 2021 was Thursday.

What was the day on February 25, 2020?

Ans: (Difference + Leap Year)

$$= (1+0) = (1) \rightarrow \text{Remainder} = 1$$

$$25 \rightarrow \text{Remainder} = 4$$

$$\text{February} = 3$$

$$2000 \rightarrow -1$$

$$7) 20(2 \text{ remainder } 6)$$

$$-14$$

$$6$$

$$\therefore 4+3-1+5+6 = 17$$

$$7) 17(2$$

$$-14$$

$$3$$

Tuesday. Ans

Ques: The day on March 5, 2021 was Friday. What was the day on March 5, 2020?

Sol: 7) 5 (0 march

$$-0$$

$$\downarrow$$

$$5$$

$$4$$

$$-20$$

$$X$$

$$7) 20(2$$

$$-14$$

$$6$$

$$5+4-1+5+6 = 19$$

$$7) 19(2$$

$$-14$$

$$5$$

Thursday.

Ques: If it was Sunday on 1<sup>st</sup> Jan, 2022, what will be the day on 1<sup>st</sup> Jan 2027?

Ans: 1 January 2022

7) 1 (0) January 2000

-0  
---  
0

7) 22 (3)

-21

---

4) 22 (5)

-20

---

$$\therefore 1 + 1 - 1 + 1 + 5 = 7 \equiv \left(\frac{7}{7}\right) \rightarrow \text{Remainder} = 0$$

Saturday + 1 = Sunday.

1<sup>st</sup> January 2027

7) 1 (0) January

-0

---

2000

-1

---

4) 27 (5)

-24

---

7) 27 (3)

-21

---

3 6

$$\therefore 1 + 1 - 1 + 6 + 6 = 13$$

$$= \left(\frac{13}{7}\right) \rightarrow \text{Remainder} = 6 \Rightarrow \text{Friday}$$

$\therefore$  Friday + 1 = Saturday. Ans //.

Ques If it was Thursday on 1<sup>st</sup> January, 2022. what will be the day on 1<sup>st</sup> April 2027.

Ans: 1 January 2022.

$$\begin{array}{r}
 7) 1(0 \quad \text{January} \quad 2000 \\
 - 0 \\
 \hline
 1
 \end{array}
 \quad
 \begin{array}{r}
 7) 22(3 \\
 - 21 \\
 \hline
 2
 \end{array}$$

$$\therefore 1 + 1 - 1 + 5 + 2 = 0 \Rightarrow \left(\frac{0}{7}\right) = \text{Remainder} = 1$$

Sunday

$$\therefore \text{Sunday} + 4 = \text{Thursday}.$$

1<sup>st</sup> April 2027.

$$\begin{array}{r}
 7) 1(0 \quad 144025036146 \\
 - 0 \\
 \hline
 1 \quad \text{April} \quad (-1)
 \end{array}$$

$$\begin{array}{r}
 4) 27(6 \\
 - 24 \\
 \hline
 3
 \end{array}$$

$$\begin{array}{r}
 7) 27(3 \\
 - 21 \\
 \hline
 6
 \end{array}$$

$$1 + 0 - 1 + 6 + 6 = 12$$

$$\begin{array}{r}
 7) 12(1 \\
 - 7 \\
 \hline
 5
 \end{array}$$

Thursday.

$$\therefore \text{Thursday} + 4 = \text{Monday. Ans//.}$$

Ques:- If 31 October 1989 is Sunday, what will be the day on 23 April 1993?

Ans:-

31 October 1989

$$\begin{array}{r} 7) 31(4 \\ - 28 \\ \hline 3 \end{array}$$

October

1900

$$\begin{array}{r} \downarrow \\ 1 \\ \hline 0 \end{array}$$

$$4) 89(22$$

$$\begin{array}{r} + 8 \\ \times 9 \\ - 8 \\ \hline 1 \end{array}$$

$$7) 89(12$$

$$\begin{array}{r} \underline{- 76} \\ 19 \\ - 14 \\ \hline 5 \end{array}$$

$$3+1+0+22+5 = 31 \text{ (Sunday)}$$

$$\begin{array}{r} 7) 31(4 \\ - 28 \\ \hline 3 \end{array}$$

Tuesday //.

Tuesday - 2 = Sunday.

23 April

$$\begin{array}{r} 7) 23(3 \\ - 21 \\ \hline 2 \end{array}$$

1993.

$$\begin{array}{r} 144025036146 \\ \downarrow \\ \text{April} \end{array}$$

$$\begin{array}{r} \Rightarrow 2+0-1+23+2 \\ = 26 \end{array}$$

$$1900 \rightarrow -1$$

$$\begin{array}{r} 7) 93(13 \\ - 7 \\ \hline 23 \\ - 21 \\ \hline 2 \end{array}$$

$$4) 93(23$$

$$\begin{array}{r} \underline{- 8} \\ 13 \\ - 12 \\ \hline 1 \end{array}$$

$$7) 26(3$$

$$\begin{array}{r} - 21 \\ \hline 5 \end{array}$$

Friday - 2

= Wednesday //

Ques: Which year will have the same calendar as that of 2009?

Sol:  $2009 \rightarrow 4n+1$

∴ 2009 calendar will repeat every 6 years.

$$\rightarrow 2009 + 6 = 2015.$$

Concept:

In such questions, year can be represented as  $4n+1, 4n+2, 4n+3$  or  $0$

$$\begin{matrix} & \downarrow & \downarrow & \downarrow \\ 68 & 811 & 11 & +28 \end{matrix}$$

Ans: Which year will have the same calendar as that of 2009?

Ans:  $2009 \rightarrow 4n+3$

∴ The calendar will be the same as 2030.

Ques: Which year will have the same calendar as that of 2021?

Ans:  $2020 + 1 = 2021 \rightarrow (4n+1)$

Repeat after 6 years.

∴ 2021 and 2027 calendar will be same.

$2027 \rightarrow (4n+3)$

Repeat after 11 years.

2027 and 2038 calendar will be same.

$2030 \rightarrow (4n+9)$

2038 and 2049 calendar will be same.

Ans:  $2020 \rightarrow$  (leap year)

Valid for Years in the range Date:  
1930 to 2070 Page:

Year Repetition after Time

Leap Year

28

Leap Year +1

11

Leap Year +2

11

Leap Year +3

11

Ques.: If second and fourth Saturday and all the Sundays are taken as only holidays from an office. What would be the minimum number of possible pos. working days of any month of any year?

Ans.:  $28 - 6 = 22$ .

$\rightarrow (4+2)$

Sunday Saturday

(1+MP) +

∴ 22 working days.

Ques.: Mr. X has 3 children. The birthday of first child falls on the 5th Monday of April, that of the second one falls on the 5th Thursday of November. On which day is the birthday of the third child, which falls on 20th December?

Ans.:

Mr. X

|

↓

|

|

①

②

③

1<sup>st</sup> children :- 5 Monday of April (30 days)  
2<sup>nd</sup> Children :- 5 Thursday of November (30 days)  
Thursday.

Ques: If today is Thursday, what will be the day 52 days after?

Ans: 7) 52 (7  
- 49  
3

Thursday + 3 = Sunday.

Ques: If today is Wednesday, then which day is it exactly on 100<sup>th</sup> day?

Ans: 7) 100 (14

- 7  
30  
- 28  
2

Wednesday + 2  
⇒ FRIDAY. Ans:-

Ques: If today is Wednesday, Then which day is exactly on 10000<sup>th</sup> day?

Ans: 7) 10000 (1428

- 7  
30  
- 28  
20  
- 14  
60  
- 56  
4

Wednesday + 4 = Sunday //.

Ques: If today is Sunday, then which day is it exactly on  $10^{th}$  day?

Ans: 7)  $10000000000 \equiv 1428571428$

$$\begin{array}{r} 30 \\ - 28 \\ \hline 2 \end{array}$$

$$\begin{array}{r} 20 \\ - 14 \\ \hline 6 \end{array}$$

$$\begin{array}{r} 60 \\ - 56 \\ \hline 4 \end{array}$$

$$\begin{array}{r} 40 \\ - 35 \\ \hline 5 \end{array}$$

$$\begin{array}{r} 50 \\ - 49 \\ \hline 1 \end{array}$$

$$\begin{array}{r} 10 \\ - 7 \\ \hline 3 \end{array}$$

$$\begin{array}{r} 30 \\ - 28 \\ \hline 2 \end{array}$$

$$\begin{array}{r} 20 \\ - 14 \\ \hline 6 \end{array}$$

$$\begin{array}{r} 60 \\ - 56 \\ \hline 4 \end{array}$$

Sunday + 4 = Thursday. Ans//.

Ques: In the particular year 12<sup>th</sup> January is a Sunday, then which one of the following is correct?

- (A) 15<sup>th</sup> July is a Sunday if the year is a leap year.
- (B) 15<sup>th</sup> July is a Sunday if the year is not a leap year.
- (C) ✓ 12 July is a Sunday if the year is a leap year.
- (D) 12<sup>th</sup> July is not a Sunday, if the year is a leap year.

Normal year

Sol:	January	Feb	March	April	May
	16	28	31	30	31
	June	July			
	30	31			

$$16 + 28 + 31 + 30 + 31 + 30 + 31 = 178$$

$$\therefore 178 \equiv 25 \pmod{7}$$

$$\begin{array}{r}
 -14 \\
 \hline
 57 \\
 -56 \\
 \hline
 1
 \end{array}$$

$$Sunday + 1 \equiv 1 \pmod{7}$$

$$1 + 35 \equiv 3 \pmod{7}$$

$$Sunday + 3 = Wednesday.$$

$$\text{leap year} \Rightarrow \text{Total Days} = 179$$

$$179 \equiv 25 \pmod{7}$$

$$\begin{array}{r}
 -14 \\
 \hline
 39
 \end{array}$$

$$\begin{array}{r}
 -35 \\
 \hline
 4
 \end{array}$$

$$Sunday + 4 = Thursday$$

$$12 \text{ July}$$

$$N.L = 175 \Rightarrow \text{Sunday. Ans/}$$