GATE

ALL BRANCHES

General Aptitude

Calendars

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TOPICS TO BE COVERED

1. Basics of English Calendar
2. Understanding Odd days Concept
3. Repetition of Calendar
4. Brainstorming on Calendars

Previous Session (Revision)

About Solar & Lunar Calendars

Basics of Calendars (Usage)

Basic Questions

1. Use of CALENDAR?

2. How many months in a year consist of 30 days?

3. Which is the first day of a week?

4. What is the difference between A.D. & B.C.?

CALENDARS

divisible by 4

29th Feb

8 yrs

1862 ✗

2048 ✓

1796 ✓

1712 ✓

Occurance of Leap Year

400

Mohit celebrated his birthday on 29th February,1796. Do he get his birthday in 4 years?

29th Feb, 1996

29th Feb, 2000

29th Feb, 1796 ← 8yrs

1800 X

29th Feb 1804

Divide by 4 le

365 days 5 hrs 48 min — sec

$365\frac{1}{4}$ days

OR

365 days 6 hrs

1 → 365

2 → 365

3 → 365

4 → 365 + 1 = 366 days (L.Y.)

6 hrs
6 hrs
6 hrs
6 hrs

24 hrs → 1 day

Calendars

ODD DAYS

If today is 15th March, 2023. The day is Wednesday. +3

✓What would be the day on 25th March, 2023? → Saturday

10 (15th March
25th March

3 days

Concept of ODD DAYS

→ 0-6

7) 50 (7 weeks
49
1

R = 0 → odd day

35
0 odd day

20
6 odd day

Concept of ODD DAYS

✓ All those number of days which can't be kept in a group of a week.

OR

✓ When given number of days is divided by 7, the remainder is called as odd days.

Normal Year & Leap Year

$7)365($

$R = 1$

N.Y. $\Rightarrow$ 365 $\Rightarrow$ 1 odd days

L.Y. $\Rightarrow$ 366 $\Rightarrow$ 2 odd days

Century

0-6

100 yrs → 5 odd days

× 100 → 5 (500)

× 200 → 3 (10)

× 300 → 1 (15)

24

L.Y

N.Y

76

(x2)

48

(x1)

76

6 + 6 = 12

5 3 1 0

04
08
12
16
20
24
28
32
96

400 → 0 (400)

500 − 5

Q. What was the week day on 3rd June, 1947?

Tuesday

0-Sun 1-Mon 2-Tue 3-Wed 4-Thu 5-Fri 6-Sat

1946 ⇒ 2 odd days

1900 ⇒ 1 odd day

(31) J	3
(28) F	0
(31) M	3
(30) A	2
(31) M	3
	1

46 ⇒ 1

L.Y N.Y.

11 35

22 35

1 0

2+0 = 2

04 ... 44 (x11)

Q. What would be the week day on 14th September, 2025?

2024 → 2

+5 = 0

2000 → 0 odd days

SUNDAY

J-3 M-3

F-0 J-2

M-3 J-3

A-2 A-3

5-0

5

24 → 2

L.Y N.Y

6 18

12 18

5 + 4 = 9

04

x6

1

24

Q. Guru Nanak was born on 15th April, 1469. What was the week day?

1468 ⇒ 4

+0 = 4

1400 ⇒ 3

Thursday

J - 3

F - 0

M - 3

A - 1

0

68 ⇒ 1

L.Y N.Y

17 51

34 51

6 2

= 1

100 - 5

200 - 3

300 - 1

400 - 0

04

× 17

68

2011

16th April, 2000 → Sunday

1999 → 5 + 2 = 0 (1999)

1900 - 1

J - 3
F - 1
M - 5
A - 2

99 → 4

Liz 24 → 6

Ny 75 → 5

Calendar Repeats

2011 → 2022

2012 → 2

2013 → 1

2014 → 1

2015 → 1

2016 → 2

2017 – 1

2018 – 1

2019 – 1

2020 – 2

2021 – 1

2022

Q. When does 2011 calendar repeats ?

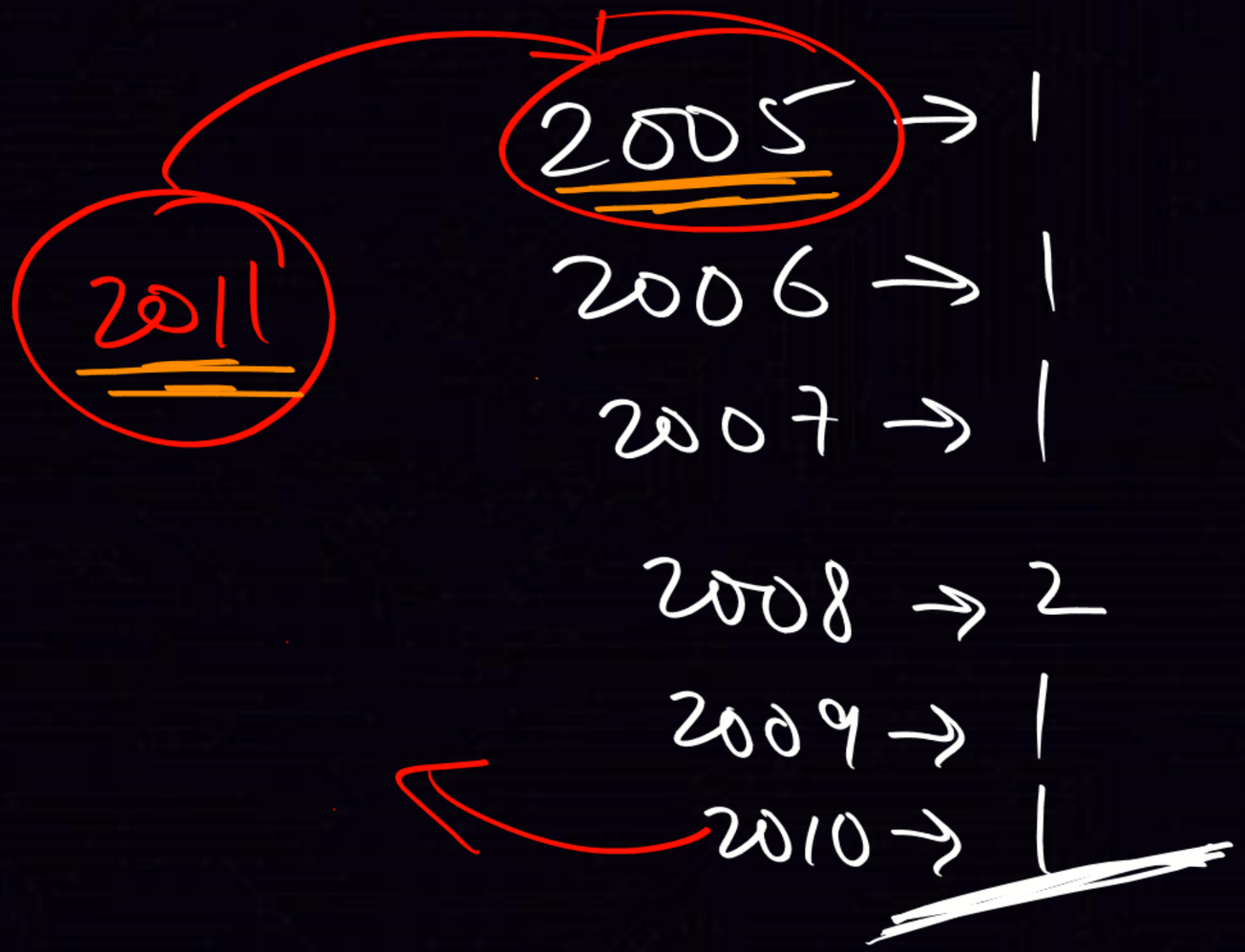
Q. 2005 calendar is same as which of the given years?

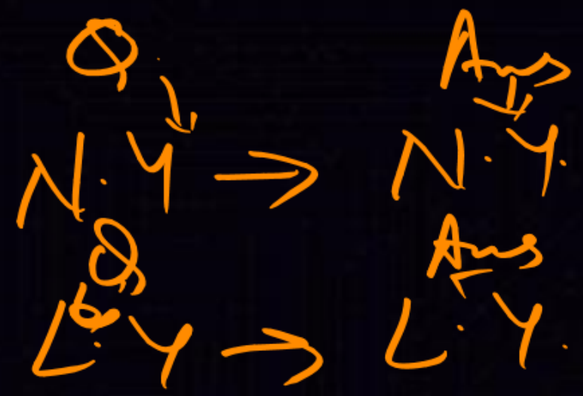
A. 2009

B. 2011

C. 2016

D. 2015





Q. When does 2012 calendar repeats ?

2040

Direct Way

2005 ω
+6
2011 ω

2013 ω
+6
2019 ω

L.Y. → 28 yrs

N.Y → 6 yrs

ω N.Y → 11 yrs

ω N.Y. → 11 yrs

L.Y → 28 yrs

2008 ω
+28
2036

2012 ω
+28
2040 ω

2016 ω
+28
2044 ω

Thank You !