

# Calendar - Solved Examples

**Q 1 - What was the day of the week on 15th June, 1776?**

A - Sunday

B - Saturday

C - Thursday

D - None of these

**Answer - B**

**Explanation**

15<sup>th</sup> June 1776 = (1775 years + Period from 01.01.1776 to 15.06.1776)

Counting of odd days:

No of odd days in 1600 years = 0

No of odd days in 100 years = 5

75 years = 18 leap years + 57 ordinary years

=  $18 \times 2 + 57 \times 1$

= 36 + 57

= 93 odd days

= 13 weeks + 2 odd days = 2 odd days

$\therefore$  1775 years have  $(0+5+2) = 7$  odd days = 0 odd days.

Jan to May =  $(31+29+31+30+31)$

= 152 days

Add 15 days of June.  
=  $152 + 15$   
= 167 days  
= 23 weeks + 6 days  
= 6 odd days.  
 $\therefore$  Total number of odd days =  $0 + 6 = 6$  odd days.  
Hence 15.06.1776 was Saturday.

**Q 2 - January 15, 1997 was a Wednesday. What day of the week was on Jan 5, 2000?**

A - Wednesday

B - Thursday

C - Friday

D - Saturday

**Answer - A**

**Explanation**

1997, 1998 and 1999 are not leap years.  
1998 and 1999 has 2 odd days.

No of days remaining in 1997 =  $365 - 15 = 350$   
= 50 weeks of 0 odd days.

05.01.2000 = 5 odd days.  
Total no of odd days =  $2 + 0 + 5 = 7$   
7 days from Wednesday is Wednesday.  
 $\therefore$  Jan 5, 2000 was also Wednesday.

**Q 3 - The calendar for the year 2007 will be the same for the year:**

A - 2018

B - 2017

C - 2016

D - 2014

**Answer - A**

**Explanation**

We will count the no of odd days from the year 2007 onwards to get the sum equal to 0 odd days.

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Odd day	1	2	1	1	1	2	1	1	1	2	1

Sum = 14 odd days = 0 odd days

Calendar for the year 2018 will be the same for the year 2007.

**Q 4 - Will date-book for the year 2003 serve for the year 2014?**

A - no

B - yes

**Answer - B**

**Explanation**

We must have same day on 1.1.2003 and 1.1.2014.

Along these lines, number of odd days somewhere around 31.12.2002 and 31.12.2013 must be 0. This period has 3 jump years and 8 common years.

Number of odd days =  $(3 \times 2 + 8 \times 1) = 14 = 0$  odd days.  
 $\therefore$  Calendar for the year 2003 will serve for the year 2014.

**Q 5 - What was the week's day on fifteenth august, 1947?**

A - Rs 1720

B - Rs 1820

C - Rs 1920

D - Rs 1220

**Answer - C**

**Explanation**

fifteenth Aug.1947 =(1946 years +period from 1.1.1947 to 15.8.1947)  
Odd days in 1600 years =0  
Odd days in 300 years =  $(5 \times 3) = 15$  =1946 years = (11 jump years+35 customary years)  
=  $(11 \times 2 + 35 \times 1)$  odd days= 57 days  
= (8 weeks +1 day) = 1 odd day

$\therefore$  odd days in 1946 years=  $(0+1+1) = 2$

Jan + Feb. + March + April + May + June + July + Aug  
 $(31 + 28 + 31 + 30 + 31 + 30 + 31 + 15) = 227$  days

227 days = (32 weeks +3 days) = 3 odd days.  
Aggregate no. of odd days =  $(2+3) = 5$

Consequently the required day is Friday.