



WELCOME TO



Preparing Bharat, Empowering Futures

airGurukul Institute for Career Growth

www.airgurukul.com

Powered by Prince Edutech Private Limited

Disclaimer

This presentation, lecture, and all related study materials have been created and published by **airGurukul Institute for Career Growth**, a unit of ***Prince Edutech Private Limited***, for **educational and informational purposes only**. While every effort has been made to ensure the accuracy and reliability of the content, **airGurukul** does not guarantee that the information is absolutely current or free from error. Examination patterns, syllabus, and official notifications are subject to change by respective authorities, and students are strongly advised to **verify details from official sources before making any decisions**.

All third-party materials including logos, questions, references, or data used within this content are **solely for educational illustration and fair-use academic discussion**. Their ownership and copyrights remain with their respective owners. **airGurukul** shall not be held liable for any loss, damage, or consequence arising directly or indirectly from the use of this information.

By attending this session, viewing this content, or using the provided materials, the viewer acknowledges and agrees to this disclaimer. **Unauthorized recording, copying, or redistribution of this content in any form is strictly prohibited.**



BIHAR EXAM MARATHON

एक ही क्लास में पूरा **CONCEPT CLEAR!**

REASONING

CALENDAR + CLOCK



BASIC TO ADVANCED LEVEL



17 MAY



**TIME
07:00 PM**



LIVE



COMPLETE CONCEPT
एक ही क्लास में



SHORT TRICKS
और **BEST METHODS**



**EXAM ORIENTED
PRACTICE**



**QUESTION PRACTICE
LIVE SESSION**



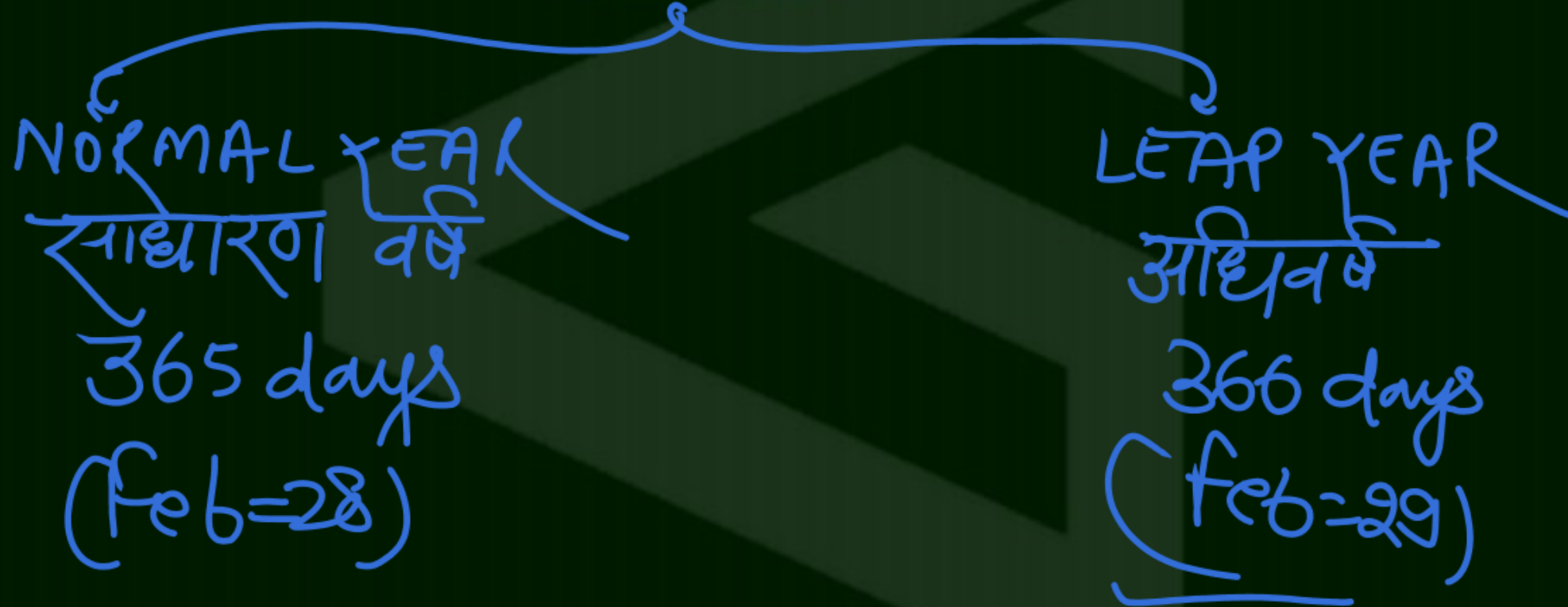
D.S SIR

Calendar
(कैलेंडर) → Gregorian calendar
(Jan, feb....dec)

Units of calendar →

- ① Day (दिन) → 24 Hours
- ② week (सप्ताह) → 7 days
- ③ Month (महीना) → 28/29/30/31 days
- ④ Year (वर्ष) → 365 days/366 days
- ⑤ Century (शताब्दी) → 100 years

YEAR



LEAP YEAR

$\frac{\text{Year}}{4}$ $\frac{\text{Century year}}{400}$

$$2004 \div 4 = \text{L.Y.}$$

$$2008 \div 4 = \text{L.Y.}$$

$$2012 \div 4 = \text{L.Y.}$$

$$1996 \div 4 = \text{L.Y.}$$

$$\frac{2000}{400} = \text{L.Y.}$$

$$\frac{1900}{400} = \text{N.Y.}$$

$$\frac{1800}{400} = \text{N.Y.}$$

$$\frac{1700}{400} = \text{N.Y.}$$

$$\frac{1600}{400} = \text{L.Y.}$$

NORMAL YEAR

$$\frac{2001}{4} = \text{N.Y.}$$

$$\frac{2002}{4} = \text{N.Y.}$$

$$\frac{2003}{4} = \text{N.Y.}$$

$$\frac{2005}{4} = \text{N.Y.}$$

$$\frac{1999}{4} = \text{N.Y.}$$

ODD DAYS (विषम दिन) (अतिरिक्त दिन)

The remainder of 7 is called odd days. (Extra days)
 7 के शेषफल को ही विषम दिन कहते हैं

$$\frac{5 \times 7}{7} = \frac{35}{7} = 5$$

8 days = ① odd days

16 days = ② odd days

24 days = ③ odd days

35 days = 0 odd days

5 weeks = 0 odd days

n weeks = 0 odd days

365 days = 1 odd days

366 days = 2 odd days

यदि आज रविवार है -
If today is Sunday -

Then

① 8 days after = ? ⁽⁺¹⁾ Monday

② 16 days after = ? ⁽⁺²⁾ Tuesday

③ 24 days after = ? ⁽⁺³⁾ Wednesday

④ 35 days after = ? ⁽⁺⁰⁾ Sunday

⑤ 5 वर्षों के बाद = ? ⁽⁺⁰⁾ Sunday

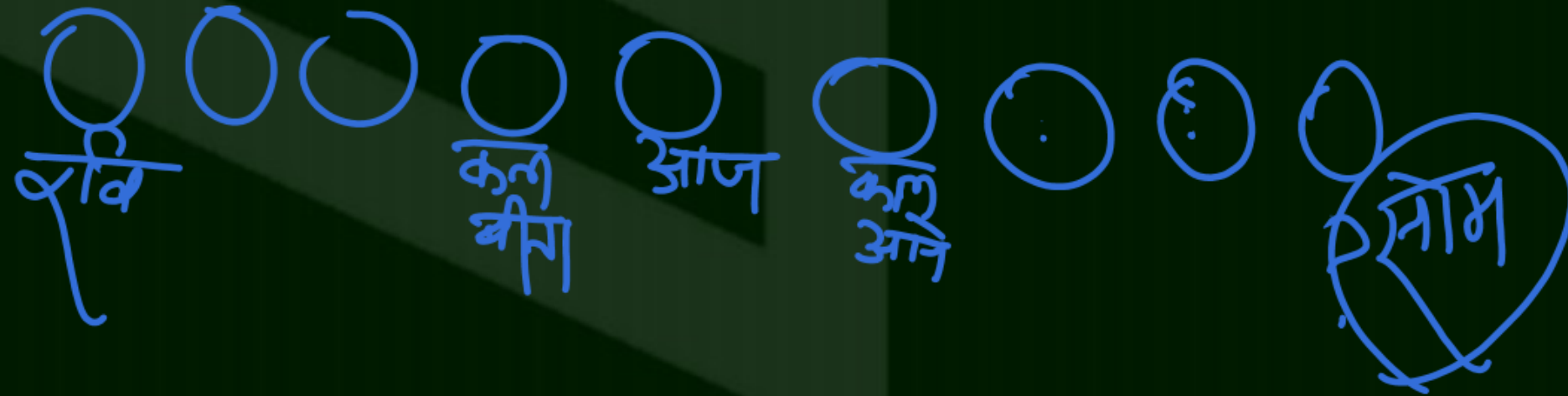
⑥ 365 days before = ? ⁽⁻¹⁾ Saturday

⑦ 366 days after = ? ⁽⁺²⁾ Tuesday

~~8 days~~
1-odd day
रवि + 1 = शनि

Q1. यदि बीते हुए ¹कल³ से ³दिन पहले रविवार था तब आने वाले कल के 3 दिन बाद क्या होगा ?

If 3 days before yesterday was Sunday then what will be 3 days after tomorrow ?



Q2. यदि बीते हुए ¹कल⁵ से ⁵दिन पहले सोमवार था तब आने वाले ⁸कल⁸ के ⁸दिन बाद क्या होगा ?

If 5 days before yesterday was monday then what will be 8 days after tomorrow ?

✓ 5 days
1 - odd days
सोम + 1 = मंगल
पर 5

Q3. यदि ⁶6 दिन बाद शनिवार है तब बीते हुए ¹कल से ₉9 दिन पहले क्या था ?

If 6 days after is Saturday then what was 9 days before yesterday ?

~~16 days~~
2-odd days
शनि - 2 = गुरुवार

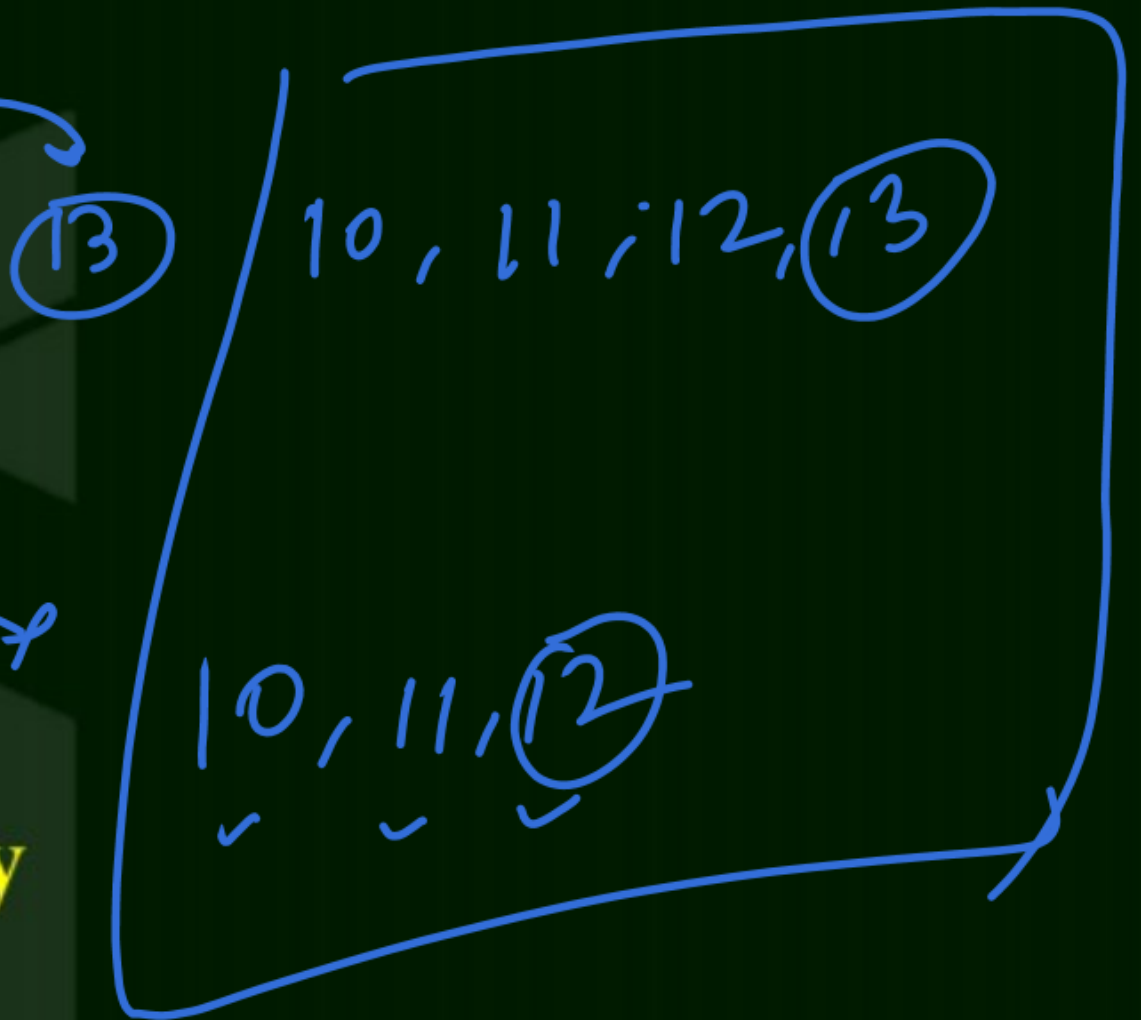
Q4. यदि बीते हुए कल से 10 दिन पहले सोमवार था तब आज से 5वां दिन क्या होगा ?

If 10 days before yesterday was Monday then what will be the 5th day ?

15 (1) odd day
सोम + 1 = बुध

10 के 3 दिन बाद
3 days after 10th

10 से तीसरा दिन
3rd day from Sunday



8 month → Aug
21

COUNT DAY, MONTH AND YEAR

①

2019-20-05

~~2020-08-05~~

1996-09-04

23-11-01

23Y
11M
1D

2019-19-36

~~2020-08-05~~

2000-10-10

19X-09-26

Reference Calendar

1. Date different but month and year same
2. Date and month same but year different
3. Date and month different but year same
4. Date month and year different

TYPE-1

Q1- If 4 august = Monday⁺³
then 28 august = ? Thursday

~~24~~
③ odd

Q2. If 1march = Saturday
Then 31 march = ?

~~30 days~~
② odd days

~~Monday~~
Monday

Q3- If 27 april=Sunday
Then 5 april=?

~~29~~
Dodd

Saturday

✓ Q4-If 30 jan=Monday
Then 5jan=? Thursday
~~95 days~~
④ odd days

ODD DAYS OF YEAR = YEAR + LEAP YEAR

TYPE-2

04, 08, 12

Q1-If 13 april 2003 = Monday +6

Then 13 april 2013 = ? Sunday

$$10 \times 3 + 3 = 33$$

6 odd days

Q2- If
Sunday
Then

10 feb 2010 = Sunday + 3
wednesday

10 feb 2029 = ?

$19 \times 5 = 95$
 $95 + 3 = 98$
98 days

12, 16, 20, 24, 28

08, 12, 16

Q3-If 31 march 2005

=Wednesday + 3 = Saturday

Then 31 march 2019 = ?

$$\frac{147}{3} + 3 \times 4 = 17$$

③ odd days

12,16

Q4- If 10 october 2019 = Tuesday

10 Oct 2019 = Tues - 5

10 Oct 2009 = ?

Then 10 october 2009 = ?

$10 \times 24 = 240$

$240 \div 7 = 34 \text{ R } 2$

⑤ Odd day

12, 16, 20, 24

**Q5- If 20 march 2024
=Saturday**

Then 20 march 2012=?

Q - 20 march 2024 = sat - 1
20 march 2012 = ? friday
 $\frac{12 \times 365}{7} = 15$
Odd day

J F M A M J J A S O N D
~~31~~ ~~28/29~~ ~~31~~ ~~30~~ ~~31~~ ~~30~~ ~~31~~ ~~31~~ ~~30~~ ~~31~~ ~~30~~ ~~31~~
 3 0/1 3 2 3 2 3 2 3 2 3 3
TYPE-3

A M J J A
~~15~~ + ~~3~~ + ~~2~~ + ~~3~~ + ~~29~~
 2+1=3 odd

Q1- If 15 april

2005=Saturday

Then 29 august 2005=?

Odd days of month
 महीने के विषम दिन

A M J J A
 शेष + महीने के विषम दिन + शेष दिन

Q- 15 April 2005 = Saturday + 3
 29 Aug 2005 = ?
Tuesday

Q2 – If 30 april 2020 = Monday ⁵
 Then 25 january 2020 = ? ^{wed}

J F M A
~~6~~ + ~~1~~ + 3 + ~~3~~₂
 Odd days

Q3- If 1 january 2020 = Monday +1
Then 6 august 2020 = ? *Tuesday*

J F M A M J J A
~~30~~+1+~~3~~+2+~~3~~+~~1~~+~~3~~+~~6~~
 ① odd days

Q4- If 25 february 2005 = Monday
Then 25 march 2005 = ?

Monday

F M
8 + 25
Odd days

Q5- If 31 december 2020 = Saturday
Then 6 august 2020 = ? *Saturday*

A S O N D
~~25~~ + ~~2~~ + ~~3~~ + ~~2~~ + ~~3~~
 3
 Odd days

04, 68, 12

TYPE-4

Q1- If 15 august 2003 = Sunday
Then 27 may 2015 = ?

$\frac{12 \times 7 + 3 \times 7}{7} = 15$
① odd

M J J A
~~4~~ + ~~2~~ + ~~3~~ + ~~18~~
③ odd days

friday

8, 12

Q2- If 31 december 2013 = Sunday
Then 31 october 2007 = ?

Monday

$\frac{6 \times 2 + 2 \times 1}{2} = 8$
Odd

O N D
0 + 2 + 3
5

Q3- If 20 february 2004 = Monday
Then 20 march 2016 = ?

Handwritten notes:

- 4, 8, 12, 16
- +0
- +2
- +2
- Wednesday
- 12x + 4L.Y. = 16
- odd days
- F M
- 8 + 20 = 28
- odd days

00, 04, 08, 12, 16, 20

Q4 - If 5 January 1997 = ⁽⁻¹⁾ Tuesday
Then 6 August 2020 = ⁽⁻⁴⁾ Saturday

$$\frac{23 \times + 6 \times 4 = 29}{\text{Odd}}$$

J F M A M J J A
~~28~~ + 0 + ~~3~~ + ~~3~~ + ~~3~~ + ~~3~~ + ~~3~~ + ~~6~~

⁽³⁾ Odd days

Q5- If 7 february 1996 = ?
Then 6 august 2020 = Thursday

Handwritten notes:
 96, 100, 04, 08, 12, 16, 20
 -5, -3, -8, 1
 wed
 24Y + 7LY, 3 odd days

F M A M J J A
 21 + 3 + 3 + 3 + 3 + 3 + 3
 5 odd days

was the day of the week on 10th
यदि 17 अप्रैल 1992 को शुक्रवार था
1993 को सप्ताह का कौन सा दिन ?

(CHSL , 2/8/ 2023 sh

- (a) Tuesday
(c) Wednesday

17 Apr 1992 = Fri
10 Oct 1993 = ?

17 + 0.47

A M J J A S
18 + 3 + 3 + 3 + 3 + 3

Q7 - If 8th March 1996 was Friday
what was the day of the week
2006?

यदि 8 मार्च 1996 को शुक्रवार
2006 को सप्ताह का कौन सा दिन
(CHSL, 2/08/2016)

- (a) Saturday (b) Sunday
(c) Friday (d) Thursday

$\text{8 March 1996} = \text{Fri}$
 $\text{7 Apr 2006} = ?$
 $\text{10 years} = 10 \times 52 = 520$
 $520 \div 7 = 74 \text{ weeks} + 2 \text{ days}$
 $\text{Fri} + 2 = \text{Sun}$

M A
~~23~~ + ~~7~~

~~36~~ 2 odd days

Q8 -If 11th August 2004 is
then what was the day of the w
February 2006?

यदि 11 अगस्त 2004 को बुधवार
फरवरी 2006 को सप्ताह का कौन

(CHSL, 3/8/2023,

(a) Saturday
(c) Sunday

(b) Th
(d) M

$\text{11 Aug 2004} = \text{Wed}$
 $\text{11 Feb 2006} = \text{Sat}$
 $\text{2Y} + 04$
 2 odd days

F M A M J J A
 $\text{17} + 3 + 2 + 3 + 1 + 3 + 1$

www.airgurukul.com

Follow Us |   

6 odd days

REPITITION OF CALENDAR

(कैलेंडर की पुनरावृत्ति)

Trick -

- ① $\frac{\text{Year}}{4}$ Rem. ① $\xrightarrow{+6}$
- ② $\frac{\text{Year}}{4}$ Rem. ② $\xrightarrow{+11}$
- ③ $\frac{\text{Year}}{4}$ Rem. ③ $\xrightarrow{+11}$
- ④ $\frac{\text{Year}}{4}$ Rem. 0 $\xrightarrow{+28}$

$\frac{2001}{4}$ Rem ① $2001+6$ 2007
 $\frac{2002}{4}$ Rem ② $2002+11$ 2013
 $\frac{2003}{4}$ Rem ③ $2003+11$ 2014
 $\frac{2004}{4}$ Rem ④ $2004+28$ 2032

1990

1997 (7th + 2nd Leap) Rem (2)

1996

2000

2001 (11th + 3rd Leap)

Q1. वर्ष 1990 का कैलेंडर किस वर्ष के कैलेंडर के समान होगा ?

The calendar of the year 1990 will be similar to the calendar of which year?

(a) 1997

(b) 1996

(c) 2000

(d) 2001

वास्तविक तरीका

3+4=7 days ⊕ odd
17 date Sunday
24 date Sunday

Q2. वर्ष 2019 का कैलेंडर किस वर्ष के कैलेंडर के समान होगा ?

The calendar of the year 2019 will be similar to the calendar of which year?

(a) 2024

(b) 2025 (6Y + 2L.Y.)

(c) 2028

(d) 2030 (11Y + 3L.Y.)

$\frac{2019}{4}$ Rem 3

HL → 2030

Q3. वर्ष 2005 का कैलेंडर किस वर्ष के कैलेंडर के समान होगा ?

The calendar of the year 2005 will be similar to the calendar of which year?

- (a) 2016
- (b) 2011
- (c) 2010
- (d) 2008

2005
4 Leap

+6 → 2011

$\frac{2017}{4}$ Rem 1

Q4. वर्ष 2017 का केलेडर किस वर्ष के केलेडर के समान होगा ?

The calendar of the year 2017 will be similar to the calendar of which year?

- (a) 2028
- (b) 2023
- (c) 2025
- (d) 2024

$$\frac{1997}{4} \text{ Rem } 1$$

Q5. वर्ष 1997 का कैलेंडर किस वर्ष के कैलेंडर के समान होगा ?

The calendar of the year 1997 will be similar to the calendar of which year?

- (a) 2008
- (b) 2003
- (c) 2004
- (d) 2005

Q6. वर्ष 1897 का कैलेंडर किस वर्ष के कैलेंडर के समान होगा ?

The calendar of the year 1897 will be similar to the calendar of which year?

(a) 1908

(b) 1903 $(6Y + 0.4Y)$

(c) 1904

(d) 1909 $(12Y + 2L.Y)$

1 normal year = 365 days = 52 weeks + 1 day
 (31 dec) ✓
52 times 53 times

$$\begin{array}{r} 7 \overline{) 365} \quad 52 \\ \underline{35} \\ 15 \\ \underline{14} \\ 1 \end{array}$$

1 leap year = 366 days = 52 weeks + 2 days
 30, 31 dec
52 times 53 times

कितनी भी साधारण वर्षे का पहला और अंतिम दिन समान होते हैं

Note- The first day and the last day of an ordinary year are the same .

Ex- 1 january 2023 = Monday
31 december 2023=Monday

Note- There is a difference of 1 day between the first day and the last day of a leap year .

Ex- 1 january 2024 =Monday
31 december 2024 = Tuesday

NOTE- Tuesday, Thursday, Saturday are never become last day of a century year.

मंगलवार, गुरुवार, शनिवार कभी भी शताब्दी वर्ष के अंतिम दिन नहीं होते।

NOTE- Sunday , Friday , Wednesday are never become first day of a century year.

रविवार, शुक्रवार, बुधवार कभी भी शताब्दी वर्ष का पहला दिन नहीं बनते।

इसमें से कौन-सा छिटी वी शताब्दी का अंतिम दिन नहीं होता है।

Q1- Which of the following can not be the last day of a century year?

(a) Sunday

(b) Monday

(c) Tuesday

(d) Wednesday

Q2- Which of the following can not be the first day of a century year ? पहला दिन नहीं हो सकता है

(a) Sunday

(b) Tuesday

(c) Thursday

(d) saturday

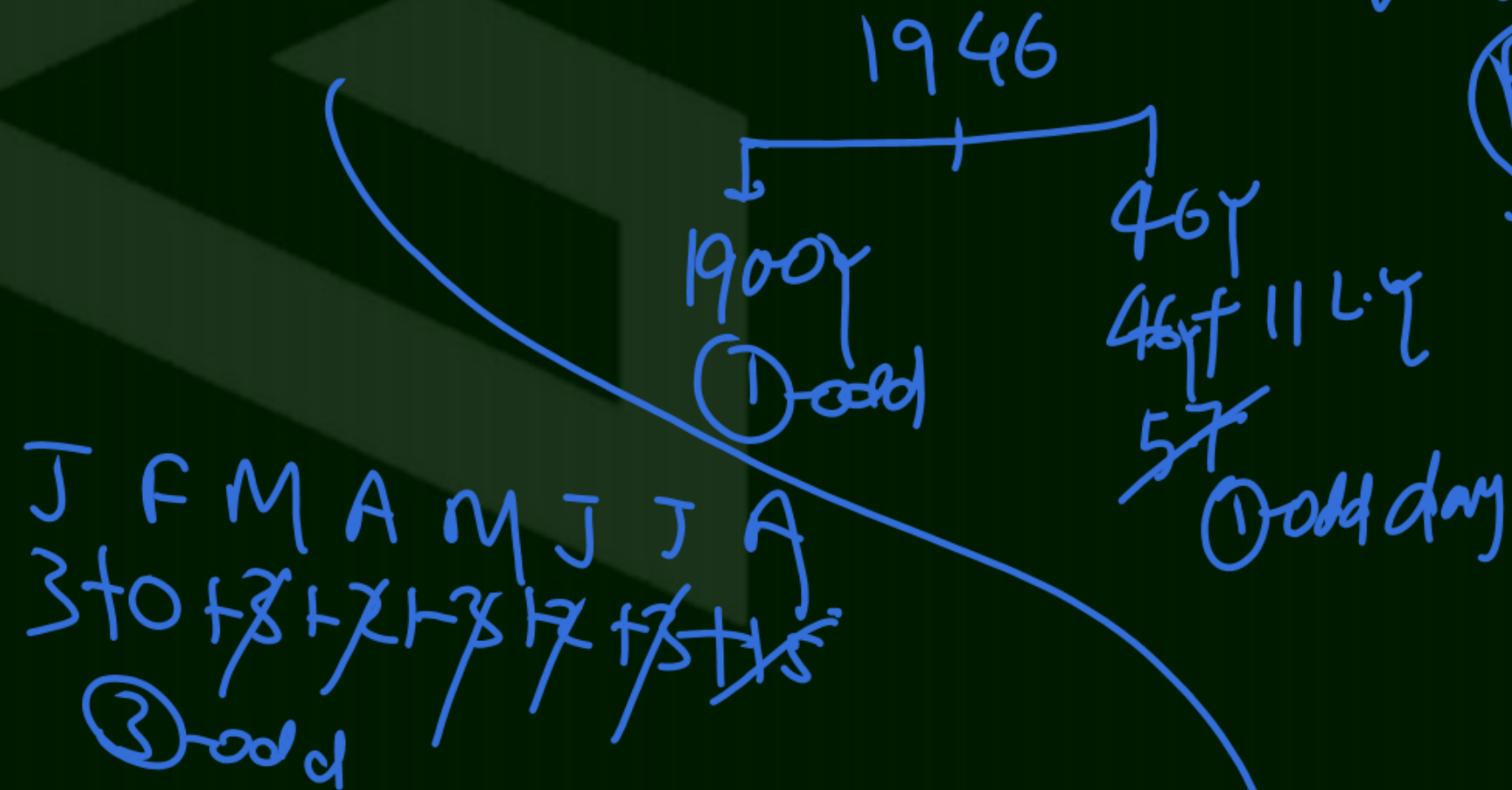
100 — 5
200 — 3
300 — 1
400 — 0

1900 — 1
2000 — 0

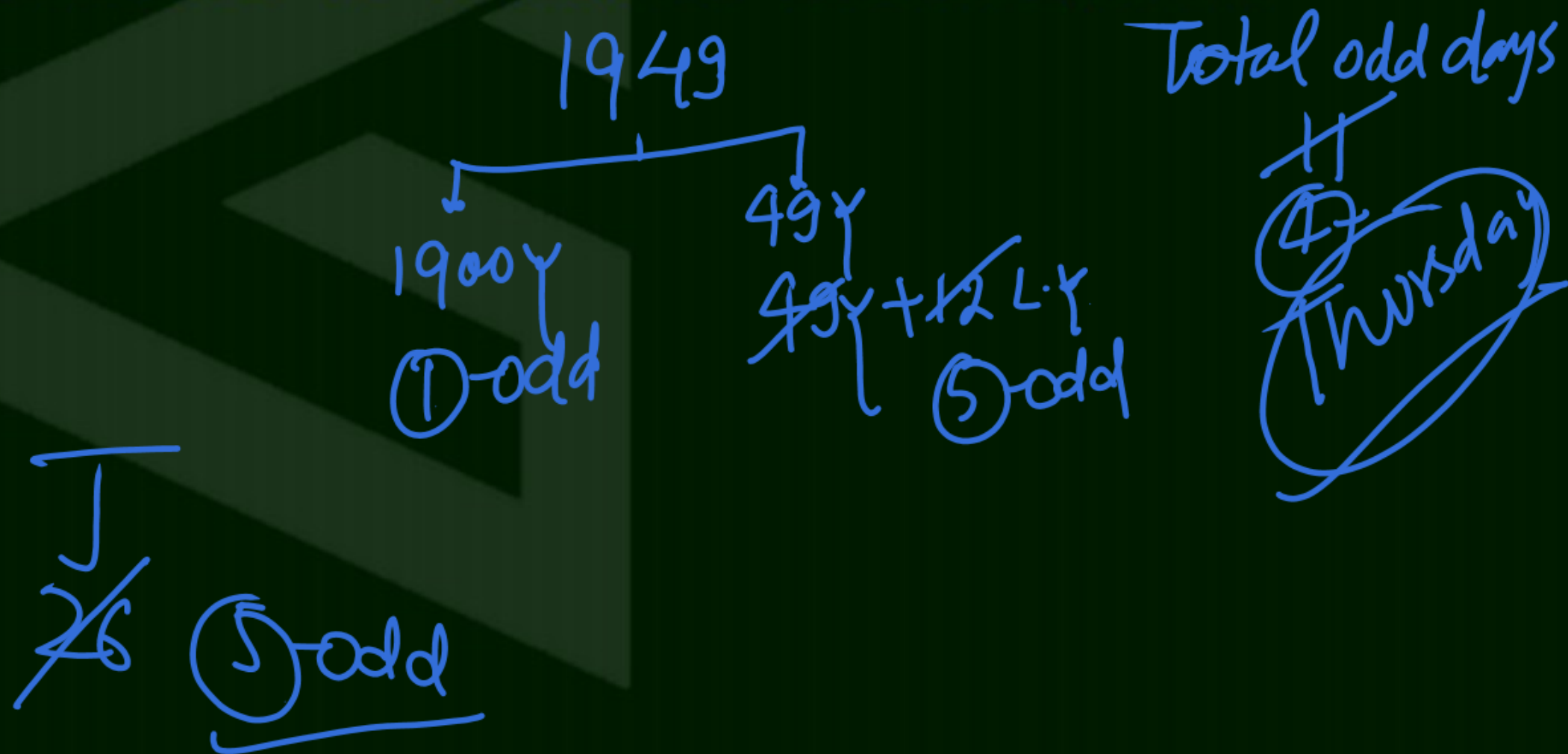
Q1 – What the day of the week on 15th august 1947 ?

15 अगस्त 1947 को सप्ताह का कौन सा दिन था?

Total odd days = 5
Friday



Q2 – What the day of week on 26th january 1950 ?
 26 जनवरी 1950 को सप्ताह का कौन सा दिन था?



Q3-What was the day of the week on 6th January 2010?

6 जनवरी 2010 को सप्ताह का कौन सा दिन था?
(SSC GD, 2/12/2021, Shift-II)

(a) Thursday
(c) Friday

(b) Tuesday
(d) Wednesday

Total odd days
to
(3)
Wed

2009
↓
2000
0-odd
9y
9y + 26y
4-odd

J
(6)-odd

Q4 -What was the day of the week on 31st January 2007?

31 जनवरी 2007 को सप्ताह का कौन सा दिन था?

(SSC CHSL, 7/03/2020, Shift II)

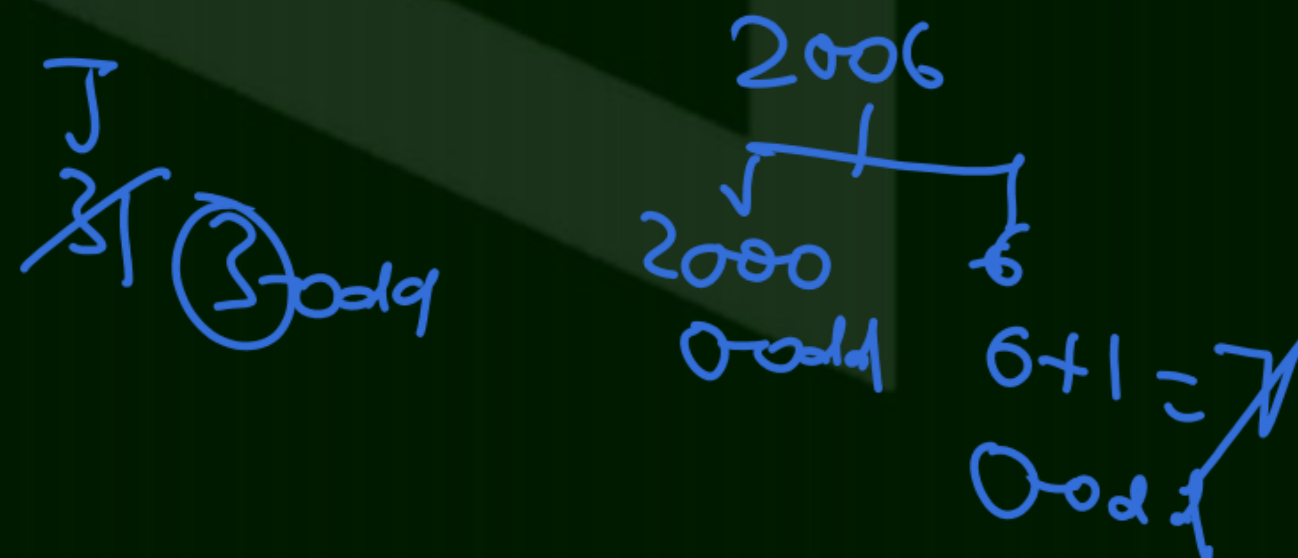
Total odd days = 3

(a) Monday

(b) Tuesday

(c) Wednesday

(d) Thursday



Q5- What was the day of the week on 29th June 2010?

29 जून 2010 को सप्ताह का कौन सा दिन था?

(SSC CGL, Tier-I, 19/03/2020, Shift-II)

- (a) Tuesday (b) Sunday
(c) Wednesday (d) Monday

J F M A M J
30 31 28 31 29
⑤ 0000

2009
2000 9
0001 9+22.4
⑪ ④ 0004

Total odd days
9 ② Tuesday

Q6- What was the day of the week on 5th February 2008?

5 फरवरी 2008 को सप्ताह का कौन सा दिन था?

(SSC CGL, 9/03/2020, Shift-III)

(a) Thursday

(b) Wednesday

(c) Monday

(d) Tuesday

Handwritten solution:

2007

J F
2+8
10
Monday

2007
2000
Odd

74
7+1=8
Odd

Total odd days
2
Tuesday

Q7- What was the day of the week on 14th march 2010?

14 मार्च 2010 को सप्ताह का कौन सा दिन था?

(SSC CPO, 23/11/2020, Shift-I)

(a) Sunday

(b) Monday

(c) Saturday

(d) Tuesday

J F M
3 + 0 + 1 = 4
③ odd days

2009
2000 1009
0 odd 9 + 2 = 11
④ odd days

Total odd days
→ Sunday

MISCELLANEOUS

Q1-Vilas remembers his marriage is after 4th July. While his sister remembers his marriage is before 6th July. On which date of July is his marriage?

विलास को याद है कि उसकी शादी 4 जुलाई के बाद हुई थी। जबकि उसकी बहन को याद है कि उसकी शादी 6 जुलाई से पहले हुई थी। उसकी शादी जुलाई की किस तारीख को हुई थी?

- (a) 4
(c) 6

- (b) 5
(d) 7

3, 4, 5, 6, 7

26, 27, 28
24, 25, 26

Q2- Vikram remembers that his son Vihaan's birthday is after 25th December. Vikram's wife remembers that Vihaan's birthday is after 23rd December but before 27th December. On which date is Vihaan's birthday?

विक्रम को याद है कि उसके बेटे विहान का जन्मदिन 25 दिसंबर के बाद है। विक्रम की पत्नी को याद है कि विहान का जन्मदिन 23 दिसंबर के बाद लेकिन 27 दिसंबर से पहले है। विहान का जन्मदिन किस तारीख को है?

- (a) 23
(c) 25

- (b) 24
(d) 26

CLOCK

(घड़ी)

REASONING

TYPES

- ✓ 1. IMAGE (प्रतिबिम्ब)
- ✓ 2. ANGLE (कोण)
- ✓ 3. TIME (समय)
- ✓ 4. ERROR BASED (त्रुटि आधारित)

11:60
~~8:20~~

3:40

✓ (I) MIRROR IMAGE (दर्पण प्रतिबिम्ब)

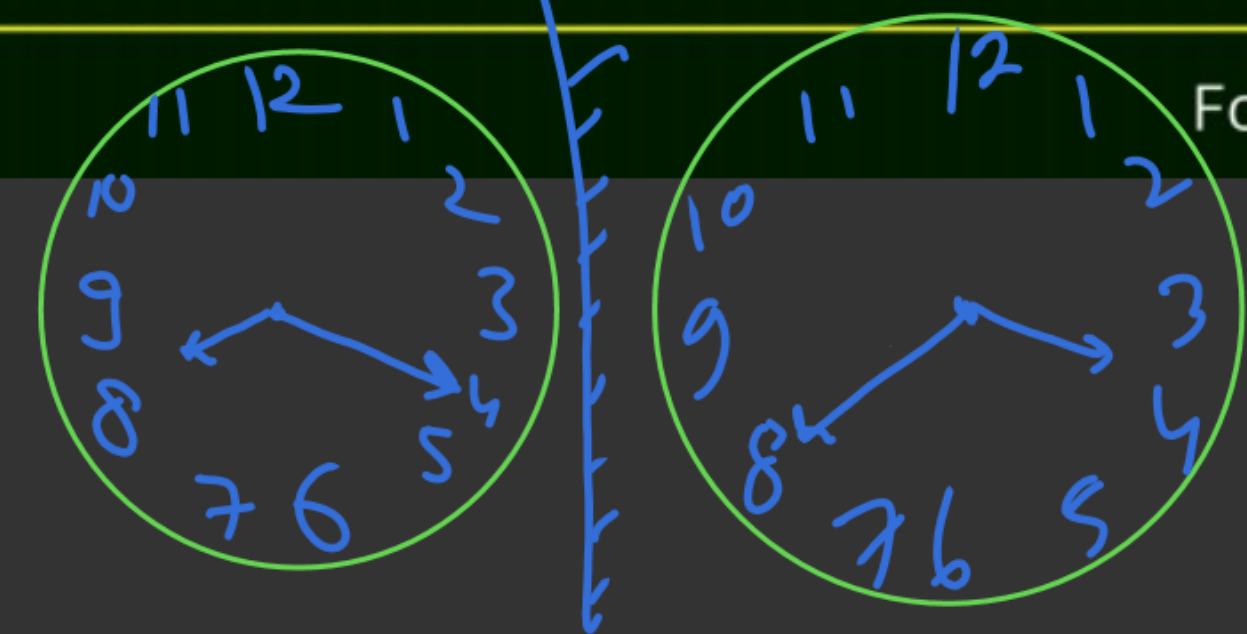
Q1- किसी घड़ी में 08:20 बज रहे हैं उस घड़ी का तब क्या होगा ?

If it is 08:20 on a clock, what will be the mirror image of that clock?

08:20

8:20 | 3:40

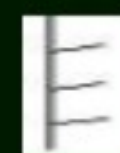
MIRROR = 12:00 या 11:60
- Given Time



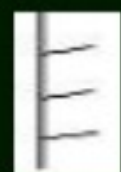
Q2- 09:00



Q3- 02:50



Q4- 03:45



Q5- 07:30



Q6- 09:25



$$\begin{array}{r} 11:60 \\ 9:25 \\ \hline 2:35 \end{array}$$

Q7- 11:20



$$\begin{array}{r} 11:60 \\ 11:20 \\ \hline 00:40 \end{array} = 12:40$$

Q8- 12:24



00:24

$$\begin{array}{r} 11:60 \\ 00:24 \\ \hline 11:36 \end{array}$$

Q9- 15:12



3:12

$$\begin{array}{r} 11:60 \\ 3:12 \\ \hline 8:48 \end{array}$$

Q10- 19:17

7:17



$$\begin{array}{r} 11:60 \\ - 7:17 \\ \hline 4:43 \end{array}$$

Q11- 23:40

11:40



$$\begin{array}{r} 11:60 \\ - 11:40 \\ \hline 00:20 \end{array} = 12:20$$

Q12- 7:46

~~4~~
11



$$\begin{array}{r} 11:59 \frac{1}{11} \\ - 7:46 \frac{4}{11} \\ \hline 4:13 \frac{7}{11} \end{array}$$

Q13- 10:23 2/3



$$\begin{array}{r} 11:59 \frac{1}{3} \\ - 10:23 \frac{2}{3} \\ \hline 1:36 \frac{1}{3} \end{array}$$

(II) WATER IMAGE (जल प्रतिबिम्ब)

Q1- किसी घड़ी में 08:20 बज रहे हैं उस घड़ी का जल प्रतिबिम्ब क्या होगा ?

If it is 08:20 o'clock on a clock, what will be the water image of that clock?

08:20



WATER IMAGE = 18:30 या 17:90
 ← Given Time

18:30

- 8:20

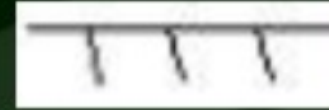
10:10

Q2- 08:20



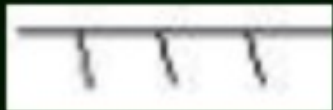
$$\begin{array}{r} 18:30 \\ - 8:20 \\ \hline 10:10 \end{array}$$

Q3- 01:30



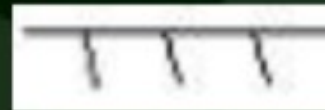
$$\begin{array}{r} 18:30 \\ - 1:30 \\ \hline 17:00 \\ \hline 5:00 \end{array}$$

Q4- 10:40



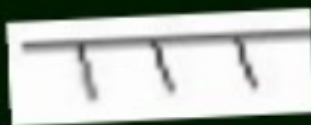
$$\begin{array}{r} 17:90 \\ - 10:40 \\ \hline 7:50 \end{array}$$

Q5- 07:15



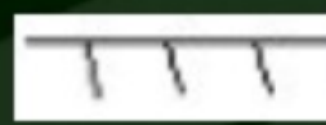
$$\begin{array}{r} 18:30 \\ - 7:15 \\ \hline 11:15 \end{array}$$

Q6- 11:50



17:90
11:50
6:40

Q7- 12:40



17:90
12:40
5:50

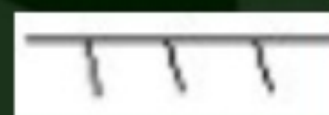
Q8- 17:44



17:90
17:44

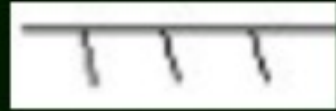
00:46
12:46

Q9-23:12 = 11:12



18:30
11:12
7:18

Q10- 02:50



$$\begin{array}{r} 17:90 \\ - 2:50 \\ \hline 15:40 \end{array} = 3:40$$

TYPE-3 Angle (कोण)

घण्टे वाली सुई $12 \text{ hrs} = 360^\circ$
 $60 \text{ min} = 360^\circ$

$$1 \text{ min} = \frac{360}{60} = 6^\circ$$

मिनट वाली सुई $60 \text{ min} = 360^\circ$
 $1 \text{ min} = 6^\circ$

सेकण्ड वाली सुई $1 \text{ min} = 360^\circ$



2hrs = 120 min

Q1- दोपहर 2 बजे से शाम 4 बजे तक घंटे की सुई और मिनट की सुई द्वारा कितना कोण तय किया जाता है?

From 2pm to 4pm how much angle covered by the hour hand and minute hand ?

घंटे वाली सुई 1 min = 1°

मिनट की सुई

1 min = 6°

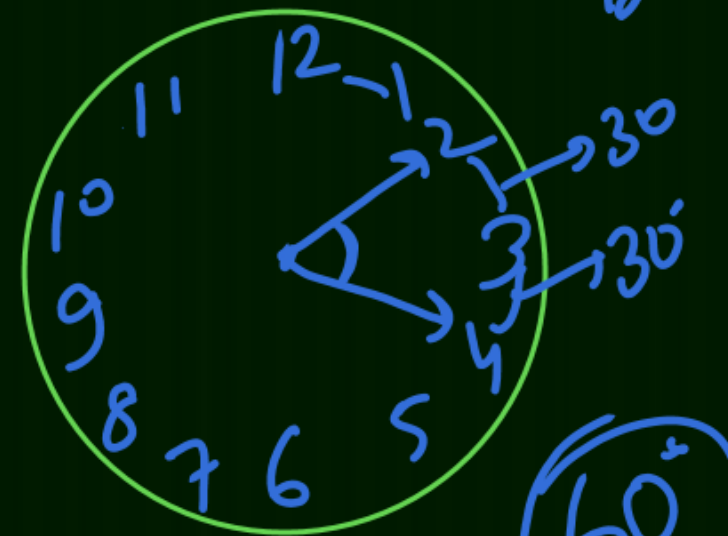
120 min = 6×120

= 720°

120 min = 1×120

= 120°

$\frac{360}{12} = 30^\circ$



60°

$$60 + 60 - 5 = 115 \text{ min}$$

Q2- दोपहर 1:45 बजे से 03:40 बजे तक घंटे की सुई मिनिट की सुई द्वारा कितना कोण तय किया जाता है?

From 1:45pm to 03:40pm how much angle covered by hour hand minute hand?

घंटे वाली सुई 1 min = $\frac{1}{2}^\circ$

$$115 \text{ min} = 115 \times \frac{1}{2} = 57.5^\circ$$

मिनिट वाली सुई 1 min = 6°

$$115 \text{ min} = 6 \times 115 = 690^\circ$$

$$25 + 60 + 10 = 95 \text{ min}$$

Q3-02:35 बजे से 04:10 बजे तक घंटे की सुई और मिनट की सुई द्वारा कितना कोण तय किया जाता है?

From 02:35 pm to 04:10pm how much angle covered by hour hand and minute hand ?

घंटे वाली सुई 1 min = $\frac{1}{2}^\circ$

$$95 \text{ min} = \frac{1}{2} \times 95 = 47.5^\circ$$

मिनट वाली सुई 1 min = 6°

$$95 \text{ min} = 6 \times 95 = 570^\circ$$

~ = Difference

Q4- ^{HM MM} 07:30 बजे दोनों सूइयों (मिनट की सुई और घंटे की सुई) के बीच का कोण क्या है?

What the angle between both hands (minute hand and hour hand) at 07:30 ?

(a) 45*

(b) 30*

(c) 315*

(d) a and c both

(a) 45*

(b) 30*

(c) 315

(d) 300*

$$\frac{360}{12} = 30^\circ$$

$$\begin{aligned} \text{Angle (कोण)} &= \frac{60H \sim 11M}{2} \\ &= \frac{60 \times 7 \sim 11 \times 30}{2} \\ &= \frac{420 \sim 330}{2} = \frac{90}{2} = 45^\circ \end{aligned}$$

Second angle
 $360 - 45$
315



$$15 \times 30 = 45^\circ$$

Q5- ^{HH MM} 09:35 पर दोनों सूइयों (घंटे और मिनट की सूइयों) के बीच का कोण क्या होगा?

what will be the angle between both hands (hour and minute hand) at 09:35 ?

$$\begin{aligned} \text{Angle (कोण)} &= \frac{60H - 11M}{2} \\ &= \frac{60 \times 9 - 11 \times 35}{2} = \frac{540 - 385}{2} = \frac{155}{2} \\ &= 77.5 \end{aligned}$$

$$\begin{aligned} \text{Second angle} &= \frac{360 - 77.5}{2} \\ &= \frac{282.5}{2} \\ &= 141.25 \end{aligned}$$

Q6- 11:20 पर दोनों सुइयों (घंटे और मिनट की सुई) के बीच का कोण क्या होगा?

What will be the angle between both hands (hour and minute hand) at 11:20 ?

$$\begin{aligned} \text{Angle} &= \frac{60 \times 11 - 11 \times 20}{2} \\ &= \frac{660 - 220}{2} = \frac{440}{2} = 220^\circ \\ \text{Second angle} &= 360 - 220 \\ &= 140^\circ \end{aligned}$$

Q7-02:25 पर दोनों सूइयों (घंटे और मिनट की सूइयों) के बीच का कोण क्या होगा?

What will be the angle between both hands (hour and minute hand) at 02:25 ?

$$\begin{aligned}
 &= \frac{60 \times 2 - 11 \times 25}{2} \\
 &= \frac{120 - 275}{2} = \frac{155^\circ}{2} = 77.5^\circ \\
 &\text{Second} = 182.5^\circ
 \end{aligned}$$

Q8- **04:45** पर दोनों सूइयों (घंटे और मिनट की सूइयों) के बीच का कोण क्या होगा?

What will be the angle between both hands (hour and minute hand) at 04:45 ?

$$\begin{aligned} \text{Angle} &= \frac{60H - 11M}{2} \\ &= \frac{60 \times 4 - 11 \times 45}{2} \\ &= \frac{240 - 495}{2} = \frac{-255}{2} = -127.5^\circ \end{aligned}$$

Second angle = $\frac{360.0 - 127.5}{2} = 116.25^\circ$

7:46 $\frac{4}{11}$ 7: $\frac{510}{11}$

Q9- 07:46 $\frac{4}{11}$ पर दोनों सूइयों (घंटे और मिनट की सूइयों) के बीच का कोण क्या होगा?

What will be the angle between both hands (hour and minute hand) at 07:46 $\frac{4}{11}$?

$$\text{Angle} = \frac{60 \times 7 - \frac{11 \times 510}{11}}{2}$$

$$= \frac{420 - 510}{2} = \frac{-90}{2} = -45^\circ$$

$$\text{Second Angle} = 360 - 45 = 315^\circ$$



THANK YOU



Preparing Bharat, Empowering Futures

airGurukul Institute for Career Growth
www.airgurukul.com

Follow Us |       

Powered by **Prince Edutech Private Limited**