

AJ INSTITUTE OF ENGINEERING & TECHNOLOGY

DEPT. OF TRAINING & PLACEMENT

Test-7

Problems on Calendar, logical reasoning on letter and symbol series

Wednesday 12th June 2024

1) If January 1, 1996, was Monday, what day of the week was January 1, 1997?

- A. Thursday
- B. Wednesday
- C. Friday
- D. Sunday

The correct option is (B)

Explanation:

The year 1996 is divisible by 4, so it is a leap year with 2 odd days.

As per the question, the first day of the year 1996 was Monday, so the first day of the year 1997 must be two days after Monday. So, it was Wednesday.

2) The first republic day of India was celebrated on January 26, 1950. What day of the week was it?

- A. Wednesday
- B. Friday
- C. Thursday
- D. Tuesday

The correct option is (C)

Explanation:

⇒ 1600 years are divisible by 400, so the year 1600 has 0 odd days.

⇒ 300 years have 1 odd day.

⇒ 49 years = (12 leap years + 37 years)

= (12*2, odd days + 37*1, odd days)

= 24 + 37 = 61 odd days

On dividing 61 by 7, we get remainder 5, so 49 years have 5 odd days.

⇒ From January 26, 1950, to January 26, 1950, we have 26 days.

26 days = 3 weeks + 5 odd days

So, total number of odd days = 1 + 5 + 5 = 11 days

⇒ 11 days = 1 week + 4 odd days

4 odd days represent Thursday, so it was Thursday on January 26, 1950.

3) On February 5, 1998, it was Thursday. The day of the week on February 5, 1997, was

- A. Wednesday
- B. Monday
- C. Friday
- D. Sunday

The correct option is (A)

Explanation:

1997 was an ordinary year, it had 1 odd day. So, the day on February 5, 1998, would be one day beyond the day on February 5, 1997.

∴ Thursday on February 5, 1998, would be one day beyond the day on February 5, 1997, so the day on February 5, 1997, was Wednesday.

4) Which of the following years is not a leap year?

- A. 800
- B. 700

- C. 1600
- D. 2000

The Correct answer; option (B)

Explanation:

A century divisible by 400 is a leap year. The years 800, 1600 and 2000 are divisible by 400, so they are leap years.

The year 700 is not divisible by 400, so it is not a leap year.

5) How many days are there in y weeks y days?

- A. $8y$
- B. $8y^2$
- C. $16y$
- D. $21y$

The Correct answer; option (A)

Explanation:

There are 7 days in a week, so y weeks will contain $7y$ days.

\therefore The required number of days = $7y + y$ days = $8y$ days

6) The day on 5th April of a year will be the same day on 5th of which month of the same year?

- A. 5th July
- B. 5th August
- C. 5th June
- D. 5th October

The Correct answer; option (A)

Explanation:

April & July for all years have the same calendar. So, a day on any date of April will be the same day on the corresponding date in July.

\therefore The same day will fall on 5th July of the same year.

7) If it was Wednesday on March 1, 2006, which day was it on March 1, 2002?

- A. Tuesday
- B. Friday
- C. Monday
- D. Sunday

The Correct answer; option (B)

Explanation:

Total number of odd days between the years 2002 and 2006 =

$(2006 - 2002) + 1 = 5$ odd days. The year 2004 is a leap year, it has two odd days. So, one extra odd day is added.

So, if it was Wednesday on March 1, 2006, it would be (Wednesday - 5) Friday on March 1, 2002.

8) It was Sunday on Jan 1, 2006. What was the day of the week Jan 1, 2010?

- A. Sunday
- B. Saturday
- C. Friday
- D. Wednesday

Answer: Option (C)

Explanation:

On 31st December, 2005 it was Saturday.

Number of odd days from the year 2006 to the year 2009 = $(1 + 1 + 2 + 1) = 5$ days.

∴ On 31st December 2009, it was Thursday.

Thus, on 1st Jan, 2010 it is Friday.

9) Today is Monday. After 61 days, it will be:

- A. Wednesday
- B. Saturday
- C. Tuesday
- D. Thursday

Answer: Option (B)

Explanation:

Each day of the week is repeated after 7 days.

So, after 63 days, it will be Monday.

∴ After 61 days, it will be Saturday.

10) If 6th March, 2005 is Monday, what was the day of the week on 6th March, 2004?

- A. Sunday
- B. Saturday
- C. Tuesday
- D. Wednesday

Answer: Option (A)

Explanation:

The year 2004 is a leap year. So, it has 2 odd days.

But, Feb 2004 not included because we are calculating from March 2004 to March 2005. So it has 1 odd day only.

∴ The day on 6th March, 2005 will be 1 day beyond the day on 6th March, 2004.

Given that, 6th March, 2005 is Monday.

∴ 6th March, 2004 is Sunday (1 day before to 6th March, 2005).

11) On what dates of April, 2001 did Wednesday fall?

- A. 1st, 8th, 15th, 22nd, 29th
- B. 2nd, 9th, 16th, 23rd, 30th
- C. 3rd, 10th, 17th, 24th
- D. 4th, 11th, 18th, 25th

Answer: Option Ⓓ

Explanation:

We shall find the day on 1st April, 2001.

1st April, 2001 = (2000 years + Period from 1.1.2001 to 1.4.2001)

Odd days in 1600 years = 0

Odd days in 400 years = 0

Jan. Feb. March April

$(31 + 28 + 31 + 1) = 91 \text{ days} \equiv 0 \text{ odd days.}$

Total number of odd days = $(0 + 0 + 0) = 0$

On 1st April, 2001 it was Sunday.

In April, 2001 Wednesday falls on 4th, 11th, 18th and 25th.

12) How many days are there in x weeks x days?

A. $7x^2$

B. $8x$

C. $14x$

D. 7

Answer: Option Ⓑ

Explanation:

$x \text{ weeks } x \text{ days} = (7x + x) \text{ days} = 8x \text{ days.}$

13) The last day of a century cannot be

A. Monday

B. Wednesday

C. Tuesday

D. Friday

Answer: Option Ⓒ

Explanation:

100 years contain 5 odd days.

∴ Last day of 1st century is Friday.

200 years contain $(5 \times 2) \equiv 3$ odd days.

∴ Last day of 2nd century is Wednesday.

300 years contain $(5 \times 3) = 15 \equiv 1$ odd day.

∴ Last day of 3rd century is Monday.

400 years contain 0 odd day.

∴ Last day of 4th century is Sunday.

This cycle is repeated.

∴ Last day of a century cannot be Tuesday or Thursday or Saturday.

14) On 8th Feb, 2005 it was Tuesday. What was the day of the week on 8th Feb, 2004?

- A. Tuesday
- B. Monday
- C. Sunday
- D. Wednesday

Answer: Option C

Explanation:

The year 2004 is a leap year. It has 2 odd days.

∴ The day on 8th Feb, 2004 is 2 days before the day on 8th Feb, 2005.

Hence, this day is Sunday.

15) The calendar for the year 2007 will be the same for the year:

- A. 2014
- B. 2016
- C. 2017
- D. 2018

Answer: Option D

Explanation:

Count the number of odd days from the year 2007 onwards to get the sum equal to 0 odd day.

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

Sum = 14 odd days = 0 odd days.

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

16) SCD, TEF, UGH, _____, WKL

- a) CMN
- b) UJI
- c) VIJ
- d) IJT

Answer: Option C

Explanation:

There are two alphabetical series here. The first series is with the first letters only: STUVW. The second series involves the remaining letters: CD, EF, GH, IJ, KL.

17) ELFA, GLHA, ILJA, _____, MLNA

- a) OLPA
- b) KLMA
- c) LLMA
- d) KLLA

Answer: Option Ⓐ

Explanation:

The second and forth letters in the series, L and A, are static. The first and third letters consist of an alphabetical order beginning with the letter E.

18) CMM, EOO, GQQ, _____, KUU

- a) GRR
- b) GSS
- c) ISS
- d) ITT

Answer: Option Ⓒ

Explanation:

The first letters are in alphabetical order with a letter skipped in between each segment: C, E, G, I, K. The second and third letters are repeated; they are also in order with a skipped letter: M, O, Q, S, U.



19)

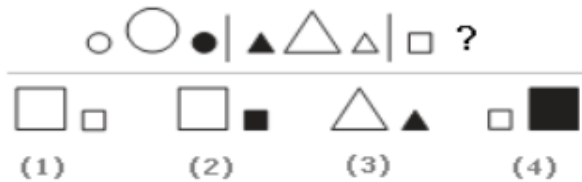
- a) 1
- b) 2
- c) 3
- d) 4

Answer: Option Ⓒ

Explanation:

This is an alternating series. In the first segment, the letter "E" faces right, then down, then right. In the second segment, the letters all face down. To follow this pattern, in the fourth segment, the letters must all face up.

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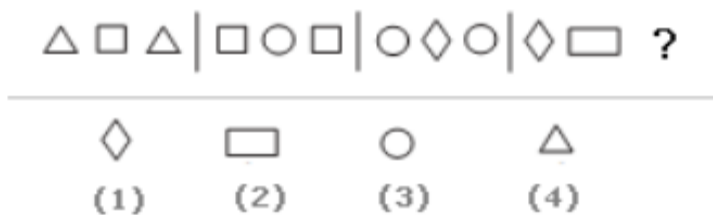
- a) 1
- b) 2
- c) 3
- d) 4

Answer: Option (B)

Explanation:

Notice that in each segment, the figures are all the same shape, but the one in the middle is larger than the two on either side. Also, notice that one of the figures is shaded and that this shading alternates first right and then left. To continue this pattern in the third segment, you will look for a square. Choice b is correct because this choice will put the large square between the two smaller squares, with the shading on the right.

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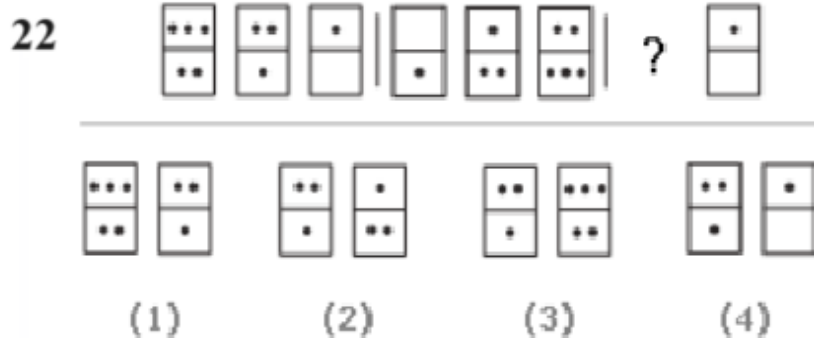


- a) 1
- b) 2
- c) 3
- d) 4

Answer: Option (A)

Explanation:

Look at each segment. You will notice that in each, the figure on the right and the figure on the left are the same; the figure in between is different. To continue this pattern in the last segment, the diamond on the left will be repeated on the right. Choice a is the only possible answer.

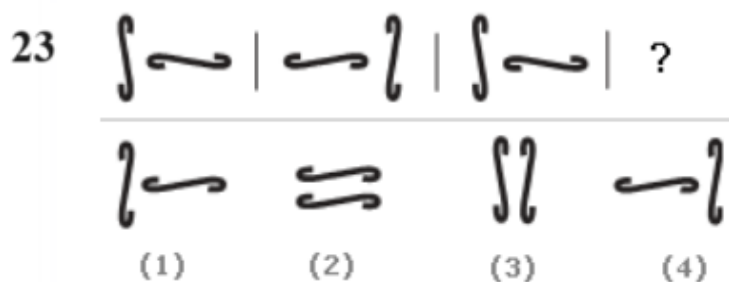


- a) 1
- b) 2
- c) 3
- d) 4

Answer: Option Ⓐ

Explanation:

Look carefully at the number of dots in each domino. The first segment goes from five to three to one. The second segment goes from one to three to five. The third segment repeats the first segment.



- a) 1
- b) 2
- c) 3
- d) 4

Answer: Option Ⓓ

Explanation:

Look for opposites in this series of figures. The first and second segments are opposites of each other. The same is true for the third and fourth segments.

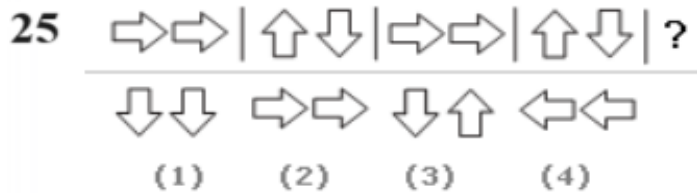


- a) 1
- b) 2
- c) 3
- d) 4

Answer: Option ©

Explanation:

In this series, the shaded part inside the circle gets larger and then smaller.



- a) 1
- b) 2
- c) 3
- d) 4

Answer: Option Ⓑ

Explanation:

Look at each segment. In the first segment, the arrows are both pointing to the right. In the second segment, the first arrow is up and the second is down. The third segment repeats the first segment. In the fourth segment, the arrows are up and then down. Because this is an alternating series, the two arrows pointing right will be repeated, so option B is the only possible choice.

26) What comes next in the series? A, C, G, M, _____

- a) U
- b) V
- c) W
- d) X

Answer: c) W

Explanation: The series adds an increasing number of letters between each letter, starting with 1, then 2, then 3, and so on, while also increasing the starting letter by one.

27) What comes next in the series? ST, WX, AB, DE, ____

- a) GH
- b) IJ
- c) KL
- d) None

Answer: b) IJ

Explanation: The series alternates between two letters, with the first letter increasing by three and the second letter increasing by two.

28) What comes next in the series? WX, ZB, DE, HI, ____

- a) KL
- b) MN
- c) OP
- d) QR

Answer: a) KL

Explanation: The series alternates between two letters, with the first letter increasing by two and the second letter increasing by three.

29) What comes next in the series? AB, BCD, DEFG, ____

- a) GHIJ
- b) GHI
- c) GH
- d) HI

Answer: b) GHI

Explanation: The series adds one more letter to each group and repeats the previous letters.

30) What comes next in the series? AB, ACD, AEFG, _____

- a) AEHIJ
- b) AEHI
- c) AH
- d) AHIJ

Answer: d) AHIJ

Explanation: The series adds two more letters to each group, with the first letter increasing by one and the second letter increasing by two.