

SBI PO Prelims 2021

November 20

Memory Based

Paper

1. Read the given passage and answer the following questions. Some words are highlighted to help you answer some of the questions.

Curiosity is a trait of many a famous genius including Thomas Edison, Albert Einstein and Leonardo da Vinci. In an article in LIFE Magazine in 1955 entitled "Old Man's Advice to Youth: 'Never Lose a Holy Curiosity'" Einstein, who developed the theory of relativity famously said: "The important thing is not to stop questioning. Curiosity has its own reason for existence. One cannot help but be in awe when he contemplates the mysteries of eternity, of life, of the marvellous structure of reality. It is enough if one tries merely to comprehend a little of this mystery each day." In an ever-evolving world that is fuelled by innovation, curiosity could indeed be considered a very relevant business imperative. We can all be grateful for those with a progressive mind and an insatiable thirst for discovery, as we have all benefited from some of their findings! Eleanor Roosevelt once observed that if a mother could ask a Fairy Godmother to endow a child with the most useful gift, that gift should be curiosity. One of the key components of cultivating a growth mindset is our ability to be curious and openminded and to question and challenge the way we think. It helps us to avoid getting rigid in our thinking and leads us into exploring new avenues and possibilities. Curiosity is the engine of innovation and curious people have an ongoing, intrinsic interest in both their inner experience and the world around them.

Life is never boring for a curious person. Everyone possesses curiosity to some degree although people will differ according to the depth and strength of their curiosity and their willingness to act on it. Curiosity helps your mind to be more active instead of passive. The mind is a muscle and the more exercise it gets the stronger it will become. Various studies have shown that keeping your brain active and alert can be very helpful as well in later life. Curiosity is the engine of intellectual achievement; those who are more interested in a topic will learn faster and prime the brain better for learning. Curiosity is associated with high performance in both academic and work settings. There is evidence to suggest that the more we learn, the more we want to learn. Curious people rarely find life boring because there is always something new to explore and discover. You can turn any event into something fascinating by sharpening your observation and giving your attention to something you would normally miss. Walt Disney embraced curiosity as one of the core ingredients of living a fulfilling and exciting life. He said: "We keep moving forward, opening new doors, and doing new things, because we are curious and curiosity keeps leading us down new paths." In any business context, it is important

that people keep satisfying the thirst of innovating new ways of doing things so that they can keep ahead of the game. Refreshing the way we do things helps us to be more agile and work smarter by letting go of irrelevant habits.

A. Why does the author encourage us to be grateful for all those who are keen to know?

☐ **A** Because they aided us in fostering a growth ethic and a desire to learn.

☐ **B** Because they were interactive individuals who queried our assumptions.

☒ **C** Because some of their research and discoveries have helped us all.

☐ **D** Because they had an intense thirst for knowledge and an open mind.

☐ **E** All of these

Solution

On referring to the starting line of the second paragraph, we can infer that the author encourages us to be grateful for all those who are keen to know because some of their research and discoveries have helped us all. Hence, option (c) is the right answer choice.

B. Which of the following instances could be deduced from Albert Einstein's quotation italicized in the first paragraph?

☐ **A** People should not cease questioning in order to be innovative in their activities.

- B** Curiosity comes to an end when its inherent purpose for being is accomplished.
- C** It is adequate to understand a tiny proportion of a mystery each and every day.
- D** All of these
- E** Only (a) and (c)

Solution

On reading the italicized quotation thoroughly, we can infer that only (a) and (c) are correct with reference to the context of the given question.

While statement (b) is incorrect as curiosity doesn't come to an end when its inherent purpose for being is accomplished. Hence, option (e) is the right answer choice.

C. Why does a curious person's life never get monotonous as per the information provided in the given passage?

- A** Because everyone has an unquenchable need to learn new things.
- B** Because the depth and power of one's curiosity affect one's thoughts.
- C** Because curiosity encourages our thoughts to be less futile.
- D** Because curious people always have something fresh to learn and explore.

E None of these

Solution

On referring to the starting line of the fourth paragraph, we can infer that a curious person's life never gets monotonous because they always have something fresh to learn and explore. Hence, option (d) is the right answer choice.

D. Which of the following statements is/are incorrect based on the information provided in the given passage?

A Curiosity helps the mind to be active as the more exercise it gets the stronger it will become.

B One of the most important factors in having a full and exciting life is curiosity.

C In both academic and professional settings, curiosity is linked to excellent performance.

D Only (a) and (c)

E None of these

Solution

On reading the given thoroughly, we can conclude that all of the given statements are correct based on the information provided in the given passage. Thus, none of the given statements is incorrect. Hence, option (e) is the right answer choice.

E. Choose the most appropriate antonym of the word ‘PROGRESSIVE’, as highlighted in the given passage.

☐ A Exasperate

☒ B Dwindling

☐ C Augmenting

☐ D Cumulative

☐ E None of these

Solution

Among the given words, ‘dwindling’ which means ‘diminishing gradually in size, amount, or strength’ is the most appropriate antonym of the highlighted word. Hence, option (b) is the right answer choice. The word ‘PROGRESSIVE’ means happening or developing gradually or in stages.

(a) Exasperate means irritating and frustrating (someone) intensely.

(c) Augmenting means make (something) greater by adding to it; increase.

(d) Cumulative means increasing or increasing in quantity, degree, or force by successive additions.

F. Which of the following words should replace the word ‘SATISFYING’, as highlighted in the passage to make the given sentence grammatically correct and contextually meaningful.

A Pleasing

B Exploring

C Impeding

D Mitigating

E No replacement required

Solution

The concerned sentence states that in any business setting, it is critical that individuals continue to seek out innovative methods of doing things in order to stay ahead of the competition. Thus, we can infer that ‘exploring’ is the most appropriate option to replace the word ‘satisfying’. Hence, option (b) is the right answer choice. Satisfying means giving fulfillment or the pleasure associated with this. While exploring means inquiring into or discussing (a subject) in detail.

(a) Pleasing means satisfying or appealing.

(c) Impeding means delaying or preventing (someone or something) by obstructing them; hindering.

(d) Mitigating means lessening the gravity of an offence or mistake.

G. Why does the author refer to curiosity as the engine of innovation?

A It assists us in staying flexible in our thoughts.

B It stimulates people to explore different things.

C It enables people to be naturally eccentric around them.

D It makes a person's life more bold and adventurous.

E None of these

Solution

On referring to the last line of the second paragraph, we can infer that curiosity stimulates people to explore different things in both their inner experience and the world around them. Thus, the author refers to curiosity as the engine of innovation. Hence, option (b) is the right answer choice.

2. Study the following information and answer the given questions.

In each of the questions below, a sentence is given with two blanks that indicate that some parts are missing. Identify the correct pair of words that fit in the sentence to make it grammatically and contextually correct.

A. The unions __ the new owners of the workers' __ to the company.

A assured, loyalty

B

exempted, allegiance

C

assured, treason

D

confirmed, treason

E

exempted, loyalty

Solution

The words that appropriately fit into the blanks to give the sentence a logical sense are: assured, loyalty.

Assured: believing that you can do something or succeed at something;
confident

Loyalty: faithfulness to commitment, obligation

Exempted: to say officially that somebody does not
have to do something or pay for something

Allegiance: support for a leader, government,
belief, etc.

Treason: the criminal act of causing harm to your country

Confirmed: fixed in a particular habit or way of life

B. A facial ___ of the suspect and the drawing _ that it was in fact a match.

A

mismatch, reveal

B**comparison, showed****C****data, suggest****D****features, suggest****E****contrast, reveal**

Solution

The words that appropriately fit into the blanks to give the sentence a logical sense are: comparison, showed.

Mismatch: a combination of things or people that do not go well together

Comparison: an act of comparing

Reveal: to make something known that was secret or unknown before

Showed: to let somebody see somebody/ something

Data: facts or information

Suggest: to mention a plan or an idea that you have for somebody to discuss or consider

Feature: an important or noticeable part of something

Contrast: comparison between two people or things that shows the differences between them

C. Because of a __ in sales, the company owner has no choice but to __ a few workers.

A**efflux, elevated**

B decline, promote

C influx, fire

D surge, dismiss

E decline, dismiss

Solution

The words that appropriately fit into the blanks to give the sentence a logical sense are: decline, dismiss.

Efflux: the flowing out of a substance or particle.

Elevated: to move somebody/something to a higher place or more important position

Decline: to become weaker, smaller or less good

Promote: to encourage something; to help something to happen or develop

Influx: large numbers of people or things arriving suddenly

Fire: to remove an employee from a job

Surge: a sudden strong swelling

Dismiss: to order an employee to leave his/her job

Decline: to become weaker, smaller or less good

D. Decades ago, Western nations faced a fuel __ when the Arab countries placed a/an __ on petroleum trades.

A shortage, embargo

B

shortage, deterrent

C

abundance, sanction

D

abundance, embargo

E

deficiency, permit

Solution

The words that appropriately fit into the blanks to give the sentence a logical sense are: shortage and embargo.

Shortage: a situation where there is not enough of something

Embargo: an official order to stop doing business with another country

Deterrent: something that should stop you doing something

Sanction: an official order that limits business, contact, etc.

Abundance: a very large quantity of something

Deficiency: the state of not having enough of something; a lack

Permit: to allow somebody to do something or to allow something to happen.

E. At the start of the __ pandemic, there seemed to be positive __ on the environment.

A

world-wide, outcome

B

global, impact

C global, nature

D regional, impact

E ongoing, outcome

Solution

The words that appropriately fit into the blanks to give the sentence a logical sense are: global, impact.

World-wide: extending or reaching throughout the world.

Global: affecting the whole world

Outcome: the result or effect of an action or an event

Impact: an effect or impression

Ongoing: continuing to exist now

3. Study the following information and answer the questions given.

In each sentence few words are given in bold. They may or may not be arranged in a proper sequence. Choose the sequence that make the sentence grammatically and contextually meaningful. If the sentence is correct, choose option(e) i.e., no rearrangement is required.

- A. **Because we had(A) decided than we needed, we(B) fortunate to sacrifice our Christmas(C) offering by(D) more them to the less(E) gifts.**

A ABDEC

B

BDCAE

C

DAECB

D

CADEB

E

No rearrangement is required

Solution

The correct rearrangement for this sentence is: DAECB. Thus, the correct sentence will be:” Because we had more than we needed, we decided to sacrifice our Christmas gifts by offering them to the less fortunate.”

- B. **The(A) asthma of smoking in(B) blessing is a(C) restaurants to people like myself who (D) abolition from allergies and(E) suffer.**

A

ABDEC

B

BCDAE

C

DCBEA

D

CADEB

E No rearrangement is required

Solution

The correct rearrangement for this sentence is: DCBEA. Thus, the correct sentence will be: "The abolition of smoking in restaurants is a blessing to people like myself who suffer from allergies and asthma."

C. **To(A) avoid being fired from his teaching gig, the(B) incompetent coach decided to(C) resign and leave on his own(D) accord.**

A ADBC

B BCAD

C DBCA

D CABD

E No rearrangement is required

Solution

The sentence is meaningful and coherent, thus, required no change.

D. **Although she has an(A) interfere on the matter, Brenda won't(B) internal in the company's(C) opinion issues(D) without being asked.**

A ADBC

B BCAD

C DBCA

D CABD

E No rearrangement is required

Solution

The correct rearrangement for this sentence is: CABD. Thus, the correct sentence will be: “Although she has an opinion on the matter, Brenda won’t interfere in the company’s internal issues without being asked.

E. There is(A) dipped for optimism in India’s battle(B) reason the COVID-19 pandemic as (C) against new coronavirus cases have(D) daily to a nine-month low

A ADBC

B BCDA

C DBCA



CDAB



No rearrangement is required

Solution

The correct rearrangement for this sentence is: BCDA. Thus, the correct sentence will be: “There is reason for optimism in India’s battle against the COVID-19 pandemic as daily new coronavirus cases have dipped to a nine-month low.”

4. Study the following information and answer the questions given.

There are three sentences given in each question. Find the sentence(s) which is/are grammatically correct and mark your answer choosing the best possible alternative among the five options given below each question. If all the sentences are incorrect, choose (e) i.e. ‘None is correct’ as your answer.

- A. **(A) Prereaders progressed faster in learning to read the visual list, whereas novice and veteran readers progressed faster in learning to read the phonetic list. (B) The residents of city X are dismayed to find its locality in the news for all the wrong reasons. (C) Farmers refused to end protest in Noida despite of repeated requests**



Only (A)



Both (A) and (C)

☐ C Both (C) and (B)

☐ D Only (B)

☐ E None is correct

Solution

The correct choice is option (a). All sentences are incorrect except sentence (A). In sentence (B), ‘its’ should be replaced with ‘their’. In sentence (C), ‘despite of’ should be ‘despite’ as despite is never followed by ‘of’.

- B. **(A) Chennai have a history of implementing innovative and inclusionary models of slum clearance. (B) In the absence of a policy, the relocations have been governed by ad hoc government orders. (C) Much residents sell or rent out their allotments and return to informal settlements in the city to safeguard their painstakingly crafted pathways to a better life**

☐ A Only (A)

☐ B Both (A) and (C)

☐ C Both (C) and (B)

☒ D Only (B)

E

None is correct

Solution

The correct choice is option (d). All sentences are incorrect except sentence (B). In sentence (A), 'have' should be replaced 'has' and in sentence (C), 'Much' should be replaced 'many' as we use 'much' if the noun is non-countable and use 'many' if the noun is countable

- C. (A) China seems to be mending its diplomatic fences with the Arab countries. (B) A Canada has become the world's first patient diagnosed with climate change, linked to breathing trouble caused by air pollution (C) His comforting words helped to sustain me in my faith during those dark days.

A

Only (A)

B

Both (A) and (C)

C

Both (C) and (B)

D

Only (B)

E

None is correct

Solution

The correct choice is option (b). Only sentence (B) has an error where ‘Canada’ should be replaced with ‘Canadian’.

- D. (A) Israel is growing increasing suspicious of almost every country.
(B) The percentage of rural children who was not enrolled in school doubled during the pandemic (C) Delhi has recorded the lowest rate of inflation among the metro city in the country.

☐ A Only (A)

☐ B Both (A) and (C)

☐ C Both (C) and (B)

☐ D Only (B)

☒ E None is correct

Solution

The correct choice is option (e). None of the given sentence is error free. In sentence (A), ‘increasing’ should be ‘increasingly’ as we need adverb here. In sentence (B), ‘was’ should be ‘were’. In sentence (C), ‘city’ should be ‘cities’ as we need plural noun here.

- E. (A) Tepid response to reopening of schools as parents prefer than wait and watch (B) The National Education Policy lays emphasis in imparting teaching in mother tongue in primary classes. (C) The

episode betrays a lack of understanding of the recovery process and its underlying principles.

- A** Only (A)
- B** Both (A) and (C)
- C** Both (C) and (B)
- D** Only (C)
- E** None is correct

Solution

The correct choice is option (d). All sentences are incorrect except sentence (C). In sentence (A), ‘prefer than’ should be ‘prefer to’. In sentence (B), ‘emphasis in’ should be ‘emphasis on’.

5. Rearrange the following six sentences (A), (B), (C), (D), and (E) in the proper sequence to form a meaningful paragraph and then answer the questions given below.

(A) Since they were part of the local culture, they could not be separated from religion.

(B) The Indians, Greeks, Mesopotamians and Egyptians led the way, but every culture, strangely enough, used the same animals to represent the same powers.

(C) They were stronger, faster, could live in the sea or air, had abilities and senses

that the human could not even aspire to.

(D) So there was a willingness to use animals as gods. They gave added meaning to the divine.

(E) In the ancient world, humans were not just close to animals but, in most cases, deeply dependent on them.

A. Which of the following should be the **SECOND** sentence after rearrangement?

☐ A E

☐ B D

☐ C C

☐ D B

☒ E A

Solution

The passage given above discusses the importance of ancient animals in human lives in earlier times. Here, apart from statement (E), none of the given statements is independent and will therefore be the first statement in the logical sequence that begins the paragraph. Further, statement (A) will follow statement (E) which further continues the sentence describing more about earlier animal-human relations. Statement (D) supports statement (A) which describes the importance of animals in spirituality. Further, statement (C) will be the appropriate statement to follow (D) which states

the features of animals. Statement (B) will conclude the given passage as it ends with describing the different cultures using the same animal to relate them with similar powers. Therefore, the correct sequence is EADCB.

B. Which of the following should be the THIRD sentence after rearrangement?

A E

B B

C D

D A

E C

Solution

The passage given above discusses the importance of ancient animals in human lives in earlier times. Here, apart from statement (E), none of the given statements is independent and will therefore be the first statement in the logical sequence that begins the paragraph. Further, statement (A) will follow statement (E) which further continues the sentence describing more about earlier animal-human relations. Statement (D) supports statement (A) which describes the importance of animals in spirituality. Further, statement (C) will be the appropriate statement to follow (D) which states

the features of animals. Statement (B) will conclude the given passage as it ends with describing the different cultures using the same animal to relate them with similar powers. Therefore, the correct sequence is EADCB.

C. Which of the following should be the **FOURTH** sentence after rearrangement?

☐ A B

☐ B D

☐ C A

☐ D E

☒ E C

Solution

The passage given above discusses the importance of ancient animals in human lives in earlier times. Here, apart from statement (E), none of the given statements is independent and will therefore be the first statement in the logical sequence that begins the paragraph. Further, statement (A) will follow statement (E) which further continues the sentence describing more about earlier animal-human relations. Statement (D) supports statement (A) which describes the importance of animals in spirituality. Further, statement (C) will be the appropriate statement to follow (D) which states

the features of animals. Statement (B) will conclude the given passage as it ends with describing the different cultures using the same animal to relate them with similar powers. Therefore, the correct sequence is EADCB.

D. Which of the following should be the LAST (FIFTH) sentence after rearrangement?

A E

B A

C B

D C

E D

Solution

The passage given above discusses the importance of ancient animals in human lives in earlier times. Here, apart from statement (E), none of the given statements is independent and will therefore be the first statement in the logical sequence that begins the paragraph. Further, statement (A) will follow statement (E) which further continues the sentence describing more about earlier animal-human relations. Statement (D) supports statement (A) which describes the importance of animals in spirituality. Further, statement (C) will be the appropriate statement to follow (D) which states

the features of animals. Statement (B) will conclude the given passage as it ends with describing the different cultures using the same animal to relate them with similar powers. Therefore, the correct sequence is EADCB.

E. Which of the following should be the FIRST sentence after rearrangement?

A A

B C

C D

D B

E E

Solution

The passage given above discusses the importance of ancient animals in human lives in earlier times. Here, apart from statement (E), none of the given statements is independent and will therefore be the first statement in the logical sequence that begins the paragraph. Further, statement (A) will follow statement (E) which further continues the sentence describing more about earlier animal-human relations. Statement (D) supports statement (A) which describes the importance of animals in spirituality. Further, statement (C) will be the appropriate statement to follow (D) which states

the features of animals. Statement (B) will conclude the given passage as it ends with describing the different cultures using the same animal to relate them with similar powers. Therefore, the correct sequence is EADCB.

6. Study the following information and answer the given questions.

In each question three sentences are given corresponding to a single idiom/phrasal verb. Choose the sentence(s) that have the correct usage of the given idiom.

A. Up in the arms

(A) The whole village is up in arms about the proposal to build an airport nearby.

(B) The children were jumping up in the arms with excitement.

(C) Her eyes widened and her chest moved up in the arm faster as her breath quickened.

A Only (A)

B Only (B)

C Only (C)

D Only (A) and (B)

E All of the above

Solution

“Up in the arm” means “protesting angrily about something”. Thus, the only sentence that correctly represent the meaning is option (A).

B. On cloud nine

(A) I told her how much of her winnings would be going to taxes, she was definitely on cloud nine.

(B) Although we are making good profits there is a cloud nine, the government may increase taxes.

(C) I've been on cloud nine ever since I landed my dream job.

A Only (A)

B Only (B)

C Only (C)

D Only (A) and (C)

E All of the above

Solution

“On cloud nine” means “extremely happy”. Thus, the only sentence that correctly represent the meaning is option (C).

C. Take off

(A) I'll take off now, and see you later.

(B) The plane will take off in twenty minutes

(C) The doctor gave me tablets to take off the pain.

☐ A Only (A)

☐ B Only (B)

☐ C Only (C)

☒ D Only (A) and (B)

☐ E Only (B) and (C)

Solution

“Take off” means “to leave or start flying”. Thus, the only sentences that correctly represent the meaning are: (A) and (B).

7. **Given below table shows total three items (refrigerators, AC's & ovens) sold by four stores. Table also shows percentage of refrigerators sold & total number of AC's sold by out of total items sold. Read the data carefully and answer following questions:**
Note- Each store sold only three types of items.

Stores	Total number of items sold	% Of refrigerators	Number of AC's sold
A	500	32%	100
B	800	48%	96
C	1200	45%	240
D	1500	56%	300

- A. Find the difference between average number of ovens sold by B & D and total number of refrigerators sold by C.

A 260

B 240

C 250

D 150

E 200

Solution

Total number of ovens sold by B & D =

$$800 - \left(96 + 800 \times \frac{48}{100} \right) + 1500 - \left(300 + 1500 \times \frac{56}{100} \right) =$$

$$320 + 360 = 680$$

$$\text{Total number of refrigerators sold by C} = 1200 \times \frac{45}{100} = 540$$

$$\text{Required difference} = 540 - \frac{680}{2} = 200$$

- B. If total refrigerators sold by store X is 25% more than refrigerators sold by D and total ovens, sold by store X is 371 2 % more than total ovens sold by A, then find total number of refrigerators & ovens sold by store X?**

A 780

B 1480

C 1180

D 1280

E 1380

Solution

$$\text{Total refrigerators sold by store X} = 1500 \times \frac{56}{100} \times \frac{125}{100} = 1050$$

$$\text{Total ovens sold by store X} = \left[500 - \left(100 + 500 \times \frac{32}{100} \right) \right] \times \frac{11}{8} = 330$$

$$\text{Required sum} = 330 + 1050 = 1380$$

- C. Find the ratio of total number of AC's sold by C & D together to total AC's & refrigerators sold by B.**

A 8 : 9

B 9 : 8

C 9 : 7

D 4 : 3

E 6 : 5

Solution

Total AC's sold by C & D together = $240 + 300 = 540$

Total AC's & refrigerators sold by B = $800 \times \frac{48}{100} + 96 = 480$

Required ratio = $540 : 480 = 9 : 8$

D. Total refrigerators sold by A & C together are what percent more than total ovens sold by C ?

A $63\frac{2}{3}\%$

B $60\frac{2}{3}\%$

C $33\frac{1}{3}\%$

D $66\frac{2}{3}\%$

E $69\frac{2}{3}\%$

Solution

Total refrigerators sold by A & C =

$$500 \times \frac{32}{100} + 1200 \times \frac{45}{100} = 160 + 540 = 700$$

$$\text{Total ovens sold by C} = 1200 - (240 + 1200 \times \frac{45}{100}) = 420$$

$$\text{Required percentage} = \frac{700 - 420}{420} \times 100 = 66\frac{2}{3}\%$$

E. Total ovens sold by C & D together is what percent less than total number of refrigerators sold by A & D together?

A 16%

B 24%

C 22%

D 26%

E 18%

Solution

Total ovens sold by C & D =

$$1200 - (240 + 1200 \times \frac{45}{100}) + 1500 - (300 + 1500 \times \frac{56}{100})$$

$$= 420 + 360 = 780$$

Total number of refrigerators sold by A & D =

$$500 \times \frac{32}{100} + 1500 \times \frac{56}{100} = 160 + 840 = 1000$$

$$\text{Required percentage} = \frac{1000 - 780}{1000} \times 100 = 22\%$$

8. In each of the following questions two equations are given. Solve these equations and give answer:

(a) if $x \geq y$, i.e., x is greater than or equal to y

(b) if $x > y$, i.e., x is greater than y

(c) if $x \leq y$, i.e., x is less than or equal to y

(d) if $x < y$, i.e., x is less than y

(e) $x = y$ or no relation can be established between x and y

A. I. $x^2 - 12x + 32 = 0$ II. $y^2 - 17y + 72 = 0$

A

a

B

b

C

c

D

d

E

e

Solution

$$I. x^2 - 12x + 32 = 0$$

$$x^2 - 8x - 4x + 32 = 0$$

$$x(x - 8) - 4(x - 8) = 0$$

$$(x - 4)(x - 8) = 0$$

$$x = 4, 8$$

$$II. y^2 - 17y + 72 = 0$$

$$y^2 - 9y - 8y + 72 = 0$$

$$y(y - 9) - 8(y - 9) = 0$$

$$(y - 9)(y - 8) = 0$$

$$y = 9, 8$$

so, $x \leq y$

B. $I. x^2 + 7x + 12 = 0$ $II. y^2 + 15y + 44 = 0$

A a

B b

C c

D d

E e

Solution

$$I. x^2 + 7x + 12 = 0$$

$$x^2 + 4x + 3x + 12 = 0$$

$$x(x + 4) + 3(x + 4) = 0$$

$$(x + 3)(x + 4) = 0$$

$$x = -3, -4$$

$$II. y^2 + 15y + 44 = 0$$

$$y^2 + 4y + 11y + 44 = 0$$

$$y(y + 4) + 11(y + 4) = 0$$

$$(y + 4)(y + 11) = 0$$

$$y = -11, -4$$

$$\text{so, } x \geq y$$

c. $I. 8x^2 + 10x - 7 = 0$

$$II. y^2 - 6y + 8 = 0$$

A a

B b

C c

D d

E e

Solution

$$I. 8x^2 + 10x - 7 = 0$$

$$8x^2 - 4x + 14x - 7 = 0$$

$$4x(2x - 1) + 7(2x - 1) = 0$$

$$(2x - 1)(4x + 7) = 0$$

$$x = \frac{1}{2}, \frac{-7}{4}$$

$$II. y^2 - 6y + 8 = 0$$

$$y^2 - 4y - 2y + 8 = 0$$

$$y(y - 4) - 2(y - 4) = 0$$

$$(y - 4)(y - 2) = 0$$

$$y = 4, 2$$

so, $x < y$

D. $I. x^2 - 12x + 35 = 0$

$$II. y^2 - 11y + 24 = 0$$

☐ A a

☐ B b

☐ C c

☐ D d

☒ E e

Solution

$$I. x^2 - 12x + 35 = 0$$

$$x^2 - 5x - 7x + 35 = 0$$

$$x(x - 5) - 7(x - 5) = 0$$

$$(x - 7)(x - 5) = 0$$

$$x = 7, 5$$

$$II. y^2 - 11y + 24 = 0$$

$$y^2 - 3y - 8y + 24 = 0$$

$$y(y - 3) - 8(y - 3) = 0$$

$$(y - 8)(y - 3) = 0$$

$$y = 8, 3$$

So, no relation can be established between x and y

E. I. $x^2 - 6x + 8 = 0$

II. $y^2 + 8y + 15 = 0$

A a

B b

C c

D d

E e

Solution

$$I. x^2 - 6x + 8 = 0$$

$$x^2 - 4x - 2x + 8 = 0$$

$$x(x - 4) - 2(x - 4) = 0$$

$$(x - 2)(x - 4) = 0$$

$$x = 2, 4$$

$$II. y^2 + 8y + 15 = 0$$

$$y^2 + 5y + 3y + 15 = 0$$

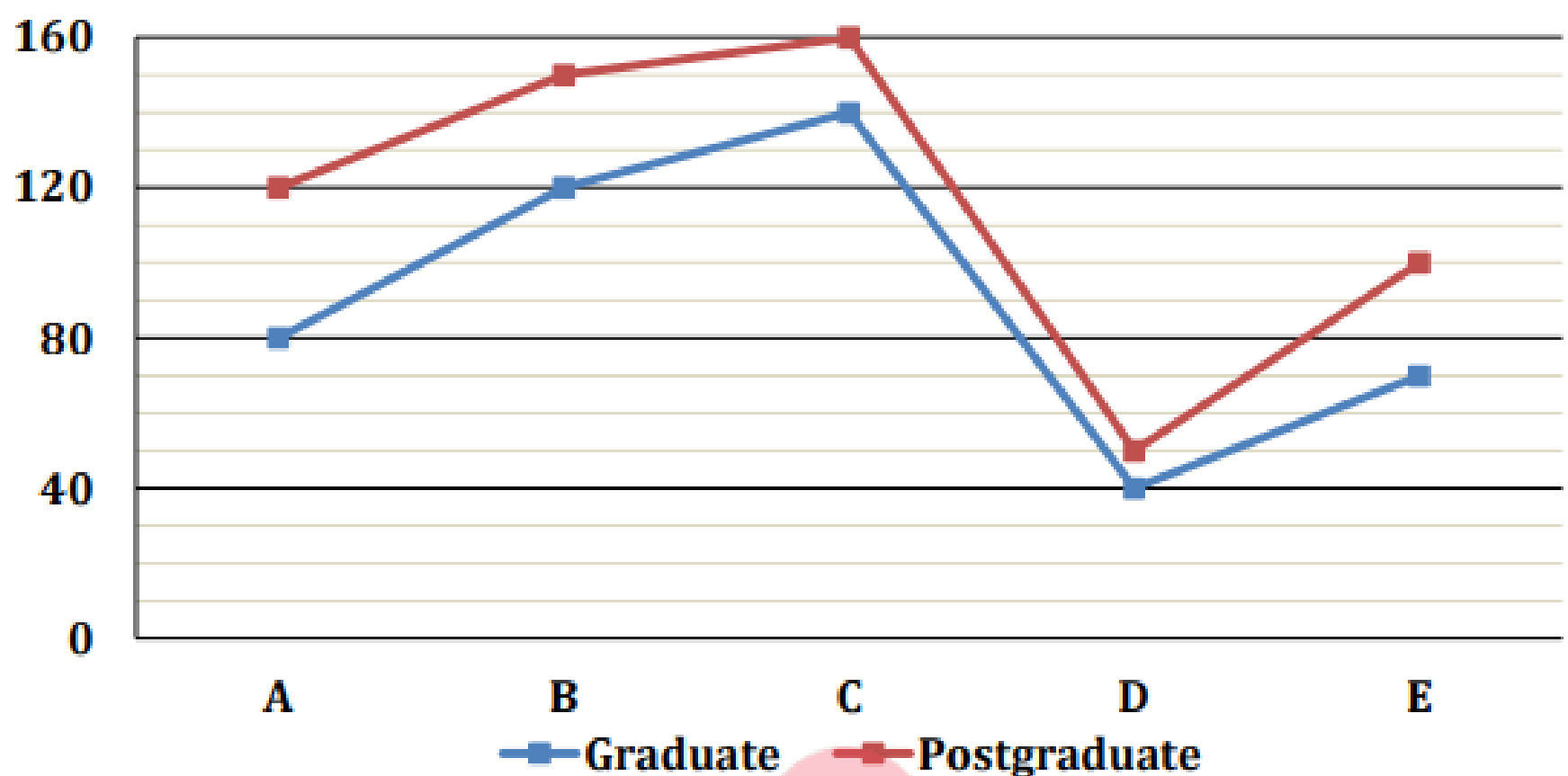
$$y(y + 5) + 3(y + 5) = 0$$

$$(y + 3)(y + 5) = 0$$

$$y = -3, -5$$

$$i.e. x > y$$

9. Line chart shows the number of graduate students & postgraduate students in five different collages (A, B, C, D & E). Study the line chart given below and answer the following questions.



- A. If ratio of boys to girls in graduate students and postgraduate students in collage C is 3 : 2 & 5 : 3 respectively, then find ratio of total number of boys in graduate students and postgraduate students in collage C together to total number of graduate students in collage B?

A 7 : 5

B 23 : 15

C 3 : 2

D 21 : 13

E 4 : 3

Solution

Total number of boys in graduate students and postgraduate students in collage C = $(140 \times \frac{3}{5}) + (160 \times \frac{5}{8}) = 84 + 100 = 184$

Total number of graduate students in B=120

Required ratio = $\frac{184}{120} = 23 : 15$

B. Total number of graduates students in collage C & collage E together are what percent of total graduate students and postgraduate students in collage D?

A $233\frac{1}{3} \%$

B $266\frac{2}{3} \%$

☐ C 250%

☐ D 225%

☐ E 275%

Solution

Total number of graduates students in collage C & collage E = $140 + 70 = 210$

Total graduate students and postgraduate students in collage D = $40 + 50 = 90$

$$\text{Required \%} = \frac{210}{90} \times 100 = 233\frac{1}{3}\%$$

- C. If total graduate students in collage X are 90 more than total graduate students in collage E and ratio of boys to girls in graduate students in collage B & collage X is 11 : 9 and 3 : 7 respectively, then find number of girls in graduate students in collage B & X together?

☐ A 145

☐ B 128

☐ C 134

☒ D 166

E

None of the above

Solution

Total graduate students in collage X = $90 + 70 = 160$

Number of girls in graduate students in collage X = $160 \times \frac{7}{10} = 112$

Number of girls in graduate students in collage B = $120 \times \frac{9}{20} = 54$

So, required sum = $112 + 54 = 166$

- D. The average number of students postgraduate students in collage B, C & D are how much more or less than graduate students in collage A & E together?

A

10

B

20

C

30

D

50

E

40

Solution

Average number of students postgraduate students in collage B, C & D =

$$\frac{1}{3} \times (150 + 160 + 50) = 120$$

Graduate students in collage A & E = $80 + 70 = 150$

$$\text{Required difference} = 150 - 120 = 30$$

E. Total number of students (graduate + postgraduate) in collage A in together are what percent more or less than total postgraduate students in collage B & collage E together?

A 80%

B 30%

C 50%

D 20%

E 60%

Solution

Total number of students (graduate + postgraduate) in collage A = $80 + 120 = 200$

Total postgraduate students in collage B & collage E = $150 + 100 = 250$

$$\text{Required percentage} = \frac{250-200}{250} \times 100 = 20 \%$$

10. A man spent 20% of his monthly income on house rent, 20% of the remaining income on Food. If from the remaining income, ratio of amount spent on clothing to saving of a man is 7: 9 and difference

between amount spent on Food and clothing is Rs.1080, then find income of man for nine months?

A Rs. 81000

B Rs. 70000

C Rs. 68000

D Rs. 96000

E Rs.108000

Solution

Let the monthly income of man be Rs.100x.

Amount spent on house rent = $100x \times \frac{20}{100} = 20x$

Amount spent on Food = $\frac{20}{100} \times (100x - 20x) = 16x$

Remaining amount = $100x - 20x - 16x = 64x$

Amount spent on clothing = $64x \times \frac{7}{16} = 28x$

ATQ,

$$28x - 16x = 1080$$

$$x = 90$$

So, income of man for nine months = $90 \times 100 \times 9 = \text{Rs. } 81000$

11. The ratio of speed of boat in still water to speed of stream is 8 : 5 and

total time taken by boat to cover 'D' km distance in downstream and upstream together is 32 hours. Find the time taken by boat to cover '2D' km in still water?

A 15.5 hours

B 21.5 hours

C 19.5 hours

D 17.5 hours

E 16.5 hours

Solution

Let the speed of stream be ' $5x$ ' km/h

And speed of boat in still water = $5x \times \frac{8}{5} = 8x$ km/hr

$$\text{ATQ, } \frac{D}{5x+8x} + \frac{D}{8x-5x} = 32$$

$$\frac{16D}{39x} = 32$$

$$D = 78x$$

$$\text{So, Required time} = \frac{2 \times 78x}{8x} = 19.5 \text{ hours}$$

12. Length of train A is 200 meters and length of train B is 'l' meters and train A and train B crosses a pole in 8 sec and 26 sec respectively, then find the time taken by train A to cross train B, when both trains

are running in opposite direction if ratio of speed of train A to train B is 5 : 4?

A 18 sec

B 20 sec

C 24 sec

D 12 sec

E 16 sec

Solution

Speed of train A = $\frac{200}{8} = 25$ m/sec

So, speed of train B = $25 \frac{4}{5} = 20$ m/sec

ATQ, $\frac{l}{20} = 26$

$l = 520$ meters

Now the time in which train A crosses train B running in opposite

direction = $\frac{200+520}{(25+20)} = 16$ sec

13. A shopkeeper marked up of article A at 60% above its cost price and sold it at the discount of 25%. Profit made by shopkeeper on article A is Rs.475. If the cost price of article B is 40% more than that of

article A and profit on both articles is same, then find the selling price of article B?

A Rs.3300

B Rs.3600

C Rs.3000

D Rs.3800

E Rs.4200

Solution

Let the cost price of article A = $100a$

Marked price of article A = $100a \times \frac{160}{100} = 160a$

Selling price of article, A = $160a \times \frac{(100-25)}{100} = 120a$

ATQ – $120a - 100a = 475$

$$a = \frac{95}{4}$$

Since, Selling price = cost price + profit

So, selling price of article B = $100 \times \frac{140}{100} \times \frac{95}{4} + 475 = Rs. 3800$

14. 16 men and 14 women can complete a piece of work in 30 days. If four men joined them, then they could finish the 80% of the same work in 20 days, then find the time taken by 42 women to complete the two times of the same work?

A 60 days

B 50 days

C 80 days

D 120 days

E 100 days

Solution

Let the efficiency of a man and a woman be 'x' units/day and 'y' units/day respectively.

ATQ,

$$\frac{(16x+14y) \times 30}{1} = \frac{(20x+14y) \times 20}{\frac{80}{100}}$$

$$96x + 84y = 100x + 70y$$

$$\frac{x}{y} = \frac{7}{2}$$

$$\text{Total work} = (16 \times 7 + 14 \times 2) \times 30 = 4200 \text{ units}$$

$$\text{Required days} = \frac{2 \times 4200}{42 \times 2} = 100 \text{ days}$$

15. Read the data carefully and answer the questions.

A store sold 'X' number of total three different items (Jackets, Sweaters & Sweatshirts) in two different brands (Adidas & Nike). 40% of total sold items are Jackets and the ratio of total Jackets to total Sweatshirts sold by store is 10: 9. The

ratio of total Adidas to Nike Sweaters sold by store is 7: 5 and 60% of total Jackets sold by store are Adidas brand. There are 40 Nike Sweatshirts sold by store & store sold 170 Nike brand items.

A. **Total Adidas Sweaters sold by store are what percent less than total Nike Jackets sold by store?**

A 8%

B 12.5%

C 12%

D 10%

E 17.5%

Solution

Let total number of items sold by store = $100x$

Total Jackets sold by store = $100x \times \frac{40}{100} = 40x$

Total Sweatshirts sold by store = $40x \times \frac{9}{10} = 36x$

Total Sweaters sold by store = $100x - (40x + 36x) = 24x$

Total Nike Sweaters sold by store = $24x \times \frac{5}{12} = 10x$

Total Nike Jackets sold by store = $40x \times \frac{40}{100} = 16x$

ATQ –

$$10x + 16x + 40 = 170$$

$$26x = 130$$

$$x = 5$$

Items	Adidas	Nike	Total
Jackets	120	80	200
Sweaters	70	50	120
Sweatshirts	140	40	180
Total	330	170	500

$$\text{Required percentage} = \frac{80-70}{80} \times 100 = 12.5\%$$

B. Find average number of Adidas brand of items sold by store.

☐ A 120

☐ B 90

☒ C 110

☐ D 80

☐ E 130

Solution

Let total number of items sold by store = $100x$

Total Jackets sold by store = $100x \times \frac{40}{100} = 40x$

Total Sweatshirts sold by store = $40x \times \frac{9}{10} = 36x$

Total Sweaters sold by store = $100x - (40x + 36x) = 24x$

Total Nike Sweaters sold by store = $24x \times \frac{5}{12} = 10x$

Total Nike Jackets sold by store = $40x \times \frac{40}{100} = 16x$

ATQ –

$$10x + 16x + 40 = 170$$

$$26x = 130$$

$$x = 5$$

Items	Adidas	Nike	Total
Jackets	120	80	200
Sweaters	70	50	120
Sweatshirts	140	40	180
Total	330	170	500

$$\text{Required average} = \frac{330}{3} = 110$$

C. Find ratio of total Adidas brand of Sweatshirts sold by store to total Nike brand of all three items sold by store?

A 17 : 14

B 12 : 17

C 7 : 17

D 13 : 17

E 14 : 17

Solution

Let total number of items sold by store = $100x$

Total Jackets sold by store = $100x \times \frac{40}{100} = 40x$

Total Sweatshirts sold by store = $40x \times \frac{9}{10} = 36x$

Total Sweaters sold by store = $100x - (40x + 36x) = 24x$

Total Nike Sweaters sold by store = $24x \times \frac{5}{12} = 10x$

Total Nike Jackets sold by store = $40x \times \frac{40}{100} = 16x$

ATQ –

$10x + 16x + 40 = 170$

$26x = 130$

$x = 5$

Items	Adidas	Nike	Total
Jackets	120	80	200
Sweaters	70	50	120
Sweatshirts	140	40	180
Total	330	170	500

Required ratio = $\frac{140}{170} = 14 : 17$

D. Total Adidas brand of Sweatshirts are what percent more than total Nike brand Sweaters sold by store?

- A

160%
- B

180%
- C

200%
- D

140%

E

120%

Solution

Let total number of items sold by store = $100x$

Total Jackets sold by store = $100x \times \frac{40}{100} = 40x$

Total Sweatshirts sold by store = $40x \times \frac{9}{10} = 36x$

Total Sweaters sold by store = $100x - (40x + 36x) = 24x$

Total Nike Sweaters sold by store = $24x \times \frac{5}{12} = 10x$

Total Nike Jackets sold by store = $40x \times \frac{40}{100} = 16x$

ATQ –

$$10x + 16x + 40 = 170$$

$$26x = 130$$

$$x = 5$$

Items	Adidas	Nike	Total
Jackets	120	80	200
Sweaters	70	50	120
Sweatshirts	140	40	180
Total	330	170	500

$$\text{Required percentage} = \frac{140-50}{50} \times 100 = 180\%$$

E. Find difference between total Adidas and Nike items sold by store.

A

160

B

120

C

180

D

260

E

140

Solution

Let total number of items sold by store = $100x$

Total Jackets sold by store = $100x \times \frac{40}{100} = 40x$

Total Sweatshirts sold by store = $40x \times \frac{9}{10} = 36x$

Total Sweaters sold by store = $100x - (40x + 36x) = 24x$

Total Nike Sweaters sold by store = $24x \times \frac{5}{12} = 10x$

Total Nike Jackets sold by store = $40x \times \frac{40}{100} = 16x$

ATQ –

$$10x + 16x + 40 = 170$$

$$26x = 130$$

$$x = 5$$

Items	Adidas	Nike	Total
Jackets	120	80	200
Sweaters	70	50	120
Sweatshirts	140	40	180
Total	330	170	500

Required difference = $330 - 170 = 160$

16.

Study the following information carefully and answer given questions.

What will come in the place of question mark (?) in following series?

A. 322, ?, 82, 42, 22, 12

A 172

B 165

C 164

D 158

E 162

Solution

Pattern of series –

322, ?= 162, 82, 42, 22, 12

-160 -80 -40 -20 - 10

B. 8, 5, 6, 13, 53, ?

A 427

B 425

C 421

D 423

E

429

Solution

Pattern of series –

$$8 \times 0.5 + 1 = 5$$

$$5 \times 1 + 1 = 6$$

$$6 \times 2 + 1 = 13$$

$$13 \times 4 + 1 = 53$$

$$? = 53 \times 8 + 1 = 425$$

C. 2, 15, 64, 195, ?, 393

A

381

B

387

C

392

D

389

E

385

Solution

Pattern of series –

$$2 \times 5 + 5 = 15$$

$$15 \times 4 + 4 = 64$$

$$64 \times 3 + 3 = 195$$

$$? = 195 \times 2 + 2 = \mathbf{392}$$

$$392 \times 1 + 1 = 393$$

D. 162, 125, 94, 65, ?, 23

A 42

B 38

C 40

D 41

E 43

Solution

Pattern of series –

Subtraction of consecutive prime number

$$162 - 37 = 125$$

$$125 - 31 = 94$$

$$94 - 29 = 65$$

$$? = 65 - 23 = 42$$

$$42 - 19 = 23$$

E. 33, 36, 44, 59, ?, 118

A**83****B****85****C****81****D****87****E****91**

Solution

Pattern of series –

$$33 + (2^2 - 1) = 36$$

$$36 + (3^2 - 1) = 44$$

$$44 + (4^2 - 1) = 59$$

$$? = 59 + (5^2 - 1) = 83$$

$$83 + (6^2 - 1) = 118$$

17. **P and Q started a business and investment of Q is 25% more than that of P. After six months P doubled his investment and Q withdrew $\frac{1}{3}$ rd of his investment. If at the end of a year total profit obtained by them is Rs. 12200, then find the profit share of P?**

A**Rs. 7200**

B

Rs. 5000

C

Rs. 7800

D

Rs. 5600

E

Rs. 8400

Solution

Let investment of P = Rs. $4x$ So, investment of Q = $4x \frac{125}{100} = Rs. 5x$

ATQ –

Ratio of profit share of P to Q =

$$(4x \times 6 + 4x \times 2 \times 6) : (5x \times 6 + 5x \times \frac{2}{3} \times 6)$$

$$= 72x : 50x = 36x : 25x$$

$$\text{Profit of P} = 12200 \times \frac{36x}{36x+25x} = Rs. 7200$$

18. A man invested Rs. P in scheme X at the rate of 20% p.a. on compound annually for two years. Man invested total amount received from scheme X in another scheme Y at the rate of 5% p.a. on simple interest for 2 years. Find interest received from scheme Y is what percent of interest received from scheme X?

A

40.72%

B 36.72%

C 39.72%

D 16.36%

E 32.72%

Solution

Equivalent interest received by man from scheme X at the rate of 20% p.a.

for two years = $20 + 20 + \frac{20 \times 20}{100} = 44\%$

So, total interest received by man from scheme X = $P \times \frac{44}{100} = 0.44P$

Total amount received by man from scheme X = $P + 0.44P = 1.44P$

Total interest received by man from scheme Y = $1.44P \times \frac{5 \times 2}{100} = 0.144P$

Required percentage = $\frac{0.144P}{0.44P} \times 100 = 32.72\%$

19. Four years ago, age of A is six years more than half of the age of B at that time. If eight years hence average age of A & B will be 42 years, then ratio of age of A to that of B two years hence will be?

A 5 : 6

B 7 : 12

C**5 : 7****D****7 : 9****E****3 : 4**

Solution

Let four years ago age of B = $2a$

So, age of A = $\frac{2a}{2} + 6 = a + 6$

ATQ –

$$(2a + 12) + (a + 18) = 42 \times 2$$

$$3a = 54$$

$$a = 18 \text{ years}$$

$$\text{Age of A} = (18 + 10) = 28 \text{ years}$$

$$\text{Age of B} = 2 \times 18 + 4 = 40 \text{ years}$$

$$\text{Required ratio} = (28 + 2) : (40 + 2) = 5 : 7$$

20. In a vessel, milk and water are in the ratio of 5 : 2 respectively. If 42 liter of mixture is taken out from the vessel and 32 liter of water is added, then new ratio of milk and water becomes 7 : 6. Find initial quantity of mixture in vessel?

A**84 liters****B****98 liters**

C 126 liters

D 154 liters

E 140 liters

Solution

Let total mixture in vessel be x liters

ATQ,

$$\frac{\frac{5x}{7} - 42 \times \frac{5}{7}}{\frac{2x}{7} - 42 \times \frac{2}{7} + 32} = \frac{7}{6}$$
$$\frac{5x - 210}{2x + 140} = \frac{7}{6}$$

$$30x - 1260 = 14x + 980$$

$$16x = 2240$$

$$x = 140 \text{ liters}$$

21. The ratio of the radius of two circles X & Y is 3 : 4 respectively and the sum of circumference of circle X and diameter of circle Y is 188 cm. If the ratio of side of a square to the sum of the radius of circle X & Y is 8 : 7, then find the perimeter of the square.

A 200 cm

B 208 cm

C 216 cm

D 224 cm

E 232 cm

Solution

Let radius of circle X & Y be $3r$ and $4r$ respectively

$$2 \times 227 \times 3r + 2 \times 4r = 188 \text{ cm}$$

$$r = 7 \text{ cm}$$

$$\text{Side of square} = \frac{8}{7} \times (3 \times 7 + 4 \times 7) = 56 \text{ cm.}$$

$$\text{Perimeter of square} = 56 \times 4 = 224 \text{ cm}$$

22. Study the following information and answer the questions below:

Eight persons A, B, C, D, E, G, H and K sit in a linear row and face north (but not necessarily in the same order). All the persons work in a company on different designations viz. MD, CMD, CEO, Senior executive, Executive, Manager, Associate Manager and HR. Two persons sit between B and the one who is CEO. G who is HR sits third to the right of CEO. K is one of the immediate neighbours of HR. The one who is Executive sits exactly between K and the one who is CEO. D sits third to the left of the one who is Executive. D sits adjacent to A who is not CEO. Same number of persons sit to the left of A and right of the one who is Manager. C and the one who is Senior executive are immediate neighbours. Three persons sit between H and the one who is MD. D is not Associate Manager.

A. Who among the following sits to the immediate right of G?



A



D



E



K



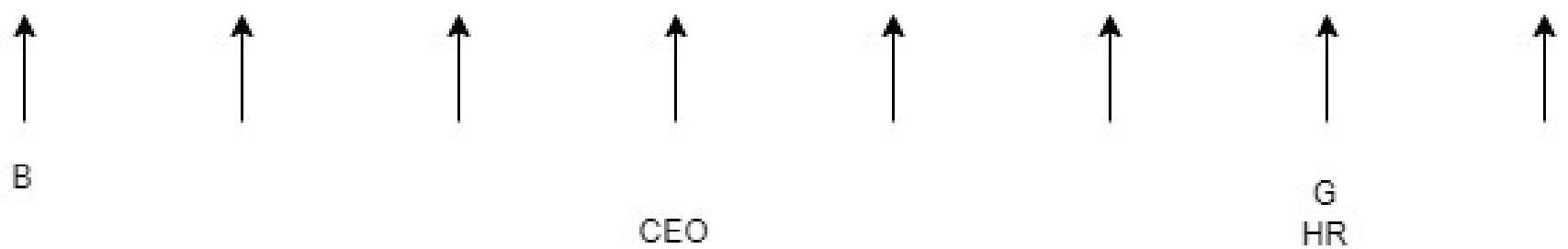
None of these

Solution

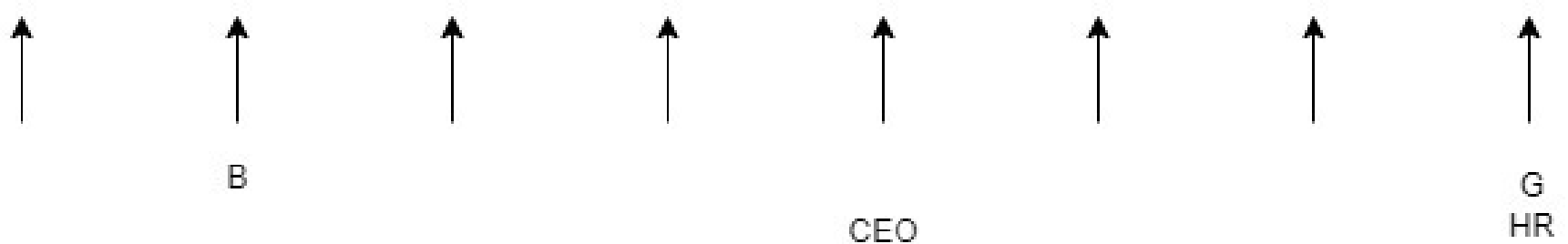
Given, two persons sit between B and the one who is CEO. G who is HR sits third to the right of CEO. Therefore, CEO can be either fourth from left end or fifth from left end.

So there will be two cases,

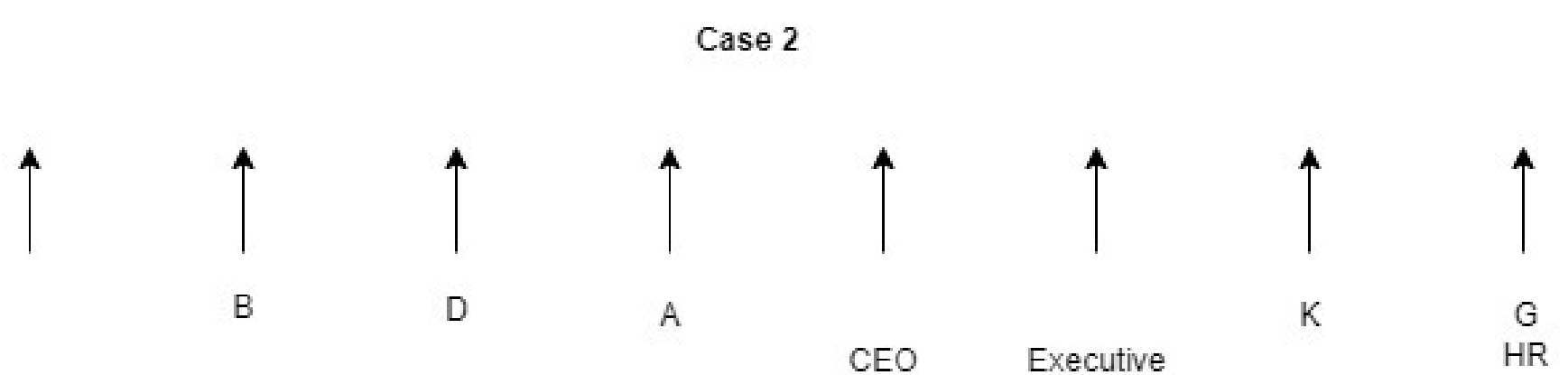
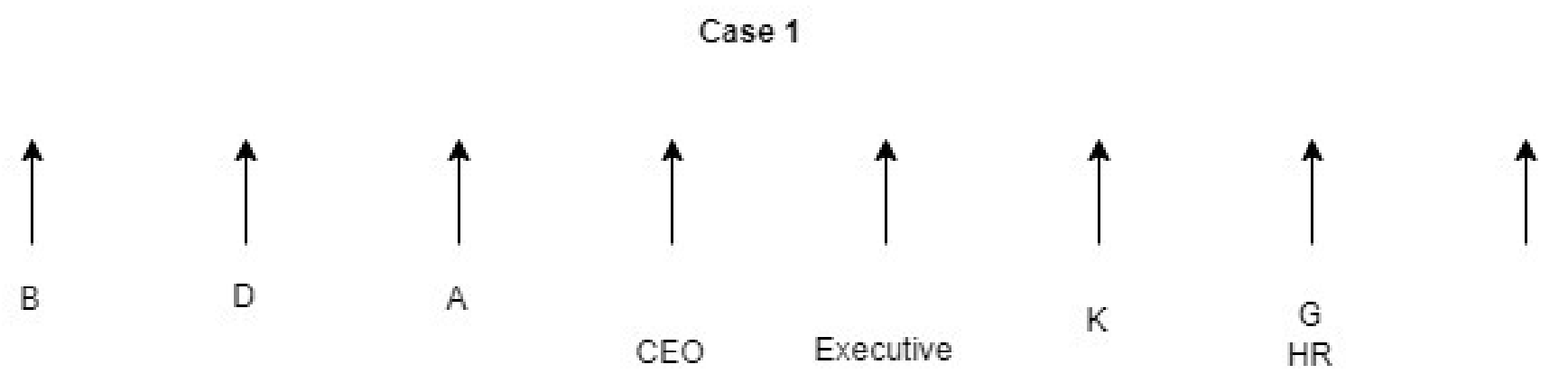
Case 1



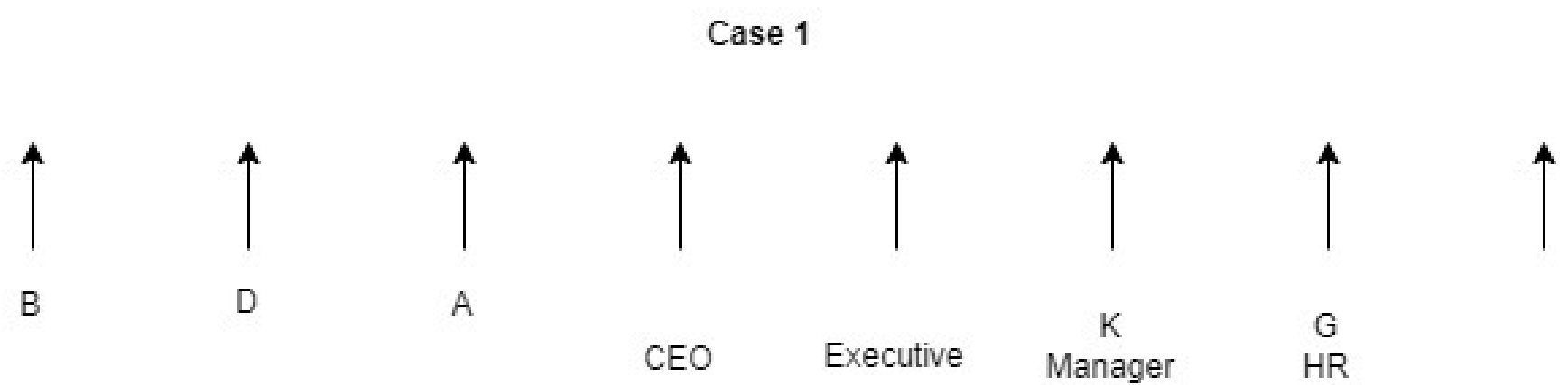
Case 2



K is one of the immediate neighbours of HR. The one who is Executive sits exactly between K and the one who is CEO. D sits third to the left of the one who is Executive. D sits adjacent to A who is not CEO

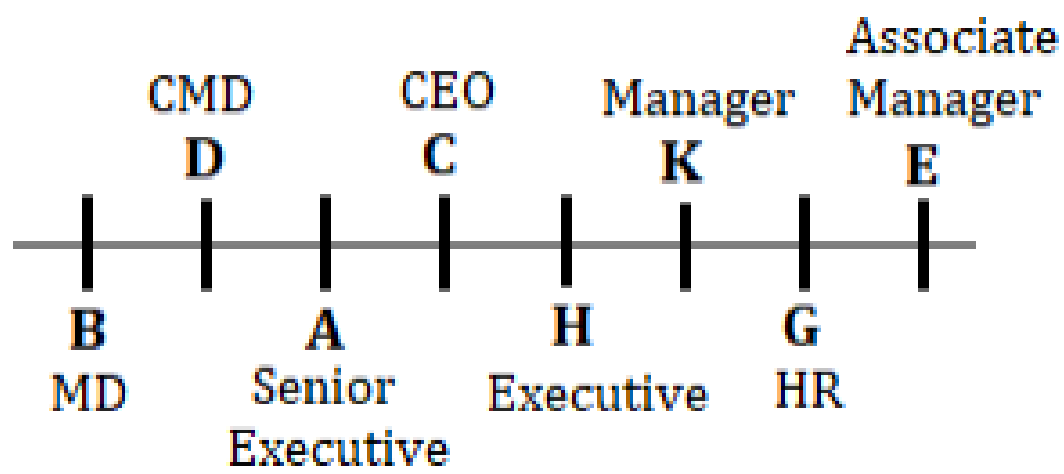


Same number of persons sit to the left of A and right of the one who is Manager. C and the one who is Senior executive are immediate neighbours. In case 2, three persons are left of A, so there must be three people to the right of manager, but the person, who is fourth from right end is CEO, so case 2 is invalid.



C and the one who is Senior executive are immediate neighbours. Three persons sit between H and the one who is MD. D is not Associate Manager.

So final arrangement will be,



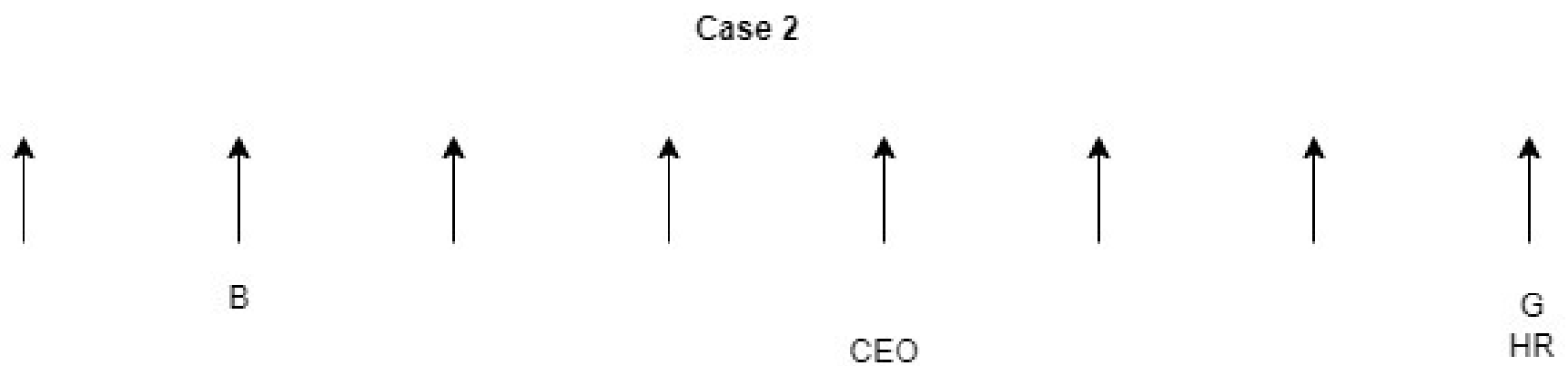
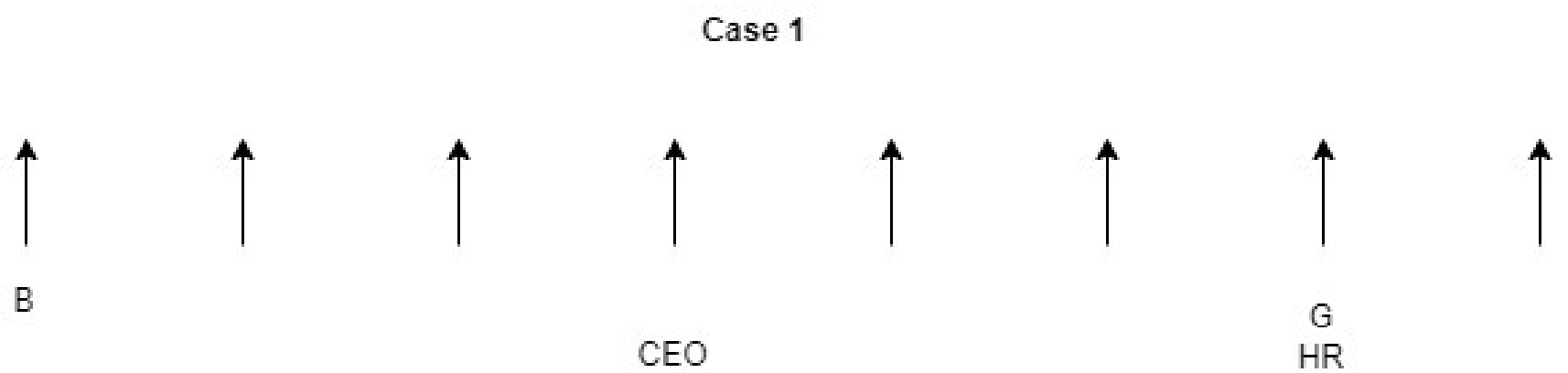
B. How many persons sit between the one who is CMD and K?

- ☒ A Three
- ☐ B Four
- ☐ C Five
- ☐ D Two
- ☐ E None of these

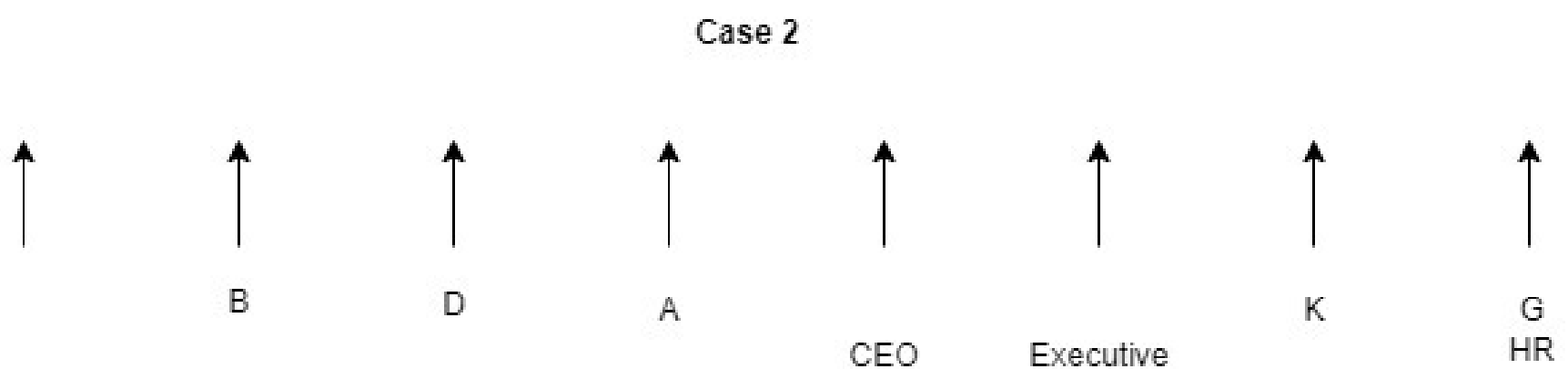
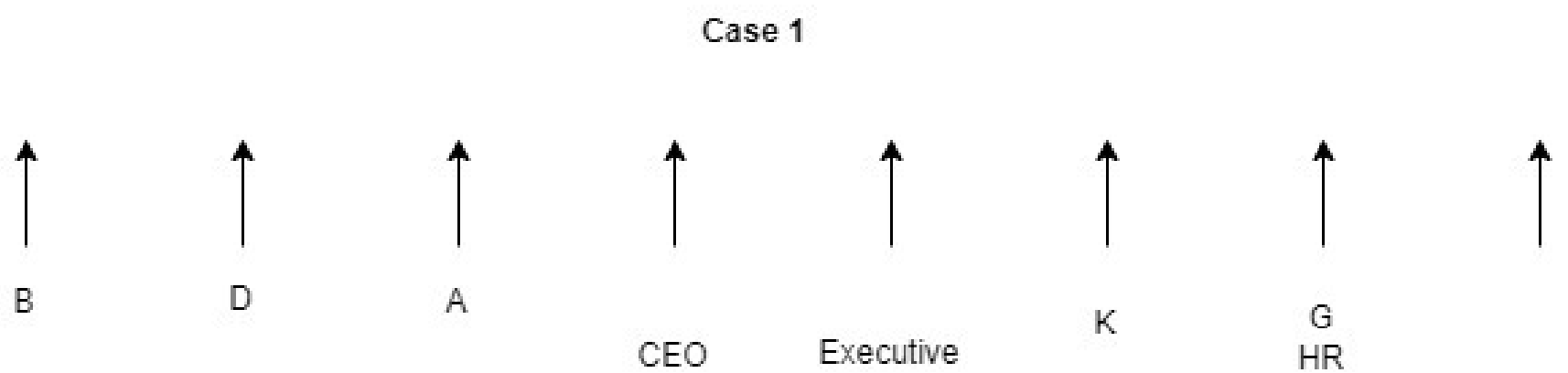
Solution

Given, two persons sit between B and the one who is CEO. G who is HR sits third to the right of CEO. Therefore, CEO can be either fourth from left end or fifth from left end.

So there will be two cases,

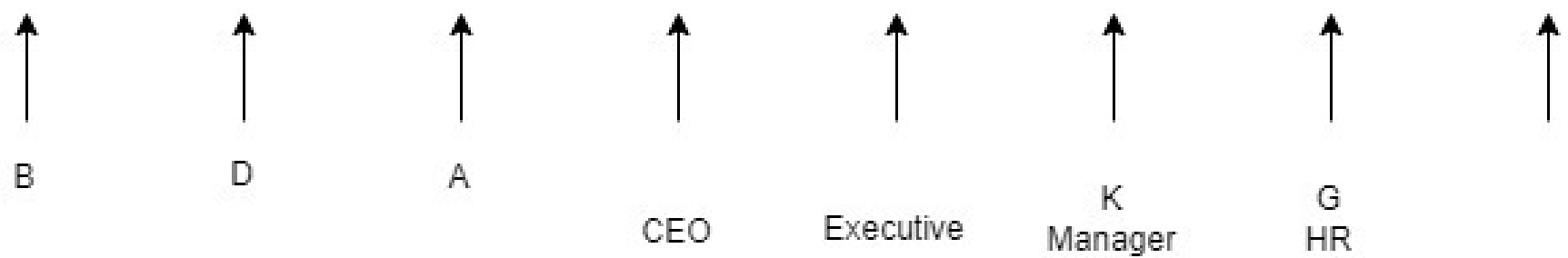


K is one of the immediate neighbours of HR. The one who is Executive sits exactly between K and the one who is CEO. D sits third to the left of the one who is Executive. D sits adjacent to A who is not CEO



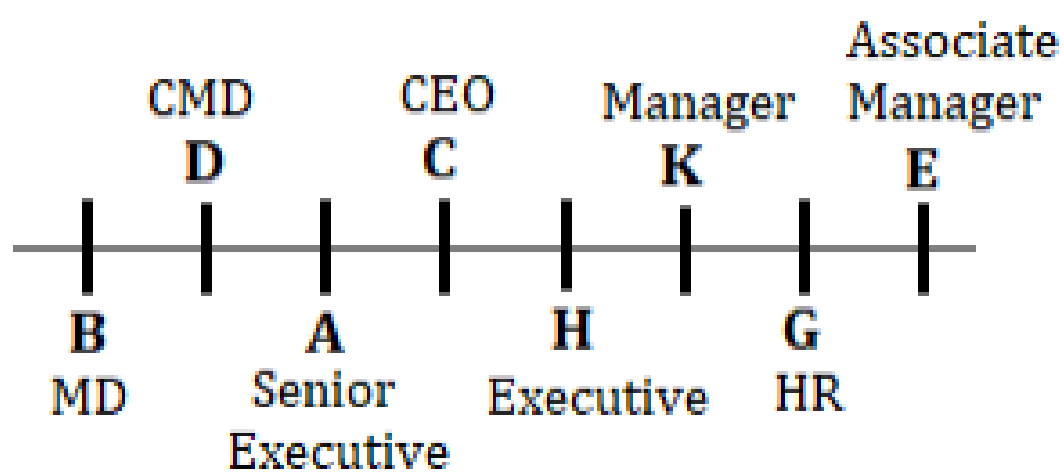
Same number of persons sit to the left of A and right of the one who is Manager. C and the one who is Senior executive are immediate neighbours. In case 2, three persons are left of A, so there must be three people to the right of manager, but the person, who is fourth from right end is CEO, so case 2 is invalid.

Case 1



C and the one who is Senior executive are immediate neighbours. Three persons sit between H and the one who is MD. D is not Associate Manager.

So final arrangement will be,



C. D works on which among the following designation?



A Manager



B CEO



C MD



D CMD

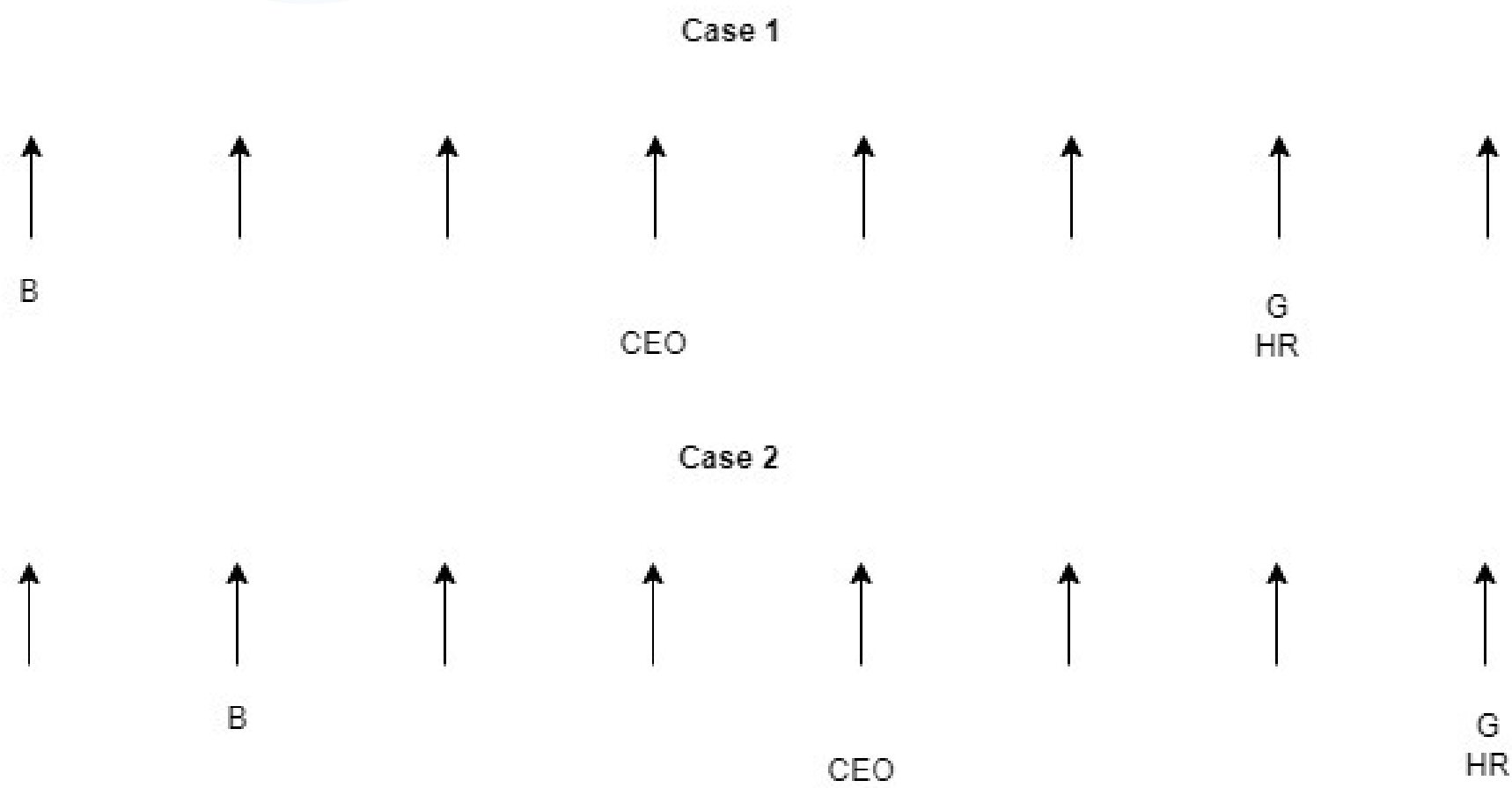


E None of these

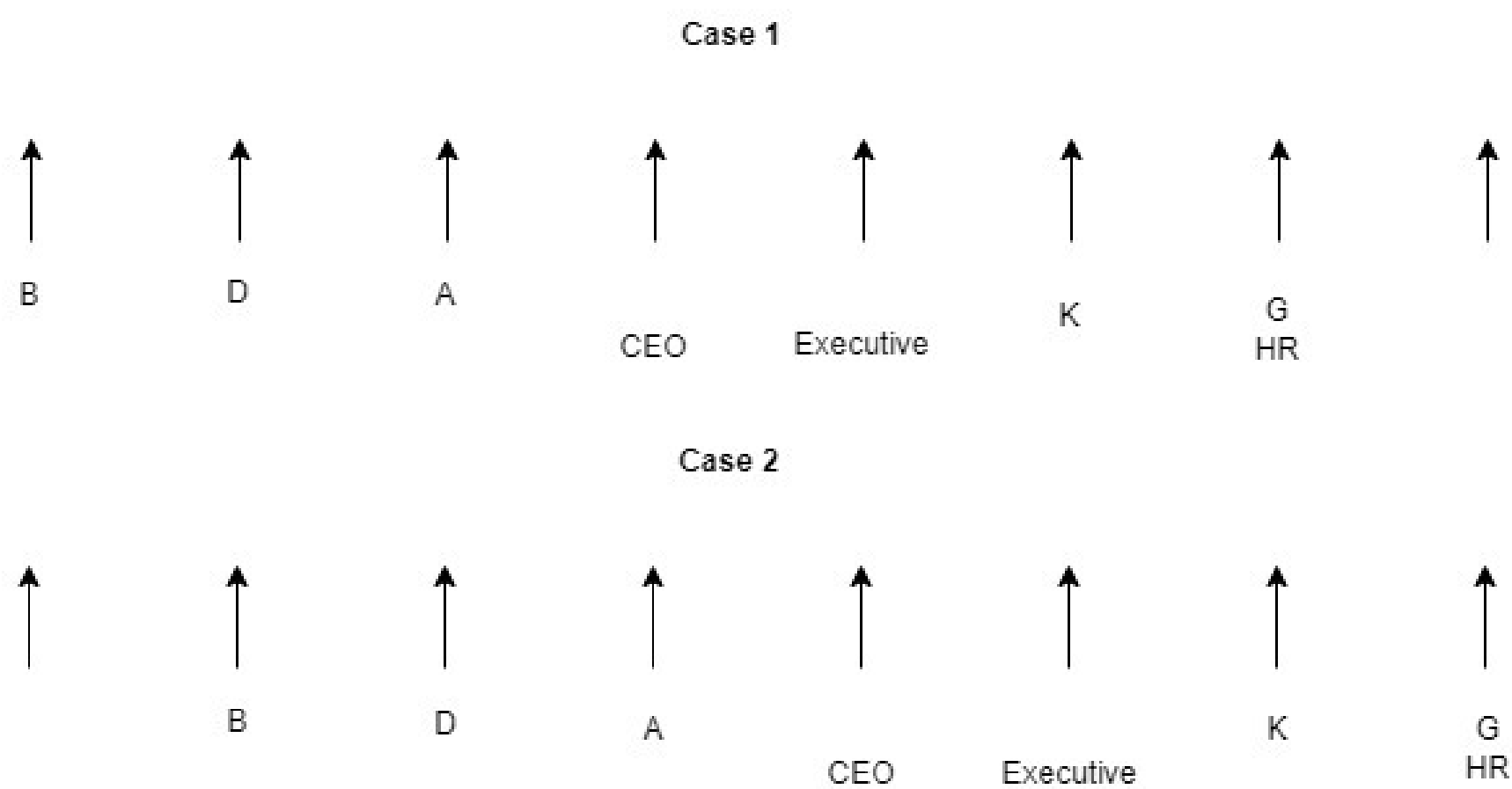
Solution

Given, two persons sit between B and the one who is CEO. G who is HR sits third to the right of CEO. Therefore, CEO can be either fourth from left end or fifth from left end.

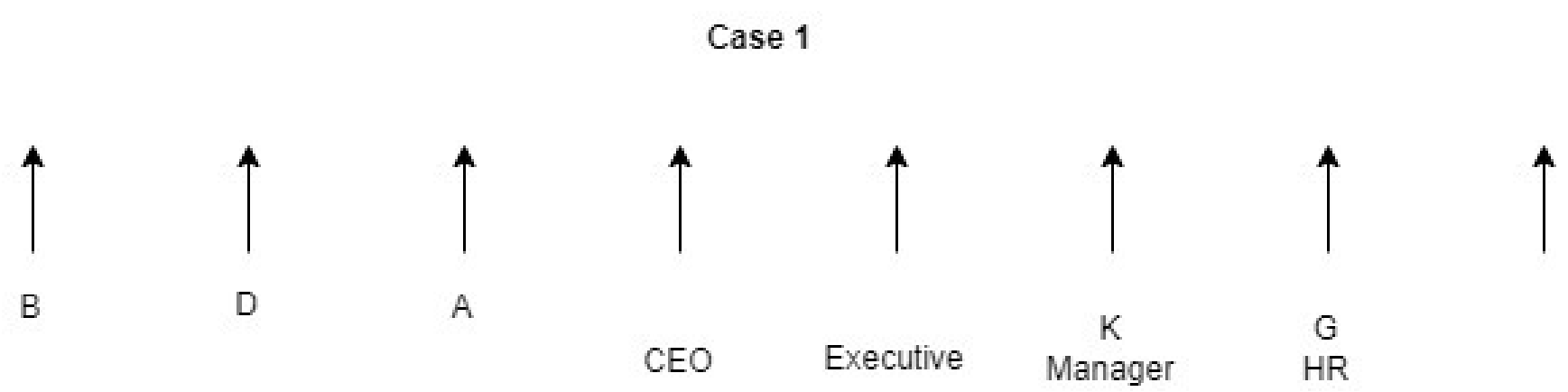
So there will be two cases,



K is one of the immediate neighbours of HR. The one who is Executive sits exactly between K and the one who is CEO. D sits third to the left of the one who is Executive. D sits adjacent to A who is not CEO

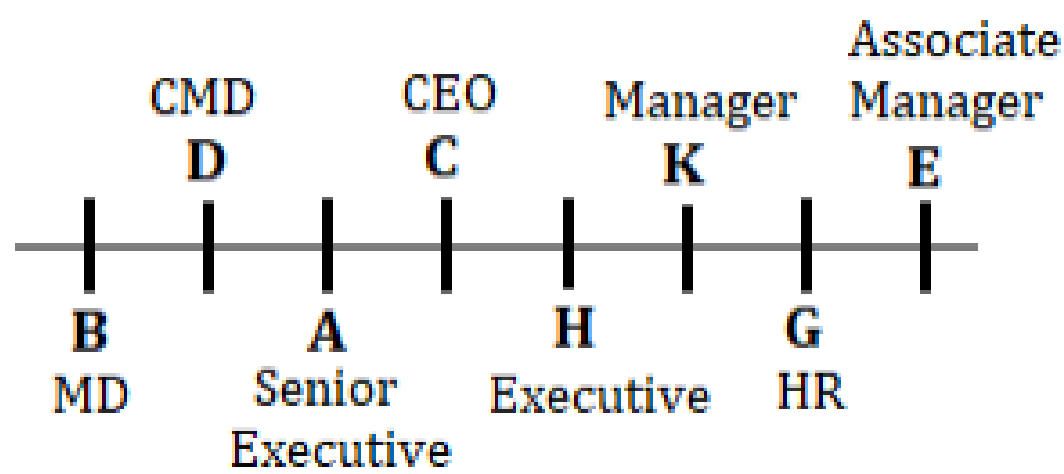


Same number of persons sit to the left of A and right of the one who is Manager. C and the one who is Senior executive are immediate neighbours. In case 2, three persons are left of A, so there must be three people to the right of manager, but the person, who is fourth from right end is CEO, so case 2 is invalid.



C and the one who is Senior executive are immediate neighbours. Three persons sit between H and the one who is MD. D is not Associate Manager.

So final arrangement will be,



D. What is the position of A with respect to the one who is CEO?

- ☐ A Second to the left
- ☒ B Immediate left
- ☐ C Immediate right

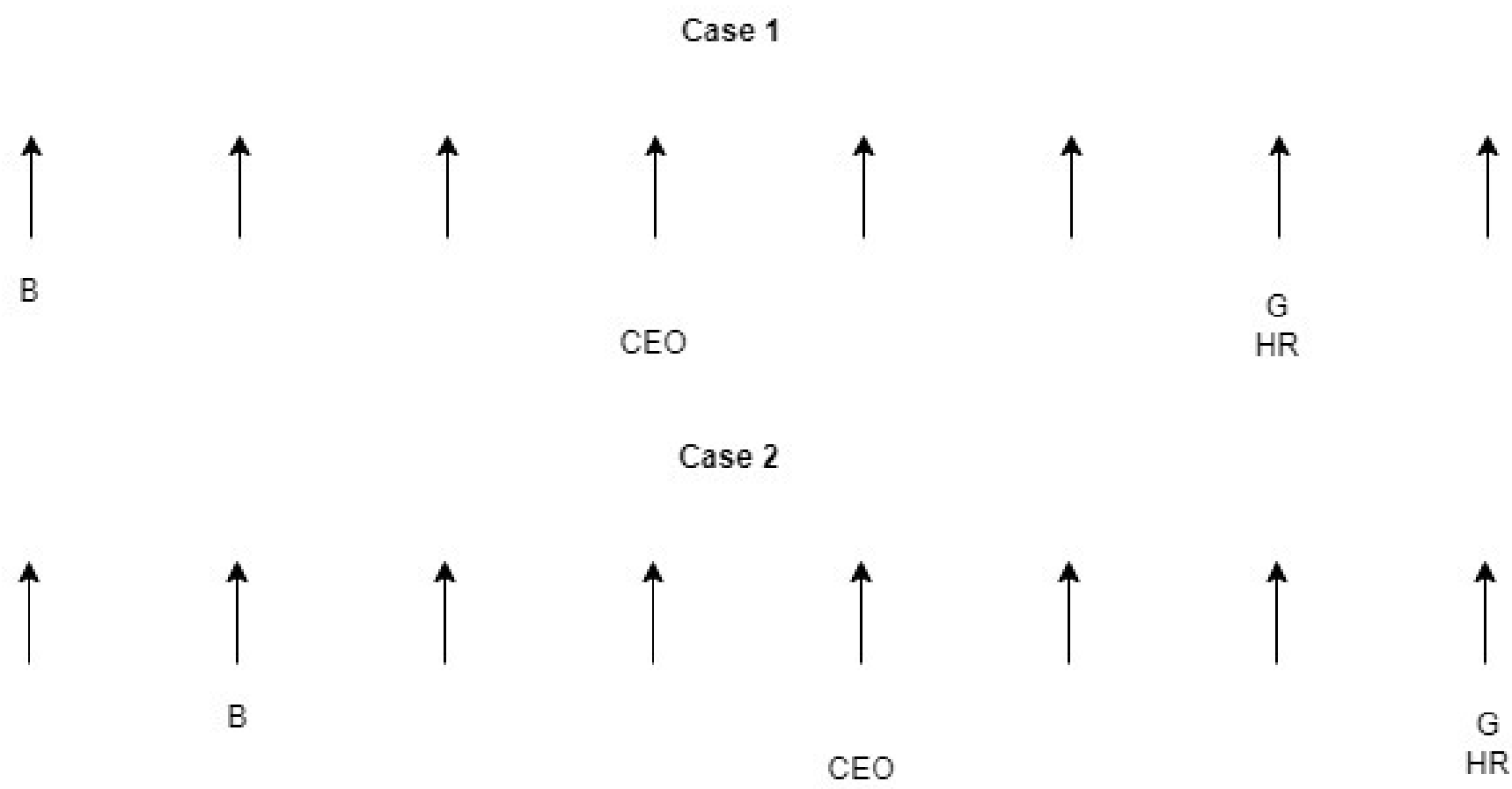
D Third to the right

E None of these

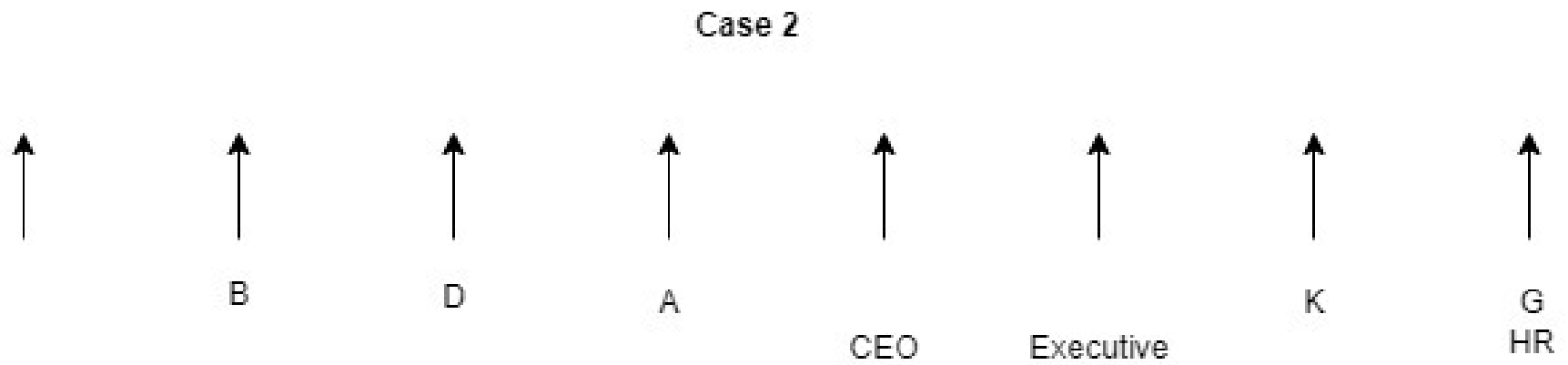
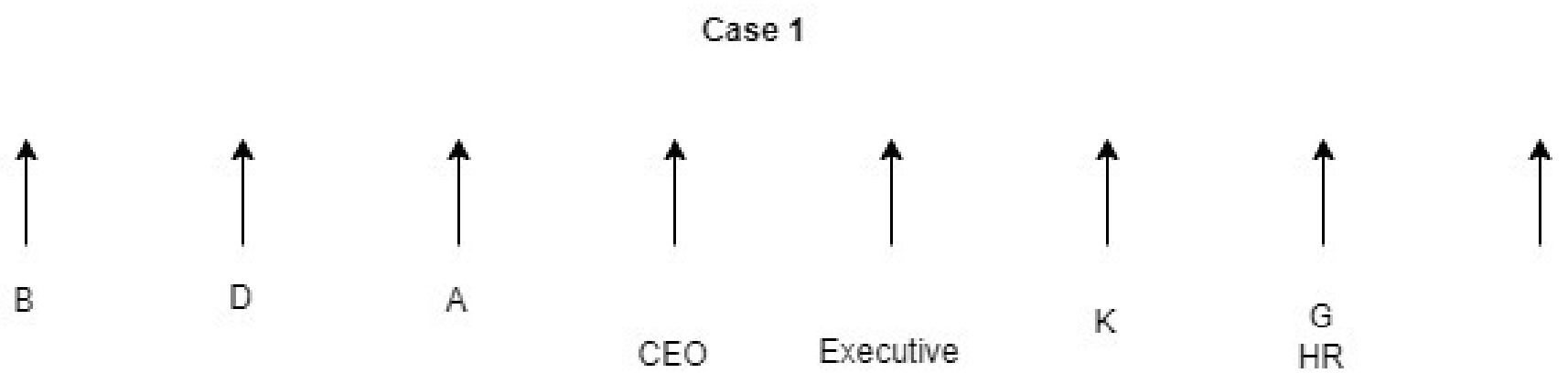
Solution

Given, two persons sit between B and the one who is CEO. G who is HR sits third to the right of CEO. Therefore, CEO can be either fourth from left end or fifth from left end.

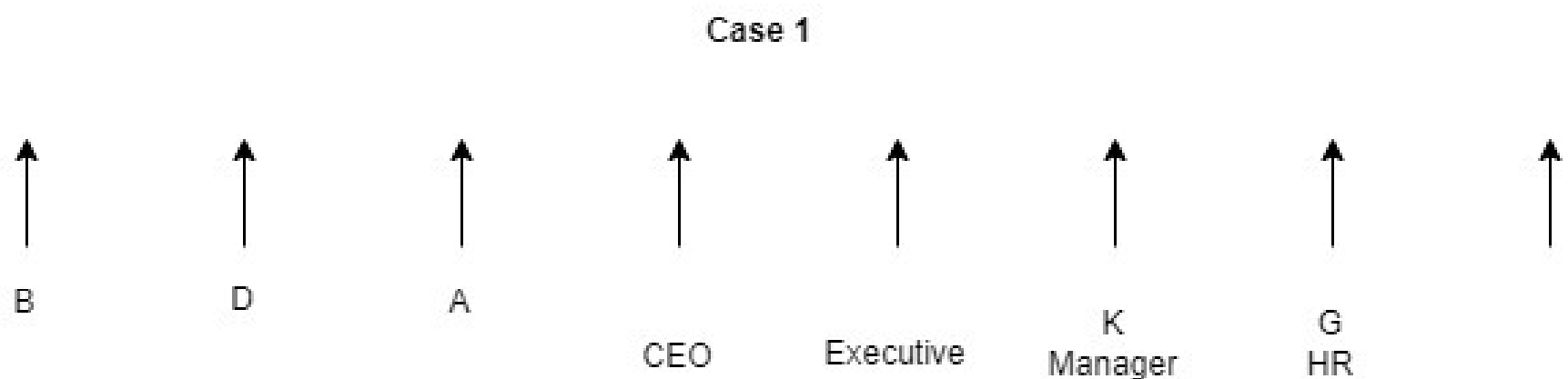
So there will be two cases,



K is one of the immediate neighbours of HR. The one who is Executive sits exactly between K and the one who is CEO. D sits third to the left of the one who is Executive. D sits adjacent to A who is not CEO

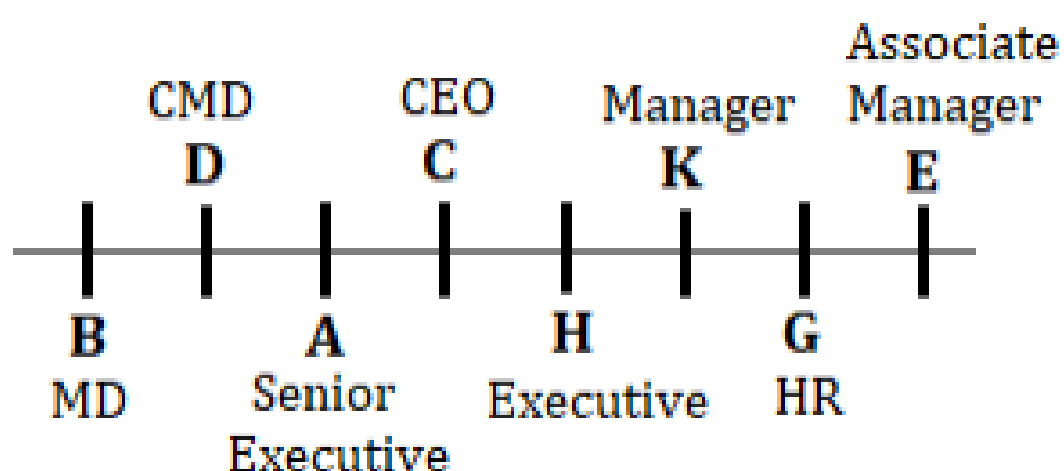


Same number of persons sit to the left of A and right of the one who is Manager. C and the one who is Senior executive are immediate neighbours. In case 2, three persons are left of A, so there must be three people to the right of manager, but the person, who is fourth from right end is CEO, so case 2 is invalid.



C and the one who is Senior executive are immediate neighbours. Three persons sit between H and the one who is MD. D is not Associate Manager.

So final arrangement will be,



E. Who among the following is Associate Manager?

☐ A B

☒ B E

☐ C K

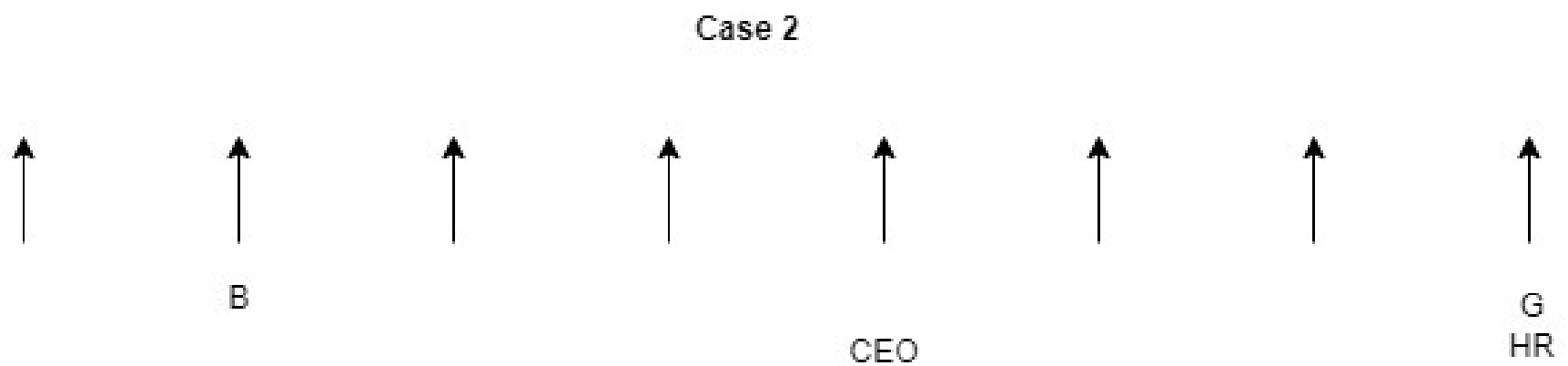
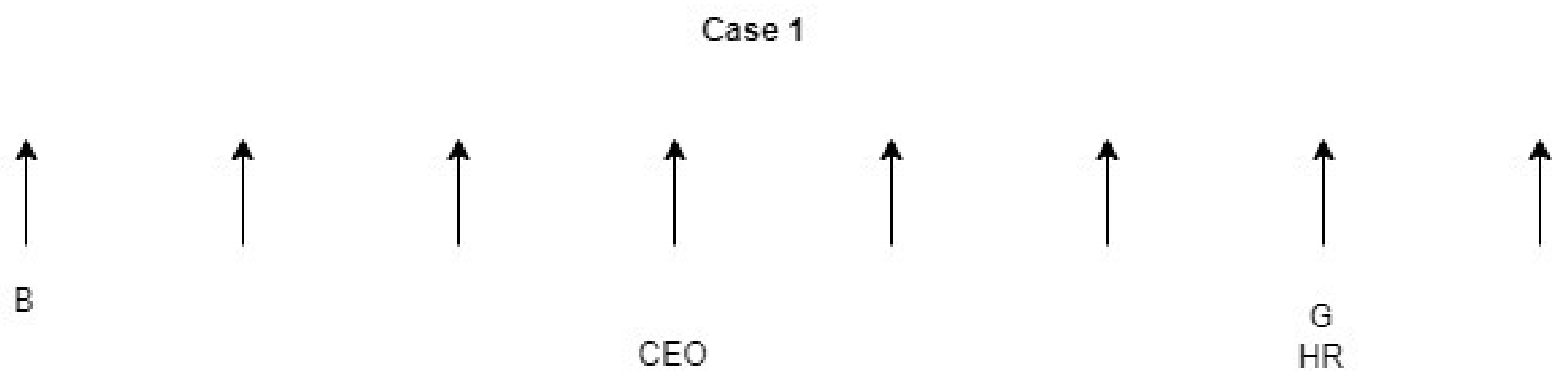
☐ D H

☐ E None of these

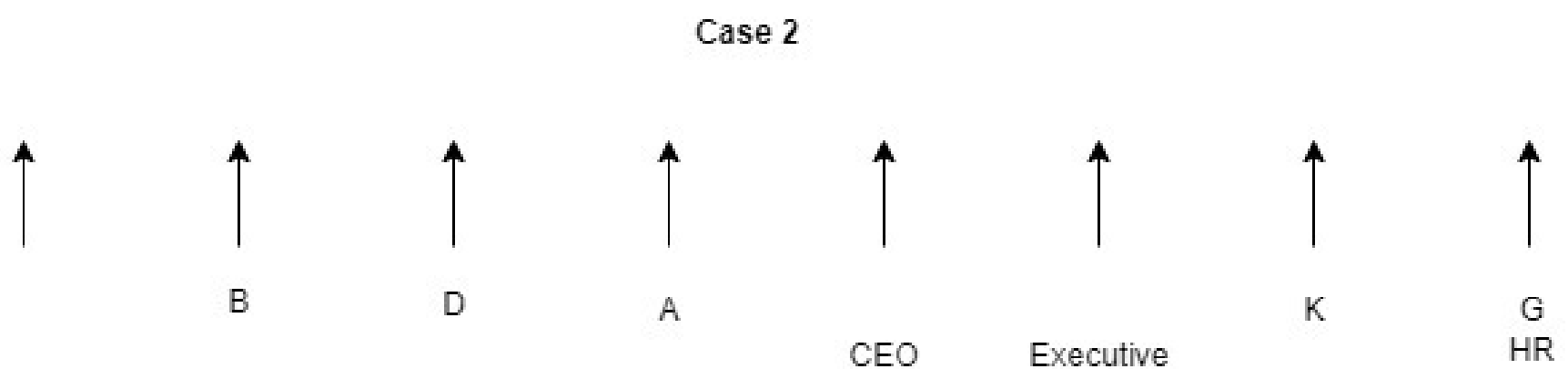
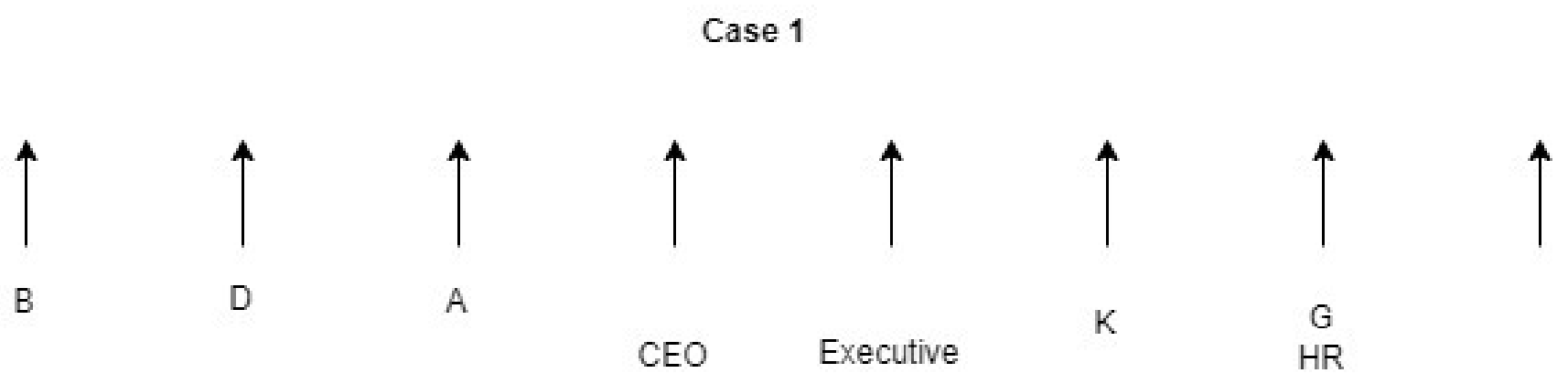
Solution

Given, two persons sit between B and the one who is CEO. G who is HR sits third to the right of CEO. Therefore, CEO can be either fourth from left end or fifth from left end.

So there will be two cases,

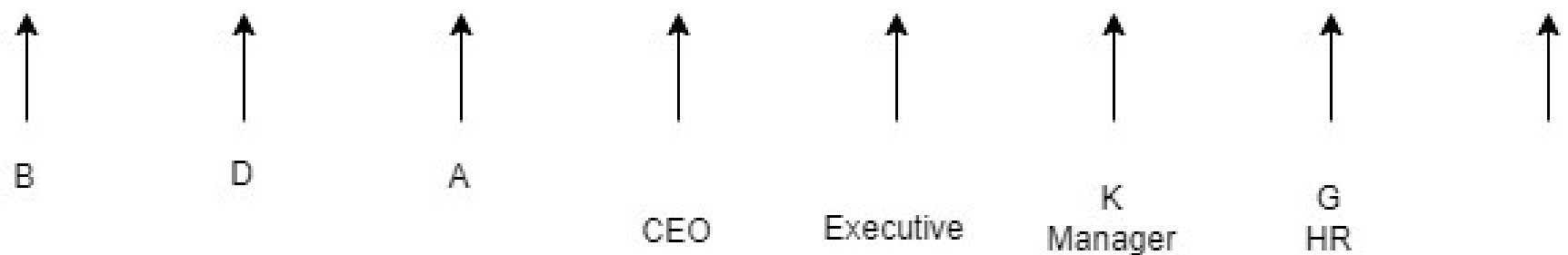


K is one of the immediate neighbours of HR. The one who is Executive sits exactly between K and the one who is CEO. D sits third to the left of the one who is Executive. D sits adjacent to A who is not CEO



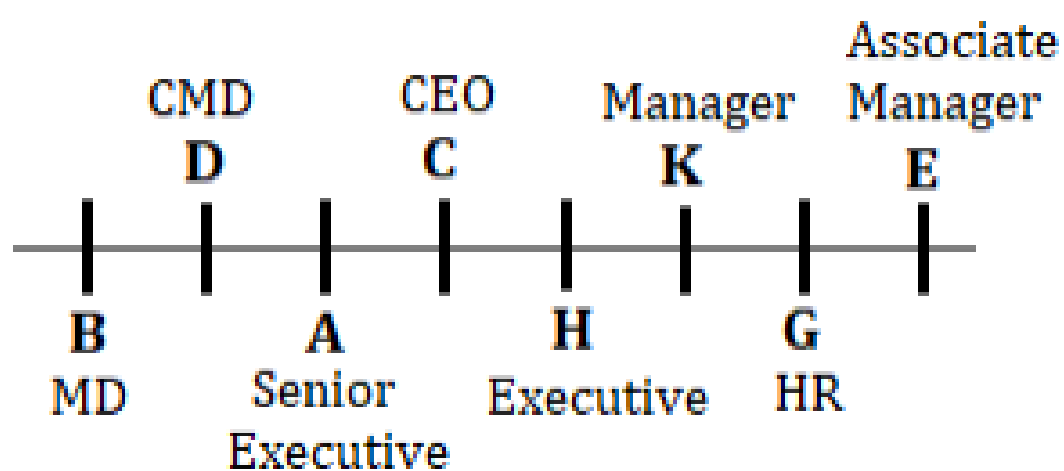
Same number of persons sit to the left of A and right of the one who is Manager. C and the one who is Senior executive are immediate neighbours. In case 2, three persons are left of A, so there must be three people to the right of manager, but the person, who is fourth from right end is CEO, so case 2 is invalid.

Case 1



C and the one who is Senior executive are immediate neighbours. Three persons sit between H and the one who is MD. D is not Associate Manager.

So final arrangement will be,



23. Study the given information carefully to answer the questions below:

In a certain code language

‘Entrance Score Attempt’ is coded as ‘gt dt ct’

‘Score Result Rank’ is coded as ‘dt bj rt’

‘Attempt Rank Advantage’ is coded as ‘ct bj nt’ ‘Practice Exam Attempt’ is coded as ‘bt ht ct’

‘Exam Analysis Score’ is coded as ‘dt st ht’

A. What will be the code for ‘Attempt Analysis’ in the given code language?

A

ct st

B gt st

C ct bj

D st ht

E None of these

Solution

Words	Codes
Entrance	gt
Exam	ht
Analysis	st
Score	dt
Attempt	ct
Practice	bt
Result	rt
Rank	bj
Advantage	nt

B. The code ‘bj’ stands for which among the following words?



Score



Rank



Result



Advantage



Can't be determined

Solution

Words	Codes
Entrance	gt
Exam	ht
Analysis	st
Score	dt
Attempt	ct
Practice	bt
Result	rt
Rank	bj
Advantage	nt

C. Which among the following words are coded as ‘ct rt nt’ in the given code language?

A Practice Attempt Result

B Attempt Result Advantage

C Exam Analysis Score

D Rank Score Attempt

E None of these

Solution

Words	Codes
Entrance	gt
Exam	ht
Analysis	st
Score	dt
Attempt	ct
Practice	bt
Result	rt

Words	Codes
Rank	bj
Advantage	nt

D. What is the code for ‘Analysis’ according to the given code language?

- ☐ A rt
- ☐ B ht
- ☐ C nt
- ☒ D st
- ☐ E None of these

Solution

Words	Codes
Entrance	gt
Exam	ht
Analysis	st
Score	dt

Words	Codes
Attempt	ct
Practice	bt
Result	rt
Rank	bj
Advantage	nt

E. Which among the following is the code for ‘Exam’?

- A

ht
- B

bt
- C

ct
- D

st
- E

None of these

Solution

Words	Codes
Entrance	gt

Words	Codes
Exam	ht
Analysis	st
Score	dt
Attempt	ct
Practice	bt
Result	rt
Rank	bj
Advantage	nt

24. Study the following information and answer the questions below:

Six persons P, Q, R, S, T and V sit around a circular table but not necessarily in the same order. Three of them face inside while rest three faces outside the centre. They are of different ages (in years) viz. 15, 16, 18, 21, 25 and 27 but not in the same order as given. V and R sits immediate left to each other. R’s age is perfect square number. Difference between the age of R and S is 2 years. S sits third to the right of R. P and T are immediate neighbours. The ages of both P and T are an even number. The age of Q is a multiple of five and sits second to the left to P. The persons whose age are a perfect square are immediate neighbours. T and Q faces each other.

A. What is the age of R?

A

16 years

B

15 years

C

27 years

D**25 years****E**

None of these

Solution

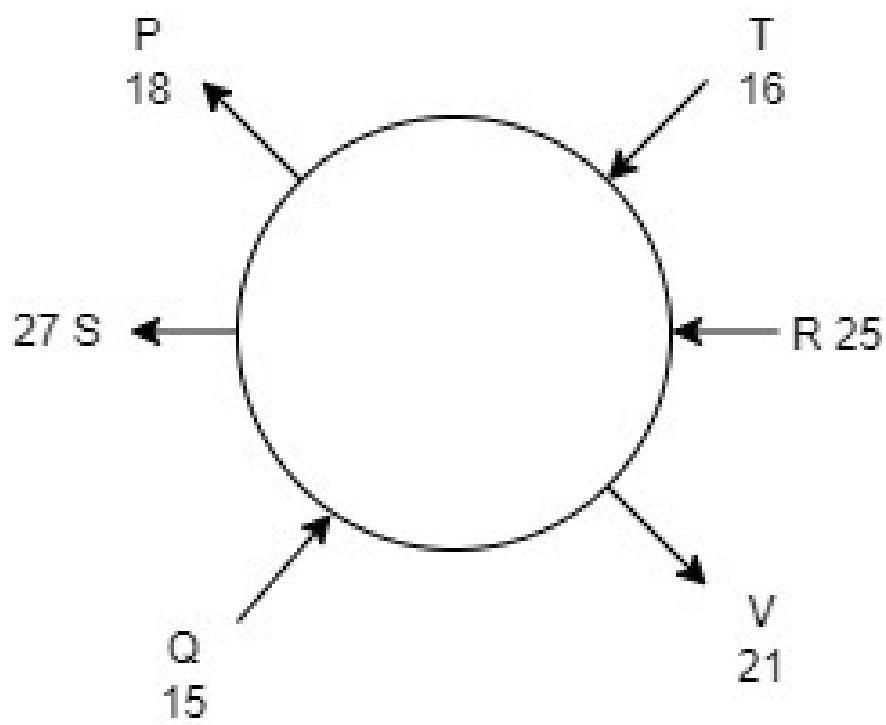
Given, V and R sits immediate left to each other. R's age is perfect square number. Difference between the age of R and S is 2 years.

So, R's age can be 16 or 25 and S can be 18 years or 27 years old. And V and R are sitting facing opposite directions.

S sits third to the right of R. P and T are immediate neighbours. The ages of both P and T are an even number. So, the possible ages of P and T are 18 and 16 years. Therefore, age of R is 25 years and age of S is 27 years.

Also given, The age of Q is a multiple of five and sits second to the left to P. So, Q's age is 15 years. So V is 21 years old.

So the arrangement will be,



B. Who among the following is 21 years old?

- ☐ A The one who faces R
- ☐ B S
- ☒ C The one who sits immediate left of R
- ☐ D Either (b) or (c)
- ☐ E None of these

Solution

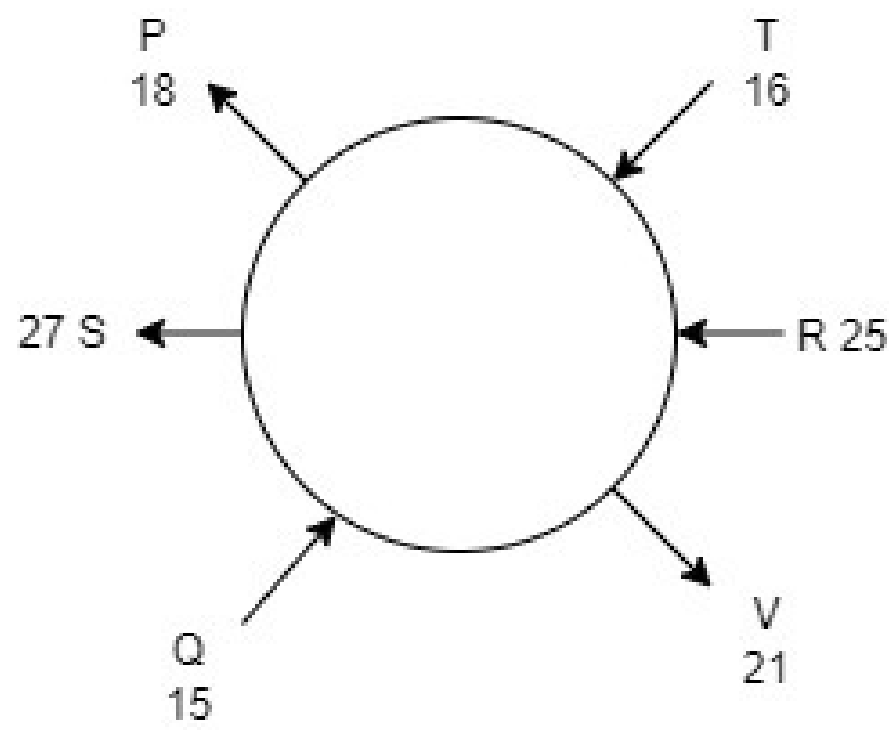
Given, V and R sits immediate left to each other. R's age is perfect square number. Difference between the age of R and S is 2 years.

So, R's age can be 16 or 25 and S can be 18 years or 27 years old. And V and R are sitting facing opposite directions.

S sits third to the right of R. P and T are immediate neighbours. The ages of both P and T are an even number. So, the possible ages of P and T are 18 and 16 years. Therefore, age of R is 25 years and age of S is 27 years.

Also given, The age of Q is a multiple of five and sits second to the left to P. So, Q's age is 15 years. So V is 21 years old.

So the arrangement will be,



C. Who among the following sits second to the right of T?

- ☐ A The one who sits immediate right of V
- ☐ B The one who sits second to the right of Q
- ☒ C The one whose age is 27 years
- ☐ D V
- ☐ E None of these

Solution

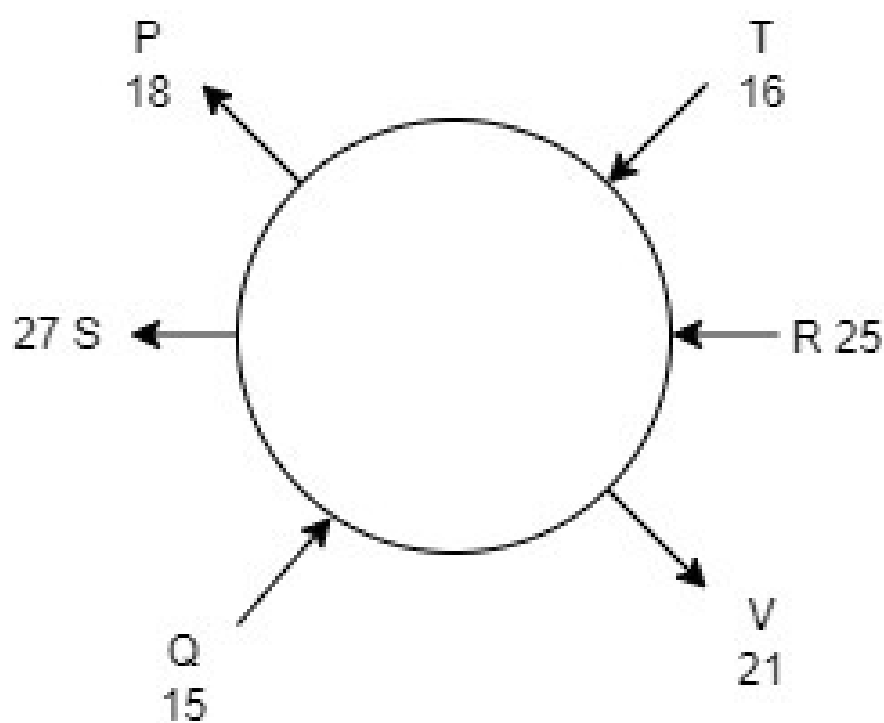
Given, V and R sits immediate left to each other. R's age is perfect square number. Difference between the age of R and S is 2 years.

So, R's age can be 16 or 25 and S can be 18 years or 27 years old. And V and R are sitting facing opposite directions.

S sits third to the right of R. P and T are immediate neighbours. The ages of both P and T are an even number. So, the possible ages of P and T are 18 and 16 years. Therefore, age of R is 25 years and age of S is 27 years.

Also given, The age of Q is a multiple of five and sits second to the left to P. So, Q's age is 15 years. So V is 21 years old.

So the arrangement will be,



25. Study the given series carefully and answer the questions below:

I E * 6 B 5 4 # 5 U I 6 L S H 7 2 I Y 8 9 @ G \$ 4 6 A R 7 2

A. How many symbols are there in the given series which are immediately followed by a number and immediately preceded by a consonant?

A

One

B

None

C

Two

D

Three

E

None of these

Solution

'\$' in ' G \$ 4 ' satisfies given condition.

B. Which among the following element is 18th from right end of the given series?

A

6

B

L

C

S

D

I

E

None of these

Solution

'L' is the 18th element from right end of the given series.

26. In the word 'OPERATION', if all the consonants are replaced with their previous letter and all the vowels are replaced with their next letter according to alphabetical series, then how many vowels are there in the new word formed after the rearrangement?

A

One

B

Two

C

Four

D

Three

E

None of these

Solution

After arrangement, 'POFQBSJPM' , so one is the answer.

27. Study the given information carefully and answer questions given.

In each of the questions below are given some statements followed by some conclusions. You have to take the given statements to be true even if they seem to be at variance with commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.

A. Statements: No animal is bird. Only a few bird is rabbit. Some rabbit is owl.

Conclusion:

I. Some bird is not rabbit.

II. No owl is animal.

A If both conclusion I and II follows.

B If neither conclusion I nor II follows.

C If only conclusion II follows.

D If either conclusion I or II follows.

E If only conclusion I follows.

Solution



B. Statements: Only red is yellow. Only a few white is red.

Conclusion:

I. No yellow is white.

II. Some white is not yellow.

III. All red can be white.

A None follows

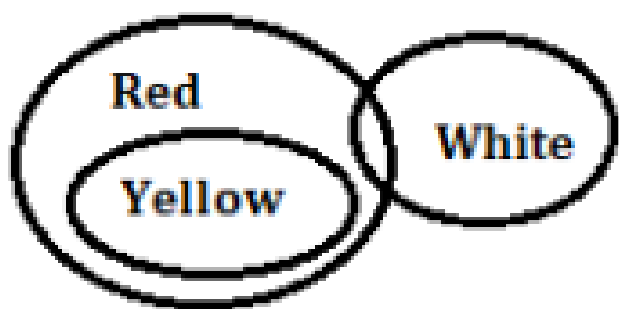
B Only conclusion II follows

C Both conclusion I and II follow

D All follows

E None of these

Solution



C. Statements: Some rocks are marble. All marble are stone. No stone is sand.

Conclusion:

I. Some rocks are not sand.

II. Some marble is sand.

- A

If only conclusion I follows.
- B

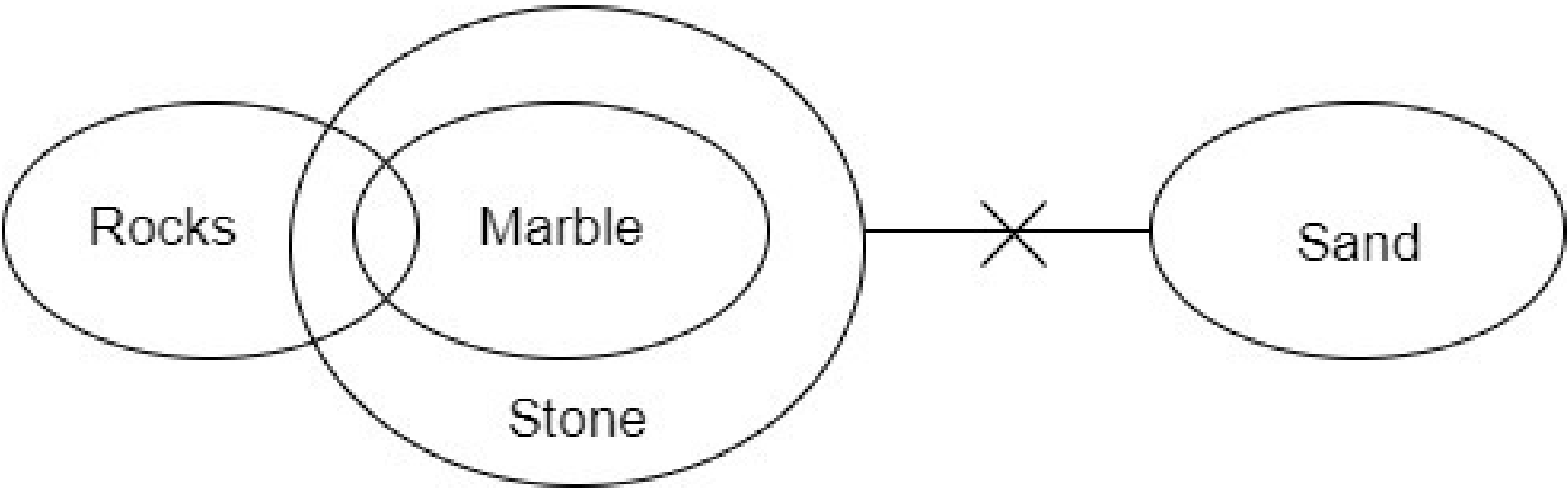
If only conclusion II follows.
- C

If either conclusion I or II follows.
- D

If neither conclusion I nor II follows.
- E

If both conclusion I and II follows.

Solution



28.

Study the information carefully and answer the questions given below.

Six persons P, Q, R, S, T and U sit around a triangular table. Three persons sit at each corner of table and rest sit at middle of each side of table. All of them face inside and like different colours – Blue, Black, White, Violet, Red and Green. All the information is not necessarily in the same order. T sits 2nd to the left of the one who likes White, who sits opposite to U. R likes red. R is not an immediate neighbour of

T and the one who likes white. Q sits 2nd to the left of P, who sits at one of the corners of the table. The one who likes Violet sits immediate left of the one who likes Black but not sit opposite to P. Q does not like Blue.

A. Which of the following pair is correct?

☐ A P-White

☐ B Q-Violet

☒ C S-White

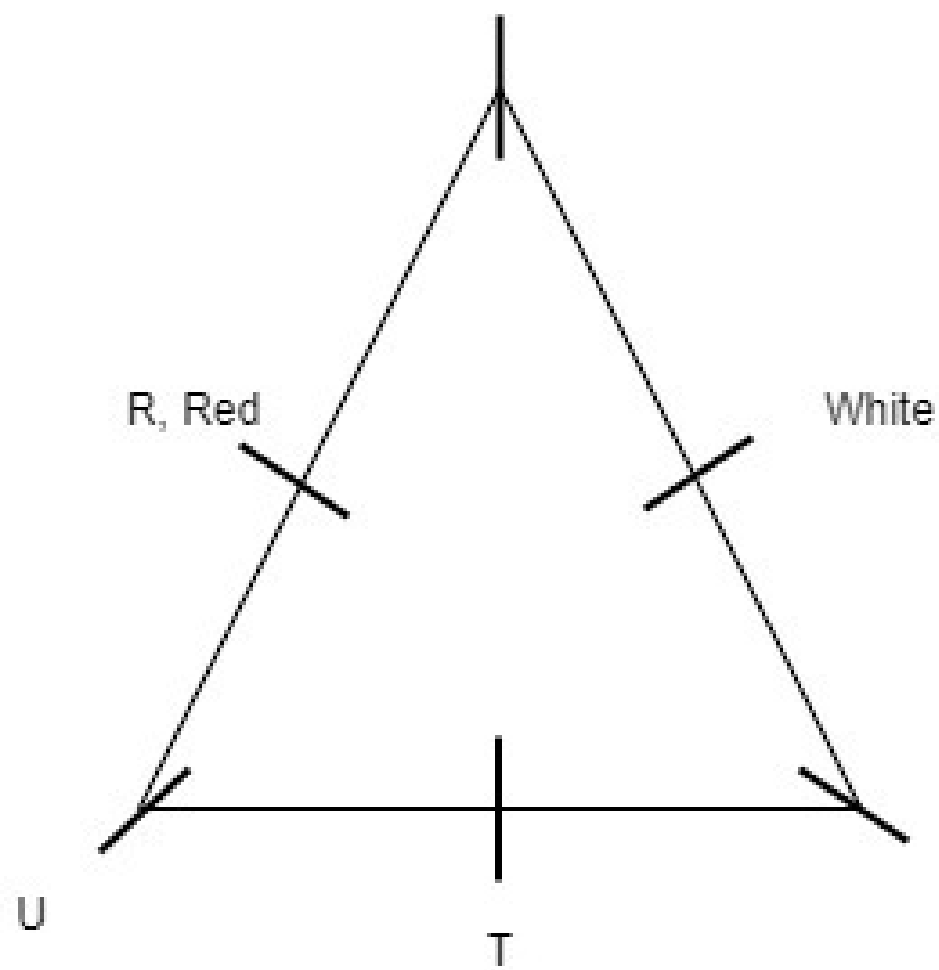
☐ D T-Blue

☐ E U-Green

Solution

Given, T sits 2nd to the left of the one who likes White, who sits opposite to U. R likes red. R is not an immediate neighbour of T and the one who likes white.

Therefore, the seating arrangement will be,



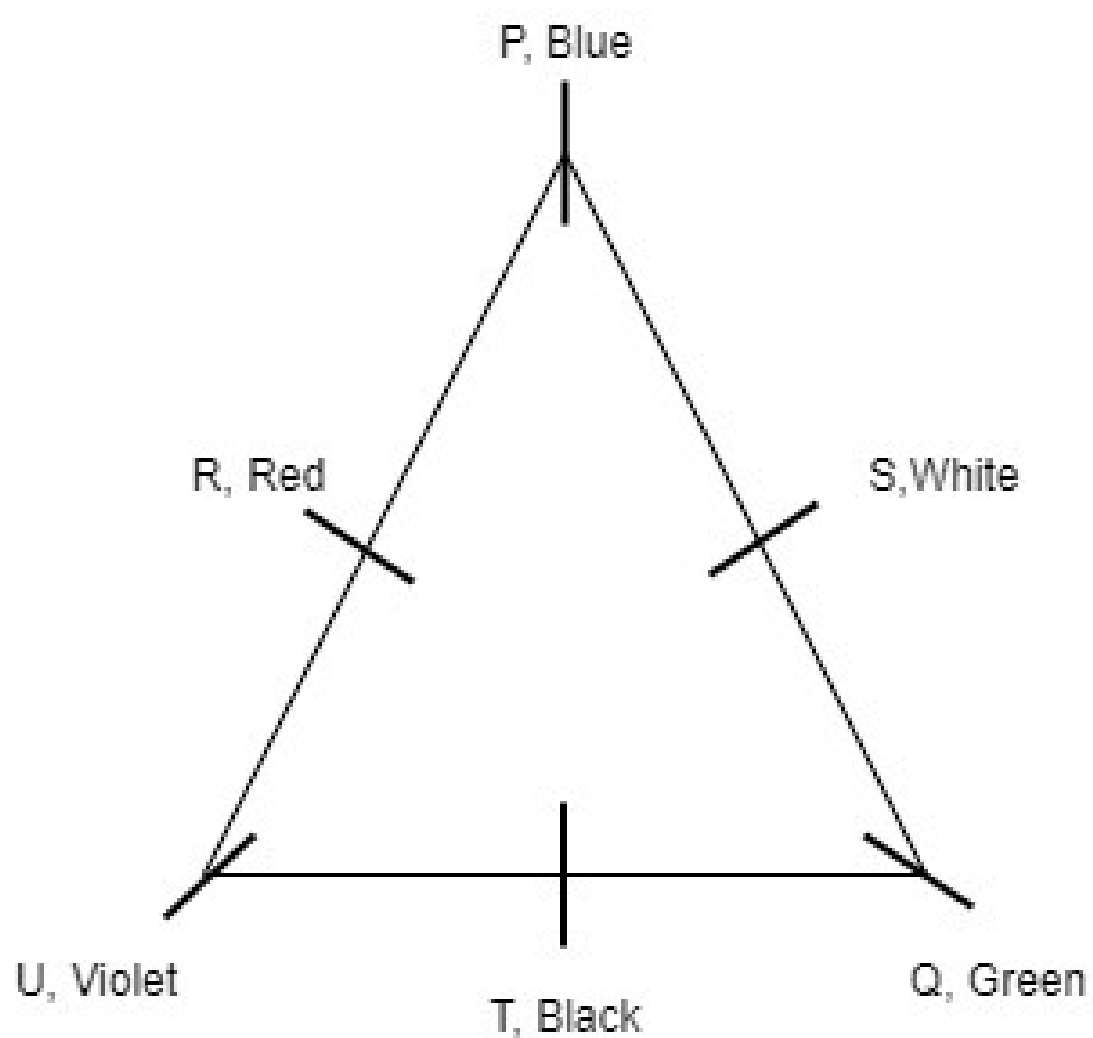
Q sits 2nd to the left of P, who sits at one of the corners of the table.

P can be in any of the corners, but when B is immediate right of T, U is second to left of P. So this case is invalid.

Also given, the one who likes Violet sits immediate left of the one who likes Black but not sit opposite to P. Q does not like Blue. Therefore, S likes white and T likes black and U likes Violet.

Since, Q does not like Blue, Q likes Green and P likes Blue.

Final arrangement,



B. Who among the following sits 3rd to the left of S?

A The one who likes Violet

B T

C The one who sits immediate left of U

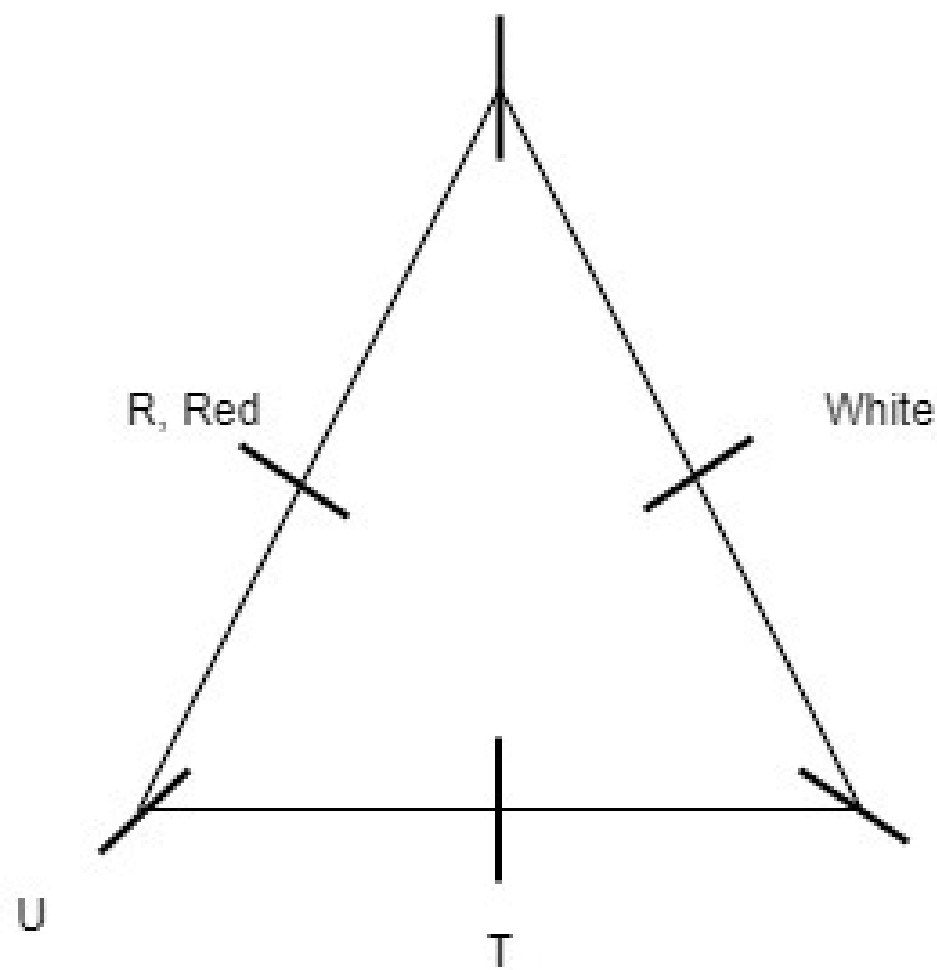
D U

E Both (a) and (d)

Solution

Given, T sits 2nd to the left of the one who likes White, who sits opposite to U. R likes red. R is not an immediate neighbour of T and the one who likes white.

Therefore, the seating arrangement will be,



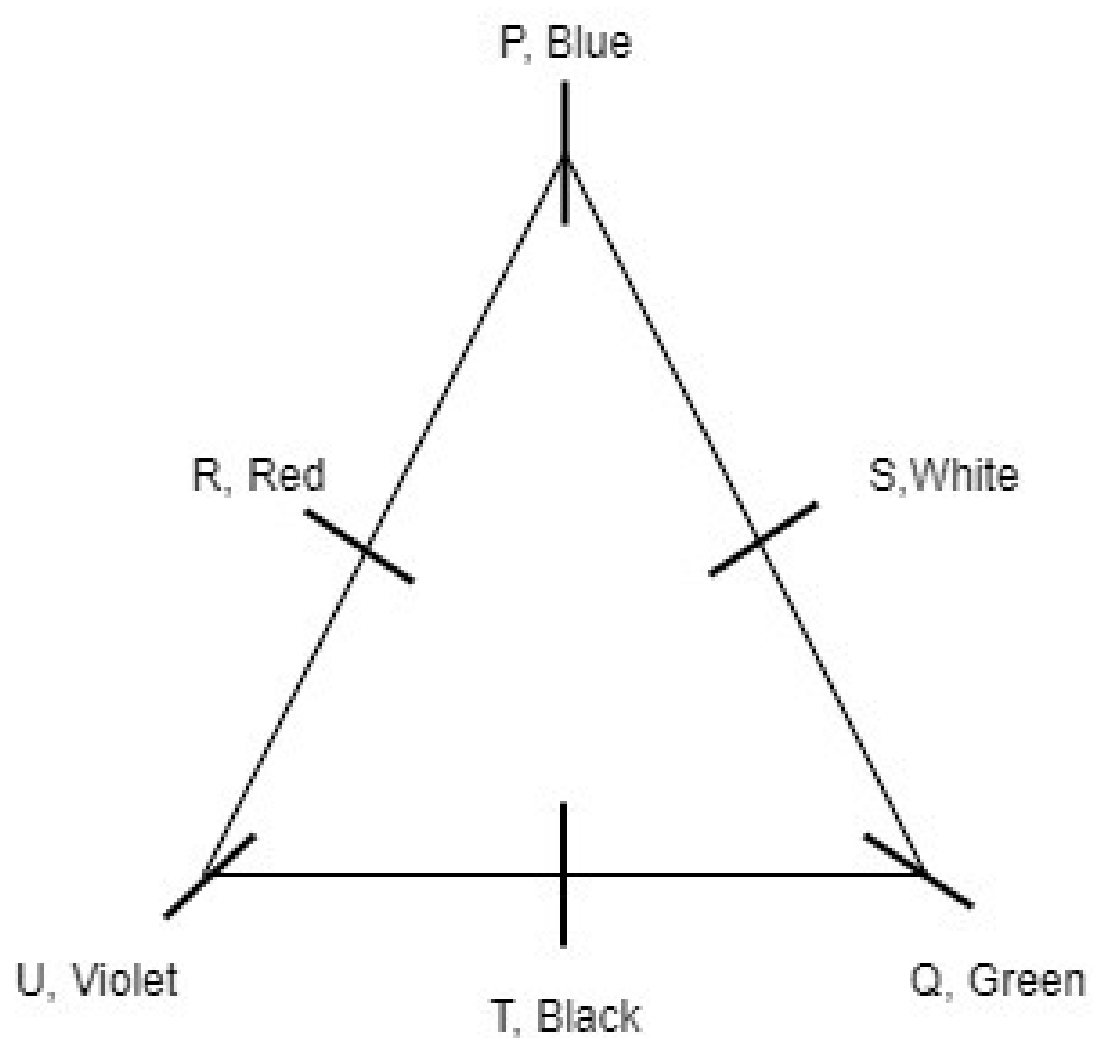
Q sits 2nd to the left of P, who sits at one of the corners of the table.

P can be in any of the corners, but when B is immediate right of T, U is second to left of P. So this case is invalid.

Also given, the one who likes Violet sits immediate left of the one who likes Black but not sit opposite to P. Q does not like Blue. Therefore, S likes white and T likes black and U likes Violet.

Since, Q does not like Blue, Q likes Green and P likes Blue.

Final arrangement,



29.

Study the information carefully and answer the questions given below

Ten Persons L, M, N, O, P, Q, R, S, T and U were born (but not necessarily in the same order) on either 9th or 30th of five different months- January, May, August, October and December. Three persons were born between M and Q and they born on same date. Two persons were born between M and R, who was born in either May or December. The number of persons were born between R and Q is same as the number of persons were born between N and T. T was born in October. S was born just after L, who was born after R. P was born just before the month when O was born. U was born before T. M was born after R. L and S were not born in the same month. U is not the eldest person.

A. Who among the following was born on 30th August?

A S

B P

C Q

D M

E L

Solution

Month	Date	Persons
January	9	N
	30	U
May	9	R
	30	L
August	9	S
	30	M
October	9	P
	30	T
December	9	O
	30	Q

From the figure, M was born on 30th August

B. The number of persons were born between N and S is same as the number of persons born after _?

A P

B L

C S

D

O

E

None of these

ENTRI

Solution

Month	Date	Persons
January	9	N
	30	U
May	9	R
	30	L
August	9	S
	30	M
October	9	P
	30	T
December	9	O
	30	Q

From the figure, number of persons were born between N and S = 3.

Therefore, three people born after P.

C. Four of the following five are alike in a certain way and so form a group. Find the one who does not belong to that group?

A N

B L

C R

D O

E P

Solution

Month	Date	Persons
January	9	N
	30	U
May	9	R
	30	L
August	9	S
	30	M
October	9	P
	30	T
December	9	O
	30	Q

Except L, all other people were born on 9th of the month.

D. Who among the following was not born before October?

A

U

B

S

C

R

D

N

E

O

Solution

Month	Date	Persons
January	9	N
	30	U
May	9	R
	30	L
August	9	S
	30	M
October	9	P
	30	T
December	9	O
	30	Q

From the figure, O was born on 9th December.

E. How many persons were born between S and U?

A

Three

B

More than five

C

Two

D

Four

E

None

Solution

Month	Date	Persons
January	9	N
	30	U
May	9	R
	30	L
August	9	S
	30	M
October	9	P
	30	T
December	9	O
	30	Q

From the figure, 2 persons were born between S and U.

30. If 1 is added from each even digit and 2 is subtracted to each odd digit in the number 45925639258, then how many digits will appear more than twice in the new number thus formed?

- ☐ A Only 7
- ☒ B Both 3 and 7
- ☐ C 1, 3 and 7
- ☐ D 1, 3 and 9
- ☐ E None of these

Solution

Original number= 45925639258

New number= 53733717339

31.

Study the information carefully and answer the questions given below.

Six persons A, B, C, D, E and F live in a three-storey building such that ground floor is numbered as 1, above it is floor 2 then topmost floor is numbered as 3. Each of the floor has 2 flats in it as flat-1 and flat-2. Flat-1 of floor-2 is immediately above flat-1 of floor-1 and immediately below flat-1 of floor-3 and so on. In the same way flat-2 of floor-2 is immediately above flat-2 of floor-1 and immediately below flat-2 of floor-3 and so on. Flat1 is in west of flat-2. Each of them likes different fruits. One

floor gap between C and the one who likes Grapes in the same flat number. A lives on an even number floor in the north west of C. The one who likes apricot lives below A. The one who likes banana lives above C and in the south-east of D, who does not like Apple. F likes Apricot. D and A not like orange. E lives below B. One of the persons like coconut.

A. Which of the following statement is true?

- ☐ A A lives below F
- ☐ B D likes Grapes
- ☒ C E lives on an even number floor
- ☐ D No one lives below B
- ☐ E A and E lives on different floor

Solution

Given, One floor gap between C and the one who likes Grapes in the same flat number. Therefore, C either lives on floor 1 or 3. Since, A lives in an even number floor in the north west of C, C lives on flat 2 of floor 1. So, the one who likes Grapes lives in flat 2 of floor 3. And A lives on flat 1 of floor 2.

Also given the one who likes apricot lives below A. So, the one who likes apricot lives on flat 1 of floor 1.

The one who likes banana lives above C and in the south-east of D, who does not like Apple. So, the one who likes banana lives on flat 2 of floor 2 and D lives on flat 1 of floor 3.

F likes Apricot. D and A not like orange. E lives below B

Since, D does not like either Apple or Orange, D likes Coconut. A likes Apple and C likes Orange. Since, E lives below B, B lives on flat 2 of floor 3 and E lives on flat 2 of floor 2.

So, final arrangement is,

Floor	Flat-1	Flat-2
3	D-Coconut	B-Grapes
2	A-Apple	E-Banana
1	F-Apricot	C-Orange

B. Who among the following lives in flat 2 on 3rd floor?

- A

D
- B

E
- C

B
- D

F
- E

C

Solution

Given, One floor gap between C and the one who likes Grapes in the same flat number. Therefore, C either lives on floor 1 or 3. Since, A lives in an even number floor in the north west of C, C lives on flat 2 of floor 1. So, the one who likes Grapes lives in flat 2 of floor 3. And A lives on flat 1 of floor 2.

Also given the one who likes apricot lives below A. So, the one who likes apricot lives on flat 1 of floor 1.

The one who likes banana lives above C and in the south-east of D, who does not like Apple. So, the one who likes banana lives on flat 2 of floor 2 and D lives on flat 1 of floor 3.

F likes Apricot. D and A not like orange. E lives below B

Since, D does not like either Apple or Orange, D likes Coconut. A likes Apple and C likes Orange. Since, E lives below B, B lives on flat 2 of floor 3 and E lives on flat 2 of floor 2.

So, final arrangement is,

Floor	Flat-1	Flat-2
3	D-Coconut	B-Grapes
2	A-Apple	E-Banana
1	F-Apricot	C-Orange

C. Who among the following lives in the northeast of the one who likes Apricot?

A

C

B

D

C E

D B

E Both (c) and (d)

Solution

Given, One floor gap between C and the one who likes Grapes in the same flat number. Therefore, C either lives on floor 1 or 3. Since, A lives in an even number floor in the north west of C, C lives on flat 2 of floor 1. So, the one who likes Grapes lives in flat 2 of floor 3. And A lives on flat 1 of floor 2.

Also given the one who likes apricot lives below A. So, the one who likes apricot lives on flat 1 of floor 1.

The one who likes banana lives above C and in the south-east of D, who does not like Apple. So, the one who likes banana lives on flat 2 of floor 2 and D lives on flat 1 of floor 3.

F likes Apricot. D and A not like orange. E lives below B

Since, D does not like either Apple or Orange, D likes Coconut. A likes Apple and C likes Orange. Since, E lives below B, B lives on flat 2 of floor 3 and E lives on flat 2 of floor 2.

So, final arrangement is,

Floor	Flat-1	Flat-2
3	D-Coconut	B-Grapes
2	A-Apple	E-Banana
1	F-Apricot	C-Orange

D. Who among the following lives just above the flat of A?

A F

B D

C C

D E

E B

Solution

Given, One floor gap between C and the one who likes Grapes in the same flat number. Therefore, C either lives on floor 1 or 3. Since, A lives in an even number floor in the north west of C, C lives on flat 2 of floor 1. So, the one who likes Grapes lives in flat 2 of floor 3. And A lives on flat 1 of floor 2.

Also given the one who likes apricot lives below A. So, the one who likes apricot lives on flat 1 of floor 1.

The one who likes banana lives above C and in the south-east of D, who does not like Apple. So, the one who likes banana lives on flat 2 of floor 2 and D lives on flat 1 of floor 3.

F likes Apricot. D and A not like orange. E lives below B

Since, D does not like either Apple or Orange, D likes Coconut. A likes Apple and C likes Orange. Since, E lives below B, B lives on flat 2 of floor 3 and E lives on flat 2 of floor 2.

So, final arrangement is,

Floor	Flat-1	Flat-2
3	D-Coconut	B-Grapes
2	A-Apple	E-Banana
1	F-Apricot	C-Orange

E. Who among the following likes Orange?

- A

B
- B

E
- C

C
- D

Either (a) or (c)
- E

None of these

Solution

Given, One floor gap between C and the one who likes Grapes in the same flat number. Therefore, C either lives on floor 1 or 3. Since, A lives in an even number floor in the north west of C, C lives on flat 2 of floor 1. So, the one who likes Grapes lives in flat 2 of floor 3. And A lives on flat 1 of floor 2.

Also given the one who likes apricot lives below A. So, the one who likes apricot lives on flat 1 of floor 1.

The one who likes banana lives above C and in the south-east of D, who does not like Apple. So, the one who likes banana lives on flat 2 of floor 2 and D lives on flat 1 of floor 3.

F likes Apricot. D and A not like orange. E lives below B

Since, D does not like either Apple or Orange, D likes Coconut. A likes Apple and C likes Orange. Since, E lives below B, B lives on flat 2 of floor 3 and E lives on flat 2 of floor 2.

So, final arrangement is,

Floor	Flat-1	Flat-2
3	D-Coconut	B-Grapes
2	A-Apple	E-Banana
1	F-Apricot	C-Orange

32.

Study the following information carefully and answer given questions.

In these questions, a relationship between different elements is shown in the statements. The statements are followed by two conclusions.

Given answer

- (a) if only conclusion I is true.
- (b) if only conclusion II is true.
- (c) if either conclusion I or II is true.
- (d) if neither conclusion I nor II is true.
- (e) if both conclusions I and II are true.

A. Statement: $I < B > C \geq E \geq D; C = O > T$

Conclusion:

I. $B > T$

II. $C \geq D$

A a

B b

C c

D d

E e

Solution

Given,

$B > C$ and $C = O > T$.

Therefore, $B > T$, so conclusion I follows.

Also, $C \geq E \geq D$

Therefore, $C \geq D$, so conclusion II follows.

B. Statement: $T > R < O > F > L < E$

Conclusion:

I. $O > L$

II. $R > E$

A

a

B

b

C

c

D

d

E

e

Solution

Given, $O > F > L$

Therefore, $O > L$, so conclusion I follows.

Since, $R < O$ and $O > E$, no relation between R and E can be established.

C. **Statement:** $X \leq V \leq Z < F > A; Z > Q$

Conclusion:

I. $Q > V$

II. $V \geq Q$

A

a

B

b

C c

D d

E e

Solution

Given, $V \leq Z$ and $Z > Q$.

Therefore, these are complementary related. So option c is correct.

