

**Common University  
Entrance Test  
(CUET) 2022  
Sample Mock Paper  
Answer & Explanation**



## Section I: Language Test (English)

### 1. Answer: D

**Solution:**

**Passage summary:**

The passage is an excerpt from the famous literary work *Howards End* by E.M. Forster. The excerpt is a letter where Helen is describing in great detail the house that's called *Howards End* and some of the activities of the people in it.

The correct expression is "The Hall" - all single countable nouns take an article before them.

### 2. Answer: B

**Solution:**

**Passage summary:**

The passage is an excerpt from the famous literary work *Howards End* by E.M. Forster. The excerpt is a letter where Helen is describing in great detail the house that's called *Howards End* and some of the activities of the people in it.

The passage describes the house and people in great detail. Hence, we can call it a descriptive passage.

### 3. Answer: A

**Solution:**

**Passage summary:**

The passage is an excerpt from the famous literary work *Howards End* by E.M. Forster. The excerpt is a letter where Helen is describing in great detail the house that's called *Howards End* and some of the activities of the people in it.

The first line of the passage gives the answer to this question- it's a letter written by Helen to her sister Meg.

Hence, A is false and it is the correct answer.

### 4. Answer: B

**Solution:**

**Passage summary:**

The passage is an excerpt from the famous literary work *Howards End* by E.M. Forster. The excerpt is a letter where Helen is describing in great detail the house that's called *Howards End* and some of the activities of the people in it.

Refer to the opening lines of the passage - "It is old and little, and altogether delightful—red brick. We can scarcely pack in as it is, and the dear knows what will happen when Paul (younger son) arrives to-morrow."

So Helen is saying that the house is little and they are barely fitting in it and the situation will become worse once another member (Paul) comes the next day.

Hence, B is the correct answer.

**5. Answer: C**

**Solution:**

**Passage summary:**

The passage is an excerpt from the famous literary work *Howards End* by E.M. Forster. The excerpt is a letter where Helen is describing in great detail the house that's called *Howards End* and some of the activities of the people in it.

Refer to the concluding lines of paragraph 2— We females are that unjust.

Here Helen asks her sister why they had such a wrong impression of the Wilcoxes— then she comments that they (Helen and her sister Meg) and women in general are unjust.

So we can infer that they have been unjust to the Wilcoxes in judging them.

Hence, C is the correct answer.

**6. Answer: D**

**Solution:**

**Passage summary:**

The passage is an excerpt from the famous literary work *Howards End* by E.M. Forster. The excerpt is a letter where Helen is describing in great detail the house that's called *Howards End* and some of the activities of the people in it.

Refer to the lines— ...Tibby is too tiresome, he starts a new mortal disease every month. How could he have got hay fever in London?

Also, refer to the lines— Tell him that Charles Wilcox (the son who is here) has hay fever too.

So, we can see that Tibby and Charles Wilcox were suffering from hay fever.

Hence, the correct answer is D.

**7. Answer: B**

**Solution:**

Defection (n.): The desertion of one's country or cause in favour of an opposing one  
Apostasy (n.): The abandonment or renunciation of a religious or political belief or principle

Perfidy (n.): The state of being deceitful and untrustworthy

Infidelity (n.): Unfaithfulness to a moral obligation; disloyalty

Constancy (n.): The quality of being faithful and dependable

So, the correct answer is option B.

**8. Answer: C**

**Solution:**

Divergent (adj.): Tending to be different or develop in different directions

Parallel (adj.): Occurring or existing at the same time or in a similar way; corresponding

Anomalous (adj.): Deviating from what is standard, normal, or expected

Deviant (adj.): Departing from usual or accepted standards, especially in social or sexual behaviour

Unorthodox (adj.): Contrary to what is usual, traditional, or accepted; not orthodox  
So, the correct answer is option C.

**9. Answer: A**

**Solution:**

Thaw (v.): To (cause to) change from a solid, frozen state to a liquid or soft one, because of an increase in temperature

Befriend (v.): Act as or become a friend to (someone), especially when they are in need of help or support

Liaise (v.): Cooperate on a matter of mutual concern

Fraternise (v.): Associate or form a friendship with someone, especially when one is not supposed to

Freeze (v.): To solidify as a result of abstraction of heat

So, the correct answer is option A.

**10. Answer: B**

**Solution:**

The correct answer is option B as the phrase 'take the wind out of someone's sails' means 'frustrate someone by unexpectedly anticipating an action or remark'.

**11. Answer: C**

**Solution:** The correct phrase is 'keep an ear to the ground', which means 'to be well informed about events and trends'.

**12. Answer: b**

**Solution:**

'Turned a deaf ear to' means to disregard someone's advice.

'Losing ground' means to become less powerful or acceptable.

'Taken to task' means to rebuke someone.

'To meet you halfway' means to reach a compromise with someone.

Thus, 'losing ground' is the only idiom that makes logical sense for the blank.

Hence, the correct answer is option b.

**13. Answer: B**

**Solution:**

**Passage summary:**

The passage talks about the fire in Delhi and states that there are many such industrial units with hazardous working conditions. Without accountability of owners and without the political will to improve working conditions, we might end up allowing many such horrific accidents.

The passage talks about the fire in Delhi and states that there are many such industrial units with hazardous working conditions. Without accountability of owners and without the political will to improve working conditions, we might end up allowing many such horrific accidents.

This point is best expressed in option B.

Hence, B is the correct answer.

**14. Answer: B**

**Solution:**

**Passage summary:**

The passage talks about the fire in Delhi and states that there are many such industrial units with hazardous working conditions. Without accountability of owners and without the political will to improve working conditions, we might end up allowing many such horrific accidents.

Refer to the lines— With the pandemic and the resultant decline in work opportunities and household income, women are compelled to join employment to compensate for the loss of employment or declined income of male household members.

Hence, option B is correct.

**15. Answer: C**

**Solution:**

**Passage summary:**

The passage talks about the fire in Delhi and states that there are many such industrial units with hazardous working conditions. Without accountability of owners and without the political will to improve working conditions, we might end up allowing many such horrific accidents.

Refer to the lines in paragraph 6— Owing to the perception that workers employed in packing or as helpers undertake jobs that do not require much skill, wages are kept very low while the labour pool remains massive.

Hence, C is the correct answer.



**16. Answer: B**

**Solution:**

**Passage summary:**

The passage talks about the fire in Delhi and states that there are many such industrial units with hazardous working conditions. Without accountability of owners and without the political will to improve working conditions, we might end up allowing many such horrific accidents.

Refer to the second paragraph— Reports on buildings catching fire leading to fatalities, followed by discussions on illegal constructions and unplanned infrastructural development in urban centres, have become a repetitive subject. With every such mishap, reports on how these buildings do not have required fire clearance and no-objection certificates from concerned authorities surface. Yet, such incidents keep on repeating; the harrowing stories of those who lost their dear ones are matters of public attention only for a few days, till the headlines shift.

The main points are best expressed in option B.  
Hence, the correct answer is B.

**17. Answer: C**

**Solution:**

**Passage summary:**

The passage talks about the fire in Delhi and states that there are many such industrial units with hazardous working conditions. Without accountability of owners and without the political will to improve working conditions, we might end up allowing many such horrific accidents.

The author is not likely to support any industrial unit with hazardous working conditions. Hence, A and B are eliminated.

Option D is eliminated as the author is critical of the discussions which do not result in any action.

Option C aligns with the author's views in the concluding lines. Hence, C is the correct answer.

**18. Answer: D**

**Solution:**

**Passage summary:**

The passage talks about the fire in Delhi and states that there are many such industrial units with hazardous working conditions. Without accountability of owners and without the political will to improve working conditions, we might end up allowing many such horrific accidents.

D is the answer because the meaning of the word 'respite' is 'relief'.

**Directions for questions 19 to 23:** In each question, a word is highlighted in the given sentence. Pick the word from the given alternatives that is the most inappropriate in the given context.

**19. Answer: D**

Solution: 'Inexorable' means unstoppable— the word that is inappropriate is 'avoidable'.

**20. Answer: C**

**Solution:**

'Fastidious' means being very particular, fussy, or finicky. The word that does not fit is 'indifferent'.

**21. Answer: A**

**Solution:**

'Penchant' means liking, fondness, or preference. The word that does not fit is 'loquet'.

**22. Answer: D**

**Solution:**

'Propagate' means to spread in the context of the sentence. So 'uproot' is the most inappropriate in the context.

**23. Answer: A**

**Solution:**

'Inundated' means flooded.

'Arid' means dry. Hence, it's the most inappropriate word here.

**Directions for questions 24 to 27:** A sentence has been written in four different ways. Select the option in which the sentence is grammatically correct.

**24. Answer: A**

**Solution:**

A quick reading of the sentence shows that there are two points to be careful about— the tense of the verbs and agreement of the verb with its subject.

Option A has maintained consistency of tense— has revealed, accidents happen, drivers are at the wheel— all verbs in present tense and the verb 'has' agrees with the singular subject a review.

Hence, A is the correct answer.

**25. Answer: B**

**Solution:**

Focus on the verb and their tenses. Also watch out for prepositions.

A is incorrect as 'that' is the incorrect relative pronoun after a comma. 'which' should be used here.

C is incorrect. When we use the past perfect tense with the past tense, the action that happens earlier is expressed in past perfect tense— here the order is reversed.

D is incorrect— the rain starts by itself— 'that had been started' is incorrect as no person starts the rain.

Hence, B is the correct answer.

**26. Answer: C**

**Solution:**

A is incorrect as we need to use the definite article 'the' before 'fourth'.

B is incorrect. 'Has became' is grammatically wrong.

D is incorrect for the same reason- 'has become'. Another error is the use of 'for' instead of 'to rise further'.

Hence, C is the correct answer.

**27. Answer: B**

**Solution:**

Option A is incorrect as it uses the singular form 'continues'.

Option B is correct— when we use a relative pronoun such as who, which, or that, we have to make the verb agree with the word preceding the relative pronoun— here the word before the relative pronoun is the plural word 'states'— hence, we have to use the plural form 'continue'.

Hence, B is the correct answer.

**28. Answer: A**

**Solution:**

The sentence mentions 'terrifying prospects'. A person would warn or advise another person, in case a situation or course of action has terrifying prospects. So, we can eliminate 'intimated', 'briefed', and 'counselled'. Hence, the correct answer is A.

**29. Answer: C**

**Solution:**

'Adjusted' means alter or move (something) slightly in order to achieve the desired fit, appearance, or result.



'Structured' means something that has been built or put together.

'Poised' means a composed or self-assured manner.

'Challenged' is used to indicate that someone or something is lacking or deficient in a specified respect.

The correct word for the blank is 'poised' since the nation was on the fringes of becoming a global player.

**30. Answer: B**

**Solution:**

**Passage summary:**

In this excerpt from the Great Gatsby, the narrator describes New York and Long Island and Gatsby's mansion. He also describes his cousin Daisy and her husband Tom and their affluent lifestyle.

**Type of question:** Specific-idea-based question

A quick reading of the passage will show that options A, C, and D are incorrect.

Option A is incorrect as the author mentions that Tom was rich.

Option C is incorrect as Daisy is the narrator's cousin while Tom knew him in college—it has not been mentioned that they were classmates.

Option D is incorrect as it has not been mentioned that Tom was a polo champion.

Option B is correct. Refer to the concluding lines of the excerpt— Why they came east I don't know. They had spent a year in France, for no particular reason, and then drifted here and there unrestfully wherever people played polo and were rich together.

**31. Answer: B**

**Solution:**

**Passage summary:**

In this excerpt from the Great Gatsby, the narrator describes New York and Long Island and Gatsby's mansion. He also describes his cousin Daisy and her husband Tom and their affluent lifestyle.

The author describe the different reactions of gulls and humans (the wingless) to the egg-shaped objects— the human beings were fascinated that the two objects were so dissimilar despite having a similar shape and size.

Hence, the correct answer is B.

**32. Answer: C**

**Solution:**

**Passage summary:**

In this excerpt from the Great Gatsby, the narrator describes New York and Long Island and Gatsby's mansion. He also describes his cousin Daisy and her husband Tom and their affluent lifestyle.

Refer to the lines— My own house was an eyesore, but it was a small eye-sore, and it had been overlooked, so I had a view of the water, a partial view of my neighbour's lawn, and the consoling proximity of millionaires—all for eighty dollars a month. This has been best expressed in option C. Hence, the correct answer is C.

**33. Answer: B**

**Solution:**

**Passage summary:**

In this excerpt from the Great Gatsby, the narrator describes New York and Long Island and Gatsby's mansion. He also describes his cousin Daisy and her husband Tom and their affluent lifestyle.

It is clear from the author's description that the house belonged to someone whose name was Gatsby because that's the name of the mansion. But he was not his cousin. Hence, B is the correct answer.

**34. Answer: A**

**Solution:**

**Passage summary:**

In this excerpt from the Great Gatsby, the narrator describes New York and Long Island and Gatsby's mansion. He also describes his cousin Daisy and her husband Tom and their affluent lifestyle.

'Perpetual' means permanent or unending.

**35. Answer: C**

**Solution:**

**Passage summary:**

In this excerpt from the Great Gatsby, the narrator describes New York and Long Island and Gatsby's mansion. He also describes his cousin Daisy and her husband Tom and their affluent lifestyle.

'Proximity' means closeness or nearness.

**36. Answer: (b)**

**Solution:**

It is clear that the paragraph is about the difficulties of learning English because it is 'odd' which is given in the first sentence.

Sentences 1-B are a pair. Sentence 1 talks about "English speakers...odd" and sentence B follows sentence 1 by agreeing with that statement with "So do people...non-natively."

Sentence A explains the oddity of the English language— its spelling. Thus, sentence A will follow sentence B directly.

Sentences C-D are a pair. Both talk about a normal language where spellings will correspond with the word's pronunciation. Sentence C still talks about spelling and will come before sentence D which closes the paragraph by stating that English is not normal.

Hence, the correct sequence is BACD.

**37. Answer: (d)**

**Solution:**

The paragraph is about democracy in ancient times which is clear from the first sentence.

Sentences B-A-D are a logical link with all these sentences mentioning regions which had some form of democracy in ancient times. Sentence A with "also" will follow sentence B.

Sentence D with "In all of these societies" will follow sentence A directly.

Sentence D also mentions three features of early democracy and sentence C with "these three features" will follow sentence D directly and close the paragraph.

Hence, the correct sequence is BADC.

**38. Answer: A**

**Solution:**

The idiom 'not fit to hold a candle to' means not to be named in comparison with something or a thing that is not as good as something else.

Hence, the correct answer is option A.

**39. Answer: A**

**Solution:**

'Blow hot and cold' means 'to alternate inconsistently between two moods, attitudes, or courses of action'. 'Vacillate' means the same. Hence, A is the answer. 'Stabilise' and 'Plateau' have opposite meanings to the given phrase. 'Nadir' means 'the lowest point'

**40. Answer: C**

**Solution:**

'Up in arms' means 'protesting vigorously about something'.

**Directions for questions 41 to 44:** In the sentence identify the segment which contains a grammatical error. If the sentence has no error, then select 'No error'

**41. Answer: C**

**Solution:** The correct expression is 'relies on many factors'.

**42. Answer: E**

**Solution:**

The given sentence is correct

**43. Answer: B**

**Solution:**

There is a word missing in B— we need a word after prominent:

- The correct expression is 'the most prominent being'.
- Hence, B is the correct answer.

**44. Answer: A**

**Solution:**

The correct expression is -" the pandemic has reminded us ...".

**45. Answer: A**

**Solution:**

This question has a few mandatory pairs/clues, but it's better to understand the thought process first.

The first thing we notice here is the question in 1 which is being answered in C. Hence, 1 and C form a mandatory pair. Hence, we can eliminate all the options except A.

D follows C as 'this' in D refers to C.

Also, B and A form a mandatory pair as B talks about Martin and A talks about Sobel 'on the other hand'.

Hence, the correct answer is option A.

**46. Answer: B**

**Solution:**

The correct answer is B as 'buy the farm' is an informal phrase used to convey that someone has died. Example: If you don't follow the traffic rules, you might buy the farm.

**47. Answer: B**

**Solution:**

B is the correct answer because 'the big enchilada' is the correct phrase which is used to refer to 'a person or thing of great importance'.

**48. Answer: D**

**Solution:**

The correct phrase is 'till the cows come home', which means 'for an indefinitely long time'.

**49. Answer: D**

**Solution:**

Nominal (adj.): (of a price or charge) very small; far below the real value or cost

Considerable (adj.): Notably large in size, amount, or extent

Hefty (adj.): (of a number or amount) impressively large

Substantial (adj.): Of considerable importance, size, or worth

Trifling (adj.): Unimportant or trivial (of little value or importance)

So, the correct answer is option D.

**50. Answer: D**

**Solution:**

The meanings of the given words are as follows:

Mar: Impair the quality or appearance of; spoil

Spoil: Diminish or destroy the value or quality of

Ruin: The physical destruction or disintegration of something or the state of disintegrating or being destroyed

Impair: Weaken or damage (something, especially a faculty or function)

Improve: Make or become better

Therefore, 'Improve' is the antonym of 'mar'.

## Section III: General Test

### Quantitative Reasoning (Data Interpretation)

1.

**Answer: D**

**Solution:**

Bus P:

$$\text{Total number of seats} = 40 \times 3 = 120$$

$$\text{Number of vacant aisle seats} = 120 \times 20\% = 24$$

$$\text{Number of occupied aisle seats} = 40 - 24 = 16$$

$$\text{Number of occupied middle seats} = 40 \times 50\% = 20$$

$$\text{Number of vacant middle seats} = 40 - 20 = 20$$

$$\text{Number of vacant window seats} = (16 + 20) \times \frac{2}{3} = 24$$

$$\text{Number of occupied window seats} = 40 - 24 = 16$$

Bus Q:

$$\text{Total number of seats} = 40 \times 3 = 120$$

$$\text{Number of vacant middle seats} = 16 + 10 = 26$$

$$\text{Number of occupied middle seats} = 40 - 26 = 14$$

$$\text{Number of occupied window seats} = \frac{(24 + 20 + 24)}{2} = 34$$

$$\text{Number of vacant window seats} = 40 - 34 = 6$$

$$\text{Number of occupied aisle seats} = \frac{40 + 12}{2} = 26$$

$$\text{Number of vacant aisle seats} = 40 - 26 = 14$$

Bus R:

$$\text{Total number of vacant seats} = 120 \times 37.5\% = 45$$

$$\text{Total number of occupied seats} = 120 - 45 = 75$$

$$\text{Number of vacant middle seats} = 40 \times 50\% = 20$$

$$\text{Number of occupied middle seats} = 40 - 20 = 20$$

$$\text{Number of occupied aisle seats} = 75 \times \frac{2}{5} = 30$$

$$\text{Number of vacant aisle seats} = 40 - 30 = 10$$

$$\text{Number of vacant window seats} = 45 - 20 - 10 = 15$$

$$\text{Number of occupied window seats} = 40 - 15 = 25$$

Seats	Bus P			Bus Q			Bus R		
	Window	Middle	Aisle	Window	Middle	Aisle	Window	Middle	Aisle
Vacant seats	24	20	24	6	26	14	15	20	10
Occupied seats	16	20	16	34	14	26	25	20	30
Total seats	40	40	40	40	40	40	40	40	40

From the table,

$$\text{Required number of occupied seats} = 16 + 20 + 16 + 34 + 14 + 26 + 25 + 20 + 30 = 201$$

Hence, option D is correct.



2.

**Answer: B**

**Solution:**

Bus P:

Total number of seats =  $40 \times 3 = 120$

Number of vacant aisle seats =  $120 \times 20\% = 24$

Number of occupied aisle seats =  $40 - 24 = 16$

Number of occupied middle seats =  $40 \times 50\% = 20$

Number of vacant middle seats =  $40 - 20 = 20$

Number of vacant window seats =  $(16 + 20) \times \frac{2}{3} = 24$

Number of occupied window seats =  $40 - 24 = 16$

Bus Q:

Total number of seats =  $40 \times 3 = 120$

Number of vacant middle seats =  $16 + 10 = 26$

Number of occupied middle seats =  $40 - 26 = 14$

Number of occupied window seats =  $\frac{(24 + 20 + 24)}{2} = 34$

Number of vacant window seats =  $40 - 34 = 6$

Number of occupied aisle seats =  $\frac{40 + 12}{2} = 26$

Number of vacant aisle seats =  $40 - 26 = 14$

Bus R:

Total number of vacant seats =  $120 \times 37.5\% = 45$

Total number of occupied seats =  $120 - 45 = 75$

Number of vacant middle seats =  $40 \times 50\% = 20$

Number of occupied middle seats =  $40 - 20 = 20$

Number of occupied aisle seats =  $75 \times \frac{2}{5} = 30$

Number of vacant aisle seats =  $40 - 30 = 10$

Number of vacant window seats =  $45 - 20 - 10 = 15$

Number of occupied window seats =  $40 - 15 = 25$

Seats	Bus P			Bus Q			Bus R		
	Window	Middle	Aisle	Window	Middle	Aisle	Window	Middle	Aisle
Vacant seats	24	20	24	6	26	14	15	20	10
Occupied seats	16	20	16	34	14	26	25	20	30
Total seats	40	40	40	40	40	40	40	40	40

From the table,

Total occupied seats in bus Q =  $34 + 14 + 26 = 74$

Required cost =  $74 \times 1500 = \text{Rs. } 111000$

Hence, option B is correct.

3.

**Answer: B**

**Solution:**

Bus P:

Total number of seats =  $40 \times 3 = 120$

Number of vacant aisle seats =  $120 \times 20\% = 24$

Number of occupied aisle seats =  $40 - 24 = 16$

Number of occupied middle seats =  $40 \times 50\% = 20$

Number of vacant middle seats =  $40 - 20 = 20$

Number of vacant window seats =  $(16 + 20) \times \frac{2}{3} = 24$

Number of occupied window seats =  $40 - 24 = 16$

Bus Q:

Total number of seats =  $40 \times 3 = 120$

Number of vacant middle seats =  $16 + 10 = 26$

Number of occupied middle seats =  $40 - 26 = 14$

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Bus R:

Total number of vacant seats =  $120 \times 37.5\% = 45$

Total number of occupied seats =  $120 - 45 = 75$

Number of vacant middle seats =  $40 \times 50\% = 20$

Number of occupied middle seats =  $40 - 20 = 20$

Number of occupied aisle seats =  $75 \times \frac{2}{5} = 30$

Number of vacant aisle seats =  $40 - 30 = 10$

Number of vacant window seats =  $45 - 20 - 10 = 15$

Number of occupied window seats =  $40 - 15 = 25$

Seats	Bus P			Bus Q			Bus R		
	Window	Middle	Aisle	Window	Middle	Aisle	Window	Middle	Aisle
Vacant seats	24	20	24	6	26	14	15	20	10
Occupied seats	16	20	16	34	14	26	25	20	30
Total seats	40	40	40	40	40	40	40	40	40

Total vacant seats =  $24 + 20 + 24 + 6 + 26 + 14 + 15 + 20 + 10 = 159$

Total loss =  $159 \times 800 = \text{Rs. } 127200$

Hence, option B is correct.

4.

**Answer: D**

**Solution:**

Bus P:

$$\text{Total number of seats} = 40 \times 3 = 120$$

$$\text{Number of vacant aisle seats} = 120 \times 20\% = 24$$

$$\text{Number of occupied aisle seats} = 40 - 24 = 16$$

$$\text{Number of occupied middle seats} = 40 \times 50\% = 20$$

$$\text{Number of vacant middle seats} = 40 - 20 = 20$$

$$\text{Number of vacant window seats} = (16 + 20) \times \frac{2}{3} = 24$$

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Bus Q:

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Bus R:

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$$\text{Total number of occupied seats} = 120 - 45 = 75$$

$$\text{Number of vacant middle seats} = 40 \times 50\% = 20$$

$$\text{Number of occupied middle seats} = 40 - 20 = 20$$

$$\text{Number of occupied aisle seats} = 75 \times \frac{2}{5} = 30$$

$$\text{Number of vacant aisle seats} = 40 - 30 = 10$$

$$\text{Number of vacant window seats} = 45 - 20 - 10 = 15$$

$$\text{Number of occupied window seats} = 40 - 15 = 25$$

Seats	Bus P			Bus Q			Bus R		
	Window	Middle	Aisle	Window	Middle	Aisle	Window	Middle	Aisle
Vacant seats	24	20	24	6	26	14	15	20	10
Occupied seats	16	20	16	34	14	26	25	20	30
Total seats	40	40	40	40	40	40	40	40	40

$$\text{Number of occupied seats in Bus R} = 25 + 20 + 30 = 75$$

$$\text{Number of seats occupied by females in Bus R} = 75 \times 40\% = 30$$

$$\text{Number of seats occupied by females below the age of 25 in Bus R} = 30 \times 60\% = 18$$

Hence, option D is correct.

5.

**Answer: C**

**Solution:**

Bus P:

Total number of seats =  $40 \times 3 = 120$

Number of vacant aisle seats =  $120 \times 20\% = 24$

Number of occupied aisle seats =  $40 - 24 = 16$

Number of occupied middle seats =  $40 \times 50\% = 20$

Number of vacant middle seats =  $40 - 20 = 20$

Number of vacant window seats =  $(16 + 20) \times \frac{2}{3} = 24$

Number of occupied window seats =  $40 - 24 = 16$

Bus Q:

Total number of seats =  $40 \times 3 = 120$

Number of vacant middle seats =  $16 + 10 = 26$

Number of occupied middle seats =  $40 - 26 = 14$

Number of occupied window seats =  $\frac{(24 + 20 + 24)}{2} = 34$

Number of vacant window seats =  $40 - 34 = 6$

Number of occupied aisle seats =  $\frac{40 + 12}{2} = 26$

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Bus R:

Total number of vacant seats =  $120 \times 37.5\% = 45$

Total number of occupied seats =  $120 - 45 = 75$

Number of vacant middle seats =  $40 \times 50\% = 20$

Number of occupied middle seats =  $40 - 20 = 20$

Number of occupied aisle seats =  $75 \times \frac{2}{5} = 30$

Number of vacant aisle seats =  $40 - 30 = 10$

Number of vacant window seats =  $45 - 20 - 10 = 15$

Number of occupied window seats =  $40 - 15 = 25$

Seats	Bus P			Bus Q			Bus R		
	Window	Middle	Aisle	Window	Middle	Aisle	Window	Middle	Aisle
Vacant seats	24	20	24	6	26	14	15	20	10
Occupied seats	16	20	16	34	14	26	25	20	30
Total seats	40	40	40	40	40	40	40	40	40

Difference between the vacant seats in Bus P and Bus R =  $24 - 15 = 9$

Required percentage =  $\frac{9}{15} \times 100 = 60\%$

Hence, option C is correct.

**6.**

**Answer: D**

**Solution:**

Sales of sugar by factory A =  $5000 \times 25\% \times 30\% = 375$  kg

Sales of sugar by factory B =  $5000 \times 22\% \times 40\% = 440$  kg

Sales of sugar by factory C =  $5000 \times 20\% \times 30\% = 300$  kg

Sales of sugar by factory D =  $5000 \times 15\% \times 50\% = 375$  kg

Sales of sugar by factory E =  $5000 \times 18\% \times 60\% = 540$  kg

Here, we can see that sales in factory E is 540, the highest.

**7.**

**Answer: C**

**Solution:**

Sugar sold by factory D =  $5000 \times 15\% \times 50\% = 375$  kg

Sugar sold by factory E =  $5000 \times 18\% \times 60\% = 540$  kg

Sugar sold by factory B =  $5000 \times 22\% \times 40\% = 440$  kg

Sugar sold by factory C =  $5000 \times 20\% \times 30\% = 300$  kg

Now required ratio =  $375 + 540 : 440 + 300 = 915 : 740 = 183 : 148$

Hence, C is the correct option.

**8.**

**Answer: D**

**Solution:**

Sugar sold by factory A =  $5000 \times 25\% \times 30\% = 375$  kg

Sugar sold by factory B =  $5000 \times 22\% \times 40\% = 440$  kg

Production of sugar by factory A =  $5000 \times 25\% = 1250$ kg

Percentage =  $\frac{815-1250}{1250} \times 100 = -34.8\%$

Hence, it is less by 34.8%.

Correct option is D.

**9.**

**Answer: C**

**Solution:**

Sugar sold by factory E =  $5000 \times 18\% \times 60\% = 540$  kg

Profit on 1 kg sugar =  $50 \times 10\% = 5$  Rs.

Total profit =  $5 \times 540 =$  Rs. 2700

**10.**

**Answer: A**

**Solution:**

Sales of sugar by A = 375 kg

Sales of sugar by B = 440 kg

Sales of sugar by C = 300 kg

Sales of sugar by D = 375 kg

Sales of sugar by E = 540 kg

Total sales = 2030 kg

Required percentage =  $\frac{2030}{5000} \times 100 = 40.6\%$

Hence, A is the correct option.

**11.**

**Answer: A**

**Solution:**

Total number of people who own a vehicle in City B = 90,000

Ratio of number of people who own a Bike to that who own a car in City B = 9 : 11

Number of people who own a bike in City B =  $\frac{9}{9+11} \times 90,000 = 40,500$

Total number of people who own a vehicle in city D = 80,000

Required percentage =  $\frac{40,500}{80,000} \times 100 = 50.625\%$

**12.**

**Answer: B**

**Solution:**

Total number of people who own a vehicle in City D = 80,000

Ratio of the number of people who own a bike to those who own a car in City D = 17 : 23

Number of people having bikes in City D =  $\frac{17}{17+23} \times 80,000 = 34,000$

Total number of people who own a vehicle in city E = 1,50,000

Ratio of the number of people who own a bike to those who own a Car in City E = 5 : 7

Number of people having cars in City E =  $\frac{7}{5+7} \times 1,50,000 = 87,500$

Ratio of the number of bike owners in City D to the car owners in City E = 34,000 : 87,500 = 68 : 175

**13.**

**Answer: D**

**Solution:**

Total number of people who own a vehicle in City A = 1,25,000

Ratio of number of people who own a Bike to those who own a Car in City A = 3 : 2

Number of people who own a car in City A =  $\frac{2}{3+2} \times 1,25,000 = 50,000$

Total number of people who own a vehicle in City B = 90,000

Ratio of the number of people who own a bike to those who own a car in City B = 9 : 11

Number of people who own a car in City B =  $\frac{11}{9+11} \times 90,000 = 49,500$

Total number of people who own a vehicle in City C = 1,27,000

Ratio of number of people who own a bike to those who own a car in City C = 2 : 3

Number of people who own a car in City C =  $\frac{3}{2+3} \times 1,27,000 = 76,200$

Total number of people who own a vehicle in city D = 80,000

Ratio of the number of people who own a bike to those who own a car in City D = 17 : 23

Number of people who own a car in City D =  $\frac{23}{17+23} \times 80,000 = 46,000$

Total number of people who own a vehicle in City E = 1.5 lakh = 1,50,000



Ratio of number of people who own a bike to those who own a car in City E = 5 : 7

Number of people who own a car in City E =  $\frac{7}{5+7} \times 1,50,000 = 87,500$

Total number of people who own a car in all 5 cities = 50,000 + 49,500 + 76,200 + 46,000 + 87,500 = 3,09,200

**14.**

**Answer: A**

**Solution:**

Total number of people who own a vehicle in City A = 1,25,000

Ratio of number of people who own a bike to those who own a car in city A = 3 : 2

Number of people who own a car in City A =  $\frac{2}{3+2} \times 1,25,000 = 50,000$

Total number of people who own a vehicle in City D = 80,000

Ratio of number of people who own a bike to those who own a car in City D = 17 : 23

Number of people who own a car in city D =  $\frac{23}{17+23} \times 80,000 = 46,000$

Total number of people who own a car in cities A & D = 50,000 + 46,000 = 96,000

Total number of people owning vehicles in all 5 cities = (1.25 + 0.90 + 1.27 + 0.80 + 1.50) lakhs = 5.72 lakhs

Required percentage =  $\frac{96,000}{5,72,000} \times 100 = 16.78\%$  (approx.)

**15.**

**Answer: C**

**Solution:**

Total number of people who own a vehicle in City A = 1,25,000

Ratio of number of people who own a bike to those who own a car in City A = 3 : 2

Number of people who own a bike in City A =  $\frac{3}{3+2} \times 1,25,000 = 75,000$

Total number of people who own a vehicle in City C = 1,27,000

Ratio of number of people who own a bike to those who own a car in city C = 2 : 3

Number of people who own a bike in City C =  $\frac{2}{2+3} \times 1,27,000 = 50,800$

Total number of people who own a vehicle in City D = 80,000

Ratio of number of people who own a bike to those who own a car in City D = 17 : 23

Number of people who own a bike in City D =  $\frac{17}{17+23} \times 80,000 = 34,000$

Total number of people who own a vehicle in City E = 1.5 lakh = 1,50,000

Ratio of number of people who own a bike to those who own a car in City E = 5 : 7

Number of people who own a bike in City E =  $\frac{5}{5+7} \times 1,50,000 = 52,500$

So, City A has the most number of bikes.

**Analytical Reasoning & General Aptitude**

**16. Answer: D**

**Solution:**



**17. Answer: C**

**Solution:**

- 1) R doesn't work in the Finance department.  
 Here, we have two possible cases, i.e., Case 1 and Case 2.  
 2) T works only with U but not in the Finance department.

	Marketing Department	HR Department	Finance Department
<b>Case 1</b>	R	T	
		U	
		<del>X</del>	
<b>Case 2</b>	T	R	
	U		
	<del>X</del>		

- 3) P neither works in the HR department nor with R.  
 4) W works with R.

	Marketing Department	HR Department	Finance Department
<b>Case 1</b>	R	T	P
	W	U	
		<del>X</del>	
<b>Case 2</b>	T	R	P
	U	W	
	<del>X</del>		

- 5) Q neither works with P nor in the Marketing department.  
 Here, Case 1 gets eliminated, and we have the final arrangement, which is given as follows:

Marketing Department	HR Department	Finance Department
T	R	P
U	W	S
<del>X</del>	Q	V

Clearly, S works with V.

**18. Answer: C**

**Solution:**

- 1) R doesn't work in the Finance department.
- Here, we have two possible cases, i.e., Case 1 and Case 2.
- 2) T works only with U but not in the Finance department.

	Marketing Department	HR Department	Finance Department
Case 1	R	T	
		U	
		X	
Case 2	T	R	
	U		
	X		

- 3) P neither works in the HR department nor with R.
- 4) W works with R.

	Marketing Department	HR Department	Finance Department
Case 1	R	T	P
	W	U	
		X	
Case 2	T	R	P
	U	W	
	X		

- 5) Q neither works with P nor in the Marketing department.
- Here, Case 1 gets eliminated, and we have the final arrangement, which is given as follows:

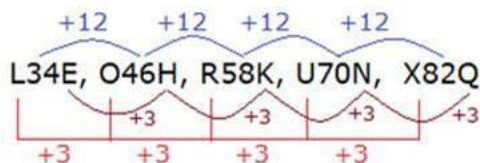
Marketing Department	HR Department	Finance Department
T	R	P
U	W	S
X	Q	V

Clearly, R, W and Q work in HR department.

**19. Answer: A**

**Solution:**

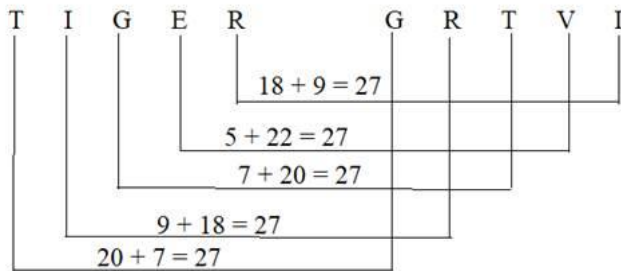
The pattern is given below as follows:



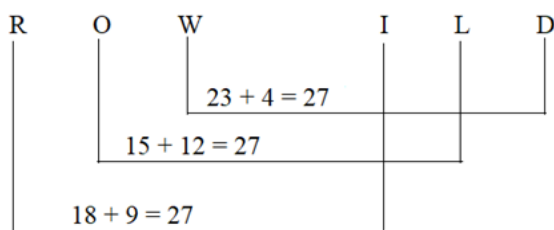
Hence, option A is the correct answer.

**20. Answer: C**

**Solution:**



Similarly, we know the following:



Hence, option C is correct.

**21. Answer: D**

**Solution:**

**For the first and the second clusters of letters:**

$A(1) + 4 = E(5)$

The reverse letter of  $E(5)$  is  $V(22)$ .

$V(22) + 4 = Z(26)$

**For the third and the fourth clusters of letters:**

$P(16) + 4 = T(20)$

The reverse letter of  $T(20)$  is  $G(7)$ .

$G(7) + 4 = K(11)$

Hence, the required answer is GK.

**22. Answer: B**

**Solution:**

X depends on Y

If  $X \rightarrow$  then Y

Then it's a certainty that:

If not Y  $\rightarrow$  then not X

If Viraat wears a pale green jersey, then he will score a century.

$\Rightarrow$  If Viraat does not score a century, then he has not worn a pale green jersey.

**23. Answer: B**

**Solution:**

The sister of X's mother is X's maternal aunt. The brother of the daughter of X's maternal aunt is the son of X's maternal aunt. The son of X's maternal aunt is a cousin.

**24. Answer: A**

**Solution:**

Cashew and almond are both types of nuts.

**25. Answer: C**

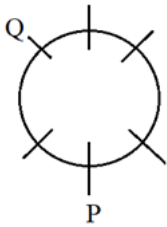
**Solution:**

5 is added to each number to get the succeeding number.

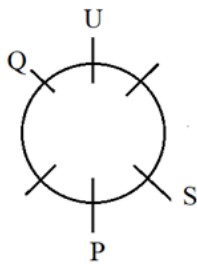
**26. Answer: A**

**Solution:**

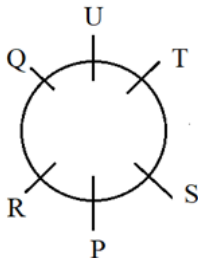
Q sits second to the left of P.



S, who is adjacent to P, sits second to the left of U, who is sitting adjacent to Q.



R doesn't sit adjacent to U.



Therefore, this is the final arrangement.

Looking at the circular diagram, S sits opposite to Q.

**27. Answer: C**

**Solution:**

A lives on an odd-numbered floor, which is not the ground floor (1st floor).

Three people live between A and U.

Floors	Person name (Case 1)	Person name (Case 2)	Person name (Case 3)
8			
7	U		A
6			
5		A	
4			
3	A		U
2			
1		U	

Two people live between U and R, who does not live on the fourth floor. Hence, case 1 and case 2 will be eliminated.

Floors	Person (Case 3)
8	
7	A
6	R
5	
4	
3	U
2	
1	

Three people live between R and G. J lives above Q but below I. N lives above A.

Floors	Person (Case 3)
8	N
7	A
6	R
5	I
4	J
3	U
2	G
1	Q

Hence, Q lives on the ground floor.



**28. Answer: D**

**Solution:**

If Y is a male; then Y himself is the only son-in-law of the father-in-law of Y. In this case, the offspring of Y is his son or daughter.

If Y is a female; then the only son-in-law of the father-in-law of Y will be the husband of Y's sister, and his offspring will either be the nephew or niece of Y.

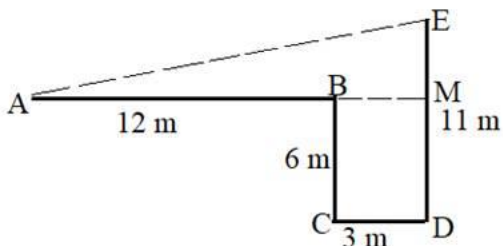
**29. Answer: A**

**Solution:**

The first figure of the first pair is inverted and then placed on the original figure to get the second figure of the pair. A similar pattern is used for the second pair. Hence, option (A) is correct.

**30. Answer: D**

**Solution:**



Here,  $AM = AB + BM = 12 + 3 = 15$  m

$EM = DE - MD = 11 - 6 = 5$  m

Required shortest distance,  $AE = \sqrt{AM^2 + EM^2} = \sqrt{15^2 + 5^2} = \sqrt{225 + 25} = \sqrt{250}$   
 $= \sqrt{25 \times 10} = 5\sqrt{10}$  m

Hence, option D is correct.

## GK & Current Affairs

**31. Answer: D**

**Solution:** Chennai Super Kings Dwayne Bravo (171) overtook Lasith Malinga (170) to become the highest wicket-taker in IPL History. He made a record against the match of Lucknow Super Giants in Mumbai. Bravo has taken 171 wickets in 153 IPL matches.

**32. Answer: A**

**Solution:** The Best Marching Contingent Trophy for Republic Day Parade 2022 to personnel of the Naval Contingent was presented by Admiral R Hari Kumar, Chief of the Naval Staff. The contingent was led by Lt Cdr Aanchal Sharma with Lt Shubham Sharma as platoon commanders and comprised 96 young sailors.

**33. Answer: C**

**Solution:** India is planning to start the construction activities for 10 'fleet mode' nuclear reactors over the next three years. The construction of 700 MW atomic power plant in Karnataka's Kaiga will begin from 2023. Currently, India operates 22 reactors with a total capacity of 6780 MW in operation. India is planning to start the construction activities for 10 'fleet mode' nuclear reactors over the next three years. The construction of 700 MW atomic power plant in Karnataka's Kaiga will begin from 2023.

**34. Answer: A**

**Solution:** Pritam Siwach Hockey Academy, Sonapat, clinched the title of Khelo India Women's Hockey League (U-21) after defeating Sports Hostel Bhubaneswar by 5-0 in the final at the Sports Authority of India National Centre of Excellence in Lucknow. The Sonapat-based academy is run by the former captain of the India women's hockey team Pritam Rani Siwach; she is also won the Dronacharya Award winner in 2021.

**35. Answer: C**

**Solution:** PM Narendra Modi participated in the 5th BIMSTEC (Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation) Summit which was hosted by Sri Lanka, the current chair of BIMSTEC virtually. The theme was Towards a Resilient Region, Prosperous Economies, Healthy People.

**36. Answer: B**

**Solution:** Maharashtra won the 21st National Para-Swimming Championship 2022 with 306 points at the Maharana Pratap Khel Gaon, Udaipur. The tournament was jointly organised by the Paralympic Committee of India (PCI) and Narayan Seva Sansthan.

**37. Answer: D**

**Solution:** According to the census conducted in Kaziranga National Park, the population of rhinos increased by 200 in the last four years. Kaziranga National Park and Tiger Reserve conducted the census. The total number of rhinos increased from 2413 to 2613.

**38. Answer: D**

**Solution:** Assam Chief Minister Dr Himanta Biswa Sarma has been re-elected as the president of the Badminton Association of India for another four years term from 2022 to 2026. He has remained president of the Badminton Association of India (BAI) since 2017.

**39. Answer: C**

**Solution:** Sindhudurg Fort is a historical fort that occupies an island in the Arabian Sea, Maharashtra. Chatrapati Shivaji Maharaj built the fort.

**40. Answer: C**

**Solution:** The New York city-based stock exchange, the NASDAQ, is the world's first electronic stock market.

**41. Answer: C**

**Solution:** China's State Councillor and Foreign Minister Wang Yi has hosted the meeting of the BRICS Ministers of Foreign Affairs on May 19 through video conference. The meeting was attended by: S. Jaishankar (India), Naledi Pandor (South Africa), Carlos Alberto Franco França (Brazil) and Sergey Lavrov (Russia). India has handed over the BRICS Chairmanship to China from January 2022.

**42. Answer: D**

**Solution:** The Tamil Nadu government named the Nanjarayan lake as the 17th bird sanctuary in Tiruppur. The government also set up an information centre to raise awareness about the bird population in the lake. The Nanjarayan Tank also known as Sarkar Periyapalayam Reservoir, is located in Tirupur city near Koolipalayam, Tami Nadu.

**43. Answer: A**

**Solution:** Bombay Stock Exchange (BSE) has approved the appointment of former Reserve Bank of India (RBI) governor SS Mundra as the Chairman of the board of directors of the company. He replaced Justice Vikramajit Sen who is the current chairman. Mundra was appointed as Public Interest Director at BSE in January 2018.

**44. Answer: C**

**Solution:** According to the Organisation Internationale des Constructeurs d'Automobiles (OICA), India has sold 3,759,398 vehicles in 2021 as compared to 2,973,319 vehicles in Germany. This shows a difference of almost 26%. The most number of vehicles were sold in China, but sales remained almost stagnant, followed by the US which has reported growth of 4% and Japan, market shrunk compared to both 2020 and 2019.

**45. Answer: D**

**Solution:** Manik Saha (Tripura BJP chief) has become the 12th Chief Minister of Tripura after Biplab Kumar Deb resigned from the post. Tripura's governor Satyadev Narayan Arya has administered the oath of office on May 15 at Raj Bhawan in Agartala (Capital city). Dr Saha is a dental surgeon by profession and joined BJP in 2016 after quitting Congress.

## Numerical Aptitude

### 46. Answer: A

#### Solution:

The total number of four-digit numbers possible =  $4! = 24$

The number of four-digit numbers divisible by 25 are 1325 and 3125.

So, probability =  $\frac{2}{24} = \frac{1}{12}$

Hence, option (A) is the correct answer.

### 47. Answer: C

#### Solution:

Let the total distance be  $3D$  km.

Time taken to travel  $\frac{1}{3}$ rd of the journey =  $\frac{\text{Distance}}{\text{Speed}} = \frac{D}{60}$

Time taken to travel remaining  $\frac{2}{3}$ rd of the journey =  $\frac{\text{Distance}}{\text{Speed}} = \frac{2D}{30}$

Total time taken =  $\frac{D}{60} + \frac{2D}{30} = \frac{D}{12}$

Average speed =  $\frac{\text{Total Distance}}{\text{Total time taken}} = \frac{3D}{\frac{D}{12}} = 3 \times 12 = 36 \text{ km/h.}$

So, option (C) is the correct answer.

### 48. Answer: D

#### Solution:

Let  $I = 675$  and  $F = 1600$

The compounding formula with rate 'r' and number of years 'n' is given by:  $F = I(1 + r\%)^n$

$$1600 = 675(1 + r\%)^3$$

$$\frac{64}{27} = (1 + r\%)^3$$

By taking cube root on both the sides, we get the following:

$$\frac{4}{3} = (1 + r\%)$$

$r\% = 33.33\%$

Hence, option (D) is the correct answer.

### 49. Answer: C

#### Solution:

Any quadratic equation is given as follows:

$$x^2 - (\text{Sum of the roots})x + \text{Product of the roots} = 0$$

As Ashish made a mistake in the constant term, the sum of the roots must be correct and is  $(-4 + 9 = 5)$ .

Vinay made a mistake in the coefficient of  $x$ . The product of the roots must be correct.

$$\text{Product} = 6 \times -4 = -24$$

So, the equation is  $x^2 - 5x - 24 = 0$  or  $(x - 8)(x + 3) = 0$  or  $x = 8, -3$

Hence, option (C) is the correct answer.

**50. Answer: A**

**Solution:**

Using the condition for sides, we know that the sum of any 2 sides is greater than the third side.

$$(3a^2 - 12) + (2a - 3) > (2a^2)$$

$$a^2 + 2a - 15 > 0$$

$$(a + 5)(a - 3) > 0$$

As 'a' is a positive integer,  $a > 3$ .

**Hence, option (A) is the correct answer.**

**51. Answer: C**

**Solution:**

Let T be the price of tea powder and C be the price of coffee powder.

It is given that  $T = \frac{1}{4}C$  and  $300T + 120C = 780$ .

$$\text{Now, } 300 \times \frac{1}{4}C + 120C = 780$$

$$C = 4 \text{ and } T = 1$$

New price of coffee powder is  $4 \times (1 + 25\%) = 4 \times (1 + \frac{1}{4}) = \text{Rs. } 5$

Let the reduction of tea powder consumption be X.

$$(300 - X) \times 1 + 120 \times 5 = 780$$

$$X = 300 + 600 - 780 = 900 - 780 = 120$$

$$\text{Percentage reduction} = \frac{120}{300} \times 100 = 40\%$$

**Hence, option (C) is the correct answer.**

**52. Answer: D**

**Solution:**

Let us start substituting for m to get a common term.

$$m = 1, f(2) - f(1) = f(0) \Rightarrow f(2) = f(1) + f(1) = 2 \times f(1)$$

$$m = 2, f(3) - f(2) = f(1) \Rightarrow f(3) = f(1) + f(2) = f(1) + 2 \times f(1) = 3 \times f(1)$$

$$\text{Substitute } f(2) = 2f(1)$$

Now, we can consider the general term as  $f(a) = (a + 1) f(1)$ .

**Hence, option (D) is the correct answer.**

**53. Answer: C**

**Solution:**

Let the entire work be LCM (12, 18, 4) = 36 units.

$$\text{Work rate of Karan} = \frac{36}{12} = 3 \text{ units}$$

$$\text{Work rate of Hetan} = \frac{36}{18} = 2 \text{ units}$$

$$\text{Combined work rate of Karan, Hetan, and Naveen} = \frac{36}{4} = 9 \text{ units}$$

$$\text{Work rate of Naveen} = 9 \text{ units} - 3 \text{ units} - 2 \text{ units} = 4 \text{ units}$$

Let's say C works for T days to complete the work alone.

$$4 \times T = 36$$

$$T = 9 \text{ units}$$

**So, option (C) is the correct answer.**

**54. Answer: A**

**Solution:**

The proportion of mixture is given by the following:

$$\frac{CP_1 - CP}{CP - CP_2} = \frac{W_2}{W_1}$$

Here,  $CP_1 = 28$ ,  $CP_2 = 36$ , and  $CP = 34$

$$\begin{aligned}\frac{28 - 34}{34 - 36} &= \frac{W_2}{W_1} \\ \frac{W_1}{W_2} &= \frac{1}{3}\end{aligned}$$

Hence, option (A) is the correct answer.

**55. Answer: D**

**Solution:**

It is given that  $\log_7 \log_5 (\sqrt{x+5} + \sqrt{x}) = 0$ .

We know that  $\log_a b = x \Rightarrow a^x = b$ .

$$\therefore \log_5 (\sqrt{x+5} + \sqrt{x}) = 7^0$$

$$\Rightarrow \log_5 (\sqrt{x+5} + \sqrt{x}) = 1$$

$$\Rightarrow \sqrt{x+5} + \sqrt{x} = 5^1$$

$$\Rightarrow \sqrt{x+5} = 5 - \sqrt{x}$$

On squaring both sides, we get the following:

$$\Rightarrow x + 5 = 25 + x - 2 \times 5 \sqrt{x}$$

$$\Rightarrow x + 5 = 25 + x - 10 \sqrt{x}$$

$$\Rightarrow 10 \sqrt{x} = 20$$

$$\Rightarrow \sqrt{x} = 2$$

$$\Rightarrow (\sqrt{x})^2 = (2)^2$$

$$\Rightarrow x = 4$$

Hence, option (D) is the correct answer.

**56. Answer: B**

**Solution:**

Consider the complement sets.

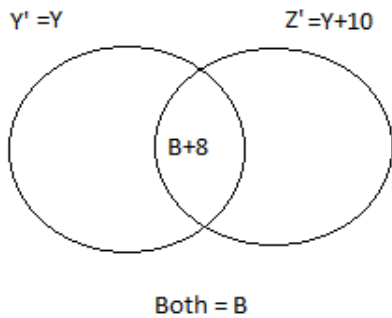
Number of members who do not attend yoga ( $Y'$ ) = Y

Number of members who do not attend Zumba ( $Z'$ ) = Y + 10

Number of members who attend both = B

Number of members who do not attend both = B + 8





Now,  $200 = Y + Y + 10 - (B + 8) + B$

$$200 = 2Y + 2$$

$$Y = 99$$

So, the number of members who attend Zumba =  $Y + 10 = 99 + 10 = 109$

**Hence, option (B) is the correct answer.**

**57. Answer: A**

**Solution:**

Let  $a$  be the 1<sup>st</sup> term and  $r$  be the common ratio.

$$\text{It is given that } a + ar + ar^2 + ar^3 = 80 \dots(1)$$

$$\text{It is also given that } ar^4 + ar^5 + ar^6 + ar^7 = 6480 \dots(2)$$

$$\text{Dividing (2) by (1) gives } \frac{ar^4(1+r+r^2+r^3)}{a(1+r+r^2+r^3)} = \frac{6480}{80}$$

$$r^4 = 81 \text{ or } r = 3 \text{ and } a = 2$$

$$\text{So, the sum of } n \text{ terms} = \frac{a(r^n - 1)}{(r - 1)} = \frac{2(3^n - 1)}{(3 - 1)} = (3^n - 1).$$

**Hence, option A is the correct answer.**

**58. Answer: B**

**Solution:**

Ramesh would have reached the opposite vertex of the starting point. In a regular hexagon, the distance between opposite vertices is equal to 2 times the length of the side of the regular hexagon.

$$\text{Hence, the shortest distance} = 2 \times 10 = 20 \text{ cm.}$$

**Hence, option (B) is the correct answer.**

**59. Answer: C**

**Solution:**

Let  $X$  be his salary.

$$\text{As Suresh spends } 37.5\% \text{ on house rents, the remaining amount} = X \times (100\% - 37.5\%) = X(62.5\%) = X\left(\frac{5}{8}\right)$$

$$\text{Similarly, the remaining amount after spending } 20\% \text{ of the remaining on groceries} = X\left(\frac{5}{8}\right)(100\% - 20\%) = X \times \frac{5}{8} \times \frac{4}{5} = \frac{X}{2}$$

$$\text{Hence, } \frac{X}{2} = 12,000$$

$$\text{Thus, } X = 24000$$

**Hence, option (C) is the correct answer.**

**60. Answer: C**

**Solution:**

Let the amount of money received by A, B, and C be 'a', 'b', and 'c', respectively.

$$\text{So, } a = \frac{b+c}{2} \Rightarrow 2a = b + c$$

$$c = \frac{2}{5}(a + b) \Rightarrow 5c = 2a + 2b$$

$$\text{So, } 5c = b + c + 2b = 3b + c$$

$$\Rightarrow 4c = 3b \Rightarrow c = \frac{3b}{4}$$

$$\text{So, } 2a = b + \frac{3b}{4} = \frac{7b}{4} \Rightarrow a = \frac{7b}{8}$$

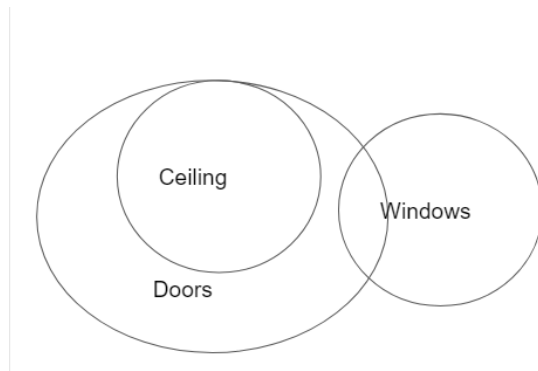
$$\text{So, the required ratio} = \frac{c}{a} = \frac{\frac{3b}{4}}{\frac{7b}{8}} = \frac{6}{7}$$

Hence, option (C) is the correct answer.

## Logical Reasoning

**61. Answer: B**

**Solution :**

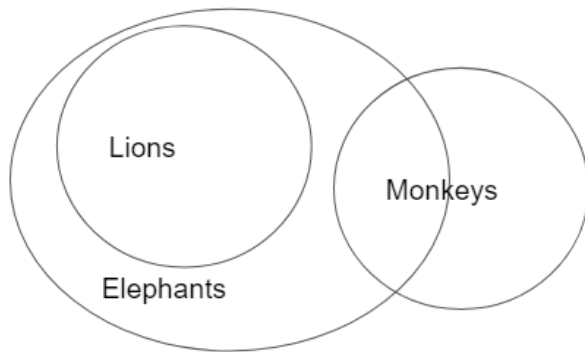


Ceiling being a window is a possibility but it cannot be said for certain but 'some windows are doors' is certain. Hence, the correct answer is option B.

**62. Answer: D**

**Solution:**

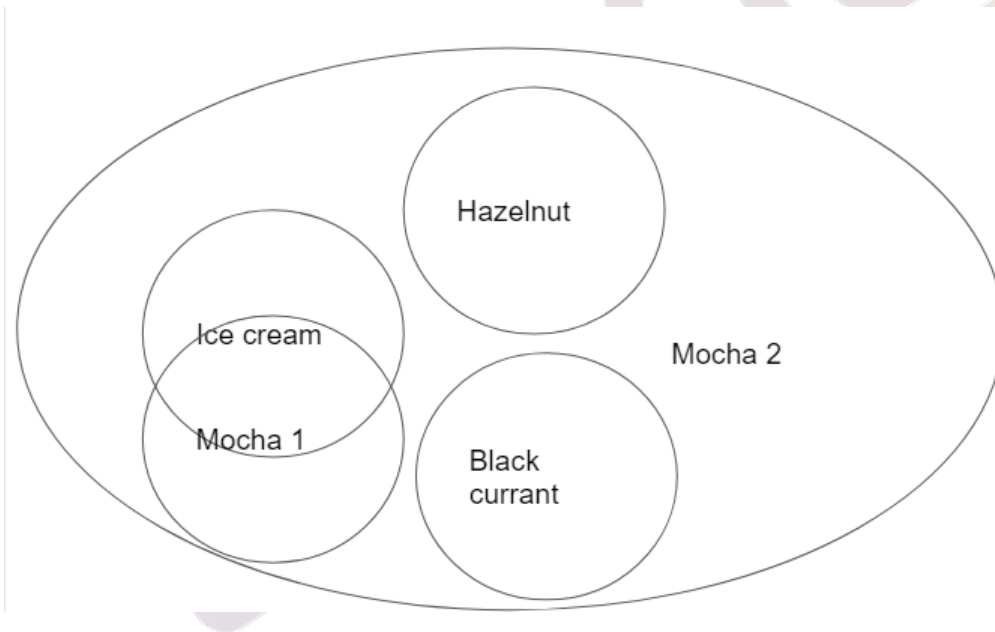
It can be seen that (a), (b), and (d) can be negated with the help of the figure below. (c) definitely follows as it is just the reverse of the second statement.



Hence, the correct answer is option D.

**63. Answer: C**

**Solution:**



Analysis of conclusions:

I: Some mocha may be hazelnut in the case of mocha 2. Hence, I follows.

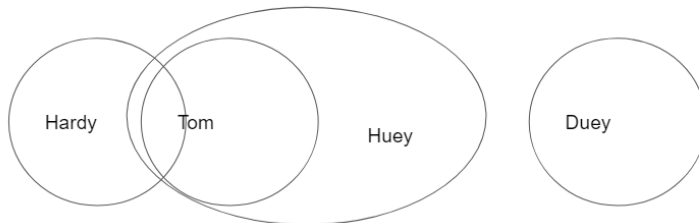
II: Some mocha may be black currant in the case of mocha 2. Hence, II follows.

III: Some black currants may not be hazelnut because 'No hazelnut is black currant'. Hence, III doesn't follow.

Hence, the correct answer is option C.

**64. Answer: D**

**Solution:**



Conclusions:

I. Some Hardy are not Duey: It is true as some Hardy are Tom, all Tom are Huey, and no Huey are Duey.

II. No Duey is Tom: It is true as all Tom are Huey and no Huey are Duey.

Hence, both conclusions I and II follow.

Hence, the correct answer is option D.

**65. Answer: C**

**Solution:**

C is the answer because both the assumptions are implicit:

- I is implicit because the basic reason for putting up an advertisement is that people will read it and respond.
- II is implicit because the need to become good at English is the reason for the offering in the advertisement.

**66. Answer: D**

**Solution:**

D is the answer because neither of the assumptions is implicit as I does not affect the statement and II negates the argument.

**67. Answer: A**

**Solution:**

A is the answer because only I is a valid conclusion. Note the use of 'although' in the statement.

**68. Answer: A**

**Solution:**

A is the answer because only I can be concluded. II is someone's opinion. I can be concluded from the statement from 'intensified the stir, continuing to chant slogans against the government and attacking the homes of its supporters.'

**69. Answer: C**

**Solution:**

C is the answer because both the courses of action follow:

- Issuing a warning to the passengers is a precautionary step for the future.
- Reporting such incidents is required and should be done immediately.

**70. Answer: B**

**Solution:**

B is the answer because only II follows:

- I is extreme, and therefore, not a valid course of action.
- II is a logical course of action and will be helpful in the future as well.

**71. Answer: D**

**Solution:** D is the answer because neither course of action follows. I is impractical and II is too harsh.

**72. Answer: D**

**Solution:**

D is the answer because both the courses of actions are impractical and harsh. No one should be arrested without a proper investigation.

**73. Answer: A**

**Solution:**

Statement I states that people fell ill after eating sweets from a particular shop.

As a result, the effect is II: the police raid of the shop and the subsequent discovery.

Hence, I is the cause and 2 is the effect.

Hence, the correct answer is option A.

**74. Answer: B**

**Solution:**

The cause is statement II: free and compulsory education followed by successive governments. The result is hundred percent literacy in the state.

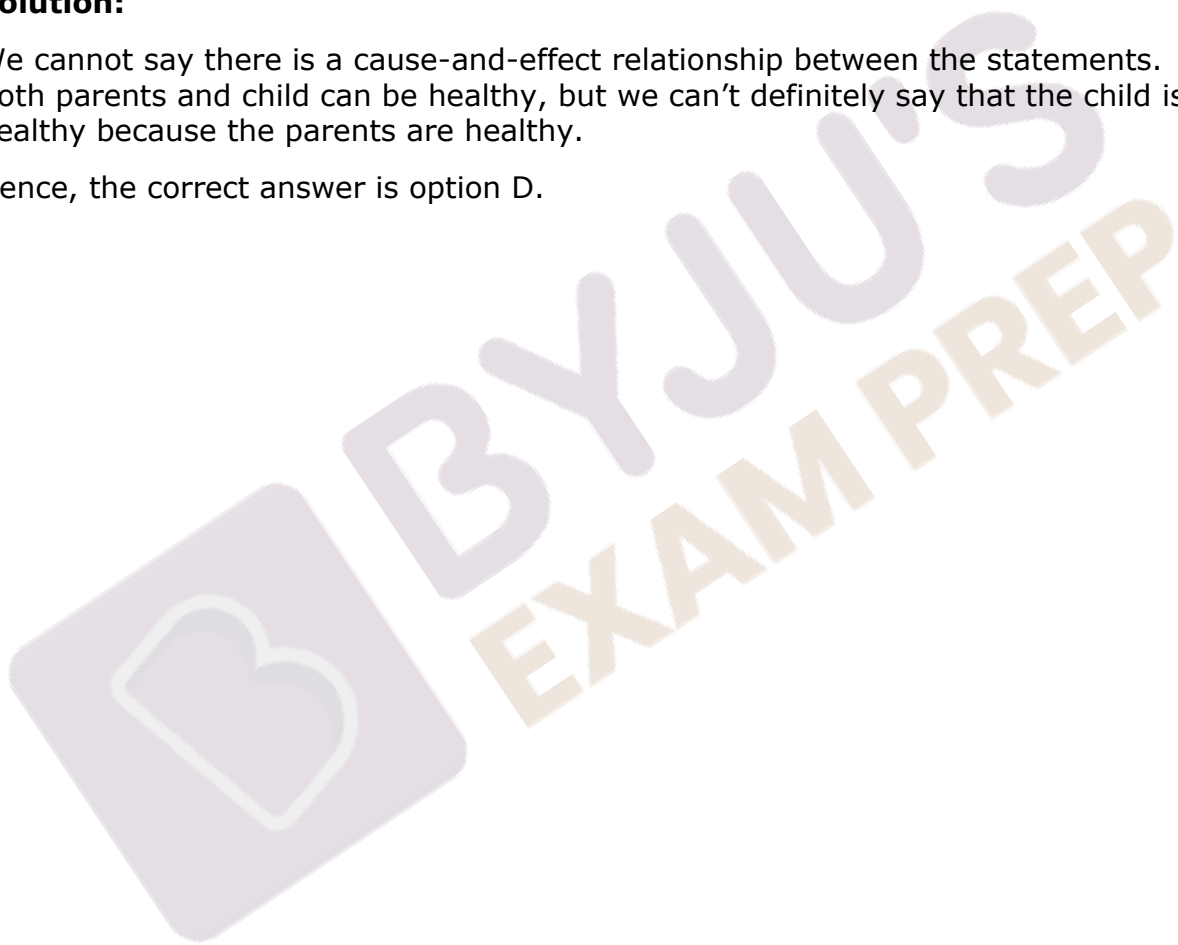
Hence, the correct answer is option B.

**75. Answer: D**

**Solution:**

We cannot say there is a cause-and-effect relationship between the statements. Both parents and child can be healthy, but we can't definitely say that the child is healthy because the parents are healthy.

Hence, the correct answer is option D.





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