

DIRECTIONS for questions 1 to 6: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

'Culture' is the emergent product of the micro rules of behaviour followed by individuals, and it plays a role in the economic performance of organisations and nations. While observations on the connection between culture and macroeconomic performance go back at least to the turn of the last century and the writings of the German sociologist Max Weber, cultural explanations for economic outcomes fell out of favour in the 1950s and 60s for two reasons. The first was political correctness. Culture frightens scholars. It has a sulfurous odour of race and inheritance, an air of immutability. The second reason was the dominance of Neoclassical economics; culture has little place in a world of perfect rationality, and to the extent that it does, cultural rules must be self-interested, optimising strategies, because otherwise, people would not use them.

Fortunately, fears over political correctness have faded as scholars have shown that it is possible to have discussions about culture that are both scientifically fruitful, and respectful of the diversity of humankind. One must avoid the relativist trap and not shy away from statements about why the norms of one culture might be more supportive of economic development than those of another, but at the same time, one can recognise that there is no one cultural formula for economic success. In a world in which cultures as varied as Japan's and Norway's are among the most economically successful, such claims of one perfect formula are easily dismissed. Likewise, the rise of behavioural economics has reduced the influence of Neoclassical assumptions and brought the cultural horse inside the economic stable.

The multibillion-dollar question then is, which norms support economic development, and which norms don't. Various researchers have proposed typologies of cultural rules which fall into three broad categories.

In the first are norms related to individual behaviour, including those supporting a strong work ethic, individual accountability, and a belief that you are the protagonist of your own life and not at the whim of gods or Big Men. Fatalism reduces personal incentives. Economically successful cultures appear to strike a balance between optimism that improvement is possible, and realism about one's current situation.

In the second category are norms related to cooperative behaviour. Foremost is a belief that life is not a zero-sum-game (where one person has to lose for another to win) and that there are payoffs to cooperation. Societies that believe in a fixed pie of wealth have a difficult time engendering cooperation and tend to be low in mutual trust.

The third category contains norms related to innovation. Thus, cultures that look to rational scientific explanations of the world rather than religious or magical explanations tend to be more innovative. Likewise, a culture needs to be tolerant of heresy and experimentation, as strict orthodoxy stifles innovation. Finally, it is important the culture be supportive of competition and celebrate achievement, since overly egalitarian cultures reduce the incentives for risk taking.

One final norm is important to all three categories: how people view time. Cultures that live for today have problems ranging from low work ethic, to an inability to engage in complex cooperation and low levels of investment in innovation. In contrast, cultures that have an ethic of investing for tomorrow tend to value work, demonstrate a willingness to sacrifice short-term pleasures for long-term gain, and enjoy high levels of cooperation.

Q1. Which of the following explains how the cultural horse was brought inside the economic stable?

- a) Behavioural economics weakens the Neoclassical assumptions thereby making culture relevant again.
- b) Behavioural economics doesn't apply to a world where cultural rules must be self-interested.
- c) Behavioural economics has proven that culture is still relevant in a world of perfect rationality.
- d) Behavioural economics has proved that we live in a world of perfect rationality.

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	357
Avg. time spent on this question by all students	351
Difficulty Level	M
Avg. time spent on this question by students who got this question right	343
% of students who attempted this question	45.62
% of students who got the question right of those who attempted	77.84

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 556

Consider the statement 'The second reason was the dominance of Neoclassical economics; culture has little place in a world of perfect rationality, and to the extent that it does, cultural rules must be self-interested, optimising strategies, because otherwise, people would not use them'. From this we can understand that Neoclassical economics entails a world where rationality, self-interest and optimising strategies are more important (the assumption is that we are operating in a perfectly rational world) – things which make culture less relevant. According to the assumptions of Neoclassical economics, people need only that aspect of culture which helps them rationally see their own interests.

Option A: 'Likewise, the rise of behavioural economics has reduced the influence of Neoclassical assumptions and brought the cultural horse inside the economic stable.'

From this statement we can understand that behavioural economics weakens the argument of Neoclassical assumptions (underlined above), by reducing the influence. So, behavioural economics makes culture relevant and thereby, allows the culture argument to be used while explaining economics – bring the cultural horse into the economic stable (earlier 'culture' was excluded, but now it is considered). Hence, Option A is the answer.

Option B: The purview of the question is not about where behavioural economics applies and where it doesn't. We are discussing the influence of behavioural economics on the discussion that links culture and economics. Hence, Option B can be eliminated.

Option C: Behavioural economics has made culture relevant – true. But the second part is not true. According to Neoclassical assumptions, culture has no place in a world of perfect rationality. So, behavioural economics can make culture relevant by proving that this is not a rational world, and we cannot infer that it has made culture relevant through some other argument while the world still remained a perfectly rational one. So, the option misses out on the inferred causation in the passage (culture has little place in a world of perfect rationality). Hence, Option C is not the answer.

Option D: From the statement 'Likewise, the rise of behavioural economics has reduced the influence of Neoclassical assumptions', we can understand that behavioural economics points to the world not being a place of perfect rationality. Hence, Choice (A)

undefined

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(where one person has to lose for another to win) and that there are payoffs to cooperation. Societies that believe in a fixed pie of wealth have a difficult time engendering cooperation and tend to be low in mutual trust.

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One final norm is important to all three categories: how people view time. Cultures that live for today have problems ranging from low work ethic, to an inability to engage in complex cooperation and low levels of investment in innovation. In contrast, cultures that have an ethic of investing for tomorrow tend to value work, demonstrate a willingness to sacrifice short-term pleasures for long-term gain, and enjoy high levels of cooperation.

Q2. Which of the following statements furthers the author's conclusion about the relation between innovation and people's perception of time?

- a) People innovate for a better present.
- b) Goal-oriented cultures lag in innovation.
- c) Innovation can be achieved when people sacrifice their present for the future.
- d) The work-ethic of people varies with their plans for present and future.

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	687
Avg. time spent on this question by all students	146
Difficulty Level	M
Avg. time spent on this question by students who got this question right	144
% of students who attempted this question	43.78
% of students who got the question right of those who attempted	65.45

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 556

Consider the statement: 'One final norm is important to all three categories: how people view time. Cultures that live for today have problems ranging from low work ethic, to an inability to engage in complex cooperation and low levels of investment in innovation.' The author concludes that people innovate less when they live for today. Option A: If people innovated for a better present, there will be more innovation amongst people who live for today. That contradicts the above-cited statement. Hence, Option A is not the answer.

Option B: The passage doesn't talk about goals and the goal-orientation of cultures. We cannot link goals with a culture's perception of the future since goals could be short-term and long-term. Hence, Option B can be eliminated.

Option C: 'In contrast, cultures that have an ethic of investing for tomorrow tend to value work, demonstrate a willingness to sacrifice short-term pleasures for long-term gain.' From this we can understand that the ethic of investing for tomorrow and sacrificing short-term pleasures go hand in hand. Also investing in the future and innovation go hand-in-hand. So, the statement that innovation can be achieved when people sacrifice their present for the future is true. Hence, Option C is the answer.

Option D: While the statement is true, it doesn't help us make a connection between innovation and work ethic, and doesn't elaborate whether the work-ethic variation is positive or negative. Hence, Option D is not the answer.

Choice (C)

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Q3. Which of the following is true about cultures conducive to economic success?

- a) While these cultures are optimistic and cooperative, they don't shy away from rationality and realism.
- b) Although these cultures don't invest in the future, they encourage rationality and cooperation to improve the quality of the present.
- c) While these cultures are egalitarian, they believe in the merits of competition and innovation.
- d) While these cultures are optimistic about their future and believe in cooperation, they enjoy the short-term pleasures of the present.

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	21
Avg. time spent on this question by all students	117
Difficulty Level	M
Avg. time spent on this question by students who got this question right	114
% of students who attempted this question	33.68
% of students who got the question right of those who attempted	67.12

[Video Solution](#)

Text Solution

Number of words and Explanatory notes for RC:

Number of words: 556

Consider the statement: '*The multibillion-dollar question then is, which norms support economic development, and which norms don't. Various researchers have proposed typologies of cultural rules which fall into three broad categories.*' Cultures conducive to economic success (cultures which aid economic development) can be explained using the three categories mentioned: individual behaviour, cooperative behaviour, and innovation. Finally, the perception of time is also important. Also, '*Economically successful cultures appear to strike a balance between optimism that improvement is possible, and realism about one's current situation.*'

Option A: A culture conducive to economic success, according to the passage, holds the individual accountable, blends optimism and realism, and encourages questioning and innovation. All these are highlighted in this option. Hence, Option A is the answer.

Option B: Consider the statement about forward-thinking cultures - '*cultures that have an ethic of investing for tomorrow* tend to *value work*, demonstrate a *willingness to sacrifice short-term pleasures for long-term gain*, and *enjoy high levels of cooperation*' Cultures conducive to economic development invest in the future. That contradicts the given option. Hence, Option B is not the answer.

Option C: From the tone of the statement 'Finally, it is *important the culture be supportive of competition and celebrate achievement*, since *overly egalitarian cultures reduce the incentives for risk taking*', we can understand that egalitarian cultures are not conducive to economic development. Hence, Option C can be eliminated.

Option D: From the passage and above explanations, it can be understood that cultures conducive to economic development demonstrate a willingness to sacrifice short-term pleasures for long-term gains. That contradicts the second part of this option. Hence, Option D can be eliminated.

Choice (A)

undefined

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Q4. Which of the following best summarises why cultural explanations for economic outcomes fell out of favour in the 1950s and 60s?

- a) It wasn't politically correct to explain economic outcomes using culture whose rules are valid only in a perfectly rational world.
- b) It was politically incorrect to frame explanations around culture whose place in a rational world was questionable.
- c) The sensitivity towards race and inheritance decreased and so did the constraints on cultural rules to be more optimal.
- d) Culture has negative connotations and was deemed ideal only in a world of perfect rationality.

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	19
Avg. time spent on this question by all students	87
Difficulty Level	M
Avg. time spent on this question by students who got this question right	83
% of students who attempted this question	38.47
% of students who got the question right of those who attempted	59.84

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 556

Consider the statements: '*cultural explanations for economic outcomes fell out of favour in the 1950s and 60s for two reasons. The first was political correctness. Culture frightens scholars. It has a sulfurous odour of race and inheritance, an air of immutability. The second reason was the dominance of Neoclassical economics; culture has little place in a world of perfect rationality, and to the extent that it does, cultural rules must be self-interested, optimising strategies, because otherwise, people would not use them.*' (Political correctness means not saying anything that could offend anyone.)

Option A: The rules of culture are not valid in a perfectly rational world. Also, only those cultural rules are applicable which are self-interested, optimising strategies. Hence, Option A is incorrect.

Option B: Cultural explanations for economic outcomes fell out of favour because people considered such explanations politically incorrect and because Neoclassical assumptions about a perfect world left no room for cultural explanations. This option explains both reasons. Hence, Option B is the answer.

Option C: 'The sensitivity towards race and inheritance decreased' suggests people were more politically incorrect. That contradicts the information in the passage. Hence, Option C is not the answer.

Option D: While culture does have the negative connotations of race, it is not idea for a world of perfect rationality. So, this option represents the first reason appropriately but is inaccurate with the second option. Hence, Option D is incorrect. Choice (B)

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Q5. Japan and Norway were cited to demonstrate which aspect of economic success?

- a) Without a distinctive culture, a country cannot be economically successful.
- b) Some cultures may be more instrumental than others in influencing economic success.
- c) One cannot credit one specific culture for supporting economic development.
- d) Cultures that vary from the norm produce economic success.

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	2
Avg. time spent on this question by all students	172
Difficulty Level	M
Avg. time spent on this question by students who got this question right	171
% of students who attempted this question	47.04
% of students who got the question right of those who attempted	76.61

[Video Solution](#)

Text Solution

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Number of words: 556

One must avoid the relativist trap and not shy away from statements about why the norms of one culture might be more supportive of economic development than those of another, but at the same time, one can recognise that there is no one cultural formula for economic success. In a world in which cultures as varied as Japan's and Norway's are among the most economically successful, such claims of one perfect formula are easily dismissed.

Option A: This line suggests there is a definite correlation between culture and economic success and that without culture, a country cannot be successful. However, as per the lines cited above, we can understand that the author is not arguing about the importance of culture but that there is not one perfect culture/formula that leads to economic success. That different cultures can be economically successful as long as they are supportive of economic development. Hence, Option A can be ruled out.

Option B: While this is true from the context of the passage, the examples of Japan and Norway, and stressing that their cultures are varied, aren't required to prove some cultures are more instrumental than others. Hence, Option B can be eliminated.

Option C: Both Japan and Norway have been represented as successful despite having varied cultures. We can understand that the author's point was to show that some cultures can lead to economic development, but there is no blueprint as to which culture can achieve economic success. That is because diverse cultures have been able to achieve economic development. Hence, Option C is the answer.

Option D: We haven't been told whether Japan and Norway have cultures which vary from the norm. Hence, we cannot infer that their examples were suggested to prove that cultures need to be different from the norm. Option D is not the answer.

Choice (C)

undefined

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Q6. Which of the following demonstrates the norms of a non-zero-sum-game related to cooperative behaviour?

- a) In trading, one person's gains are another person's losses.
- b) In a war between two kingdoms, the area lost by one kingdom is that gained by the other.
- c) In betting, the winner's payoff comes from what the loser bets.
- d) In a village, a successful farmer can share his practices with the rest to raise the yield of their farmlands.

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	2
Avg. time spent on this question by all students	69
Difficulty Level	M
Avg. time spent on this question by students who got this question right	65
% of students who attempted this question	41.94
% of students who got the question right of those who attempted	67.54

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 556

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Option A: Trading is an example of a zero-sum game, as one person gains from another person's losses. Hence, cooperative behaviour may not be possible in this scenario. Option A is not the answer.

Option B: Since, what one kingdom lost is what another kingdom wins, we can say that war is a zero-sum-game. Hence, Option B is not the answer.

Option C: In betting, one wins and takes home the money another better bets and loses. This is an example of a zero-sum game. Hence, Option C is not the answer.

Option D: There is cooperative behaviour in this scenario indicating that this is a non-zero-sum-game, where farmers help each other and create a win-win situation. Hence, Option D is the answer.

Choice (D)

undefined

DIRECTIONS for questions 7 to 9: The passage given below is accompanied by a set of three questions. Choose the best answer to each question.

Many wonder what separates the two iconic brands, Marvel and DC. DC characters are not defined by a singular artistic voice influencing all the rest, but that's what happened under Jack Kirby's leadership of the entire Marvel brand. Those 10 years where he created most of the characters in the '60s, provide the core for what every artist and writer has built their process upon, including the movies today. There's a kinetic energy and a chaotic energy that embodies Marvel's stuff.

DC is the foremost component of where the DNA of what makes a superhero came from. They did the very first superhero in Superman, and the first great embodiment of the dark superhero in Batman, and of course the first female superhero in Wonder Woman. All those key things are lined up by them. With Marvel, it's clear that Spider-Man is not the same kind of hero as Superman; Cap has similarities, but he has differences as well, and has been used in very interesting ways that stop him from being a clone of any DC counterpart. The Marvel characters are all over the place in terms of what makes them unique, and there's a hip energy that's been instilled in them since their creation. Every other superhero company follows the mould of having their heroes follow those archetypes that DC embodies, but Marvel broke away.

Marvel has indeed been known for its kitschy and (in artist terms) "kinetic" style, whereas DC is known for its more mythic and almost religious reverence of the superhero archetype. That same stylistic divergence has clearly influenced the cinematic side of things, as DC is defined by more "high art" visions like The Dark Knight Trilogy or the Zack Snyder Trilogy, while Marvel Studios has built itself around quirky and kitschy adventures like Iron Man, Guardians of the Galaxy and Thor. Clearly, one formula has been more lucrative at the box-office than the other when it comes to delivering fun movie experiences to audiences, leaving DC with a major roadblock that only Wonder Woman has been able to scale.

Q7. All the following can be inferred from the last line of the passage EXCEPT:

- a) Marvel movies have done well in terms of movie revenues.
- b) **Movie-watchers prefer watching quirky, kitschy adventures of their superheroes to high art visions.** □ **Your answer is incorrect**
- c) Only fun movies make money at the box office.
- d) Wonder Woman has done well for DC movie revenues.

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	157
Difficulty Level	M
Avg. time spent on this question by students who got this question right	155
% of students who attempted this question	59.15
% of students who got the question right of those who attempted	68.05

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 346

That same stylistic divergence has clearly influenced the cinematic side of things, as DC is defined by more "high art" visions like The Dark Knight Trilogy or the Zack Snyder Trilogy, while Marvel Studios has built itself around quirky and kitschy adventures like Iron Man, Guardians of the Galaxy and Thor. Clearly, one formula has been more lucrative at the box-office than the other when it comes to delivering fun movie experiences to audiences, leaving DC with a major roadblock that only Wonder Woman has been able to scale. Once the discussion of the cinematic side of things start, two formulae have been highlighted: Marvel's quirky, kitschy adventures and DC's high art visions. The last lines says one formula has been more lucrative (profitable). Whose? We can infer that it is Marvel because DC has a major roadblock (negative – hindrance, impediment). We can also infer that Wonder Woman is a DC movie that was profitable.

Option A: From the two bits, 'one formula has been more lucrative at the box-office than the other' and 'leaving DC with a major roadblock', we can understand that Marvel has been more successful at the box office and DC has a roadblock. Hence, Option A can be inferred and not the answer.

Option B: Marvel's quirky, kitschy adventures' formula is lucrative at the box office according to the author. Therefore, Option B can be inferred, and not the answer.

Option C: Marvel's fun movies are more lucrative than DC's high-art visions. From that we cannot infer that only fun movies make money at the box office. It will be an extreme extrapolation. Hence, Option C is the answer.

Option D: From 'leaving DC with a major roadblock that only Wonder Woman has been able to scale', we can understand that Wonder Woman has been successful at the box-office (roadblock Wonder Woman has been able to scale is box office given the line mentions 'one formula has been more lucrative at the box-office'). Choice (C)

undefined

DIRECTIONS for questions 7 to 9: The passage given below is accompanied by a set of three questions. Choose the best answer to each question.

Many wonder what separates the two iconic brands, Marvel and DC. DC characters are not defined by a singular artistic voice influencing all the rest, but that's what happened under Jack Kirby's leadership of the entire Marvel brand. Those 10 years where he created most of the characters in the '60s, provide the core for what every artist and writer has built their process upon, including the movies today. There's a kinetic energy and a chaotic energy that embodies Marvel's stuff.

DC is the foremost component of where the DNA of what makes a superhero came from. They did the very first superhero

in Superman, and the first great embodiment of the dark superhero in Batman, and of course the first female superhero in Wonder Woman. All those key things are lined up by them. With Marvel, it's clear that Spider-Man is not the same kind of hero as Superman; Cap has similarities, but he has differences as well, and has been used in very interesting ways that stop him from being a clone of any DC counterpart. The Marvel characters are all over the place in terms of what makes them unique, and there's a hip energy that's been instilled in them since their creation. Every other superhero company follows the mould of having their heroes follow those archetypes that DC embodies, but Marvel broke away.

Marvel has indeed been known for its kitschy and (in artist terms) "kinetic" style, whereas DC is known for its more mythic and almost religious reverence of the superhero archetype. That same stylistic divergence has clearly influenced the cinematic side of things, as DC is defined by more "high art" visions like The Dark Knight Trilogy or the Zack Snyder Trilogy, while Marvel Studios has built itself around quirky and kitschy adventures like Iron Man, Guardians of the Galaxy and Thor. Clearly, one formula has been more lucrative at the box-office than the other when it comes to delivering fun movie experiences to audiences, leaving DC with a major roadblock that only Wonder Woman has been able to scale.

Q8. The difference between Marvel and DC character depictions based on the evidence given in the passage is that

- a) DC's archetypes are fluid whereas Marvel's characters rigidly follow the original archetypes.
- b) **DC characters are archetypal whereas Marvel characters are hippy with diverse traits.**
- c) DC superheroes are dark whereas the Marvel superheroes are quirky.
- d) DC characters are mythological whereas Marvel characters are depicted to be more humanistic.

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	75
Difficulty Level	D
Avg. time spent on this question by students who got this question right	75
% of students who attempted this question	56.39
% of students who got the question right of those who attempted	68

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 346

Option A: A 'kinetic'(fluid) style is associated with Marvel characters whereas DC adheres to its archetypes. This can be understood from the sentences: 'DC is known for its more mythic and almost religious reverence of the superhero archetype' and 'There's a kinetic energy and a chaotic energy that embodies Marvel's stuff'. Hence, Option A doesn't depict the difference accurately.

Option B: From the sentence - 'The Marvel characters are all over the place in terms of what makes them unique, and there's a hip energy that's been instilled in them since their creation'- we can understand that Marvel characters are unique in their traits (more diverse in their traits). From - 'DC is known for its more mythic and almost religious reverence of the superhero archetype' – we can understand that DC characters are true to their archetypes. Hence, Option B summarises the difference well. Option B is the answer.

Option C: From this sentence, 'and the first great embodiment of the dark superhero in Batman' we can understand that DC created one dark superhero. That doesn't necessarily mean all DC superheroes are dark, or have dark characteristics. Hence, Option C is not true.

Option D: 'DC is known for its more mythic and almost religious reverence'. Even if 'mythic' is extrapolated to include 'mythology', the passage doesn't give evidence to assert that Marvel characters are 'humanistic'. Hence, Option D is not the answer.

Choice (B)

DIRECTIONS for questions 7 to 9: The passage given below is accompanied by a set of three questions. Choose the best answer to each question.

Many wonder what separates the two iconic brands, Marvel and DC. DC characters are not defined by a singular artistic voice influencing all the rest, but that's what happened under Jack Kirby's leadership of the entire Marvel brand. Those 10 years where he created most of the characters in the '60s, provide the core for what every artist and writer has built their process upon, including the movies today. There's a kinetic energy and a chaotic energy that embodies Marvel's stuff.

DC is the foremost component of where the DNA of what makes a superhero came from. They did the very first superhero in Superman, and the first great embodiment of the dark superhero in Batman, and of course the first female superhero in Wonder Woman. All those key things are lined up by them. With Marvel, it's clear that Spider-Man is not the same kind of hero as Superman; Cap has similarities, but he has differences as well, and has been used in very interesting ways that stop him from being a clone of any DC counterpart. The Marvel characters are all over the place in terms of what makes them unique, and there's a hip energy that's been instilled in them since their creation. Every other superhero company follows the mould of having their heroes follow those archetypes that DC embodies, but Marvel broke away.

Marvel has indeed been known for its kitschy and (in artist terms) "kinetic" style, whereas DC is known for its more mythic and almost religious reverence of the superhero archetype. That same stylistic divergence has clearly influenced the cinematic side of things, as DC is defined by more "high art" visions like The Dark Knight Trilogy or the Zack Snyder Trilogy, while Marvel Studios has built itself around quirky and kitschy adventures like Iron Man, Guardians of the Galaxy and Thor. Clearly, one formula has been more lucrative at the box-office than the other when it comes to delivering fun movie experiences to audiences, leaving DC with a major roadblock that only Wonder Woman has been able to scale.

Q9. Which of the following can be understood from the opinions expressed in the passage?

- a) DC embodies a veneration for the superhero template.
- b) **DC characters carry the stamp of a singular artistic voice that misses kinetic energy.**
- c) Breaking away from the mould of DC led to Marvel's commercial success.
- d) DC is popular for its superheroes whereas Marvel is popular for the adventures of its characters.

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	325
Avg. time spent on this question by all students	225
Difficulty Level	E
Avg. time spent on this question by students who got this question right	225
% of students who attempted this question	49.12
% of students who got the question right of those who attempted	17.83

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 346

Option A: From the sentence 'DC is known for its more mythic and almost religious reverence of the superhero archetype', we can understand that the superhero template holds a lot of importance and respect (veneration) for DC. Hence, Option A can be understood from the passage.

Option B: From the sentence 'DC characters are not defined by a singular artistic voice influencing all the rest' we can understand that Option B contradicts the opinion of the author. Hence, Option B is not the answer.

Option C: From the sentence 'Every other superhero company follows the mould of having their heroes follow those archetypes that DC embodies, but Marvel broke away' we can understand that Marvel broke away from the superhero template that DC embodies. However, that doesn't signify that Marvel's success is because of that event. Marvel's success and Marvel's breaking away from DC templates have not been connected directly in the passage. Hence, Option C is not the answer.

Option D: 'Marvel Studios has built itself around quirky and kitschy adventures'. From this sentence we can understand what the audiences of the movies prefer. However, we cannot infer that Marvel is popular because of the adventures of its characters. Instead, the movie-universe is 'built' around the adventures of the characters. Also, from the passage we cannot understand that DC is popular because of superheroes (and not necessarily the plots) whereas Marvel is popular for the adventures of its characters (and not necessarily the characters).

Choice (A)

undefined

DIRECTIONS for questions 10 to 15: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

How well do you remember the dinners you enjoyed with your friends, the ones where you left feeling as if you had eaten more than you could manage? Or in the opposite direction, the meals where you didn't order a pudding, because nobody else did?

Perhaps you can blame social cues for eating too much or too little. Several decades of research shows that we eat more in company, and we follow what and how others eat.

But how exactly do our companions affect what we eat, and can we tap into these social influences to cut down on fats and sugar, and even lose weight?

A series of diary studies by health psychologist John de Castro in the 1980s alerted us to social influences in eating. By 1994, de Castro collected diaries of over 500 people recording their meals and the social context of how they ate them – in company, or alone.

To his surprise, people ate more in groups than when they were by themselves. Experiments by other scientists also found that people ate 40% more ice-cream and 10% more macaroni and beef in company than when alone. De Castro named the phenomenon 'social facilitation' and described it as the "single most important and all-pervasive influence on eating yet identified".

What expands our palate when we eat with someone else? Hunger, mood, or distracting social interactions were all

discounted by de Castro and other scientists. Their studies reveal that we extend our meal times when we eat in a group, and we eat more in those extra minutes. Careful observation in a range of eateries showed that bigger groups do enjoy longer meals. And when meal time is fixed, larger parties no longer eat more than smaller ones.

It seems very plausible that when we dine with our friends, we might linger, and therefore reach for yet another slice of cheesecake.

When we anticipate a group meal, we even order more food individually. This was revealed from observations in an Italian restaurant: the larger a dining party, the more pastas and desserts each diner ordered. Social meals appear to make us hungrier, and it appears that we decide that we will indulge even before we order. Such observations led C Peter Herman, a food scientist, to propose his 'feast hypothesis': indulgence is part and parcel of social meals, and that we socialise partially so that we can all eat more without the guilt of overindulgence.

But sometimes we do eat less in company. Our drive to indulge can be tamed by the need to behave. We could manage our impression by eating according to social norms. Or we might observe how others are eating and follow their lead, a behaviour called social modelling.

So far, very few studies have considered why we might have evolved to eat according to social context. Perhaps heeding social norms and not eating more than others might have facilitated food-sharing among our hunter-gatherer ancestors. And eating like others could help children develop preferences for safe and nutritious foods, and therefore avoid potentially dangerous foods.

Q10. Which of the following is the most apt example of social modelling?

- a) A dinner you enjoyed with your friends, where you left feeling as if you had eaten more than you could manage.
- b) **A dinner in which you ordered a pudding because everybody else did.** Your answer is correct
- c) A dinner at a conference where you did not eat well because of social norms.
- d) A dinner with your family in which you ate less so that others could eat more.

Time spent / Accuracy Analysis

Time taken by you to answer this question	16
Avg. time spent on this question by all students	192
Difficulty Level	D
Avg. time spent on this question by students who got this question right	195
% of students who attempted this question	61.6
% of students who got the question right of those who attempted	44.98

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 512

Social modelling is defined as a behaviour in which "we might observe how others are eating and follow their lead". Social modelling can be loosely understood as mimicking others in a group, while eating.

Option A: This option does not talk about how much the others have eaten. It only mentions that "you left feeling as if you had eaten more than you could manage" but does not talk about how much your friends ate. Hence, we cannot infer this to be an example of social modelling.

Option B: If one ordered a pudding **because** everybody else did, it can be called an example of social modelling because in this case, the person observed how others were eating and followed their lead. Therefore, this is an example of social modelling.

Option C: In this example, social norms dictated the quantity of food consumed. This does not talk about how much everyone else was eating. Hence, this is not an example of social modelling.

Option D: Eating less so that others could eat more is not an example of social modelling. Eating more (or less) because other ate more (or less) is social modelling. Therefore, the correct answer is option B.

Choice (B)

undefined

DIRECTIONS for questions 10 to 15: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

How well do you remember the dinners you enjoyed with your friends, the ones where you left feeling as if you had eaten more than you could manage? Or in the opposite direction, the meals where you didn't order a pudding, because nobody else did?

Perhaps you can blame social cues for eating too much or too little. Several decades of research shows that we eat more in company, and we follow what and how others eat.

But how exactly do our companions affect what we eat, and can we tap into these social influences to cut down on fats and sugar, and even lose weight?

A series of diary studies by health psychologist John de Castro in the 1980s alerted us to social influences in eating. By 1994, de Castro collected diaries of over 500 people recording their meals and the social context of how they ate them – in company, or alone.

To his surprise, people ate more in groups than when they were by themselves. Experiments by other scientists also found that people ate 40% more ice-cream and 10% more macaroni and beef in company than when alone. De Castro named the phenomenon 'social facilitation' and described it as the "single most important and all-pervasive influence on eating yet identified".

What expands our palate when we eat with someone else? Hunger, mood, or distracting social interactions were all discounted by de Castro and other scientists. Their studies reveal that we extend our meal times when we eat in a group, and we eat more in those extra minutes. Careful observation in a range of eateries showed that bigger groups do enjoy longer meals. And when meal time is fixed, larger parties no longer eat more than smaller ones.

It seems very plausible that when we dine with our friends, we might linger, and therefore reach for yet another slice of cheesecake.

When we anticipate a group meal, we even order more food individually. This was revealed from observations in an Italian restaurant: the larger a dining party, the more pastas and desserts each diner ordered. Social meals appear to make us hungrier, and it appears that we decide that we will indulge even before we order. Such observations led C Peter Herman, a food scientist, to propose his 'feast hypothesis': indulgence is part and parcel of social meals, and that we socialise partially so that we can all eat more without the guilt of overindulgence.

But sometimes we do eat less in company. Our drive to indulge can be tamed by the need to behave. We could manage our impression by eating according to social norms. Or we might observe how others are eating and follow their lead, a behaviour called social modelling.

So far, very few studies have considered why we might have evolved to eat according to social context. Perhaps heeding social norms and not eating more than others might have facilitated food-sharing among our hunter-gatherer ancestors. And eating like others could help children develop preferences for safe and nutritious foods, and therefore avoid potentially dangerous foods.

Q11. Which of the following steps will Herman most probably recommend based on his research for a person trying to reduce his food intake?

- a) Eat with people who eat lesser than him.
- b) **Fix the time that he spends on eating everyday.** Your answer is incorrect
- c) Avoid social meals.
- d) Do not eat with large groups only when he is ravenous.

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	117
Avg. time spent on this question by all students	100
Difficulty Level	M
Avg. time spent on this question by students who got this question right	103

Time spent / Accuracy Analysis

% of students who attempted this question	57.28
% of students who got the question right of those who attempted	48.67

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 512

According to Peter Herman's feast hypothesis, "indulgence is **part and parcel of social meals**".

This is based on the observation that "we decide that we will indulge even before we order".

Option A: His hypothesis is that it is almost inevitable that one will indulge in social meals. His hypothesis does not consider any case in which everyone in the group eats lesser than one person. Hence, this is not a likely recommendation.

Option B: One of the observations based on de Castro's research is that "when meal time is fixed, larger parties no longer eat more than smaller ones". However, Herman does not talk about the time taken by the groups for eating in his hypothesis. Hence, he would most probably not recommend this.

Option C: Since Herman believes that indulgence is a part and parcel of social meals, the most likely recommendation for a person who is trying to reduce his food intake is that he must avoid social meals. Therefore, this is the correct answer.

Option D: According to Herman, eating in large groups makes one hungrier. However, not eating with large groups only when one is extremely hungry (ravenous) does not follow from this and is, therefore, not a likely recommendation of Herman.

Hence, the correct answer is option C.

Choice (C)

undefined

DIRECTIONS for questions 10 to 15: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

How well do you remember the dinners you enjoyed with your friends, the ones where you left feeling as if you had eaten more than you could manage? Or in the opposite direction, the meals where you didn't order a pudding, because nobody else did?

Perhaps you can blame social cues for eating too much or too little. Several decades of research shows that we eat more in company, and we follow what and how others eat.

But how exactly do our companions affect what we eat, and can we tap into these social influences to cut down on fats and sugar, and even lose weight?

A series of diary studies by health psychologist John de Castro in the 1980s alerted us to social influences in eating. By 1994, de Castro collected diaries of over 500 people recording their meals and the social context of how they ate them – in company, or alone.

To his surprise, people ate more in groups than when they were by themselves. Experiments by other scientists also found that people ate 40% more ice-cream and 10% more macaroni and beef in company than when alone. De Castro named the phenomenon 'social facilitation' and described it as the "single most important and all-pervasive influence on eating yet identified".

What expands our palate when we eat with someone else? Hunger, mood, or distracting social interactions were all discounted by de Castro and other scientists. Their studies reveal that we extend our meal times when we eat in a group, and we eat more in those extra minutes. Careful observation in a range of eateries showed that bigger groups do enjoy longer meals. And when meal time is fixed, larger parties no longer eat more than smaller ones.

It seems very plausible that when we dine with our friends, we might linger, and therefore reach for yet another slice of cheesecake.

When we anticipate a group meal, we even order more food individually. This was revealed from observations in an Italian restaurant: the larger a dining party, the more pastas and desserts each diner ordered. Social meals appear to make us

hungrier, and it appears that we decide that we will indulge even before we order. Such observations led C Peter Herman, a food scientist, to propose his 'feast hypothesis': indulgence is part and parcel of social meals, and that we socialise partially so that we can all eat more without the guilt of overindulgence.

But sometimes we do eat less in company. Our drive to indulge can be tamed by the need to behave. We could manage our impression by eating according to social norms. Or we might observe how others are eating and follow their lead, a behaviour called social modelling.

So far, very few studies have considered why we might have evolved to eat according to social context. Perhaps heeding social norms and not eating more than others might have facilitated food-sharing among our hunter-gatherer ancestors. And eating like others could help children develop preferences for safe and nutritious foods, and therefore avoid potentially dangerous foods.

Q12. As can be inferred from the passage, 'social facilitation' can best be defined as

- a) the most important and all-pervasive influence on eating yet identified.
- b) **the quantity of food that people eat when dining in groups depends on the size of the group, provided there is no constraint on time.**
- c) **the quantity of food that people eat when dining in groups is more than that when dining alone, provided there is no constraint on time.** Your answer is correct
- d) people eat more when they have more time to eat.

Time spent / Accuracy Analysis

Time taken by you to answer this question	18
Avg. time spent on this question by all students	79
Difficulty Level	D
Avg. time spent on this question by students who got this question right	79
% of students who attempted this question	59.34
% of students who got the question right of those who attempted	67.66

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 512

'Social facilitation' is a phenomenon described by de Castro. The best definition of this phenomenon is given in the beginning of the fifth paragraph, "people ate more in groups than when they were by themselves".

Option A: That social facilitation is the "single most important and all-pervasive influence on eating yet identified" has been mentioned in the passage. However, this is not as much a definition of the phenomenon as a feature. This does not define what the phenomenon is but it rather describes how important it is. Therefore, this option is incorrect.

Option B: The passage mentions that "bigger groups do enjoy longer meals" and longer meals implies eating more. However, social facilitation is used to describe a phenomenon which compares eating alone and eating in groups. ("To his surprise, **people ate more in groups** than when **they were by themselves**". "people ate 40% more ice-cream and 10% more macaroni and beef in company **than when alone**.") Since this option limits itself only to dining in groups, this cannot be a good definition of social facilitation.

Option C: De Castro compared eating alone and eating in groups and found that there is a difference in the amount that people eat. He named this phenomenon social facilitation. This option best captures the essence of this phenomenon. Therefore, this is the correct answer.

Option D: Eating in groups is intrinsic to the phenomenon of social facilitation (and to de Castro's research). Since this option does not mention eating in groups, this is not a good definition of the phenomenon.

Therefore, the correct answer is option C.

Choice (C)

undefined

DIRECTIONS for questions 10 to 15: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

How well do you remember the dinners you enjoyed with your friends, the ones where you left feeling as if you had eaten more than you could manage? Or in the opposite direction, the meals where you didn't order a pudding, because nobody else did?

Perhaps you can blame social cues for eating too much or too little. Several decades of research shows that we eat more in company, and we follow what and how others eat.

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To his surprise, people ate more in groups than when they were by themselves. Experiments by other scientists also found that people ate 40% more ice-cream and 10% more macaroni and beef in company than when alone. De Castro named the phenomenon 'social facilitation' and described it as the "single most important and all-pervasive influence on eating yet identified".

What expands our palate when we eat with someone else? Hunger, mood, or distracting social interactions were all discounted by de Castro and other scientists. Their studies reveal that we extend our meal times when we eat in a group, and we eat more in those extra minutes. Careful observation in a range of eateries showed that bigger groups do enjoy longer meals. And when meal time is fixed, larger parties no longer eat more than smaller ones.

It seems very plausible that when we dine with our friends, we might linger, and therefore reach for yet another slice of cheesecake.

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But sometimes we do eat less in company. Our drive to indulge can be tamed by the need to behave. We could manage our impression by eating according to social norms. Or we might observe how others are eating and follow their lead, a behaviour called social modelling.

So far, very few studies have considered why we might have evolved to eat according to social context. Perhaps heeding social norms and not eating more than others might have facilitated food-sharing among our hunter-gatherer ancestors. And eating like others could help children develop preferences for safe and nutritious foods, and therefore avoid potentially dangerous foods.

Q13. The difference between Herman's hypothesis and de Castro's research findings is that

- a) the size of the dining group plays a part in the former but not in the latter. Your answer is incorrect
- b) indulgence is inevitable in social meals according to the former but not according to the latter.
- c) food wastage is more in social meals according to the former but not so according to the latter.
- d) the former considers eating in large groups, while the latter considers eating in smaller groups.

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	325
Avg. time spent on this question by all students	123
Difficulty Level	M
Avg. time spent on this question by students who got this question right	122

Time spent / Accuracy Analysis

% of students who attempted this question	53.05
% of students who got the question right of those who attempted	65.34

[Video Solution](#)

Text Solution

Number of words and Explanatory notes for RC:

Number of words: 512

Herman's feast hypothesis is that "indulgence is **part and parcel of social meals**". De Castro's finding is that "**people ate more in groups** than when **they were by themselves**". Also, "we extend our meal times when we eat in a group, and we eat **more in those extra minutes**".

Option A: In de Castro's research, it was found that "bigger groups do enjoy longer meals". Herman's research is based on observations like "the larger a dining party, the more pastas and desserts each diner". In both these cases, the size of a group plays a part. Hence, this is not the correct answer.

Option B: According to Herman, indulgence is part and parcel of social meals. He does not talk about any case in which people do not indulge in social meals. However, de Castro's research links the amount that we eat to two things – eating in group and time available ("we extend our meal times when we eat in a group, and **we eat more in those extra minutes**"). If those extra minutes are not available, it is not necessary that we eat more. Hence, indulgence is not inevitable according to de Castro.

Option C: While Herman's research is based on the observation that people order more when dining in groups, the passage does not mention whether they waste the food. Since they order more and also eat more, we cannot determine anything about the food wastage. Hence, this option is not correct.

Option D: There is no indication or comparison of the size of the groups between the two researches. Hence, this option cannot be inferred.

Therefore, the correct answer is option B.

Choice (B)

undefined

DIRECTIONS for questions 10 to 15: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

How well do you remember the dinners you enjoyed with your friends, the ones where you left feeling as if you had eaten more than you could manage? Or in the opposite direction, the meals where you didn't order a pudding, because nobody else did?

Perhaps you can blame social cues for eating too much or too little. Several decades of research shows that we eat more in company, and we follow what and how others eat.

But how exactly do our companions affect what we eat, and can we tap into these social influences to cut down on fats and sugar, and even lose weight?

A series of diary studies by health psychologist John de Castro in the 1980s alerted us to social influences in eating. By 1994, de Castro collected diaries of over 500 people recording their meals and the social context of how they ate them – in company, or alone.

To his surprise, people ate more in groups than when they were by themselves. Experiments by other scientists also found that people ate 40% more ice-cream and 10% more macaroni and beef in company than when alone. De Castro named the phenomenon 'social facilitation' and described it as the "single most important and all-pervasive influence on eating yet identified".

What expands our palate when we eat with someone else? Hunger, mood, or distracting social interactions were all discounted by de Castro and other scientists. Their studies reveal that we extend our meal times when we eat in a group, and we eat more in those extra minutes. Careful observation in a range of eateries showed that bigger groups do enjoy longer meals. And when meal time is fixed, larger parties no longer eat more than smaller ones.

It seems very plausible that when we dine with our friends, we might linger, and therefore reach for yet another slice of cheesecake.

When we anticipate a group meal, we even order more food individually. This was revealed from observations in an Italian restaurant: the larger a dining party, the more pastas and desserts each diner ordered. Social meals appear to make us hungrier, and it appears that we decide that we will indulge even before we order. Such observations led C Peter Herman, a food scientist, to propose his 'feast hypothesis': indulgence is part and parcel of social meals, and that we socialise partially so that we can all eat more without the guilt of overindulgence.

But sometimes we do eat less in company. Our drive to indulge can be tamed by the need to behave. We could manage our impression by eating according to social norms. Or we might observe how others are eating and follow their lead, a behaviour called social modelling.

So far, very few studies have considered why we might have evolved to eat according to social context. Perhaps heeding social norms and not eating more than others might have facilitated food-sharing among our hunter-gatherer ancestors. And eating like others could help children develop preferences for safe and nutritious foods, and therefore avoid potentially dangerous foods.

Q14. The explanations provided in the last para regarding evolution of eating according to social context highlights which of the following aspects of social dining?

- I.
The drive to indulge is tamed by the need to behave.
- II.
One might observe how others are eating and follow their lead.
- III.
One can eat more without the guilt of overindulgence when dining socially.

- a) Only I
- b) Only II and III
- c) Only I and III
- d) Only I and II Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	86
Difficulty Level	D
Avg. time spent on this question by students who got this question right	87
% of students who attempted this question	51.89
% of students who got the question right of those who attempted	79.08

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 512

In the last paragraph, the author provides two possible explanations for the evolution of eating according to social context.

The first one is "**heeding social norms** and **not eating more than others**" might have facilitated food-sharing among our hunter-gatherer ancestors"

The second one is "**eating like others**" could help children develop preferences for safe and nutritious foods"

Statement I: The need to behave is mentioned in the first explanation. Heeding social norms might have facilitated food-sharing. We can infer that the social norms refer to the need to behave (from the passage, where it is mentioned that "Our drive to indulge can be tamed by the need to behave. We could manage our impression by eating according to social norms"). Hence, this is one aspect mentioned in the explanation.

Statement II: In the second explanation, it talks about "eating like others" which highlights observing how others are eating and follow their lead. Hence this is also mentioned.

Statement III: The two explanations do not talk about overindulgence. It talks about eating according to social contexts which facilitates food-sharing and helping children. Hence, this has not been mentioned in any of the two explanations.

Therefore, only I and II have been mentioned.

Choice (D)

undefined

DIRECTIONS for questions 10 to 15: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

How well do you remember the dinners you enjoyed with your friends, the ones where you left feeling as if you had eaten more than you could manage? Or in the opposite direction, the meals where you didn't order a pudding, because nobody else did?

Perhaps you can blame social cues for eating too much or too little. Several decades of research shows that we eat more in company, and we follow what and how others eat.

But how exactly do our companions affect what we eat, and can we tap into these social influences to cut down on fats and sugar, and even lose weight?

A series of diary studies by health psychologist John de Castro in the 1980s alerted us to social influences in eating. By 1994, de Castro collected diaries of over 500 people recording their meals and the social context of how they ate them – in company, or alone.

To his surprise, people ate more in groups than when they were by themselves. Experiments by other scientists also found that people ate 40% more ice-cream and 10% more macaroni and beef in company than when alone. De Castro named the phenomenon 'social facilitation' and described it as the "single most important and all-pervasive influence on eating yet identified".

What expands our palate when we eat with someone else? Hunger, mood, or distracting social interactions were all discounted by de Castro and other scientists. Their studies reveal that we extend our meal times when we eat in a group, and we eat more in those extra minutes. Careful observation in a range of eateries showed that bigger groups do enjoy longer meals. And when meal time is fixed, larger parties no longer eat more than smaller ones.

It seems very plausible that when we dine with our friends, we might linger, and therefore reach for yet another slice of

cheesecake.

When we anticipate a group meal, we even order more food individually. This was revealed from observations in an Italian restaurant: the larger a dining party, the more pastas and desserts each diner ordered. Social meals appear to make us hungrier, and it appears that we decide that we will indulge even before we order. Such observations led C Peter Herman, a food scientist, to propose his 'feast hypothesis': indulgence is part and parcel of social meals, and that we socialise partially so that we can all eat more without the guilt of overindulgence.

But sometimes we do eat less in company. Our drive to indulge can be tamed by the need to behave. We could manage our impression by eating according to social norms. Or we might observe how others are eating and follow their lead, a behaviour called social modelling.

So far, very few studies have considered why we might have evolved to eat according to social context. Perhaps heeding social norms and not eating more than others might have facilitated food-sharing among our hunter-gatherer ancestors. And eating like others could help children develop preferences for safe and nutritious foods, and therefore avoid potentially dangerous foods.

Q15. Which of the following statements is true regarding social modelling and social facilitation?

- a) **Social modelling is a possible explanation for the phenomenon of social facilitation.** □ Your answer is incorrect
- b) **Social facilitation is a possible explanation for social modelling.**
- c) **Social modelling is an example of the phenomenon of social facilitation.**
- d) **None of the above**

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	59
Difficulty Level	D
Avg. time spent on this question by students who got this question right	58
% of students who attempted this question	43.11
% of students who got the question right of those who attempted	40.75

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 512

Social facilitation is the phenomenon which can be described as people eating more in groups than when they are by themselves.

Social modelling can be described as a behaviour in which "we might observe how others are eating and follow their lead".

Option A: Social modelling mentions about mimicking others. Social facilitation talks about eating more in larger groups. However, the reason for eating more is not because we mimic, it is because we eat longer ("we extend our meal times when we eat in a group, and we eat more in those extra minutes"). Social facilitation does not mention mimicking as a possible reason for why people eat more in groups. Hence, social modelling does not explain social facilitation.

Option B: Social modelling (eating more by mimicking others) does not happen because of social facilitation (eating more when in a group). As explained in the above option, neither of the two can serve as an explanation for the other.

Option C: According to social modelling, we can eat **more or less** when in groups. If others in the group eat more, we eat more; if they eat less, we eat less. Social facilitation is only about eating more in groups and not about eating less. Hence, social modelling cannot be an example of social facilitation.

Hence, the correct answer is option D.

Choice (D)

undefined

DIRECTIONS for questions 16 to 18: The passage given below is accompanied by a set of three questions. Choose the best answer to each question.

Gemeinschaft and gesellschaft are both sociological theories developed by German sociologist Ferdinand Tonnies describing two normal types of human association. Gemeinschaft is a social association in which the individuals are inclined towards social community rather than their individual wants and needs. Gesellschaft is a civil society in which the individual needs are given more importance than the social association.

“Gemeinschaft” is a German word which is translated as “community” and mainly emphasizes common mores wherein the individuals believe in appropriate behaviour and responsibility of each other to the association instead of focusing on individual interests and needs. Ferdinand Tonnies believed that family was the perfect epitome of gemeinschaft. On the other hand, gesellschaft translated as “society” mainly focuses on individual interests rather than large association. Modern businesses, managers, workers, and owners are a good example of a gesellschaft association.

Gemeinschaft emphasizes community ties in which personal relationships and families are given more importance. In contrast, gesellschaft emphasizes more on secondary relationships instead of families and personal relationships. While Gesellschaft is characterized by a more elaborate division of labour, Gemeinschaft typically derives from a moderate division of labour.

Gemeinschaft is identified by small, localized societies as opposed to gesellschaft which is characterized by complex, impersonal societies. The communities in the gemeinschaft theory have strong social bonds, shared values, and benefits. In gesellschaft communities, social ties are impersonal, instrumental, and narrow. Talcott Parsons, a renowned American sociologist, further described gemeinschaft as a collective orientation and gesellschaft as self-orientation.

The gemeinschaft association occurs in small cities where the individuals focus more on the social community interests than their own self interests. The idea is to focus on the “will of all”. The group values and norms regulate the gemeinschaft community. Gesellschaft can be seen in very large cities where individuals are self-centric. The gesellschaft society doesn't believe in social ties and group values as individual needs are given more importance than anything else.

Q16. All the following regarding the differences between Gemeinschaft and Gesellschaft are true EXCEPT:

- a) Gemeinschaft represents a socio-centric attitude whereas Gesellschaft represents an egocentric attitude.
- b) Gemeinschaft emphasizes common mores whereas Gesellschaft doesn't involve shared mores.
- c) Gemeinschaft encompasses values instrumental in personal success whereas Gesellschaft involves the growth and nurturing of secondary ties and relationships.
- d) Gemeinschaft works well in small, localized societies where Gesellschaft is more of a theme in complex, impersonal societies.

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	150
Difficulty Level	M
Avg. time spent on this question by students who got this question right	145
% of students who attempted this question	38.24
% of students who got the question right of those who attempted	76.63

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 320

Option A: Gemeinschaft is a social association in which the individuals are inclined towards social community (the word 'socio-centric' is apt for this attitude) rather than their individual wants and needs. Gesellschaft is a civil society in which the individual needs are given more importance than the social association (the word 'egocentric' is apt for this attitude). From the underlined portions, A is true. Hence, A is not the answer.

Option B: 'Gemeinschaft is a German word which is translated as "community" and mainly emphasizes common mores' wherein the individuals believe in appropriate behaviour and responsibility of each other to the association instead of focusing on individual interests and needs. On the other hand, Gesellschaft translated as "society" mainly focuses on individual interests rather than large association. There is no shared mores concept involved in this type of association as the large association is not given prime importance.

B incorporates the underlined portions. Hence, B is not the answer.

Option C: From 'In contrast, gesellschaft emphasizes more on secondary relationships instead of families and personal relationships', the second part is proven true. However, from 'The communities in the gemeinschaft theory have strong social bonds, shared values, and benefits. In gesellschaft communities, social ties are impersonal, instrumental, and narrow', the first part is proven wrong. In Gemeinschaft, people are not carried away by personal success or instrumental actions. Hence, C is the answer.

Option D: 'Gemeinschaft is identified by small, localized societies as opposed to gesellschaft which is characterized by complex, impersonal societies.' From this line, D is true. Hence, D is not the answer.

Choice (C)

undefined

DIRECTIONS for questions 16 to 18: The passage given below is accompanied by a set of three questions. Choose the best answer to each question.

Gemeinschaft and gesellschaft are both sociological theories developed by German sociologist Ferdinand Tonnies describing two normal types of human association. Gemeinschaft is a social association in which the individuals are inclined towards social community rather than their individual wants and needs. Gesellschaft is a civil society in which the individual needs are given more importance than the social association.

"Gemeinschaft" is a German word which is translated as "community" and mainly emphasizes common mores wherein the individuals believe in appropriate behaviour and responsibility of each other to the association instead of focusing on individual interests and needs. Ferdinand Tonnies believed that family was the perfect epitome of gemeinschaft. On the other hand, gesellschaft translated as "society" mainly focuses on individual interests rather than large association. Modern businesses, managers, workers, and owners are a good example of a gesellschaft association.

Gemeinschaft emphasizes community ties in which personal relationships and families are given more importance. In contrast, gesellschaft emphasizes more on secondary relationships instead of families and personal relationships. While Gesellschaft is characterized by a more elaborate division of labour, Gemeinschaft typically derives from a moderate division of labour.

Gemeinschaft is identified by small, localized societies as opposed to gesellschaft which is characterized by complex, impersonal societies. The communities in the gemeinschaft theory have strong social bonds, shared values, and benefits. In gesellschaft communities, social ties are impersonal, instrumental, and narrow. Talcott Parsons, a renowned American sociologist, further described gemeinschaft as a collective orientation and gesellschaft as self-orientation.

The gemeinschaft association occurs in small cities where the individuals focus more on the social community interests than their own self interests. The idea is to focus on the "will of all". The group values and norms regulate the gemeinschaft community. Gesellschaft can be seen in very large cities where individuals are self-centric. The gesellschaft society doesn't believe in social ties and group values as individual needs are given more importance than anything else.

Q17. Which of the following models deviates from the author's view of what Gemeinschaft is?

- a) A sports team where members are only invested in the overall accomplishments of the team.
- b) A farm community where individuals share their spoils of harvest and celebrate all festivals together.
- c) A non-profit organisation where volunteers believe in the spirit of healthy teamwork and group ethos thereby building a strong brand.
- d) A family business run by all the siblings who are interested only in their share of profits.

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	275
Avg. time spent on this question by all students	223
Difficulty Level	D
Avg. time spent on this question by students who got this question right	219
% of students who attempted this question	38.31
% of students who got the question right of those who attempted	85.49

[Video Solution](#)

Text Solution

According to the author, Gemeinschaft represents a scenario where society is more important than the individuals who work for society's benefit. Gesellschaft represents a scenario where society is not important and individuals are working for their own personal gain.

Option A: In this scenario, team members are invested in the team and are not worried about their individual interests. Hence, A represents Gemeinschaft. It doesn't deviate from the author's models. Therefore, A is not the answer.

Option B: In this scenario, individuals are part of a small, localized community (farm community) and the group interests come ahead of self-interest. This represents the 'gemeinschaft' model. Therefore, B doesn't deviate from the passage. B is not the answer.

Option C: In this scenario, the volunteers are invested in group ethos, looking to work towards a common goal rather than an individual goal. This represents Gemeinschaft. Also, since it is a non-profit organisation, we cannot apply the logic that all modern businesses/managers/workers, etc. come under gesellschaft. Hence, C is not the answer.

Option D: In this scenario, the siblings are involved in individual interests. The term family-business doesn't necessarily convey the idea of a family living together and working for each other. Therefore, this option doesn't adhere to the Gemeinschaft model. Hence, D is the answer.

Choice (D)

undefined

DIRECTIONS for questions 16 to 18: The passage given below is accompanied by a set of three questions. Choose the best answer to each question.

Gemeinschaft and gesellschaft are both sociological theories developed by German sociologist Ferdinand Tonnies describing two normal types of human association. Gemeinschaft is a social association in which the individuals are inclined towards social community rather than their individual wants and needs. Gesellschaft is a civil society in which the individual needs are given more importance than the social association.

"Gemeinschaft" is a German word which is translated as "community" and mainly emphasizes common mores wherein the individuals believe in appropriate behaviour and responsibility of each other to the association instead of focusing on individual interests and needs. Ferdinand Tonnies believed that family was the perfect epitome of gemeinschaft. On the other hand, gesellschaft translated as "society" mainly focuses on individual interests rather than large association. Modern businesses, managers, workers, and owners are a good example of a gesellschaft association.

Gemeinschaft emphasizes community ties in which personal relationships and families are given more importance. In

contrast, gesellschaft emphasizes more on secondary relationships instead of families and personal relationships. While Gesellschaft is characterized by a more elaborate division of labour, Gemeinschaft typically derives from a moderate division of labour.

Gemeinschaft is identified by small, localized societies as opposed to gesellschaft which is characterized by complex, impersonal societies. The communities in the gemeinschaft theory have strong social bonds, shared values, and benefits. In gesellschaft communities, social ties are impersonal, instrumental, and narrow. Talcott Parsons, a renowned American sociologist, further described gemeinschaft as a collective orientation and gesellschaft as self-orientation.

The gemeinschaft association occurs in small cities where the individuals focus more on the social community interests than their own self interests. The idea is to focus on the "will of all". The group values and norms regulate the gemeinschaft community. Gesellschaft can be seen in very large cities where individuals are self-centric. The gesellschaft society doesn't believe in social ties and group values as individual needs are given more importance than anything else.

Q18. Which of the following is the author most likely to agree with based on the viewpoints expressed in the passage?

- a) The gemeinschaft association can occur in small cities because social community interests come ahead of self-interest there.
- b) Those living in small cities resonate Gesellschaft because of the presence of familial connect.
- c) Focusing on communities is harder in smaller cities than in complex, large cities.
- d) Gesellschaft depicts a more amorphous form of hierarchy than gemeinschaft does.

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	61
Difficulty Level	D
Avg. time spent on this question by students who got this question right	59
% of students who attempted this question	35.06
% of students who got the question right of those who attempted	85.73

[Video Solution](#)

[Text Solution](#)

Option A: Gemeinschaft puts the society and community ahead of individuals and is usually seen in small, localized societies. Hence, the author is likely to agree with A.

Option B: 'Gesellschaft can be seen in very large cities where individuals are self-centric.' From this line, it can be understood that the author will not agree to the fact that those living in small cities will resonate the idea of Gesellschaft. Rather, 'the gemeinschaft association occurs in small cities' B is not the answer.

Option C: 'Gemeinschaft is identified by small, localized societies as opposed to gesellschaft which is characterized by complex, impersonal societies.' 'Gemeinschaft emphasizes community ties in which personal relationships and families are given more importance.' From the underlined portions, it can be understood that community ties are focused upon in small societies. Also, gesellschaft is characterized by complex societies where individual interest is catered to. Hence, the author is unlikely to agree with the fact that focusing on communities is harder in smaller cities. Therefore, C is not the answer.

Option D: 'While Gesellschaft is characterized by a more elaborate division of labour, Gemeinschaft typically derives from a moderate division of labour.' From this line, the hierarchy (division of labour) is more pronounced in Gesellschaft. In other words, it is Gemeinschaft and not Gesellschaft which depicts a more amorphous form of hierarchy or division of labour. Hence, the author is unlikely to agree with the fact that Gesellschaft depicts a more amorphous form. D is not the answer.

Choice (A)

undefined

DIRECTIONS for questions 19 to 24: The passage given below is accompanied by a set of six questions. Choose the best

Answer to each question.

Two high-profile men in the tennis world recently tried to set back women players a few decades. Raymond Moore, during the Indian Wells tournament, said that female tennis stars “ride on the coattails of the men”. He has since resigned as the tournament’s director and CEO. Then Novak Djokovic, a Grand Slam winner, added that male tennis players should earn more prize money than women because their matches attract more viewers. But don’t worry, he has respect for female athletes who face added challenges such as “the hormones and different stuff.” He has since apologized on his Facebook page to “anyone who has taken this the wrong way” — the classic non-apology apology — and said in a news conference that he is “for equality in the sport.” These misogynist comments are particularly troublesome because tennis is a sport which has been uniquely progressive on gender equality.

In tennis' four major tournaments, women now earn the same amount of prize money as men. The pay situation in tennis is not perfect — prizes at women's tournaments are still less than at men's tournaments. But compared to other sports, such as professional golf, where the prize money for men is more than five times higher than that for women, tennis is a feminist paradise.

Many men will say that since sports is entertainment, players should be paid based on the number of spectators they attract. If women received equal opportunities to train or to attract sponsorship and media coverage, that argument would be more convincing. But since female athletes simply don't receive the same investment, it's impossible to know how popular women's sports could be if given the "male" treatment.

Those disadvantages aside, women's tennis has a respectable following. In 2015, the U.S. Open women's tournament sold out more quickly than the men's event and in 2013 and 2014, the women's finals had higher ratings.

But perhaps, as many male sports fans point out, female players deserve less money because they are lesser athletes. Most men are physically stronger than women, but luckily most sports don't consist of picking up a heavy boulder and grunting loudly. Being a good athlete also involves skill, agility, leadership and mental strength. Women's tennis has become so popular precisely because instead of the smashes and aces that characterize male matches, the ladies hold long, nerve-wracking rallies that make for more compelling TV.

The true root of any justification for a return to unequal pay is sexism. For proof, look at how men speak publicly about female athletes. Because Serena Williams is strong and black, her body is seen as a threat, not an asset. One journalist wrote that she is “built like one of the monster trucks that crushes Volkswagens at sports arenas.” Because Canadian tennis star Eugenie Bouchard is svelte and blonde, she was asked by a male interviewer to twirl her skirt after winning a January match at the Australian Open.

Forty-three years after Billie Jean King helped secure equal pay at the U.S. Open, women still don't receive equal treatment. It's a shame that the game's male athletes would rather use twisted logic to roll back women's rights than celebrate their sport's progressive stance on gender.

Q19. Which of the following is the 'progressive stance' the author refers to in the last line of the passage?

- a) Sexism in all its forms is banned at tennis tournaments.
 - b) The prize money for the four major tennis tournaments is equal for men and women. Your answer is correct
 - c) Media gives the same coverage to male and female tennis stars.
 - d) In tennis, the women's matches enjoy higher ratings.

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	169
Difficulty Level	M
Avg. time spent on this question by students who got this question right	169
% of students who attempted this question	49.88
% of students who got the question right of those who attempted	64.59

Video Solution

Text Solution

Number of words and Explanatory notes for RC:

Number of words: 531

The progressive stance referred to in the last line of the passage was earlier mentioned in the statement: "These misogynist comments are particularly troublesome because tennis is a sport which has been uniquely progressive on gender equality." This has been explained further in the statement: "In tennis' four major tournaments, women now earn the same amount of prize money as men."

Option A: The passage doesn't talk about any bans in any sport, leave alone tennis tournaments. Hence, this option can be easily eliminated.

Option B: This has been mentioned above as the reason the stance of tennis is considered progressive. Men and women are treated equally at all four major tournaments in terms of prize money. Hence, Option B is the answer.

Option C: Media coverage has not been discussed in this particular context. Where it has been mentioned - '*If women received equal opportunities to train or to attract sponsorship and media coverage, that argument would be more convincing'* – it has been shown in a poor light. Hence, Option C is not the answer.

Option D: This is always not the case. Some matches enjoy higher ratings. Also, ratings have got nothing to do with the stance referred to in the passage with respect to the sport itself. Hence, Option D is not the answer.

Choice (B)

undefined

DIRECTIONS for questions 19 to 24: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

Two high-profile men in the tennis world recently tried to set back women players a few decades. Raymond Moore, during the Indian Wells tournament, said that female tennis stars "ride on the coattails of the men". He has since resigned as the tournament's director and CEO. Then Novak Djokovic, a Grand Slam winner, added that male tennis players should earn more prize money than women because their matches attract more viewers. But don't worry, he has respect for female athletes who face added challenges such as "the hormones and different stuff." He has since apologized on his Facebook page to "anyone who has taken this the wrong way" — the classic non-apology apology — and said in a news conference that he is "for equality in the sport." These misogynist comments are particularly troublesome because tennis is a sport which has been uniquely progressive on gender equality.

In tennis' four major tournaments, women now earn the same amount of prize money as men. The pay situation in tennis is not perfect — prizes at women's tournaments are still less than at men's tournaments. But compared to other sports, such as professional golf, where the prize money for men is more than five times higher than that for women, tennis is a feminist paradise.

Many men will say that since sports is entertainment, players should be paid based on the number of spectators they attract. If women received equal opportunities to train or to attract sponsorship and media coverage, that argument would be more convincing. But since female athletes simply don't receive the same investment, it's impossible to know how popular women's sports could be if given the "male" treatment.

Those disadvantages aside, women's tennis has a respectable following. In 2015, the U.S. Open women's tournament sold out more quickly than the men's event and in 2013 and 2014, the women's finals had higher ratings.

But perhaps, as many male sports fans point out, female players deserve less money because they are lesser athletes. Most men are physically stronger than women, but luckily most sports don't consist of picking up a heavy boulder and grunting loudly. Being a good athlete also involves skill, agility, leadership and mental strength. Women's tennis has become so popular precisely because instead of the smashes and aces that characterize male matches, the ladies hold long, nerve-wracking rallies that make for more compelling TV.

The true root of any justification for a return to unequal pay is sexism. For proof, look at how men speak publicly about female athletes. Because Serena Williams is strong and black, her body is seen as a threat, not an asset. One journalist wrote that she is "built like one of the monster trucks that crushes Volkswagens at sports arenas." Because Canadian tennis star Eugenie Bouchard is svelte and blonde, she was asked by a male interviewer to twirl her skirt after winning a January match at the Australian Open.

Forty-three years after Billie Jean King helped secure equal pay at the U.S. Open, women still don't receive equal treatment.

It's a shame that the game's male athletes would rather use twisted logic to roll back women's rights than celebrate their sport's progressive stance on gender.

Q20. To counter the argument that pay should be proportional to spectatorship, the author mentions all the below EXCEPT?

- a) Equal opportunity to train
- b) Equal opportunity to attract sponsorship
- c) Media coverage
- d) Uniquely progressive nature of tennis. Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	42
Difficulty Level	M
Avg. time spent on this question by students who got this question right	42
% of students who attempted this question	53.25
% of students who got the question right of those who attempted	90.7

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 531

Consider the statements: 'Many men will say that since sports is entertainment, players should be paid based on the number of spectators they attract. If women received equal opportunities to train or to attract sponsorship and media coverage, that argument would be more convincing. But since female athletes simply don't receive the same investment, it's impossible to know how popular women's sports could be if given the "male" treatment.' There are two aspects to the counterargument. The author doesn't agree to the recommendation that pay should be proportional to the spectatorship because the playing field is not even for men and women. Despite the absence of a level playing field, women's tennis sometimes garners higher ratings and sells out faster.

Option A: The author clearly states that (underlined portions above) female athletes do not receive equal opportunity to train, and hence, the argument that players be paid based on number of spectators they attract is unconvincing. Hence, Option A is a counter-argument made by the author, and not the answer.

Option B: The author mentions how women do not have the same opportunity to attract sponsorship arguing that pay based on spectatorship doesn't give women a level playing field. Hence, Option B is not the answer.

Option C: From the statement 'If women received equal opportunities to train or to attract sponsorship and media coverage, that argument would be more convincing', we can understand that the author believes lack of media coverage affects the chances of female tennis players when it comes to attracting spectatorship. Hence, Option B is not the answer.

Option D: Tennis is a feminist paradise because it is a little more progressive than other sports when it comes to equal prize money. While the author would agree with the statement, this is not a counterargument against the opinion that pay should be tied with spectatorship. (Also, this sentence is positive, so on tone, one can find that this option doesn't fit the criteria of the author's counterarguments.) Hence, Option D is the answer.

Choice (D)

undefined

DIRECTIONS for questions 19 to 24: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

Two high-profile men in the tennis world recently tried to set back women players a few decades. Raymond Moore, during the Indian Wells tournament, said that female tennis stars “ride on the coattails of the men”. He has since resigned as the tournament’s director and CEO. Then Novak Djokovic, a Grand Slam winner, added that male tennis players should earn more prize money than women because their matches attract more viewers. But don’t worry, he has respect for female athletes who face added challenges such as “the hormones and different stuff.” He has since apologized on his Facebook page to “anyone who has taken this the wrong way” — the classic non-apology apology — and said in a news conference that he is “for equality in the sport.” These misogynist comments are particularly troublesome because tennis is a sport which has been uniquely progressive on gender equality.

In tennis’ four major tournaments, women now earn the same amount of prize money as men. The pay situation in tennis is not perfect — prizes at women’s tournaments are still less than at men’s tournaments. But compared to other sports, such as professional golf, where the prize money for men is more than five times higher than that for women, tennis is a feminist paradise.

Many men will say that since sports is entertainment, players should be paid based on the number of spectators they attract. If women received equal opportunities to train or to attract sponsorship and media coverage, that argument would be more convincing. But since female athletes simply don’t receive the same investment, it’s impossible to know how popular women’s sports could be if given the “male” treatment.

Those disadvantages aside, women’s tennis has a respectable following. In 2015, the U.S. Open women’s tournament sold out more quickly than the men’s event and in 2013 and 2014, the women’s finals had higher ratings.

But perhaps, as many male sports fans point out, female players deserve less money because they are lesser athletes. Most men are physically stronger than women, but luckily most sports don’t consist of picking up a heavy boulder and grunting loudly. Being a good athlete also involves skill, agility, leadership and mental strength. Women’s tennis has become so popular precisely because instead of the smashes and aces that characterize male matches, the ladies hold long, nerve-wracking rallies that make for more compelling TV.

The true root of any justification for a return to unequal pay is sexism. For proof, look at how men speak publicly about female athletes. Because Serena Williams is strong and black, her body is seen as a threat, not an asset. One journalist wrote that she is “built like one of the monster trucks that crushes Volkswagens at sports arenas.” Because Canadian tennis star Eugenie Bouchard is svelte and blonde, she was asked by a male interviewer to twirl her skirt after winning a January match at the Australian Open.

Forty-three years after Billie Jean King helped secure equal pay at the U.S. Open, women still don’t receive equal treatment. It’s a shame that the game’s male athletes would rather use twisted logic to roll back women’s rights than celebrate their sport’s progressive stance on gender.

Q21. By saying that female tennis stars ride on the coattails of men, Raymond Moore probably implies that they

- a) reap the benefits of the stardom of male tennis stars. Your answer is correct
- b) cannot compete with the male tennis stars for attention.
- c) do not benefit as much as male tennis stars.
- d) do not get the spotlight because of male tennis stars.

Time spent / Accuracy Analysis

Time taken by you to answer this question	194
Avg. time spent on this question by all students	138
Difficulty Level	M
Avg. time spent on this question by students who got this question right	133
% of students who attempted this question	48.37
% of students who got the question right of those who attempted	81.37

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 531

Two high-profile men in the tennis world recently tried to set back women players a few decades. Raymond Moore, during the Indian Wells tournament, said that female tennis stars "ride on the coattails of the men". From the underlined portion, we can infer that Raymond Moore made a regressive comment about women. Riding on the coattails of someone implies benefiting because of someone else's strengths.

Option A: Moore implied that female tennis stars are benefiting because of their male counterparts and reaping the benefits of the stardom of the male stars. Hence, Option A is the answer.

Option B: Female tennis stars not getting enough attention may be true but, that doesn't explain how they are riding on the coattails of men. Hence, Option B is not the answer.

Option C: Female tennis stars not benefiting as much as male tennis stars talks in favour of women, contradicting the tone of what Moore intended, which is that they benefit because of the men. Hence, Option C is not the answer.

Option D: Like the previous option, even here, the line points to a bitter truth about female tennis. They do not get as much spotlight as the male tennis stars. Therefore, it doesn't fit the accusation by Moore that women stars benefit from the male tennis stars.

Hence, Option D is not the answer.

Choice (A)

undefined

DIRECTIONS for questions 19 to 24: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

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Those disadvantages aside, women's tennis has a respectable following. In 2015, the U.S. Open women's tournament sold out more quickly than the men's event and in 2013 and 2014, the women's finals had higher ratings.

But perhaps, as many male sports fans point out, female players deserve less money because they are lesser athletes. Most men are physically stronger than women, but luckily most sports don't consist of picking up a heavy boulder and grunting loudly. Being a good athlete also involves skill, agility, leadership and mental strength. Women's tennis has become so popular precisely because instead of the smashes and aces that characterize male matches, the ladies hold long, nerve-wracking rallies that make for more compelling TV.

The true root of any justification for a return to unequal pay is sexism. For proof, look at how men speak publicly about female athletes. Because Serena Williams is strong and black, her body is seen as a threat, not an asset. One journalist wrote that she is "built like one of the monster trucks that crushes Volkswagens at sports arenas." Because Canadian tennis star Eugenie Bouchard is svelte and blonde, she was asked by a male interviewer to twirl her skirt after winning a January match at the Australian Open.

Forty-three years after Billie Jean King helped secure equal pay at the U.S. Open, women still don't receive equal treatment. It's a shame that the game's male athletes would rather use twisted logic to roll back women's rights than celebrate their sport's progressive stance on gender.

Q22. By using the phrase 'the classic non-apology apology', the author implied that Djokovic

- a) admitted he was wrong on social media and not at a press conference.
- b) apologised only to those who took his comments the wrong way.
- c) didn't apologise for the real issue - commenting upon the female athletes' hormones.
- d) offered only a superficial apology which didn't include admission of his being wrong. Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	16
Avg. time spent on this question by all students	74
Difficulty Level	D
Avg. time spent on this question by students who got this question right	71
% of students who attempted this question	51.7
% of students who got the question right of those who attempted	79.92

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 531

The author's intended sarcasm was about how Djokovic seemed to give an apology but didn't really give one. This is because he apologised to those who may have taken it the wrong way, implying that he didn't say anything wrong, but was willing to apologise to those who may have misconstrued his comments.

Option A: The author didn't make a differentiation between where he apologised and where he didn't. In fact, the author seems to suggest sarcastically that Djokovic didn't even apologise in the first place. Hence, Option A is not implied from the 'non-apology apology' remark. Option A is not the answer.

Option B: Djokovic apologised to those who took his comments the wrong way. While this is true, it was not enough according to the author. It wasn't an apology in the actual sense where someone is sorry for the wrong they've committed, an admission Djokovic didn't make. Hence, Option B is not the answer.

Option C: The author didn't differentiate between which part of what he said was the real issue and which part wasn't. The author didn't indicate that talking about hormones was wrong and the rest of his remarks are fine. The author implies that Djokovic didn't apologise even though he seemed superficially to be apologising, for the entire remark. Hence, this option misrepresents the information. Option C is not the answer.

Option D: The author's sarcasm was directed at how Djokovic had seemingly apologised but not under the pretext that he was wrong but under the pretext that he was misunderstood. That according to the author is the non-apology, since Djokovic didn't admit guilt or say sorry for something he said which he understood was wrong. Hence, Choice (D)

undefined

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page to “anyone who has taken this the wrong way” — the classic non-apology apology — and said in a news conference that he is “for equality in the sport.” These misogynist comments are particularly troublesome because tennis is a sport which has been uniquely progressive on gender equality.

In tennis’ four major tournaments, women now earn the same amount of prize money as men. The pay situation in tennis is not perfect — prizes at women’s tournaments are still less than at men’s tournaments. But compared to other sports, such as professional golf, where the prize money for men is more than five times higher than that for women, tennis is a feminist paradise.

Many men will say that since sports is entertainment, players should be paid based on the number of spectators they attract. If women received equal opportunities to train or to attract sponsorship and media coverage, that argument would be more convincing. But since female athletes simply don’t receive the same investment, it’s impossible to know how popular women’s sports could be if given the “male” treatment.

Those disadvantages aside, women’s tennis has a respectable following. In 2015, the U.S. Open women’s tournament sold out more quickly than the men’s event and in 2013 and 2014, the women’s finals had higher ratings.

But perhaps, as many male sports fans point out, female players deserve less money because they are lesser athletes. Most men are physically stronger than women, but luckily most sports don’t consist of picking up a heavy boulder and grunting loudly. Being a good athlete also involves skill, agility, leadership and mental strength. Women’s tennis has become so popular precisely because instead of the smashes and aces that characterize male matches, the ladies hold long, nerve-wracking rallies that make for more compelling TV.

The true root of any justification for a return to unequal pay is sexism. For proof, look at how men speak publicly about female athletes. Because Serena Williams is strong and black, her body is seen as a threat, not an asset. One journalist wrote that she is “built like one of the monster trucks that crushes Volkswagens at sports arenas.” Because Canadian tennis star Eugenie Bouchard is svelte and blonde, she was asked by a male interviewer to twirl her skirt after winning a January match at the Australian Open.

Forty-three years after Billie Jean King helped secure equal pay at the U.S. Open, women still don’t receive equal treatment. It’s a shame that the game’s male athletes would rather use twisted logic to roll back women’s rights than celebrate their sport’s progressive stance on gender.

Q23. The author backs his impression of ‘how men speak publicly about female athletes’ by citing which of the following proofs?

- a) **Serena is compared to monster trucks while Eugenie is asked to twirl her skirt.** Your answer is correct
- b) **Unequal pay is still the norm in sport.**
- c) **Tennis tournaments outside the top four still have a bigger prize for men.**
- d) **Sexist male interviewers are employed to interview female winners.**

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	71
Difficulty Level	M
Avg. time spent on this question by students who got this question right	70
% of students who attempted this question	51.15
% of students who got the question right of those who attempted	92.3

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 531

The true root of any justification for a return to unequal pay is sexism. For proof, look at how men speak publicly about female athletes. Because Serena Williams is strong and black, her body is seen as a threat, not an asset. One journalist wrote that she is "built like one of the monster trucks that crushes Volkswagens at sports arenas." Because Canadian tennis star Eugenie Bouchard is svelte and blonde, she was asked by a male interviewer to twirl her skirt after winning a January match at the Australian Open. As proof, the author cites two examples about how Serena Williams is depicted and what Eugenie Bouchard was asked to do.

Option A: Both the examples, of Serena being compared to monster trucks because she is strong and Eugenie asked to twirl her skirt because she is svelte, show how sexism is rampant in the sport. This option mentions both the examples and is hence, the answer.

Option B: This line doesn't give any proof. Rather, it makes a statement about unequal pay, which has not been discussed in the context of 'how men speak about female athletes'. Hence, Option B is not the answer.

Option C: While the statement is true, the discussion about prize money is irrelevant in the discussion about how men speak about their female athletes. Hence, Option C is not the answer.

Option D: This can be inferred from the male interviewer's asking Eugenie to twirl her skirt, but this is not the proof offered by the author to depict 'how men talk about female athletes'. The author only spoke about the two examples, but didn't pass a judgment on the interviewer or anyone else as sexist. So, this option could be an inference from the examples stated by the author, but not the right depiction of the example itself. Option D is not the answer.

Choice (A)

undefined

DIRECTIONS for questions 19 to 24: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

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grunting loudly. Being a good athlete also involves skill, agility, leadership and mental strength. Women's tennis has become so popular precisely because instead of the smashes and aces that characterize male matches, the ladies hold long, nerve-wracking rallies that make for more compelling TV.

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Forty-three years after Billie Jean King helped secure equal pay at the U.S. Open, women still don't receive equal treatment. It's a shame that the game's male athletes would rather use twisted logic to roll back women's rights than celebrate their sport's progressive stance on gender.

Q24. The author counters the argument of male sports fans that 'female players deserve less money because they are lesser athletes' by pointing out that

- a) the money is a reflection not of athletic ability but of star power.
- b) being a good athlete involves physical as well as mental abilities.
- c) TRP ratings and how fast the tickets are sold determine the pay.
- d) longer matches make for more compelling TV and hence, deserve higher pay. Your answer is incorrect

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	66
Difficulty Level	M
Avg. time spent on this question by students who got this question right	63
% of students who attempted this question	49.63
% of students who got the question right of those who attempted	69.7

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 531

Consider the statements: "as many male sports fans point out, female players deserve less money because they are lesser athletes. Most men are physically stronger than women, but luckily most sports don't consist of picking up a heavy boulder and grunting loudly. Being a good athlete also involves skill, agility, leadership and mental strength. Women's tennis has become so popular precisely because instead of the smashes and aces that characterize male matches, the ladies hold long, nerve-wracking rallies that make for more compelling TV." It can be understood from the statements that while the author may admit men are physically stronger, the author doesn't agree with the argument that female players deserve less money because they are lesser athletes. The author points out that being a good athlete also involves aspects outside the physical dominion – skill, mental strength, agility and leadership.

Option A: Star power hasn't been discussed as a parameter here, since we are only talking about physical strength and those abilities that come outside the boundaries of physical strength. Hence, Option A is not the answer.

Option B: Being a good athlete involves physical as well as mental abilities. The author agrees to this statement and uses it to counterargue that sheer physical abilities shouldn't be the criteria for pay, and goes on to give examples of other mental faculties like mental strength and leadership. The author also points out that most sports are not, luckily, about lifting heavy boulders. Hence, Option B is the answer.

Option C: The argument about TRP ratings and how fast the tickets are sold has been made elsewhere in the passage and not with respect to the argument that women get a lower pay because they are lesser athletes. Hence, Option C is not the answer.

Option D: The author cites 'longer rallies' as an example of how tennis is more than just physical strength and how mental abilities are involved in it too. The length of the match and how it makes for compelling TV has not been mentioned as a counter-argument to the assertion that women pay is lower because they are lesser athletes. The overall argument is about whether women are lesser athletes because men are stronger. The author thinks not because according to the author, being a good athlete is not just about physical strength. Hence, Option D is not the answer.

Choice (B)

undefined

Q25. DIRECTIONS for questions 25 and 26: Five sentences (labelled 1, 2, 3, 4, 5) are given in each of the following questions. Four of them can be put together to form a meaningful and coherent short paragraph and **one sentence is the odd one out**. Decide on the proper logical order for the sentences and key in the sequence of **four** numbers as your answer, even as you omit the contextually unrelated sentence.

1. Ministers point with pride to the C\$174 billion (\$169 billion) in export revenues from sales of minerals, oil and gas in 2013 and to the fact that Canada is home to more than half of the world's publicly listed exploration and mining companies.
2. It seems that the miners' experience in dealing with local communities is making them more sensitive to their concerns about corruption and other ills.
3. Under the banner of "responsible resource development", his government has done its best to ease the way for minerals firms, at home and abroad, including directing some foreign aid to countries where Canadian firms wanted to drill.
4. The prime minister, Stephen Harper, has also boasted of Canada as an "emerging energy super-power".
5. Few governments have aligned their interests so closely to those of their country's energy and mining firms as Canada's Conservative administration.

Your Answer:2435 □ **Your answer is incorrect**

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	406
Avg. time spent on this question by all students	175
Difficulty Level	VD
Avg. time spent on this question by students who got this question right	168
% of students who attempted this question	31.57
% of students who got the question right of those who attempted	21.71

[Video Solution](#)

[Text Solution](#)

Sentence 1: Sentence 1 is a follow-up sentence to another sentence as it provides evidence of Canada's prowess and its influential role in the world in the energy and mining domain (space). "Ministers" in 1 needs a context.

Sentence 2: Sentence 2 is an independent sentence that talks about the miners' sensitivity to the troubles experienced by the local communities.

Sentence 3: This is one of the easier sentences to decipher because of the personal (possessive) pronoun 'his' which should make the reader ask, 'where is the person being referred to?' In terms of content, it is an 'elaboration' sentence, talking about what the government has done to make things better for minerals firms.

Sentence 4: Sentence 4 mentions the comment of the Canadian prime minister. 'Superpower' (in 4) is usually more than just a country's own strength, it's a term that can be used when a country has influence in the world. 'Also' in sentence 4 points to additional information (an add-on).

Sentence 5: Sentence 5 is a standalone sentence which introduces the Canadian Conservative Administration to us.

'Few governments' and 'Canada's conservative administration' in 5 would mean an entire team. Sentence 1 could be read as the justifiable pride of that team. And 51 would speak of what Canada has achieved for itself. So 51 is a logical block.

We could then move on to larger objectives that Harper and his government are acting towards. 43 would tell us of this larger objective that Stephen Harper has and what his government is doing towards it. {Note: Sentence 4 is followed by sentence 3. "The prime minister, Stephen Harper, has boasted of Canada" in sentence 4 links with "his government has done its best to ease the way for minerals firms, at home and abroad" in sentence 3.}

'51' is followed by '43'. Note that '31' is not a logical block. Exports would mean minerals, oil and gas sent and sold from Canada and not drilling overseas or selling products produced overseas.

Sentence 2 does not refer to the Canadian government at all. It mentions some unrelated detail about the Canadian miners becoming sensitive to the problems faced by the local communities including corruption. This point can be a part of another paragraph.

Ans: (5143)

undefined

Q26. DIRECTIONS for questions 25 and 26: Five sentences (labelled 1, 2, 3, 4, 5) are given in each of the following questions. Four of them can be put together to form a meaningful and coherent short paragraph and **one sentence is the odd one out**. Decide on the proper logical order for the sentences and key in the sequence of four numbers as your answer, even as you **omit the contextually unrelated sentence**.

1. Two armies of the Seventh Coalition – a British-led Allied army under the command of the Duke of Wellington and a Prussian army under the command of Gebhard Leberecht von Blücher – were cantoned close to the north-eastern border of France.
2. Upon Napoleon's return to power in France in March 1815, many states that had opposed him formed the Seventh Coalition, and began to mobilize armies.
3. On 16 June 1815, Napoleon attacked the bulk of the Prussian army at the Battle of Ligny with his main force; a portion of the French army simultaneously attacked the Allied army at the Battle of Quatre Bras – forcing Wellington to withdraw north of Waterloo on the 17th.
4. Napoleon was making plans to attack them separately in the hope of destroying them before they could join in a co-ordinated invasion of France with other members of the coalition.
5. The defeat at Waterloo ended Napoleon's rule as Emperor of the French, and marked the end of his Hundred Days return from exile.

Your Answer:4235 □ Your answer is incorrect

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	310
Avg. time spent on this question by all students	155
Difficulty Level	VD
Avg. time spent on this question by students who got this question right	163
% of students who attempted this question	28.66
% of students who got the question right of those who attempted	35.74

[Video Solution](#)

[Text Solution](#)

This parajumble question can be best solved by following the sequence of events and chronological order (of dates).

Sentence 1: Sentence 1 mentions the names of two armies of the Seventh Coalition and where they were positioned.

Sentence 2: Sentence 2 is a general sentence that can begin the para. It mentions the topic of discussion: Napoleon's return to power and the opposition mobilizing armies.

Sentence 3: Along with the dates, this sentence provides details of Napoleon's attack on the Prussian army and the Allied army.

Sentence 4: Sentence 4 provides the reason for Napoleon waging a separate battle against the British-led Allied army and the Prussian army.

Sentence 5: Sentence 5 is a standalone sentence, sounds conclusive in tone and can be placed at the end of a narrative or report.

So the general introductory sentence 2 is followed by sentence 1. "many states formed the Seventh Coalition mobilize armies" in statement 2 links with "Two armies of the Seventh Coalition were cantoned close to the north-eastern border of France" in sentence 1. Sentence 1 is followed by sentence 4. "Two armies of the Seventh Coalition were cantoned close" in sentence 1 points to "Napoleon chose to attack them separately" in sentence 4. Also "before they could join in a co-ordinated invasion of France with other members of the coalition" in sentence 4 links with "many states that had opposed him formed the Seventh Coalition, and began to mobilize armies" in sentence 2. So, 214. Sentence 4 is followed by sentence 3. "Napoleon successfully attacked the bulk of the Prussian army at the Battle of Ligny the French army attacked an Allied army at the Battle of Quatre Bras" in sentence 3 links with "Napoleon chose to attack them separately in the hope of destroying them" in sentence 4 and also points to "Two armies of the Seventh Coalition – a British-led Allied army under the command of the Duke of Wellington and a Prussian army under the command of Gebhard Leberecht von Blücher" given earlier in sentence 1. Hence, 2143.

Sentence 5 highlights Napoleon's defeat which needs the discussion of several events before it. Sentence 5 can come later in the flow. The required answer is 2143.

Ans: (2143)

undefined

Q27. DIRECTIONS for questions 27 and 28: Each of the following questions has a paragraph from which the last sentence has been left incomplete. From the given options, choose the one that completes the paragraph in the most appropriate way.

Although people use both sides of the brain, one side or the other generally tends to be dominant in each individual. Of course, the ideal would be to cultivate and develop the ability to have good crossover between both sides of the brain so that a person could first sense what the situation called for and then use the appropriate tool to deal with it.

- a) As we become aware of the different capacities of the brain, we can consciously use our minds to meet specific needs in more effective ways.
- b) The left side of the brain deals with words, with parts and specifics, with analysis (to break apart), with sequential thinking; while the right side of the brain deals with pictures, with wholes, with synthesis (to put together), with simultaneous and holistic thinking.
- c) But people tend to stay in the “comfort zone” of their dominant hemisphere and process every situation according to either a right or left brain preference. Your answer is correct
- d) Admittedly this description is oversimplified and new studies will undoubtedly throw more light on brain functioning.

Time spent / Accuracy Analysis

Time taken by you to answer this question	128
Avg. time spent on this question by all students	84
Difficulty Level	D
Avg. time spent on this question by students who got this question right	82
% of students who attempted this question	47.79
% of students who got the question right of those who attempted	61.69

[Video Solution](#)

[Text Solution](#)

The first sentence of the paragraph highlights the fact that one side of the brain is more dominant than the other in individuals.

The second sentence talks about the ideal situation: that there should be a good crossover between both sides of the brain.

Option A: The essence of the para is that though the ideal scenario would be to use both hemispheres of the brain, one side of the brain is more dominant than the other. Choice A is too general and does not connect with the penultimate sentence of the paragraph. It talks about becoming aware of different capacities of the brain and how we can use our minds for specific needs. Choice A can come much later in the text, in another para that talks about brain functioning to its optimum potential.

Option B: Choice B differentiates between the functions of the left brain and the right brain. This idea can be upstream of the given paragraph. The question paragraph has already gone on to discuss the fact that people use one brain hemisphere more than the other.

Option C: Choice C mentions that, in real life, the dominant hemisphere of the brain is preferred in every situation of life. Hence choice C best concludes and completes the para. It brings the simple idea of the paragraph to a perfect end and connects very well to the penultimate sentence of the paragraph.

Option D: “Admittedly this description is oversimplified” in choice D may seem to connect with the penultimate sentence of the paragraph (Of course, the ideal would be to). However, the second part deviates from the topic of “brain hemisphere dominance” to “(overall) brain functioning. Choice D cannot complete the thought flow.

Choice (C)

undefined

Q28. DIRECTIONS for questions 27 and 28: Each of the following questions has a paragraph from which the last sentence has been left incomplete. From the given options, choose the one that completes the paragraph in the most appropriate way.

Do you wonder what went through Oleg Shuplyak's mind when he first sat down to create his very first oil painting? Did the idea of creating a second layer on top of the first just come to him one day? Who knows! All we know is that he gave us mesmerizing optical illusions that play with our minds. His brilliance in creating not one, but two pictures in the same painting is astounding. It is as if he has created a “two in one” oil painting. The artist is well known for placing a second image behind the characters, objects, coloring, and objects of the first image. From the first image, protrudes a second image of the faces of famous people such as Zeus, Uncle Sam, Charles Darwin, John Lennon, and more.

- a) In the instance the second image is not visible, squint your eyes and move back until you can see it.
- b) It was at the Lviv Polytechnic Institute where the conniving artist learned to compose a picture and articulately position images inside it; where he learnt to befuddle the viewers and confuse them further.
- c) In some of his oil paintings, the second image is clearly visible.
- d) Oleg Shupliak's optical illusions will compel you to stare at them for a long time, not because of how brilliantly they are created, but because what each illusion contains.

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	345
Avg. time spent on this question by all students	105
Difficulty Level	D
Avg. time spent on this question by students who got this question right	101
% of students who attempted this question	36.35
% of students who got the question right of those who attempted	53.85

[Video Solution](#)

[Text Solution](#)

The paragraph is a eulogy of Oleg Shuplyak's painting style.

Option A: Choice A needs a precedent. One needs to mention a case/ an instance of the "second image being visible clearly". Choice A also leaves the thoughtflow incomplete.

Option B: "befuddle" in choice B means to play or cause to become unable to think clearly. The context does not support the use of 'conniving'. Also, while there's a context of 'confusing', there's no context of 'confusing further'. So choice B cannot complete the given para.

Option C: Choice C cannot stand on its own and continues the idea but does not complete the para. Choice C is not the correct answer.

Option D: His brilliance in creating not one, but two pictures in the same painting is astounding. From the use of "mesmerizing optical illusions that play with our minds", "The artist is well known" and "it is as if he has created a "two in one" oil painting", we can understand that choice D would help to conclude the thoughtflow of the paragraph. Choice D is a conclusion of the idea in the last few sentences of the given para and also furthers the idea: mesmerizing optical illusions that play with our minds.

Choice (D)

undefined

Q29. DIRECTIONS for questions 29 and 30: The sentences given in each of the following questions, when properly sequenced, form a coherent paragraph. Each sentence is labelled with a number. Decide on the proper order for the sentences and key in the sequence of five numbers as your answer, in the input box given below the question.

1. The letter is written in the brain, sparked to life by some sudden chemical reaction, two compounds arcing across synapses and reacting like lead and acid in an automobile battery.
2. They come in starbursts and waterfalls and explosions and they race away on parallel tracks, jostling, competing, fighting for supremacy.
3. Nobody knows how long it takes thoughts to form.

4. But, instead of sending twelve dumb volts to a turn signal, the brain floods the body with all kinds of subtle adjustments all at once because thoughts don't necessarily happen one at a time.
5. People talk about electrical impulses racing through the nerves at a fraction of the speed of light, but that's mere transmission, like mail delivery.

Your Answer:32514 □ **Your answer is incorrect**

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	37
Avg. time spent on this question by all students	197
Difficulty Level	VD
Avg. time spent on this question by students who got this question right	196
% of students who attempted this question	36.41
% of students who got the question right of those who attempted	20.32

[Video Solution](#)

Text Solution

Sentence 1: Sentence 1 brings in some chemistry into the discussion. Use of the definite article "the" in "The letter" indicates that this sentence needs a precedent and also more substantiation.

Sentence 2: Sentence 2 cannot be the opening sentence of the para. "Nothing else" needs some explanation before it. Again, there is a reference to "thoughts".

Sentence 3: This is an independent sentence. The starter "Nobody knows" indicates that this can be a general opening sentence. This sentence has a reference to "thoughts".

Sentence 4: The use of a contrast conjunction "But, instead of" in sentence 4 implies that this is a contradiction or a correction to something that has been mentioned earlier. Sentence 1 has a reference to the 'brain'.

Sentence 5: Another independent sentence. "But that's mere transmission, like mail delivery" is judgmental or opinionated in tone. 'electrical impulses racing through the nerves' in sentence 5 points to "thoughts".

So, between sentences 3 and 5, sentence 3 is a more suitable opening sentence of the para. It establishes the background of the discussion: the time taken for thoughts to form.

Sentences 3 and 5 form a logical block. "electrical impulses racing through the nerves" in sentence 5 points to "thoughts" in sentence 3. "how long it takes" in sentence 3 links with "fraction of the speed of light" in sentence 5.

5 and 1 form another logical block. "mere transmission, like mail delivery" in 5 links with "The letter is written" in sentence 1. Note the use of two analogies "like mail delivery" and "like lead and acid in an automobile battery" in sentences 5 and 1 respectively.

Sentence 1 is linked with sentence 4. "chemical reaction two compounds automobile battery" in sentence 1 links with "twelve dumb volts to a turn signal" in sentence 4 and contrasts "brain floods the body with all kinds of subtle adjustments all at once" in sentence 4.

Sentence 2 is the conclusion sentence of the paragraph and is placed after sentence 4. "brain floods the body with all kinds of subtle adjustments all at once" in 4 links with "they come in starbursts and waterfalls and explosions and they race away on parallel tracks, jostling, competing, fighting for supremacy" in sentence 2.

"Nothing else will do, since thoughts don't necessarily happen one at a time" sums up the discussion in sentences 5, 1 and 4 and also mirrors the introduction sentence: Nobody knows how long it takes thoughts to form. So, 35142.

Ans: (35142)

Q30. DIRECTIONS for questions 29 and 30: The sentences given in each of the following questions, when properly sequenced, form a coherent paragraph. Each sentence is labelled with a number. Decide on the proper order for the sentences and key in the sequence of five numbers as your answer, in the input box given below the question.

1. It used to be an acute infection, something that most people could get treated fairly quickly before they had a chance to infect many others.
2. The most famous flu pandemic was quite tame in the spring of 1918 but over the summer the virus underwent strange transformations killing 40 million people over the next six months.
3. Now, epidemics tip because of the extraordinary efforts of a few select carriers but they also tip when something happens to transform the epidemic agent itself.
4. In Baltimore, when the city's public clinics suffered cutbacks, the nature of the syphilis affecting the city's poor neighbourhoods changed.
5. But with the cutbacks, syphilis increasingly became a chronic disease, and the disease's carriers had three or four or five times longer to pass on their infection.

Your Answer:2135 □ **Your answer is incorrect**

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	114
Difficulty Level	D
Avg. time spent on this question by students who got this question right	125
% of students who attempted this question	32.84
% of students who got the question right of those who attempted	6.16

[Video Solution](#)

Text Solution

Sentence 1: Sentence 1 has the pronoun 'it' which would need a precedent.
Sentence 2: Sentence 2 provides a specific example for a point mentioned elsewhere among the five sentences.
Sentence 3: The starter 'now' indicates that this can be a follow up sentence to another sentence. It mentions a new point 'epidemics tipping' and has a reference to carriers like sentence 5.
Sentence 4: Sentence 4 is an independent and general sentence which mentions the name of the location and the disease 'syphilis'.
Sentence 5: Sentence 5 has the contrast conjunction 'but' and again a reference to 'syphilis' and its carriers.
So, the only general standalone sentence to begin the para is sentence 4. Sentences 4 and 1 form a logical block. "the nature of the syphilis changed" in sentence 4 links with "It used to be an acute infection" in sentence 1.
Sentences 1 and 5 form another logical block. "**syphilis** increasingly became a chronic disease" in sentence 5 contrasts "**It** used to be an acute infection" in sentence 1. Also "**people** could get treated fairly quickly before they had a chance to infect many others" in sentence 1 contrasts "the **disease's carriers** had three or four or five times longer to pass on their infection" in sentence 5. "But with the cutbacks" in sentence 5 links with "when the city's public clinics suffered cutbacks" mentioned earlier in sentence 4.
Sentence 5 is followed by sentence 3. "epidemics tip because of the extraordinary efforts of a few select carrier" in sentence 3 links with "disease's carriers" in sentence 5.
Sentence 3 is followed by sentence 2. "when something happens to transform the epidemic agent itself" in sentence 3 is exemplified in sentence 2. So, 41532.

Ans: (41532)

undefined

Q31. DIRECTIONS for questions 31 and 32: Each of the following questions consists of a highlighted sentence followed by the context from where the sentence may have been drawn. The context given provides exactly three successive paragraphs, which may or may not have any other paragraph preceding or succeeding them. The paragraphs have a total of four blanks numbered as (2), (3), (4) and (5). Choose the number of the blank where the highlighted sentence can best be reinserted and key in that number in the input box provided below the context.

Further:

If you think that the highlighted sentence does not belong in the given context altogether, then key in the number 0 as your answer in the input box.

If you think that the highlighted sentence precedes or is upstream of the first of the three paras reproduced below, then key in the number 1 as your answer in the input box.

If you think that the highlighted sentence succeeds or is downstream of the last of the three paras reproduced below, then key in the number 6 as your answer in the input box.

Dissociation is commonly displayed on a continuum.

In psychology, dissociation is any of a wide array of experiences from mild detachment from immediate surroundings to more severe detachment from physical and emotional experiences. _____ (2) _____ The major characteristic of all dissociative phenomena involves a detachment from reality, rather than a loss of reality as in psychosis.

_____ (3) _____ In mild cases, dissociation can be regarded as a coping mechanism or defense mechanisms in seeking to master, minimize or tolerate stress – including boredom or conflict. At the non-pathological end of the continuum, dissociation describes common events such as daydreaming. Further along the continuum are non-pathological altered states of consciousness.

_____ (4) _____ More pathological dissociation involves dissociative disorders, including dissociative fugue and depersonalization disorder with or without alterations in personal identity.

_____ (5) _____ These alterations can include: a sense that self or the world is unreal (depersonalization and derealization); a loss of memory (amnesia); forgetting identity or assuming a new self (fugue); and fragmentation of identity into separate streams of consciousness (dissociative identity disorder) and complex post-traumatic stress disorder.

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	84
Difficulty Level	M
Avg. time spent on this question by students who got this question right	81
% of students who attempted this question	22.71
% of students who got the question right of those who attempted	59.48

[Video Solution](#)

[Text Solution](#)

On a cursory reading of the paragraph, one can understand that the paragraphs talk about 'dissociation'.

The highlighted sentence is a poor example of an upstream statement. The paragraph best begins with the general sentence: In psychology, dissociation is any of a wide array of experiences from mild detachment The highlighted sentence can only be placed after a definition of or reference to 'dissociation'.

The highlighted sentence does not belong to blank (2). The sentence preceding blank (2) has the keywords "wide array of experiences". The sentence succeeding blank (2) has the phrase: major characteristic of all dissociative phenomena Hence the highlighted sentence would disrupt the thoughtflow if placed in blank (2). The sentence preceding blank (2) and the one succeeding blank (2) have to run continuously. So (2) is not the answer.

The highlighted sentence can be a part of blank (3) as it fits the context. The second reproduced paragraph talks about what happens in the mild cases of dissociation, what happens in the nonpathological end of the continuum and what happens further along the continuum. So the highlighted sentence can introduce the second reproduced paragraph. (3) is the answer. {Continuum is a continuous sequence in which adjacent elements are not perceptibly different from each other, but the extremes are quite distinct.}

The highlighted sentence would be a misfit if placed in blank (4) as it needs to come prior in the thoughtflow. The last sentence of the second para has ended with the idea: Further along the continuum are non-pathological altered states of consciousness. Hence the next paragraph best begins with the sentence: More pathological dissociation involves dissociative disorders Hence (4) is not the answer.

The highlighted sentence cannot be a part of blank (5). It has to be placed earlier in the thoughtflow. "with or without alterations in personal identity" in the sentence preceding blank (5) links with " These alterations can include " in the sentence succeeding blank (5).

It would be difficult to say whether the highlighted sentence would be placed downstream of the given text as it would need a specific context. Since the appropriate context has already been provided in the second para of the text, (6) is not the answer.

Ans: (3)

undefined

Q32. DIRECTIONS for questions 31 and 32: Each of the following questions consists of a highlighted sentence followed by the context from where the sentence may have been drawn. The context given provides exactly three successive paragraphs, which may or may not have any other paragraph preceding or succeeding them. The paragraphs have a total of four blanks numbered as (2), (3), (4) and (5). Choose the number of the blank where the highlighted sentence can best be reinserted and key in that number in the input box provided below the context.

Further:

If you think that the highlighted sentence does not belong in the given context altogether, then key in the number 0 as your answer in the input box.

If you think that the highlighted sentence precedes or is upstream of the first of the three paras reproduced below, then key in the number 1 as your answer in the input box.

If you think that the highlighted sentence succeeds or is downstream of the last of the three paras reproduced below, then key in the number 6 as your answer in the input box.

Life style is no longer simply a manifestation of class position.

During Elizabethan times, the term "gentleman" referred to a whole way of life, not simply an accident of birth.

(2) Appropriate lineage may have been a prerequisite, but to be a gentleman, one had to live in a certain style: be better educated, have better manners, wear better clothes than the masses; to engage in

certain recreations (and not others); to live in a large, well-furnished house; to maintain a certain aloofness with subordinates; in short, never to lose sight of his class "superiority".

(3) _____ The merchant class had its own preferred life style and the peasantry still another. These life styles, like that of the gentleman, were pieced together out of many different components, ranging from residence, occupation and dress to jargon, gesture and religion.

(4) _____ Today we still create our life styles by forming a mosaic of components. But much has changed. (5) _____ Classes themselves are breaking up into smaller units. Economic factors are declining in importance. Thus today it is not so much one's class base as one's ties with a subcult that determine the individual's style of life.

You did not answer this question [Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	62
Difficulty Level	D
Avg. time spent on this question by students who got this question right	60
% of students who attempted this question	24.67
% of students who got the question right of those who attempted	66.22

[Video Solution](#)

Text Solution

On a cursory reading of the sentences, it can be observed that the first paragraph talks about the style adopted by a "gentleman" in Elizabethan times, the second paragraph talks about the style of the merchant class and the peasantry, and the third paragraph focuses on how we create our lifestyles today.

On a careful reading of the paragraph, it can be inferred that the highlighted sentence does not belong to blank (2). The sentence is completely out of place in blank (2), as it interrupts the flow of thought. "gentleman" referred to a whole way of life, not simply an accident of birth" in the sentence before blank (2) needs to continue with the idea succeeding blank (2) (Appropriate lineage may have been a prerequisite, but to be a gentleman, one had to). So (2) is not the answer.

The first reproduced para of the passage highlights the conditions for being a "gentleman". The second reproduced para of the passage highlights some lifestyle features of the merchant class and the peasantry. "no longer" in the highlighted sentence implies some change taking place. But there is nothing to suggest any "change" in the first para and the second para. So (3) is also not the answer. Also note that there would be a shift of tense if the highlighted sentence (given in present tense) was placed in blank (3) because both the first and the second paras of the reproduced text refer to the past period.

The highlighted sentence cannot be a part of blank (4). "Today we still create our life styles by forming a mosaic of components" in the sentence after blank (4) links with or follows "These life styles, like that of the gentleman, were pieced together out of many different components" in the sentence preceding blank (4). So the highlighted sentence would disrupt the thoughtflow if placed in blank (4).

The highlighted sentence can be a part of blank (5). The latter half of the third para talks about changes taking place in today's times. So "But much has changed" is the sentence in the third para that highlights that a lot of change has taken place in the present times. The highlighted sentence "Life style is no longer simply a manifestation of class position" contrasts "Today we still create our life styles by forming a mosaic of components." It also serves as a bridge sentence between the sentences: "But much has changed." and "Classes themselves are breaking up into smaller units." Class positions (and the lifestyles associated with the class position) have been discussed in the first two paragraphs and the third paragraph goes on to highlight the change in perspective of lifestyle in today's times. Hence (5) is the answer.

The highlighted sentence would be redundant if placed before or after the given passage. So (1) and (6) do not apply as answers. Ans: (5)

Q33. DIRECTIONS for questions 33 and 34: Read each of the following paragraphs and answer the question given below it.

For every pleasure, it should not be difficult to see that the 'how' matters more than the 'what'. Furthermore, the highest pleasures do not merely use our distinctively human capacities, they use them for a valuable end. Someone who goes to the opera to be seen in a new dress is not experiencing the higher pleasures of music but indulging the lower pleasures of vanity. Someone who reads Dr Seuss with a careful ear for language gets a higher pleasure than someone who mechanically recites The Waste Land (1922) without any understanding of what T S Eliot was doing.

Choose the option that best captures the author's position.

- a) Pleasures are meaningless when one focuses on the 'what' more than the 'how' like reading TS Eliot mechanically or going to the opera to show-off a new dress.
- b) Higher pleasures are about 'how' rather than 'what' and the highest pleasures are beyond the human capacities.
- c) How one experiences pleasure is more important than what one experiences, but more importantly, the higher pleasures attach greater value to the human capacities.
- d) How is more important than what for any pleasure; subsequently, the highest pleasures use human capacities for higher purposes.

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	113
Avg. time spent on this question by all students	122
Difficulty Level	D
Avg. time spent on this question by students who got this question right	123
% of students who attempted this question	34.57
% of students who got the question right of those who attempted	26.7

[Video Solution](#)

[Text Solution](#)

There are two ideas in the para.

The introduction of the idea – The 'how' of a pleasure matters more than the 'what'.

The elaboration – The highest pleasures use human capacities to achieve valuable ends, probably referring to more meaningful experiences. This is followed by examples of higher and lower pleasures.

The conclusion – No specific conclusion.

Option A: While the two aspects of pleasure have been discussed and one is stated to be more important than the other, the word 'meaningless' is an extrapolation. We cannot say that focusing on 'what' is completely meaningless. Hence, Option A is not the answer.

Option B: Higher pleasures are about 'how' rather than 'what' – this is incorrect since the para mentions one matters more than the other and not that only one of them matters and the other doesn't. Also, the para doesn't say the highest pleasures are 'beyond' human capacity. Rather, they use human capacity for higher purposes. Hence, Option B is not the answer.

Option C: The first half of the option depicts the first idea of the para correctly – 'how' mattering more than 'what'. The second half of the para is incorrect. Higher pleasures don't attach greater value to the human capacities. Rather they use human capacity to reach more valuable ends. Hence, Option C is not the answer.

Option D: The first half of the option depicts the first idea correctly ('How' of the pleasure more important than 'what'). The second half depicts the second idea aptly as well. The highest pleasures use human capacity for higher purposes (valuable end). Hence, Option D is the answer.

Choice (D)

Q34. DIRECTIONS for questions 33 and 34: Read each of the following paragraphs and answer the question given below it.

The human mind has two fundamental psychological motifs. Descartes's proclamation, "I think, therefore I am," illustrates one, while Melville's statement, "Ahab never thinks, he just feels, feels, feels," exemplifies the other. Our Rationalist inclinations make us want certainty (objective truth), while the Romantic in us basks in emotional subjectivity. Psychology and neuroscience recognize this distinction: cognition and emotion are the two major categories of mind that researchers study. But things were not always quite like this. Rational thought has always been treated as a product of the mind, and emotions were traditionally viewed as belonging to the body.

Which of the following represents the essence of the para in the best possible way?

- a) The human mind oscillates between rational inclinations and emotional romanticism, a distinction that drives psychology and neuroscience research.
- b) Cognition as a product of the mind is distinct from emotion which was once considered a product of the body; psychology and neuroscience now recognize both as distinct products of the mind.
- c) While rational thought was always associated with the mind, emotions, traditionally considered a product of the body, was brought into the fold of human mind only recently.
- d) At the core of the human mind is a conflict between certainty and subjectivity, one a product of the mind and the other, a product of the body.

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	88
Avg. time spent on this question by all students	138
Difficulty Level	D
Avg. time spent on this question by students who got this question right	139
% of students who attempted this question	26.61
% of students who got the question right of those who attempted	57.84

[Video Solution](#)

[Text Solution](#)

The unity/introduction of the para is about the two categories of the mind: Rational inclinations (objective) and emotions (subjective).

The elaboration of the para revolves around psychology and neuroscience research around this distinction between the two categories of the mind.

The conclusion is about how this is a breakaway from the earlier understanding that cognition is related to the mind, but emotions weren't. They were related to the body.

Option A: The human mind oscillates between rational inclinations and emotional romanticism (this part covers the unity of the idea – the basic idea of the para about rationality and emotionality). The distinction that drives psychology and neuroscience research is an exaggeration as the para only says that psychology and neuroscience recognize this distinction. Further, the conclusion – which was about the traditional thought has been left out. Hence, Option A is not the answer.

Option B: Cognition as a product of the mind is distinct from emotion (this part covers the two fundamental categories of mind – the introduction of the idea) which was once considered a product of the body (this part covers the conclusion, the past belief) Now, psychology and neuroscience research consider both to be products of the mind. Hence, Option B is the answer.

Option C: While rational thought was always associated with the mind, emotions, traditionally considered a product of the body (the first part depicts the conclusion of the given para – the traditional view about rational thought and emotions), was brought into the fold of human mind only recently (this depicts the shift in how we understand emotions). However, while the fact that emotions are now a category of human mind is understood from the para, that this has been a recent change is not something the para explains. In fact, the para doesn't discuss the transformation of the traditional idea about emotions to the current perception. Hence, Option C is not the answer.

Option D: At the core of the human mind is a conflict between certainty and subjectivity (this represents the introduction of the idea – the distinction between certainty or cognition and subjectivity or emotion), one a product of the mind and the other, a product of the body (this part is not true) since emotion is not considered a product of the body anymore. It was a traditional idea. Now emotion is a category of the human mind. Hence, Option D is not the answer.

Choice (B)

undefined

DIRECTIONS for questions 1 to 4: Answer the questions on the basis of the information given below.

In a test, there are 98 questions and each question carries either 2 marks or 5 marks. Any student who answers a 2-mark question incorrectly is given a penalty of 1 mark and any student who answers a 5-mark question incorrectly is given a penalty of 2 marks. No marks were either awarded or deducted for any question left unattempted. In the test, each 5-mark question is preceded by exactly two 2-mark questions and succeeded by exactly two 2-mark questions.

There is at least one 5-mark question in the test.

Q1. DIRECTIONS for questions 1 to 4: Select the correct alternative from the given choices.

If a student correctly answers the fifth question and every fifth question after that, and did not attempt any other question, how many marks will he score?

- a) 54
- b) 56 Your answer is correct
- c) 53
- d) 55

Time spent / Accuracy Analysis

Time taken by you to answer this question	56
Avg. time spent on this question by all students	233
Difficulty Level	M
Avg. time spent on this question by students who got this question right	234
% of students who attempted this question	36.82
% of students who got the question right of those who attempted	72.57

[Video Solution](#)

[Text Solution](#)

Since each 5-mark question is preceded and succeeded by two 2-mark questions, every third question will be a 5-mark question. Let the questions be numbered from 1 to 98. Hence, every question number which is a multiple of 3 is the question number of a 5-mark question.

Since the student answered every 5th question correctly, he will answer 5th, 10th, 15th... questions correctly. Among these questions, any question number which is a multiple of 3, will be a 5-mark question. Since the question numbers are all multiples of 5, every question which is a multiple of 15 is a 5-mark question. There will be 6 questions of 5-marks.

The total number of questions that the student gets right = 19 (since the highest multiple of 5 less than 98 is 95).

Among these questions, 6 questions are 5-mark questions and the remaining 13 are 2-mark questions.

Total score of the student = $6 \times 5 + 13 \times 2 = 56$

Choice (B)

undefined

DIRECTIONS for questions 1 to 4: Answer the questions on the basis of the information given below.

In a test, there are 98 questions and each question carries either 2 marks or 5 marks. Any student who answers a 2-mark question incorrectly is given a penalty of 1 mark and any student who answers a 5-mark question incorrectly is given a penalty of 2 marks. No marks were either awarded or deducted for any question left unattempted. In the test, each 5-mark question is preceded by exactly two 2-mark questions and succeeded by exactly two 2-mark questions.

There is at least one 5-mark question in the test.

Q2. DIRECTIONS for questions 1 to 4: Select the correct alternative from the given choices.

A student correctly answers the first question and every nth question after that, and did not attempt any other question. If he scored 40 marks in the test, what is the value of n?

- a) 6
- b) 7

c) 8

d) 9 Your answer is incorrect

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	12
Avg. time spent on this question by all students	222
Difficulty Level	D
Avg. time spent on this question by students who got this question right	235
% of students who attempted this question	25.17
% of students who got the question right of those who attempted	50.28

[Video Solution](#)

[Text Solution](#)

Since each 5-mark question is preceded and succeeded by two 2-mark questions, every third question will be a 5-mark question. Let the questions be numbered from 1 to 98. Hence, every question number which is a multiple of 3 is the question number of a 5-mark question.

We can calculate the score of the student for the values given in the options.

Option A: The student answers 1st, 7th, 13th... questions correctly. Since n = 6 (which is a multiple of 3), all the questions that he answers correctly will be 2-mark questions. Total number of questions that he will answer = 17. His score in this case = 34

Option B: The student answers 1st, 8th, 15th, 22nd, 29th, 36th... questions correctly.

Total number of questions that he answers correctly = 14 (the last question that he answers correctly will have the number $7 \times 13 + 1$)

Every third question that he answers is a 5-mark question.

Hence, the total number of 5-mark questions = 4

Total number of 2-mark questions = 10

Score of the student = $10 \times 2 + 4 \times 5 = 40$

(Once we determine that option B works, we need not check for the other options.)

Option C: The student answers 1st, 9th, 17th, 25th, 33rd, 41st... questions correctly.

Total number of questions that he answers correctly = 13

Of these questions, every third question (starting from the 9th question) is a 5-mark question. Hence, there will be four 5-mark questions (9, 33, 60, 97). The remaining 9 questions will be 2-mark questions.

Total score of the student = $9 \times 2 + 4 \times 5 = 38$

Option D: The student answers 1st, 10th, 19th, 28th... questions correctly. Since n = 9 is a multiple of 3, all the questions that he answers will be 2-mark questions. He will answer a total of 11 questions and score 22 marks.

Hence, if the student scored 40 marks, the value of n has to be 7.

Choice (B)

undefined

DIRECTIONS for questions 1 to 4: Answer the questions on the basis of the information given below.

In a test, there are 98 questions and each question carries either 2 marks or 5 marks. Any student who answers a 2-mark question incorrectly is given a penalty of 1 mark and any student who answers a 5-mark question incorrectly is given a penalty of 2 marks. No marks were either awarded or deducted for any question left unattempted. In the test, each 5-mark question is preceded by exactly two 2-mark questions and succeeded by exactly two 2-mark questions.

There is at least one 5-mark question in the test.

Q3. DIRECTIONS for questions 1 to 4: Select the correct alternative from the given choices.

Ram correctly answered the first question and every fourth question after that, and did not attempt any other question. Kalyan answered the first n questions correctly and did not attempt any other question. If both the students scored the same marks, what is the value of n?

- a) 21
- b) 27
- c) 24
- d) 25

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	272
Avg. time spent on this question by all students	170
Difficulty Level	M
Avg. time spent on this question by students who got this question right	177
% of students who attempted this question	19.89
% of students who got the question right of those who attempted	49.82

[Video Solution](#)

[Text Solution](#)

Since each 5-mark question is preceded and succeeded by two 2-mark questions, every third question will be a 5-mark question. Let the questions be numbered from 1 to 98. Hence, every question number which is a multiple of 3 is the question number of a 5-mark question.

Ram answered the 1st, 5th, 9th, 13th, 17th, 21st... questions correctly.

Total number of questions that he answered correctly = 25

Of these 25 questions, every third question is a multiple of 3 and is a 5-mark question. Hence, there will be 8 5-mark questions and 17 2-mark questions.

Total score of Ram = $8 \times 5 + 17 \times 2 = 74$

Kalyan answered the first n questions correctly and did not attempt any other question. Considering each block of three questions, Kalyan will score 9 marks for each block of three questions that he answers correctly.

Since there are 32 blocks of three questions,

$9m = 74 \Rightarrow m = 8.222$

Hence, Kalyan must have answered $8.222 \times 3 = 24.667$, i.e. either 24 and 25 questions correctly.

From the first 24 questions, Kalyan will score $9 \times 8 = 72$ marks. Answering the next question correctly will result in Kalyan scoring 74 marks.

Hence, Kalyan will answer the first 25 questions and will not attempt the rest.

Choice (D)

undefined

DIRECTIONS for questions 1 to 4: Answer the questions on the basis of the information given below.

In a test, there are 98 questions and each question carries either 2 marks or 5 marks. Any student who answers a 2-mark question incorrectly is given a penalty of 1 mark and any student who answers a 5-mark question incorrectly is given a penalty of 2 marks. No marks were either awarded or deducted for any question left unattempted. In the test, each 5-mark question is preceded by exactly two 2-mark questions and succeeded by exactly two 2-mark questions.

There is at least one 5-mark question in the test.

Q4. DIRECTIONS for questions 1 to 4: Select the correct alternative from the given choices.

Robert correctly answered the first question and every n^{th} question after that, and did not attempt any other question. Bill answered the first n questions correctly and the remaining questions incorrectly. If Robert scored 5 marks more than Bill, which of the following can be the value of n?

Q 40

- b) 31
- c) 32
- d) 33

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	166
Avg. time spent on this question by all students	171
Difficulty Level	D
Avg. time spent on this question by students who got this question right	186
% of students who attempted this question	4.57
% of students who got the question right of those who attempted	44.76

[Video Solution](#)

[Text Solution](#)

Since each 5-mark question is preceded and succeeded by two 2-mark questions, every third question will be a 5-mark question. Let the questions be numbered from 1 to 98. Hence, every question number which is a multiple of 3 is the question number of a 5-mark question.

We can compare the scores of the two students for each option.

Option A: Robert will answer 1st, 31st, 61st and 91st questions correctly. All the questions are 2-mark questions. The score of this student = 8.

Bill will score 9 marks for 10 blocks of three questions (i.e., 30 questions). Among the remaining 68 questions, he will score -4 marks for 22 blocks of 3 questions and -2 marks for the two remaining questions.

Total score of Bill = $9 \times 10 - 4 \times 22 - 2 = 0$

Option B: Robert will answer 1st, 32nd, 63rd, 94th questions correctly. Among these, one question is a 5-mark question. Total score of Robert = $5 + 6 = 11$

Bill will score $9 \times 10 + 2 - 4 \times 22 - 1 = 3$

Option C: Robert will answer 1st, 33rd, 65th, 97th questions correctly. Among these, only one question is a 5-mark question, Total score of Robert = $5 + 6 = 11$

Bill will score $9 \times 10 + 2 + 2 - 4 \times 22 = 6$

Option D: Robert will answer 1st, 34th, 67th questions correctly. All of these are 2-mark questions. Total score of Robert = 6

Bill will score $9 \times 11 - 4 \times 21 - 1 - 1 = 13$

Hence, from the options, the value of n can only be 32.

Choice (C)

undefined

DIRECTIONS for questions 5 to 8: Answer the questions on the basis of the information given below.

In the Football World Cup, England played against Brazil in the finals. The match was played for exactly 93 minutes. During the match, England was leading (i.e., England had scored at least one goal more than Brazil) for a total of 35 minutes, Brazil was leading for a total of 22 minutes and none of the two teams were leading for a total of 36 minutes. Further, a total of six goals were scored during the match. The first goal was scored at the end of the 21st minute from the start of the match, the second goal, at the end of the 41st minute, the third goal, at the end of the 46th minute, the fourth goal at the end of 56th minute, the fifth goal at the end of 71st minute and the sixth goal, at the end of the 86th minute.

Q5. DIRECTIONS for questions 5 to 8: Select the correct alternative from the given choices.

What is the maximum number of goals scored consecutively by any team?

- a) 2

b) 3

c) 4

d) 5

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	101
Avg. time spent on this question by all students	286
Difficulty Level	D
Avg. time spent on this question by students who got this question right	309
% of students who attempted this question	27.69
% of students who got the question right of those who attempted	45.9

[Video Solution](#)

Text Solution

Given that England was in the lead for 35 minutes, Brazil for 22 minutes and no team was leading for 36 minutes.

The team that was in the lead will change only when any goal was scored.

From the given information, the first goal was scored after 21 minutes. The second goal was scored at the end of 41st minute. Hence, there was 20 minutes between the two goals. Similarly, we can calculate the time between any two goals scored consecutively.

Time between	0 and 1 st goal	1 st and 2 nd goals	2 nd and 3 rd goals	3 rd and 4 th goals	4 th and 5 th goals	5 th and 6 th goals	6 th goal and end of match
	21	20	5	10	15	15	7

The first goal was scored at the end of the 21st minute. Hence, for the first 21 minutes of the match, no team was leading (as no goals were scored). Hence, of the 36 minutes for which no team was leading, 21 minutes is accounted for. No team was leading for an additional 15 minutes. Also, if no team should be leading, an even number of goals must have been scored. Hence, no team can be leading only after the 2nd or 4th or 6th goal was scored. However, since no team was leading for only 15 minutes (after the first goal was scored), the only possibility is that no team was leading after the 4th goal was scored. Hence, after 4 goals were scored, the two teams had 2 goals each.

Therefore, after the first goal, the score must be 1 – 0.

After the second goal, the score must be 2 – 0. (It cannot be 1 – 1 because one of the teams must have been leading after the second goal).

After the third goal, the score must be 2 – 1 (only then the fourth goal will be an equalizer).

After the fourth goal, the score must be 2 – 2.

Hence, until the fourth goal was scored, the same team was leading. Hence, for 35 minutes (after the first goal was scored until the fourth goal was scored) the same team was leading. This can only be England (because Brazil was leading for only 22 minutes). Hence, Brazil was leading after the 5th and 6th goals were scored. Hence, the first two goals were scored by England and the last four goals were scored by Brazil.

Brazil scored 4 goals consecutively.

Choice (C)

undefined

DIRECTIONS for questions 5 to 8: Answer the questions on the basis of the information given below.

In the Football World Cup, England played against Brazil in the finals. The match was played for exactly 93 minutes. During the match, England was leading (i.e., England had scored at least one goal more than Brazil) for a total of 35 minutes, Brazil was leading for a total of 22 minutes and none of the two teams were leading for a total of 36 minutes. Further, a total of six goals were scored during the match. The first goal was scored at the end of the 21st minute from the start of the match, the

second goal, at the end of the 41st minute, the third goal, at the end of the 46th minute, the fourth goal at the end of 50th minute, the fifth goal at the end of 71st minute and the sixth goal, at the end of the 86th minute.

Q6. DIRECTIONS for questions 5 to 8: Select the correct alternative from the given choices.

Which of the following could have been the score at some point during the match?

- a) Brazil: 1 – England: 0
- b) Brazil: 3 – England: 2
- c) Brazil: 2 – England: 1
- d) Brazil: 3 – England: 1

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	158
Avg. time spent on this question by all students	73
Difficulty Level	D
Avg. time spent on this question by students who got this question right	67
% of students who attempted this question	25.29
% of students who got the question right of those who attempted	58.78

[Video Solution](#)

Text Solution

Given that England was in the lead for 35 minutes, Brazil for 22 minutes and no team was leading for 36 minutes.

The team that was in the lead will change only when any goal was scored.

From the given information, the first goal was scored after 21 minutes. The second goal was scored at the end of 41st minute. Hence, there was 20 minutes between the two goals. Similarly, we can calculate the time between any two goals scored consecutively.

Time between	0 and 1 st goal	1 st and 2 nd goals	2 nd and 3 rd goals	3 rd and 4 th goals	4 th and 5 th goals	5 th and 6 th goals	6 th goal and end of match
	21	20	5	10	15	15	7

The first goal was scored at the end of the 21st minute. Hence, for the first 21 minutes of the match, no team was leading (as no goals were scored). Hence, of the 36 minutes for which no team was leading, 21 minutes is accounted for. No team was leading for an additional 15 minutes. Also, if no team should be leading, an even number of goals must have been scored. Hence, no team can be leading only after the 2nd or 4th or 6th goal was scored. However, since no team was leading for only 15 minutes (after the first goal was scored), the only possibility is that no team was leading after the 4th goal was scored. Hence, after 4 goals were scored, the two teams had 2 goals each.

Therefore, after the first goal, the score must be 1 – 0.

After the second goal, the score must be 2 – 0. (It cannot be 1 – 1 because one of the teams must have been leading after the second goal).

After the third goal, the score must be 2 – 1 (only then the fourth goal will be an equalizer).

After the fourth goal, the score must be 2 – 2.

Hence, until the fourth goal was scored, the same team was leading. Hence, for 35 minutes (after the first goal was scored until the fourth goal was scored) the same team was leading. This can only be England (because Brazil was leading for only 22 minutes). Hence, Brazil was leading after the 5th and 6th goals were scored. Hence, the first two goals were scored by England and the last four goals were scored by Brazil.

Among the given scores, Brazil 3 – England 2 is possible.

Choice (B)

undefined

DIRECTIONS for questions 5 to 8: Answer the questions on the basis of the information given below.

In the Football World Cup, England played against Brazil in the finals. The match was played for exactly 93 minutes. During the match, England was leading (i.e., England had scored at least one goal more than Brazil) for a total of 35 minutes, Brazil was leading for a total of 22 minutes and none of the two teams were leading for a total of 36 minutes. Further, a total of six goals were scored during the match. The first goal was scored at the end of the 21st minute from the start of the match, the second goal, at the end of the 41st minute, the third goal, at the end of the 46th minute, the fourth goal at the end of 56th minute, the fifth goal at the end of 71st minute and the sixth goal, at the end of the 86th minute.

Q7. DIRECTIONS for questions 5 to 8: Select the correct alternative from the given choices.

The six goals were scored by Ronaldo, Neymar, Gerrard, Lahm, Cech and Belluschi. Gerrard scored before Ronaldo and Cech, while Belluschi scored immediately after Neymar. Exactly two players scored after Ronaldo did but before Lahm did. Ronaldo and Lahm belong to different teams.

Who among the following scored a goal for England?

- a) **Gerrard**
- b) **Cech**
- c) **Lahm**
- d) **Cannot be determined**

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	314
Avg. time spent on this question by all students	156
Difficulty Level	D
Avg. time spent on this question by students who got this question right	159
% of students who attempted this question	19.21
% of students who got the question right of those who attempted	58.42

[Video Solution](#)

[Text Solution](#)

Given that England was in the lead for 35 minutes, Brazil for 22 minutes and no team was leading for 36 minutes.

The team that was in the lead will change only when any goal was scored.

From the given information, the first goal was scored after 21 minutes. The second goal was scored at the end of 41st minute. Hence, there was 20 minutes between the two goals. Similarly, we can calculate the time between any two goals scored consecutively.

Time between	0 and 1 st goal	1 st and 2 nd goals	2 nd and 3 rd goals	3 rd and 4 th goals	4 th and 5 th goals	5 th and 6 th goals	6 th goal and end of match
	21	20	5	10	15	15	7

The first goal was scored at the end of the 21st minute. Hence, for the first 21 minutes of the match, no team was leading (as no goals were scored). Hence, of the 36 minutes for which no team was leading, 21 minutes is accounted for. No team was leading for an additional 15 minutes. Also, if no team should be leading, an even number of goals must have been scored. Hence, no team can be leading only after the 2nd or 4th or 6th goal was scored. However, since no team was leading for only 15 minutes (after the first goal was scored), the only possibility is that no team was leading after the 4th goal was scored. Hence, after 4 goals were scored, the two teams had 2 goals each.

Therefore, after the first goal, the score must be 1 – 0.

After the second goal, the score must be 2 – 0. (It cannot be 1 – 1 because one of the teams must have been leading after the second goal).

After the third goal, the score must be 2 – 1 (only then the fourth goal will be an equalizer).

After the fourth goal, the score must be 2 – 2.

Hence, until the fourth goal was scored, the same team was leading. Hence, for 35 minutes (after the first goal was scored until the fourth goal was scored) the same team was leading. This can only be England (because Brazil was leading for only 22 minutes). Hence, Brazil was leading after the 5th and 6th goals were scored. Hence, the first two goals were scored by England and the last four goals were scored by Brazil.

From the given information, Ronaldo scored first and Lahm scored the third goal after this. They belong to different teams. Ronaldo could have scored 1st or 2nd goal. But Gerrard scored before Ronaldo. Hence, Ronaldo could not have scored the 1st goal.

Ronaldo scored the 2nd goal. Lahm scored the 5th goal. Gerrard scored the 1st goal. Neymar and Belluschi scored one after the other. Hence, Neymar scored the 3rd goal and Belluschi scored the 4th goal. Cech scored the last goal.

Hence, the six goals were scored by Gerrard, Ronaldo, Neymar, Belluschi, Lahm and Cech in that order.

Among the given options, Gerrard scored a goal for England.

Choice (A)

In the Football World Cup, England played against Brazil in the finals. The match was played for exactly 93 minutes. During the match, England was leading (i.e., England had scored at least one goal more than Brazil) for a total of 35 minutes, Brazil was leading for a total of 22 minutes and none of the two teams were leading for a total of 36 minutes. Further, a total of six goals were scored during the match. The first goal was scored at the end of the 21st minute from the start of the match, the second goal, at the end of the 41st minute, the third goal, at the end of the 46th minute, the fourth goal at the end of 56th minute, the fifth goal at the end of 71st minute and the sixth goal, at the end of the 86th minute.

Q8. DIRECTIONS for questions 5 to 8: Select the correct alternative from the given choices.

The six goals were scored by Ronaldo, Neymar, Gerrard, Lahm, Cech and Belluschi. Gerrard scored before Ronaldo and Cech, while Belluschi scored immediately after Neymar. Exactly two players scored after Ronaldo did but before Lahm did. Ronaldo and Lahm belong to different teams.

Who among the following scored the second goal for Brazil?

- a) Neymar
- b) Ronaldo
- c) Belluschi
- d) Cannot be determined

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	269
Avg. time spent on this question by all students	104
Difficulty Level	D
Avg. time spent on this question by students who got this question right	91
% of students who attempted this question	17.44
% of students who got the question right of those who attempted	42.31

[Video Solution](#)

[Text Solution](#)

Given that England was in the lead for 35 minutes, Brazil for 22 minutes and no team was leading for 36 minutes.

The team that was in the lead will change only when any goal was scored.

From the given information, the first goal was scored after 21 minutes. The second goal was scored at the end of 41st minute. Hence, there was 20 minutes between the two goals. Similarly, we can calculate the time between any two goals scored consecutively.

Time between	0 and 1 st goal	1 st and 2 nd goals	2 nd and 3 rd goals	3 rd and 4 th goals	4 th and 5 th goals	5 th and 6 th goals	6 th goal and end of match
	21	20	5	10	15	15	7

The first goal was scored at the end of the 21st minute. Hence, for the first 21 minutes of the match, no team was leading (as no goals were scored). Hence, of the 36 minutes for which no team was leading, 21 minutes is accounted for. No team was leading for an additional 15 minutes. Also, if no team should be leading, an even number of goals must have been scored. Hence, no team can be leading only after the 2nd or 4th or 6th goal was scored. However, since no team was leading for only 15 minutes (after the first goal was scored), the only possibility is that no team was leading after the 4th goal was scored. Hence, after 4 goals were scored, the two teams had 2 goals each.

Therefore, after the first goal, the score must be 1 – 0.

After the second goal, the score must be 2 – 0. (It cannot be 1 – 1 because one of the teams must have been leading after the second goal).

After the third goal, the score must be 2 – 1 (only then the fourth goal will be an equalizer).

After the fourth goal, the score must be 2 – 2.

Hence, until the fourth goal was scored, the same team was leading. Hence, for 35 minutes (after the first goal was scored until the fourth goal was scored) the same team was leading. This can only be England (because Brazil was leading for only 22 minutes). Hence, Brazil was leading after the 5th and 6th goals were scored. Hence, the first two goals were scored by England and the last four goals were scored by Brazil.

From the given information, the six goals were scored by Gerrard, Ronaldo, Neymar, Belluschi, Lahm and Cech in that order. Belluschi scored the second goal for Brazil.

Choice (C)

DIRECTIONS for questions 9 to 12: Answer the questions on the basis of the information given below.

Ajay wanted to conduct a test for students from six sections – A, B, C, D, E and F. He prepared four questions, Q1 through Q4, and created six tests, one for each section, using these four questions. He ensured that each of the six tests had an equal number of questions. No two tests had the same set of questions.

It is also known that

- i. the test for section B and the test for section D have Q3 in common.
- ii. the test for section A and the test for section E have Q4 in common.
- iii. the test for Section F and the test for Section B both do not have Q4.
- iv. the test for Section C does not have Q4 but has Q2, while the test for section A does not have Q2.

Q9. DIRECTIONS for questions 9 to 12: Select the correct alternative from the given choices.c

The tests for which of the following pairs of sections will definitely have at least one question in common?

- a) A, B
- b) B, C Your answer is correct
- c) C, D
- d) E, F

Time spent / Accuracy Analysis

Time taken by you to answer this question	10
Avg. time spent on this question by all students	298
Difficulty Level	D
Avg. time spent on this question by students who got this question right	300
% of students who attempted this question	37.38
% of students who got the question right of those who attempted	72.44

[Video Solution](#)

[Text Solution](#)

Given that there are four questions and these are used in six tests. Each question was used in at least three tests. Hence, across all the tests, there must be at least 12 questions. Since there are six tests, each test must have at least 2 questions. There cannot be 4 questions in a test because six distinct tests cannot be created with only four questions because no two tests have the same set of questions. If there are 3 questions in a test, for no two tests to have the same set of questions, a maximum of 4 tests can be created.

Hence, each test must have exactly 2 questions.

The questions in the six tests must be (Q1, Q2), (Q1, Q3), (Q1, Q4), (Q2, Q3), (Q2, Q4), (Q3, Q4).

From (i), the test for section B and section D can be two of (Q1, Q3), (Q2, Q3), (Q3, Q4). From (iii), the test for section B cannot be (Q3, Q4).

From (ii), the test for section A and section E can be two of (Q1, Q4), (Q2, Q4), (Q3, Q4). From (iv), the test for section A cannot be (Q2, Q4).

The test for section F can be (Q1, Q2), (Q1, Q3), (Q2, Q3).

From (iv), the test for section C can be (Q1, Q2) or (Q2, Q3).

Let the test for section C be (Q2, Q3). The test for section B must be (Q1, Q3) and the test for section D must be (Q3, Q4). The test for section A and section E must be (Q1, Q4) and (Q2, Q4), respectively. The test for section F must be (Q1, Q2). This is a possible case.

Let the test for section C be (Q1, Q2). The test for section F can be (Q1, Q3) or (Q2, Q3).

Let the test for section F be (Q1, Q3). The test for section B can be (Q2, Q3). The test for section D must be (Q3, Q4). The test for section A and section E must be (Q1, Q4) and (Q2, Q4), in any order.

If the test for section F is (Q2, Q3), the test for section B must be (Q1, Q3). The test for section D must be (Q3, Q4). The test for section A and section E must be (Q1, Q4) and (Q2, Q4), in any order.

Section	Questions
A	(Q1, Q4)
B	(Q1, Q3) or (Q2, Q3)
C	(Q2, Q3) or (Q1, Q2)
D	(Q3, Q4)
E	(Q2, Q4)
F	(Q1, Q2) or (Q1, Q3) or (Q2, Q3)

The test for sections B and C will definitely have one question in common, in any of the possible cases.

Choice (B)

undefined

DIRECTIONS for questions 9 to 12: Answer the questions on the basis of the information given below.

Ajay wanted to conduct a test for students from six sections – A, B, C, D, E and F. He prepared four questions, Q1 through

Q4, and created six tests, one for each section, using these four questions. He ensured that each of the six tests had an equal number of questions. No two tests had the same set of questions.

It is also known that

- i. the test for section B and the test for section D have Q3 in common.
- ii. the test for section A and the test for section E have Q4 in common.
- iii. the test for Section F and the test for Section B both do not have Q4.
- iv. the test for Section C does not have Q4 but has Q2, while the test for section A does not have Q2.

Q10. DIRECTIONS for questions 9 to 12: Select the correct alternative from the given choices.

The test for section E will necessarily have

- a) **Q1.**
- b) **Q2.** Your answer is correct
- c) **Q3.**
- d) **None of the above**

Time spent / Accuracy Analysis

Time taken by you to answer this question	163
Avg. time spent on this question by all students	90
Difficulty Level	M
Avg. time spent on this question by students who got this question right	96
% of students who attempted this question	37.59
% of students who got the question right of those who attempted	60.92

[Video Solution](#)

[Text Solution](#)

Given that there are four questions and these are used in six tests. Each question was used in at least three tests. Hence, across all the tests, there must be at least 12 questions. Since there are six tests, each test must have at least 2 questions. There cannot be 4 questions in a test because six distinct tests cannot be created with only four questions because no two tests have the same set of questions. If there are 3 questions in a test, for no two tests to have the same set of questions, a maximum of 4 tests can be created.

Hence, each test must have exactly 2 questions.

The questions in the six tests must be (Q1, Q2), (Q1, Q3), (Q1, Q4), (Q2, Q3), (Q2, Q4), (Q3, Q4).

From (i), the test for section B and section D can be two of (Q1, Q3), (Q2, Q3), (Q3, Q4). From (iii), the test for section B cannot be (Q3, Q4).

From (ii), the test for section A and section E can be two of (Q1, Q4), (Q2, Q4), (Q3, Q4). From (iv), the test for section A cannot be (Q2, Q4).

The test for section F can be (Q1, Q2), (Q1, Q3), (Q2, Q3).

From (iv), the test for section C can be (Q1, Q2) or (Q2, Q3).

Let the test for section C be (Q2, Q3). The test for section B must be (Q1, Q3) and the test for section D must be (Q3, Q4). The test for section A and section E must be (Q1, Q4) and (Q2, Q4), respectively. The test for section F must be (Q1, Q2). This is a possible case.

Let the test for section C be (Q1, Q2). The test for section F can be (Q1, Q3) or (Q2, Q3).

Let the test for section F be (Q1, Q3). The test for section B can be (Q2, Q3). The test for section D must be (Q3, Q4). The test for section A and section E must be (Q1, Q4) and (Q2, Q4), in any order.

If the test for section F is (Q2, Q3), the test for section B must be (Q1, Q3). The test for section D must be (Q3, Q4). The test for section A and section E must be (Q1, Q4) and (Q2, Q4), in any order.

Section	Questions
A	(Q1, Q4)
B	(Q1, Q3) or (Q2, Q3)
C	(Q2, Q3) or (Q1, Q2)
D	(Q3, Q4)
E	(Q2, Q4)
F	(Q1, Q2) or (Q1, Q3) or (Q2, Q3)

The test for section E has Q2.

Choice (B)

undefined

DIRECTIONS for questions 9 to 12: Answer the questions on the basis of the information given below.

Ajay wanted to conduct a test for students from six sections – A, B, C, D, E and F. He prepared four questions, Q1 through Q4, and created six tests, one for each section, using these four questions. He ensured that each of the six tests had an equal number of questions. No two tests had the same set of questions.

It is also known that

- i. the test for section B and the test for section D have Q3 in common.
- ii. the test for section A and the test for section E have Q4 in common.
- iii. the test for Section F and the test for Section B both do not have Q4.
- iv. the test for Section C does not have Q4 but has Q2, while the test for section A does not have Q2.

Q11. DIRECTIONS for questions 9 to 12: Select the correct alternative from the given choices.

Which of the following statements is sufficient to determine the questions in each of the six tests?

- a) **The test for section B has Q1.**
- b) **The test for section F has Q3.**
- c) **The test for section D has Q3.**
- d) **The test for section C has Q3.** Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	3
Avg. time spent on this question by all students	137
Difficulty Level	D
Avg. time spent on this question by students who got this question right	150
% of students who attempted this question	31.26
% of students who got the question right of those who attempted	45.88

[Video Solution](#)

[Text Solution](#)

Given that there are four questions and these are used in six tests. Each question was used in at least three tests. Hence, across all the tests, there must be at least 12 questions. Since there are six tests, each test must have at least 2 questions. There cannot be 4 questions in a test because six distinct tests cannot be created with only four questions because no two tests have the same set of questions. If there are 3 questions in a test, for no two tests to have the same set of questions, a maximum of 4 tests can be created.

Hence, each test must have exactly 2 questions.

The questions in the six tests must be (Q1, Q2), (Q1, Q3), (Q1, Q4), (Q2, Q3), (Q2, Q4), (Q3, Q4).

From (i), the test for section B and section D can be two of (Q1, Q3), (Q2, Q3), (Q3, Q4). From (iii), the test for section B cannot be (Q3, Q4).

From (ii), the test for section A and section E can be two of (Q1, Q4), (Q2, Q4), (Q3, Q4). From (iv), the test for section A cannot be (Q2, Q4).

The test for section F can be (Q1, Q2), (Q1, Q3), (Q2, Q3).

From (iv), the test for section C can be (Q1, Q2) or (Q2, Q3).

Let the test for section C be (Q2, Q3). The test for section B must be (Q1, Q3) and the test for section D must be (Q3, Q4). The test for section A and section E must be (Q1, Q4) and (Q2, Q4), respectively. The test for section F must be (Q1, Q2). This is a possible case.

Let the test for section C be (Q1, Q2). The test for section F can be (Q1, Q3) or (Q2, Q3).

Let the test for section F be (Q1, Q3). The test for section B can be (Q2, Q3). The test for section D must be (Q3, Q4). The test for section A and section E must be (Q1, Q4) and (Q2, Q4), in any order.

If the test for section F is (Q2, Q3), the test for section B must be (Q1, Q3). The test for section D must be (Q3, Q4). The test for section A and section E must be (Q1, Q4) and (Q2, Q4), in any order.

Section	Questions
A	(Q1, Q4)
B	(Q1, Q3) or (Q2, Q3)
C	(Q2, Q3) or (Q1, Q2)
D	(Q3, Q4)
E	(Q2, Q4)
F	(Q1, Q2) or (Q1, Q3) or (Q2, Q3)

From the fourth statement, the questions in the test for sections B, C and F can be determined.

Choice (D)

Ajay wanted to conduct a test for students from six sections – A, B, C, D, E and F. He prepared four questions, Q1 through Q4, and created six tests, one for each section, using these four questions. He ensured that each of the six tests had an equal number of questions. No two tests had the same set of questions.

It is also known that

- i. the test for section B and the test for section D have Q3 in common.
- ii. the test for section A and the test for section E have Q4 in common.
- iii. the test for Section F and the test for Section B both do not have Q4.
- iv. the test for Section C does not have Q4 but has Q2, while the test for section A does not have Q2.

Q12. DIRECTIONS for questions 9 to 12: Select the correct alternative from the given choices.

Which of the following questions is not present in the test for Section D but is present in the test for section A?

- a) **Q1** Your answer is correct
- b) **Q2**
- c) **Q4**
- d) **Q3**

Time spent / Accuracy Analysis

Time taken by you to answer this question	4
Avg. time spent on this question by all students	49
Difficulty Level	M
Avg. time spent on this question by students who got this question right	47
% of students who attempted this question	34.97
% of students who got the question right of those who attempted	65.55

[Video Solution](#)

[Text Solution](#)

Given that there are four questions and these are used in six tests. Each question was used in at least three tests. Hence, across all the tests, there must be at least 12 questions. Since there are six tests, each test must have at least 2 questions. There cannot be 4 questions in a test because six distinct tests cannot be created with only four questions because no two tests have the same set of questions. If there are 3 questions in a test, for no two tests to have the same set of questions, a maximum of 4 tests can be created.

Hence, each test must have exactly 2 questions.

The questions in the six tests must be (Q1, Q2), (Q1, Q3), (Q1, Q4), (Q2, Q3), (Q2, Q4), (Q3, Q4).

From (i), the test for section B and section D can be two of (Q1, Q3), (Q2, Q3), (Q3, Q4). From (iii), the test for section B cannot be (Q3, Q4).

From (ii), the test for section A and section E can be two of (Q1, Q4), (Q2, Q4), (Q3, Q4). From (iv), the test for section A cannot be (Q2, Q4).

The test for section F can be (Q1, Q2), (Q1, Q3), (Q2, Q3).

From (iv), the test for section C can be (Q1, Q2) or (Q2, Q3).

Let the test for section C be (Q2, Q3). The test for section B must be (Q1, Q3) and the test for section D must be (Q3, Q4). The test for section A and section E must be (Q1, Q4) and (Q2, Q4), respectively. The test for section F must be (Q1, Q2). This is a possible case.

Let the test for section C be (Q1, Q2). The test for section F can be (Q1, Q3) or (Q2, Q3).

Let the test for section F be (Q1, Q3). The test for section B can be (Q2, Q3). The test for section D must be (Q3, Q4). The test for section A and section E must be (Q1, Q4) and (Q2, Q4), in any order.

If the test for section F is (Q2, Q3), the test for section B must be (Q1, Q3). The test for section D must be (Q3, Q4). The test for section A and section E must be (Q1, Q4) and (Q2, Q4), in any order.

Section	Questions
A	(Q1, Q4)
B	(Q1, Q3) or (Q2, Q3)
C	(Q2, Q3) or (Q1, Q2)
D	(Q3, Q4)
E	(Q2, Q4)
F	(Q1, Q2) or (Q1, Q3) or (Q2, Q3)

Q1 is not present in the test for Section D but is present in the test for section A.

Choice (A)

undefined

DIRECTIONS for questions 13 to 16: Answer the questions on the basis of the information given below.

Sid was playing with a common balance. He had exactly n wooden blocks numbered 1 to n, with each block having a different weight. He also had two boxes labelled Box-A and Box-B. He placed the block numbered 1 on one side of the balance and the block numbered 2 on the other side. If the first block was lighter than the second block, he placed the first block in Box-A. If the first block was heavier than the second block, he placed the first block in Box-B. He then weighed the second block against the third block and continued the process, i.e., if the second block was lighter than the third block, he placed it in Box-A. Otherwise, he placed the second block in Box-B.

In this manner, after each weighing, he placed the lower numbered block into Box-A or Box-B, until he placed all the blocks that he had, except for the last one.

Q13. DIRECTIONS for questions 13 to 16: Select the correct alternative from the given choices.

If n = 7 and the block numbered 4 is the only block in Box-B, then which of the following can be true?

- a) The block numbered 6 is the second heaviest.
- b) The block numbered 5 is the third heaviest.
- c) The block numbered 7 is the third heaviest.
- d) More than one of the above

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	3
Avg. time spent on this question by all students	169
Difficulty Level	D
Avg. time spent on this question by students who got this question right	162
% of students who attempted this question	19.6
% of students who got the question right of those who attempted	51.53

[Video Solution](#)

[Text Solution](#)

Given that there are seven blocks and block number 4 was the only block in Box-B. Hence, blocks 1, 2, 3, 5, 6 will be in Box-A (the last block in any case will not be placed in any box).

From this, we can infer that block 1 is lighter than 2, which is lighter than block 3, which is lighter than block 4.

Block 4 is heavier than block 5 (because block 4 is in Box-B). Block 5 is lighter than block 6, which is lighter than block 7.

Hence, arranging block 1 to block 4 in the descending order of their weights, we get block 4, block 3, block 2 and block 1.

Similarly, arranging block 5 to block 7 in the descending order of their weights, we get block 7, block 6 and block 5.

Option A: Block numbered 6 can be the second heaviest. This is if the descending order of the weights of the seven blocks are 7, 6, 4, 5, 3, 2, 1. Hence, option A can be true.

Option B: Blocks 4, 6 and 7 are definitely heavier than block 5. Hence, block 5 cannot be the third heaviest. Option B cannot be true.

Option C: This is possible if block 7 is lighter than block 4 and block 3. (Block 5 and 6 can be lighter than block 7). Hence, this option also can be true.

Therefore, the statements given in option A and option D can be true.

Choice (D)

undefined

DIRECTIONS for questions 13 to 16: Answer the questions on the basis of the information given below.

Sid was playing with a common balance. He had exactly n wooden blocks numbered 1 to n, with each block having a different weight. He also had two boxes labelled Box-A and Box-B. He placed the block numbered 1 on one side of the

balance and the block numbered 2 on the other side. If the first block was lighter than the second block, he placed the first block in Box-A. If the first block was heavier than the second block, he placed the first block in Box-B. He then weighed the second block against the third block and continued the process, i.e., if the second block was lighter than the third block, he placed it in Box-A. Otherwise, he placed the second block in Box-B.

In this manner, after each weighing, he placed the lower numbered block into Box-A or Box-B, until he placed all the blocks that he had, except for the last one.

Q14. DIRECTIONS for questions 13 to 16: Select the correct alternative from the given choices.

It is known that $n = 10$ and the blocks numbered 1, 4, 5, 6 are the only blocks in Box-A. Further, the block numbered 7 is the fourth heaviest.

Which of the following is definitely true?

- a) The block numbered 5 is the sixth heaviest.
- b) The block numbered 1 is heavier than the block numbered 8.
- c) The block numbered 2 is lighter than the block numbered 7.
- d) None of the above.

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	14
Avg. time spent on this question by all students	153
Difficulty Level	D
Avg. time spent on this question by students who got this question right	163
% of students who attempted this question	13.09
% of students who got the question right of those who attempted	35.36

[Video Solution](#)

[Text Solution](#)

Given that there are 10 blocks and only 1, 4, 5, 6 are in Box-A.
Hence, 1 is lighter than 2. 2 is heavier than 3; 3 is heavier than 4.
4 is lighter than 5; 5 is lighter than 6; 6 is lighter than 7.
7 is heavier than 8; 8 is heavier than 9 and 9 is heavier than 10.
Given that 7 is the fourth heaviest.
We also know that 4, 5, 6, 8, 9 and 10 are lighter than 7.
Since 7 is the fourth heaviest, 1, 2 and 3 must be heavier than 7.
Since 1 and 3 are both lighter than 2, 2 must be the heaviest, while 1 and 3 will be the heaviest and the second heaviest respectively.
In any case, block number 1 is heavier than block number 8. Hence, option B is definitely true.
Block number 5 need not be the sixth heaviest and block number 2 is definitely heavier than block number 7. Hence, the other two options need not be true and only option B can be definitely true. Choice (B)

undefined

DIRECTIONS for questions 13 to 16: Answer the questions on the basis of the information given below.

Sid was playing with a common balance. He had exactly n wooden blocks numbered 1 to n , with each block having a different weight. He also had two boxes labelled Box-A and Box-B. He placed the block numbered 1 on one side of the balance and the block numbered 2 on the other side. If the first block was lighter than the second block, he placed the first block in Box-A. If the first block was heavier than the second block, he placed the first block in Box-B. He then weighed the second block against the third block and continued the process, i.e., if the second block was lighter than the third block, he

placed it in Box-A. Otherwise, he placed the second block in Box-B.

In this manner, after each weighing, he placed the lower numbered block into Box-A or Box-B, until he placed all the blocks that he had, except for the last one.

Q15. DIRECTIONS for questions 13 to 16: Select the correct alternative from the given choices.

It is known that $n = 10$ and the blocks numbered 1, 4, 5, 6 are the only blocks in Box-A. Further, the block numbered 7 is the fourth heaviest.

Which is the heaviest block?

- a) **Block numbered 10**
- b) **Block numbered 6**
- c) **Block numbered 2**
- d) **Cannot be determined**

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	56
Avg. time spent on this question by all students	128
Difficulty Level	D
Avg. time spent on this question by students who got this question right	114
% of students who attempted this question	13.53
% of students who got the question right of those who attempted	50.72

[Video Solution](#)

[Text Solution](#)

From the above solution, the block numbered 2 is the heaviest block.

Choice (C)

undefined

DIRECTIONS for questions 13 to 16: Answer the questions on the basis of the information given below.

Sid was playing with a common balance. He had exactly n wooden blocks numbered 1 to n , with each block having a different weight. He also had two boxes labelled Box-A and Box-B. He placed the block numbered 1 on one side of the balance and the block numbered 2 on the other side. If the first block was lighter than the second block, he placed the first block in Box-A. If the first block was heavier than the second block, he placed the first block in Box-B. He then weighed the second block against the third block and continued the process, i.e., if the second block was lighter than the third block, he placed it in Box-A. Otherwise, he placed the second block in Box-B.

In this manner, after each weighing, he placed the lower numbered block into Box-A or Box-B, until he placed all the blocks that he had, except for the last one.

Q16. DIRECTIONS for questions 13 to 16: Select the correct alternative from the given choices.

If $n = 10$ and the blocks numbered 2, 3 and 4 are the only blocks in Box-B, which of the following cannot be the heaviest block?

- a) **Block numbered 2**
- b) **Block numbered 4**

c) Block numbered 10

d) More than one of the above

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	78
Avg. time spent on this question by all students	71
Difficulty Level	D
Avg. time spent on this question by students who got this question right	80
% of students who attempted this question	12.39
% of students who got the question right of those who attempted	50.71

[Video Solution](#)

[Text Solution](#)

Given that blocks 2, 3 and 4 are in Box-B.

Hence, 1, 5, 6, 7, 8 and 9 are in Box-A.

1 is lighter than 2; 2 is heavier than 3; 3 is heavier than 4; 4 is heavier than 5.

5 is lighter than 6; 6 is lighter than 7; 7 is lighter than 8; 8 is lighter than 9; 9 is lighter than 10.

From this, we can see that no block can be heavier than block 2 or block 10.

Hence, one of these two must be the heaviest.

From the given options, block numbered 4 cannot be the heaviest. Hence, the answer is option B.

Choice (B)

undefined

DIRECTIONS for questions 17 to 20: Answer the questions on the basis of the information given below.

In a planet called Titan, there exists a continent called Pangea, which is surrounded on all sides by water. The continent comprises eight countries – Antegria, Republia, Bahari, Centopia, Draka, Ecotopia, Graznavia and Krakozhia – located contiguously on it, i.e., the total area of the eight countries is the same as the area of the continent. Each country is exactly in the shape of a square, with the four edges of the square as its boundaries. The areas of the eight countries are all equal. Any country is said to be a neighbour of another country if the two countries have one edge as a common boundary. Further, one can travel by land between two countries only if the two countries are neighbours and it is known that one can reach any country from any of the other countries by travelling by land (passing through one or more countries, if required).

It is also known that

- i.
Republia and Ecotopia are the only neighbours of Draka, while Krakozhia is the only neighbour of Bahari but Krakozhia is not to the West of Bahari.
- ii.
Antegria and Draka are the only neighbours of Ecotopia, while Krakozhia is the only neighbour of Centopia.
- iii.
Ecotopia is directly to the North of Republia.
- iv.
Graznavia is directly to the East of Draka and no country is present directly to the South of Graznavia.

Q17. DIRECTIONS for questions 17 to 20: Select the correct alternative from the given choices.

Which of the following countries is a peninsula, i.e., surrounded by water on exactly three sides?

- a) **Antegria**
- b) **Republia**
- c) **Ecotopia**
- d) **Krakozhia**

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

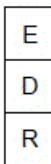
Time taken by you to answer this question	69
Avg. time spent on this question by all students	376
Difficulty Level	D
Avg. time spent on this question by students who got this question right	384
% of students who attempted this question	27.6
% of students who got the question right of those who attempted	55.35

[Video Solution](#)

[Text Solution](#)

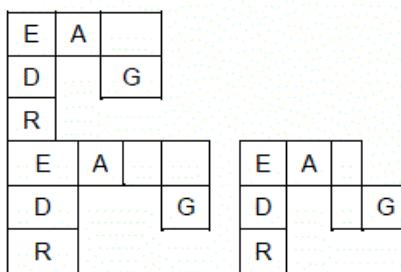
From (i), Republia and Ecotopia are the only neighbours of Draka. From (iii), Ecotopia is to the North of Republia.

Hence, the three countries must be in the following manner:



From (ii), Antegria and Draka are also neighbours of Ecotopia. Hence, there must be one other country surrounding Ecotopia.

From (iv), Graznavia is to the East of Draka. Since Graznavia is not a neighbour of Draka (from (i)), the relative positions of Graznavia and Draka can be any of the following:



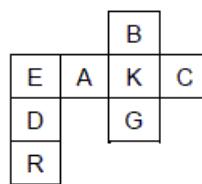
Graznavia cannot be any further east than this as there are only eight countries and Bahari and Centopia have only one neighbour, Krakozhia. (since they have only one neighbour, they cannot be a part of any configuration in which each country, except the ones at the extreme ends, has two neighbours).

In the second and third cases, Krakozhia must be placed such that Bahari and Centopia have only Krakozhia as their neighbour. Further, in each of the two cases, we can place only one additional country apart from the ones in the given figures. It is not possible to satisfy these conditions in the second and third cases. In the second case, Krakozhia must be placed to the North of Graznavia. But Bahari and Centopia cannot be placed in any of the existing positions. Hence, the second case is not possible (as there will be nine positions).

In the third case, Krakozhia cannot be placed in any existing cell because it is not possible for Krakozhia to have two neighbours, which, in turn, do not have any other neighbours.

Hence, only the first configuration is possible. Krakozhia must be to the North of Graznavia.

From (i), Bahari and Centopia must be to the North and East of Krakozhia respectively. The following diagram provides the positions of the eight countries:



Republia has water on three sides.

Choice (B)

undefined

DIRECTIONS for questions 17 to 20: Answer the questions on the basis of the information given below.

In a planet called Titan, there exists a continent called Pangea, which is surrounded on all sides by water. The continent comprises eight countries – Antegria, Republia, Bahari, Centopia, Draka, Ecotopia, Graznavia and Krakozhia – located contiguously on it, i.e., the total area of the eight countries is the same as the area of the continent. Each country is exactly in the shape of a square, with the four edges of the square as its boundaries. The areas of the eight countries are all equal. Any country is said to be a neighbour of another country if the two countries have one edge as a common boundary.

Further, one can travel by land between two countries only if the two countries are neighbours and it is known that one can reach any country from any of the other countries by travelling by land (passing through one or more countries, if required).

It is also known that

- i. Republia and Ecotopia are the only neighbours of Draka, while Krakozhia is the only neighbour of Bahari but Krakozhia is not to the West of Bahari.
- ii. Antegria and Draka are the only neighbours of Ecotopia, while Krakozhia is the only neighbour of Centopia.
- iii. Ecotopia is directly to the North of Republia.
- iv. Graznavia is directly to the East of Draka and no country is present directly to the South of Graznavia.

Q18. DIRECTIONS for questions 17 to 20: Select the correct alternative from the given choices.

Which of the following countries is to the immediate South of Krakozhia?

- a) **Bahari**
- b) **Centopia**
- c) **Graznavia**
- d) **No country is to the immediate South of Krakozhia.**

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

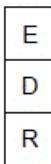
Time taken by you to answer this question	77
Avg. time spent on this question by all students	98
Difficulty Level	D
Avg. time spent on this question by students who got this question right	97
% of students who attempted this question	23.26
% of students who got the question right of those who attempted	34.19

[Video Solution](#)

[Text Solution](#)

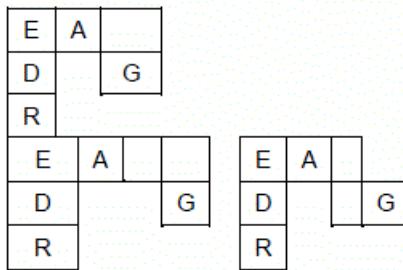
From (i), Republia and Ecotopia are the only neighbours of Draka. From (iii), Ecotopia is to the North of Republia.

Hence, the three countries must be in the following manner:



From (ii), Antegria and Draka are also neighbours of Ecotopia. Hence, there must be one other country surrounding Ecotopia.

From (iv), Graznavia is to the East of Draka. Since Graznavia is not a neighbour of Draka (from (i)), the relative positions of Graznavia and Draka can be any of the following:



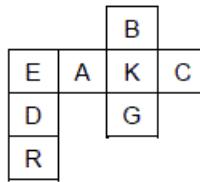
Graznavia cannot be any further east than this as there are only eight countries and Bahari and Centopia have only one neighbour, Krakozhia. (since they have only one neighbour, they cannot be a part of any configuration in which each country, except the ones at the extreme ends, has two neighbours).

In the second and third cases, Krakozhia must be placed such that Bahari and Centopia have only Krakozhia as their neighbour. Further, in each of the two cases, we can place only one additional country apart from the ones in the given figures. It is not possible to satisfy these conditions in the second and third cases. In the second case, Krakozhia must be placed to the North of Graznavia. But Bahari and Centopia cannot be placed in any of the existing positions. Hence, the second case is not possible (as there will be nine positions).

In the third case, Krakozhia cannot be placed in any existing cell because it is not possible for Krakozhia to have two neighbours, which, in turn, do not have any other neighbours.

Hence, only the first configuration is possible. Krakozhia must be to the North of Graznavia.

From (i), Bahari and Centopia must be to the North and East of Krakozhia respectively. The following diagram provides the positions of the eight countries:



Graznavia is to the immediate South of Krakozhia.

Choice (C)

undefined

DIRECTIONS for questions 17 to 20: Answer the questions on the basis of the information given below.

In a planet called Titan, there exists a continent called Pangea, which is surrounded on all sides by water. The continent comprises eight countries – Antegria, Republia, Bahari, Centopia, Draka, Ecotopia, Graznavia and Krakozhia – located contiguously on it, i.e., the total area of the eight countries is the same as the area of the continent. Each country is exactly in the shape of a square, with the four edges of the square as its boundaries. The areas of the eight countries are all equal. Any country is said to be a neighbour of another country if the two countries have one edge as a common boundary.

Further, one can travel by land between two countries only if the two countries are neighbours and it is known that one can reach any country from any of the other countries by travelling by land (passing through one or more countries, if required).

It is also known that

- i. Republia and Ecotopia are the only neighbours of Draka, while Krakozhia is the only neighbour of Bahari but Krakozhia is not to the West of Bahari.
- ii. Antegria and Draka are the only neighbours of Ecotopia, while Krakozhia is the only neighbour of Centopia.
- iii. Ecotopia is directly to the North of Republia.
- iv. Graznavia is directly to the East of Draka and no country is present directly to the South of Graznavia.

Q19. DIRECTIONS for questions 17 to 20: Select the correct alternative from the given choices.

If a person has to travel by land from Ecotopia to Graznavia, which of the following countries must he pass through?

- a) Krakozhia
- b) Republia
- c) Draka
- d) None of the above

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

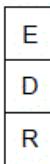
Time taken by you to answer this question	93
Avg. time spent on this question by all students	76
Difficulty Level	D
Avg. time spent on this question by students who got this question right	70
% of students who attempted this question	23.26
% of students who got the question right of those who attempted	30.01

[Video Solution](#)

[Text Solution](#)

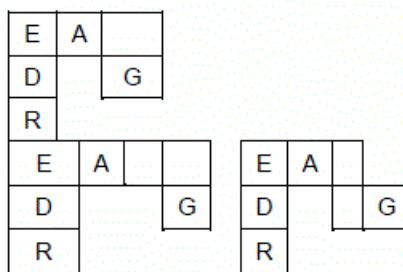
From (i), Republia and Ecotopia are the only neighbours of Draka. From (iii), Ecotopia is to the North of Republia.

Hence, the three countries must be in the following manner:



From (ii), Antegria and Draka are also neighbours of Ecotopia. Hence, there must be one other country surrounding Ecotopia.

From (iv), Graznavia is to the East of Draka. Since Graznavia is not a neighbour of Draka (from (i)), the relative positions of Graznavia and Draka can be any of the following:



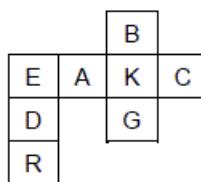
Graznavia cannot be any further east than this as there are only eight countries and Bahari and Centopia have only one neighbour, Krakozhia. (since they have only one neighbour, they cannot be a part of any configuration in which each country, except the ones at the extreme ends, has two neighbours).

In the second and third cases, Krakozhia must be placed such that Bahari and Centopia have only Krakozhia as their neighbour. Further, in each of the two cases, we can place only one additional country apart from the ones in the given figures. It is not possible to satisfy these conditions in the second and third cases. In the second case, Krakozhia must be placed to the North of Graznavia. But Bahari and Centopia cannot be placed in any of the existing positions. Hence, the second case is not possible (as there will be nine positions).

In the third case, Krakozhia cannot be placed in any existing cell because it is not possible for Krakozhia to have two neighbours, which, in turn, do not have any other neighbours.

Hence, only the first configuration is possible. Krakozhia must be to the North of Graznavia.

From (i), Bahari and Centopia must be to the North and East of Krakozhia respectively. The following diagram provides the positions of the eight countries:



For a person has to travel by land from Ecotopia to Graznavia, he has to travel through
Krakozhia.
Choice (A)

undefined

DIRECTIONS for questions 17 to 20: Answer the questions on the basis of the information given below.

In a planet called Titan, there exists a continent called Pangea, which is surrounded on all sides by water. The continent comprises eight countries – Antegria, Republia, Bahari, Centopia, Draka, Ecotopia, Graznavia and Krakozhia – located contiguously on it, i.e., the total area of the eight countries is the same as the area of the continent. Each country is exactly in the shape of a square, with the four edges of the square as its boundaries. The areas of the eight countries are all equal. Any country is said to be a neighbour of another country if the two countries have one edge as a common boundary. Further, one can travel by land between two countries only if the two countries are neighbours and it is known that one can reach any country from any of the other countries by travelling by land (passing through one or more countries, if required).

It is also known that

- i. Republia and Ecotopia are the only neighbours of Draka, while Krakozhia is the only neighbour of Bahari but Krakozhia is not to the West of Bahari.
- ii. Antegria and Draka are the only neighbours of Ecotopia, while Krakozhia is the only neighbour of Centopia.
- iii. Ecotopia is directly to the North of Republia.
- iv. Graznavia is directly to the East of Draka and no country is present directly to the South of Graznavia.

Q20. DIRECTIONS for questions 17 to 20: Select the correct alternative from the given choices.

How many of the eight countries do not have a neighbour to their South but have a neighbour to their East?

- a) **0**
- b) **1**
- c) **2**
- d) **3**

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

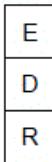
Time taken by you to answer this question	174
Avg. time spent on this question by all students	73
Difficulty Level	D
Avg. time spent on this question by students who got this question right	75
% of students who attempted this question	19.36
% of students who got the question right of those who attempted	45.87

[Video Solution](#)

[Text Solution](#)

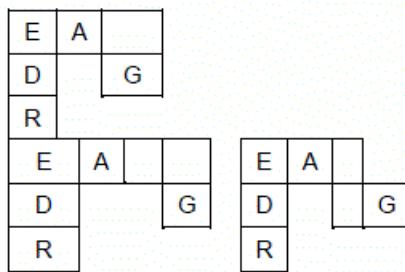
From (i), Republia and Ecotopia are the only neighbours of Draka. From (iii), Ecotopia is to the North of Republia.

Hence, the three countries must be in the following manner:



From (ii), Antegria and Draka are also neighbours of Ecotopia. Hence, there must be one other country surrounding Ecotopia.

From (iv), Graznavia is to the East of Draka. Since Graznavia is not a neighbour of Draka (from (i)), the relative positions of Graznavia and Draka can be any of the following:



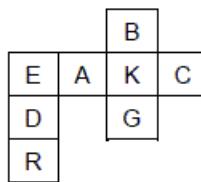
Graznavia cannot be any further east than this as there are only eight countries and Bahari and Centopia have only one neighbour, Krakozhia. (since they have only one neighbour, they cannot be a part of any configuration in which each country, except the ones at the extreme ends, has two neighbours).

In the second and third cases, Krakozhia must be placed such that Bahari and Centopia have only Krakozhia as their neighbour. Further, in each of the two cases, we can place only one additional country apart from the ones in the given figures. It is not possible to satisfy these conditions in the second and third cases. In the second case, Krakozhia must be placed to the North of Graznavia. But Bahari and Centopia cannot be placed in any of the existing positions. Hence, the second case is not possible (as there will be nine positions).

In the third case, Krakozhia cannot be placed in any existing cell because it is not possible for Krakozhia to have two neighbours, which, in turn, do not have any other neighbours.

Hence, only the first configuration is possible. Krakozhia must be to the North of Graznavia.

From (i), Bahari and Centopia must be to the North and East of Krakozhia respectively. The following diagram provides the positions of the eight countries:



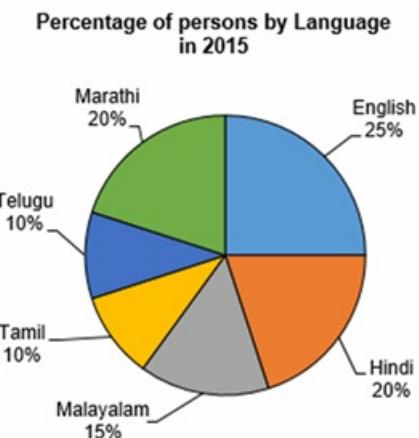
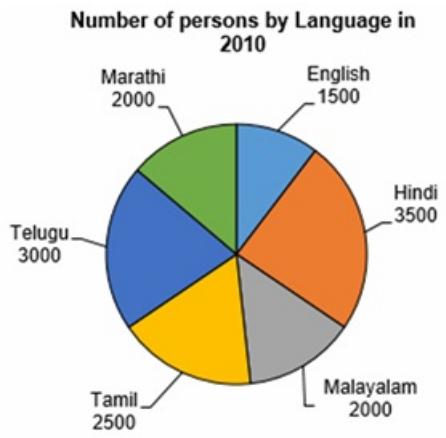
Only Antegria satisfies the given condition.

Choice (B)

undefined

DIRECTIONS for questions 21 to 24: Answer the questions on the basis of the information given below.

Each person living in a certain city speaks exactly one language among six different languages – English, Hindi, Malayalam, Tamil, Telugu and Marathi. The first pie chart below gives the number of persons in the city who speak each language at the beginning of 2010. The second pie chart gives the exact percentage breakup of the number of persons who speak each language at the beginning of 2015. It is known that, between 2010 and 2015, no person learned to speak another language and there were no births or deaths in the city. However, some persons in the city might have moved out of the city and/or some persons from outside the city might have moved into the city. Every person who moved into the city speaks exactly one of the six languages.



Q21. DIRECTIONS for questions 21 to 24: Type in your answer in the input box provided below the question.

If the number of persons who speak Hindi remained the same during the given period, what is the minimum number of persons who would have moved out of the city?

Your Answer:1200 □ **Your answer is incorrect**

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	12
Avg. time spent on this question by all students	201
Difficulty Level	M
Avg. time spent on this question by students who got this question right	243
% of students who attempted this question	38.56
% of students who got the question right of those who attempted	24.57

[Video Solution](#)

[Text Solution](#)

Let N be the total number of persons in the city in 2015. Hence, the number of persons speaking English, Hindi, Malayalam, Tamil, Telugu and Marathi must be 0.25N, 0.2N, 0.15N, 0.1N, 0.1N and 0.2N respectively.

Given that $0.2N = 3500 \Rightarrow N = 17,500$

Number of persons speaking English = 4375. This increased and hence, no one needs to leave.

Number of persons speaking Malayalam = 2625. This also increased.

Number of persons speaking Tamil = 1750. This decreased by 750. Hence, at least 750 persons who speak Tamil would have left.

Number of persons speaking Telugu = 1750. This decreased by 1250. Hence, at least 1250 persons who speak Tamil would have left.

Number of persons speaking Marathi = 3500. This increased. No one needs to leave. Hence, a total of $1250 + 750 = 2000$ persons must have left the city.

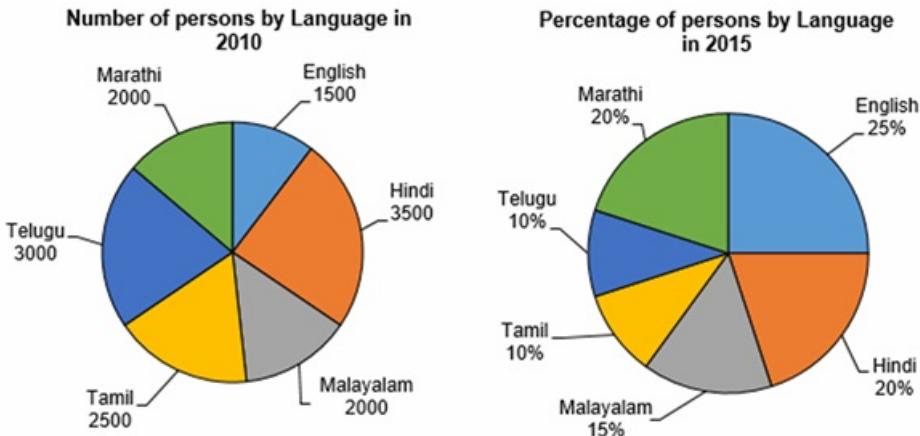
Ans: (2000)

undefined

DIRECTIONS for questions 21 to 24: Answer the questions on the basis of the information given below.

Each person living in a certain city speaks exactly one language among six different languages – English, Hindi, Malayalam, Tamil, Telugu and Marathi. The first pie chart below gives the number of persons in the city who speak each language at the beginning of 2010. The second pie chart gives the exact percentage breakup of the number of persons who speak each language at the beginning of 2015. It is known that, between 2010 and 2015, no person learned to speak another language and there were no births or deaths in the city. However, some persons in the city might have moved out of the city and/or some persons from outside the city might have moved into the city. Every person who moved into the city speaks exactly

one of the six languages.



Q22. DIRECTIONS for questions 21 to 24: Type in your answer in the input box provided below the question.

If no person moved out of the city between 2010 and 2015, what is the minimum number of people who speak Malayalam that must have moved into the city?

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	28
Avg. time spent on this question by all students	125
Difficulty Level	M
Avg. time spent on this question by students who got this question right	138
% of students who attempted this question	32.33
% of students who got the question right of those who attempted	9.41

[Video Solution](#)

[Text Solution](#)

Let N be the total number of persons in the city in 2015. Hence, the number of persons speaking English, Hindi, Malayalam, Tamil, Telugu and Marathi must be $0.25N$, $0.2N$, $0.15N$, $0.1N$, $0.1N$ and $0.2N$ respectively.

Given that no person left the city. For the percentage of people speaking different languages to change, people must have moved into the city.

Hence, there must be at least 1500 people speaking English. If this remained unchanged, then $0.25N = 1500 \Rightarrow N = 6000$. However, for $N = 6000$, the number of people speaking Hindi will only be 1200. This was 3500 in 2010. Since no one left, there cannot be a reduction in the number of people speaking any language. Hence, this is not possible.

Similarly, for Hindi, if $0.2N = 3500$, then $N = 17,500$.

For Malayalam, if $0.15N = 2000$, then $N \cong 13,333$.

For Tamil, if $0.1N = 2500$, then $N = 25,000$.

For Telugu, if $0.1N = 3000$, then $N = 30,000$.

For Marathi, if $0.2N = 2000$, then $N = 10,000$.

The minimum possible value of N must be 30,000 because in all the other cases, there will be a reduction in the number of persons who speak Telugu.

If $N = 30,000$, the number of persons who speak Malayalam = $30000 \times 0.15 = 4500$

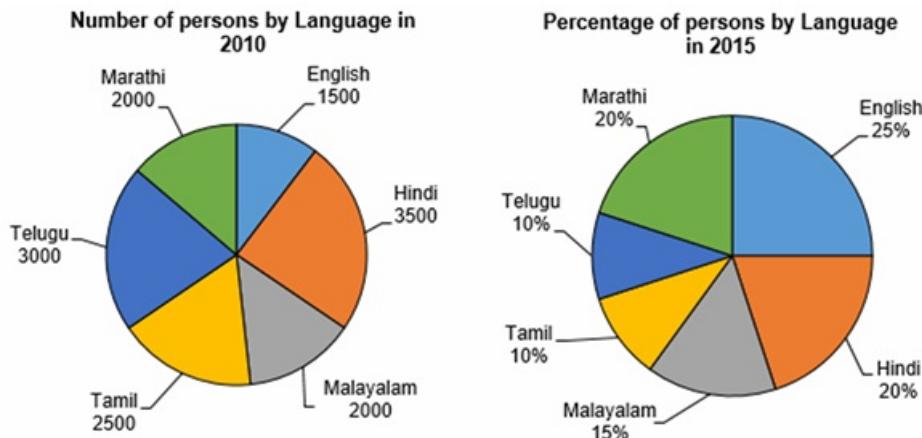
Minimum number of Malayalam speaking persons who would have moved into the city = $4500 - 2000 = 2500$

Ans: (2500)

undefined

DIRECTIONS for questions 21 to 24: Answer the questions on the basis of the information given below.

Each person living in a certain city speaks exactly one language among six different languages – English, Hindi, Malayalam, Tamil, Telugu and Marathi. The first pie chart below gives the number of persons in the city who speak each language at the beginning of 2010. The second pie chart gives the exact percentage breakup of the number of persons who speak each language at the beginning of 2015. It is known that, between 2010 and 2015, no person learned to speak another language and there were no births or deaths in the city. However, some persons in the city might have moved out of the city and/or some persons from outside the city might have moved into the city. Every person who moved into the city speaks exactly one of the six languages.



Q23. DIRECTIONS for questions 21 to 24: Type in your answer in the input box provided below the question.

If no person moved out of the city between 2010 and 2015, what is the minimum number of people that must have moved into the city?

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	24
Avg. time spent on this question by all students	109
Difficulty Level	M
Avg. time spent on this question by students who got this question right	113
% of students who attempted this question	20.85
% of students who got the question right of those who attempted	18.13

[Video Solution](#)

Text Solution

Let N be the total number of persons in the city in 2015. Hence, the number of persons speaking English, Hindi, Malayalam, Tamil, Telugu and Marathi must be $0.25N$, $0.2N$, $0.15N$, $0.1N$, $0.1N$ and $0.2N$ respectively.

As seen in the above solution, if no person moved into the city, number of persons in the city in 2015 = 30,000.

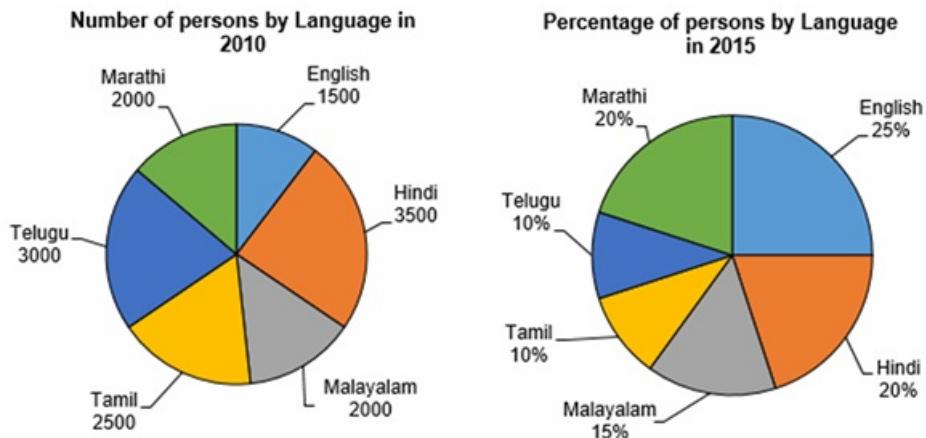
Since there were 14,500 persons in the city in 2010 and no one moved out of the city, at least 15,500 persons must have moved into the city. Ans: (15500)

undefined

DIRECTIONS for questions 21 to 24: Answer the questions on the basis of the information given below.

Each person living in a certain city speaks exactly one language among six different languages – English, Hindi, Malayalam, Tamil, Telugu and Marathi. The first pie chart below gives the number of persons in the city who speak each language at the beginning of 2010. The second pie chart gives the exact percentage breakup of the number of persons who speak each language at the beginning of 2015. It is known that, between 2010 and 2015, no person learned to speak another language and there were no births or deaths in the city. However, some persons in the city might have moved out of the city and/or some persons from outside the city might have moved into the city. Every person who moved into the city speaks exactly one of the six languages.

one of the six languages.



Q24. DIRECTIONS for questions 21 to 24: Type in your answer in the input box provided below the question.

If no person moved into the city between 2010 and 2015, what is the minimum number of people that must have moved out of the city?

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	39
Avg. time spent on this question by all students	81
Difficulty Level	M
Avg. time spent on this question by students who got this question right	100
% of students who attempted this question	15.71
% of students who got the question right of those who attempted	19.25

[Video Solution](#)

[Text Solution](#)

Let N be the total number of persons in the city in 2015. Hence, the number of persons speaking English, Hindi, Malayalam, Tamil, Telugu and Marathi must be $0.25N$, $0.2N$, $0.15N$, $0.1N$, $0.1N$ and $0.2N$ respectively.

Given that no person moved in to the city. Hence, the number of persons speaking any language cannot increase in the given period.

As seen from the above solution, the maximum possible value of N is 6000. If the number of persons is more than 6000, then there will be an increase in the number of persons speaking English (which is not possible unless someone moves into the city). Hence, the maximum possible value of N is 6000.

Minimum number of persons that must have left the city will be $14500 - 6000 = 8500$
Ans: (8500)

undefined

DIRECTIONS for questions 25 to 28: Answer the questions on the basis of the information given below.

In a certain kingdom, there were three kinds of people called Nothrees, Nofives and Nosevens. The peculiarity of the three kinds of people lies in the way they count. While counting, a Nothree would skip over any multiple of 3, i.e., if he has to count four items, he will count the four items as one, two, four and five (skipping three); if he has to count six items, he will count the six items as one, two, four, five, seven and eight (skipping three and six).

Similarly, a Nofive would skip over any multiple of 5 while counting and a Noseven would skip over any multiple of 7 while counting.

Q25. DIRECTIONS for questions 25 to 28: Type in your answer in the input box provided below the question.

If there were 185 marbles in a pile, what will be the number reported by a Nofive on counting this pile of marbles?

Your Answer:231 **Your answer is correct**

Time spent / Accuracy Analysis

Time taken by you to answer this question	122
Avg. time spent on this question by all students	149
Difficulty Level	D
Avg. time spent on this question by students who got this question right	189
% of students who attempted this question	46.72
% of students who got the question right of those who attempted	12.34

[Video Solution](#)

[Text Solution](#)

If a person from Nothrees reports either 4 or 5, there must be one less marble; if he reports 7 or 8 marbles, there must be 2 less marbles; if he reports 10 or 11 marbles, there must be 3 less marbles and so on.

Hence, if this person reports n marbles, the actual number of marbles will be less by the number of multiples of 3 less than n , i.e., the integer part (INT) of $n/3$.

Hence, $\text{Actual Number of Marbles} = \text{Marbles Reported} - \text{INT}\left(\frac{\text{Marbles Reported}}{3}\right)$

Similarly, for a person from Nofives,

$\text{Actual Number of Marbles} = \text{Marbles Reported} - \text{INT}\left(\frac{\text{Marbles Reported}}{5}\right)$

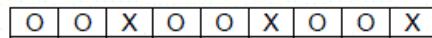
For a person from Nosevens,

$\text{Actual Number of Marbles} = \text{Marbles Reported} - \text{INT}\left(\frac{\text{Marbles Reported}}{7}\right)$

To find the reported number of marbles from actual number, we can use the following approach.

Consider that X is the actual number of marbles in a pile. A Nothree will count in the following manner: 1, 2, 4, 5, 7, 8...

We can represent these numbers as boxes and a nothreed will place a marble in two boxes and leave one empty. as represented below:



Hence, a nothreed will divide the actual number of marbles into pairs. Between each pair, there will be an empty box. The empty box here signifies a skipped number (i.e., a multiple of 3) by nothreed.

To find the reported number of marbles for any actual number of marbles, we can divide the actual number of marbles into pairs and find the number of gaps between pairs. If we add these gaps to the actual number of marbles, we get the number reported by a nothreed.

For example, consider there are 11 marbles. Using the above approach, we can divide the 10 marbles into 5 pairs and one extra marble. There will be 5 gaps between the five pairs and the one extra marble. Hence, the number reported by nothreed will be $11 + 5 = 16$.

This is represented below:

Actual number	1	2		3	4		5	6		7	8		9	10		11
Marbles	O	O	X	O	O	X	O	O	X	O	O	X	O	O	X	O
Number counted by nothreed	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Similarly, a nfone will divide the actual number of marbles into groups of 4, while a noseven will divide the actual number of marbles into groups of 6.

Since there are 185 marbles in a pile, a Nofive will divide these 185 marbles into groups of 4.

185 marbles can be divided into 47 groups (46 full and 1 partially full).

There will be 46 gaps between the groups. Hence, the number of marbles as reported by a Nofive will be $185 + 46 = 231$ marbles.

Ans: (231)

undefined

DIRECTIONS for questions 25 to 28: Answer the questions on the basis of the information given below.

In a certain kingdom, there were three kinds of people called Nothrees, Nofives and Nosevens. The peculiarity of the three kinds of people lies in the way they count. While counting, a Nothree would skip over any multiple of 3, i.e., if he has to count four items, he will count the four items as one, two, four and five (skipping three); if he has to count six items, he will count the six items as one, two, four, five, seven and eight (skipping three and six).

Similarly, a Nofive would skip over any multiple of 5 while counting and a Noseven would skip over any multiple of 7 while counting.

Q25. DIRECTIONS for questions 25 to 28: Type in your answer in the input box provided below the question.

If there were 185 marbles in a pile, what will be the number reported by a Nofive on counting this pile of marbles?

Your Answer:231 **Your answer is correct**

Time spent / Accuracy Analysis

Time taken by you to answer this question	122
Avg. time spent on this question by all students	149
Difficulty Level	D
Avg. time spent on this question by students who got this question right	189
% of students who attempted this question	46.72
% of students who got the question right of those who attempted	12.34

[Video Solution](#)

[Text Solution](#)

If a person from Nothrees reports either 4 or 5, there must be one less marble; if he reports 7 or 8 marbles, there must be 2 less marbles; if he reports 10 or 11 marbles, there must be 3 less marbles and so on.

Hence, if this person reports n marbles, the actual number of marbles will be less by the number of multiples of 3 less than n , i.e., the integer part (INT) of $n/3$.

$$\text{Hence, Actual Number of Marbles} = \text{Marbles Reported} - \text{INT}\left(\frac{\text{Marbles Reported}}{3}\right)$$

Similarly, for a person from Nofives,

$$\text{Actual Number of Marbles} = \text{Marbles Reported} - \text{INT}\left(\frac{\text{Marbles Reported}}{5}\right)$$

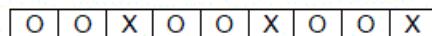
For a person from Nosevens,

$$\text{Actual Number of Marbles} = \text{Marbles Reported} - \text{INT}\left(\frac{\text{Marbles Reported}}{7}\right)$$

To find the reported number of marbles from actual number, we can use the following approach.

Consider that X is the actual number of marbles in a pile. A Nothree will count in the following manner: 1, 2, 4, 5, 7, 8...

We can represent these numbers as boxes and a nothree will place a marble in two boxes and leave one empty, as represented below:



Hence, a nothree will divide the actual number of marbles into pairs. Between each pair, there will be an empty box. The empty box here signifies a skipped number (i.e., a multiple of 3) by nothree.

To find the reported number of marbles for any actual number of marbles, we can divide the actual number of marbles into pairs and find the number of gaps between pairs. If we add these gaps to the actual number of marbles, we get the number reported by a nothree.

For example, consider there are 11 marbles. Using the above approach, we can divide the 10 marbles into 5 pairs and one extra marble. There will be 5 gaps between the five pairs and the one extra marble. Hence, the number reported by nothree will be $11 + 5 = 16$.

This is represented below:

Actual number	1	2		3	4		5	6		7	8		9	10		11
Marbles	O	O	X	O	O	X	O	O	X	O	O	X	O	O	X	O
Number counted by nothree	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Similarly, a nfone will divide the actual number of marbles into groups of 4, while a noseven will divide the actual number of marbles into groups of 6.

Since there are 185 marbles in a pile, a Nofive will divide these 185 marbles into groups of 4.

185 marbles can be divided into 47 groups (46 full and 1 partially full).

There will be 46 gaps between the groups. Hence, the number of marbles as reported by a Nofive will be $185 + 46 = 231$ marbles.

Ans: (231)

undefined

DIRECTIONS for questions 25 to 28: Answer the questions on the basis of the information given below.

In a certain kingdom, there were three kinds of people called Nothrees, Nofives and Nosevens. The peculiarity of the three kinds of people lies in the way they count. While counting, a Nothree would skip over any multiple of 3, i.e., if he has to count four items, he will count the four items as one, two, four and five (skipping three); if he has to count six items, he will count the six items as one, two, four, five, seven and eight (skipping three and six).

Similarly, a Nofive would skip over any multiple of 5 while counting and a Noseven would skip over any multiple of 7 while counting.

Q26. DIRECTIONS for questions 25 to 28: Type in your answer in the input box provided below the question.

On counting a pile of mangoes, the number reported by a Nothree was five more than the number reported by a Nofive.

What is the maximum number of mangoes in the pile?

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	23
Avg. time spent on this question by all students	171
Difficulty Level	VD
Avg. time spent on this question by students who got this question right	196
% of students who attempted this question	25.03
% of students who got the question right of those who attempted	15.1

[Video Solution](#)

Text Solution

If a person from Nothrees reports either 4 or 5, there must be one less marble; if he reports 7 or 8 marbles, there must be 2 less marbles; if he reports 10 or 11 marbles, there must be 3 less marbles and so on.

Hence, if this person reports n marbles, the actual number of marbles will be less by the number of multiples of 3 less than n , i.e., the integer part (INT) of $n/3$.

$$\text{Hence, Actual Number of Marbles} = \text{Marbles Reported} - \text{INT}\left(\frac{\text{Marbles Reported}}{3}\right)$$

Similarly, for a person from Nofives,

$$\text{Actual Number of Marbles} = \text{Marbles Reported} - \text{INT}\left(\frac{\text{Marbles Reported}}{5}\right)$$

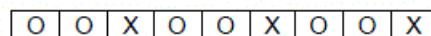
For a person from Nosevens,

$$\text{Actual Number of Marbles} = \text{Marbles Reported} - \text{INT}\left(\frac{\text{Marbles Reported}}{7}\right)$$

To find the reported number of marbles from actual number, we can use the following approach.

Consider that X is the actual number of marbles in a pile. A Nothree will count in the following manner: 1, 2, 4, 5, 7, 8...

We can represent these numbers as boxes and a nothree will place a marble in two boxes and leave one empty, as represented below:



Hence, a nothree will divide the actual number of marbles into pairs. Between each pair, there will be an empty box. The empty box here signifies a skipped number (i.e., a multiple of 3) by nothree.

To find the reported number of marbles for any actual number of marbles, we can divide the actual number of marbles into pairs and find the number of gaps between pairs. If we add these gaps to the actual number of marbles, we get the number reported by a nothree.

For example, consider there are 11 marbles. Using the above approach, we can divide the 10 marbles into 5 pairs and one extra marble. There will be 5 gaps between the five pairs and the one extra marble. Hence, the number reported by nothree will be $11 + 5 = 16$.

This is represented below:

Actual number	1	2	3	4	5	6	7	8	9	10	11
Marbles	O	O	X	O	O	X	O	O	O	X	O
Number counted by nothree	1	2	3	4	5	6	7	8	9	10	11

Similarly, a nfone will divide the actual number of marbles into groups of 4, while a noseven will divide the actual number of marbles into groups of 6.

A person from Nothrees reported five more marbles than a person from Nofives. Let x be the number of marbles that Nothrees reported. The actual number of marbles approximately (ignoring the integer part) will be $x - \frac{x}{3}$. Nofives reported $x - 5$ marbles.

Actual number of marbles according to Nofives number will be $(x - 5) - \frac{x-5}{5}$.

The actual number of marbles must be equal in the two cases.

$$\text{Hence, } x - \frac{x}{3} = x - 5 - \frac{x-5}{5} \Rightarrow x = 30$$

Since we have taken an approximate value, we can check for values of x on either side

of 30. Also, x cannot be 30 because Nothrees cannot report 30 marbles.
If Nothrees reported 31 marbles, Nofives would have reported 26 marbles.
If Nothrees reported 31 marbles, actual number of marbles will be
21 (i.e., $31 - \text{INT}\left(\frac{31}{3}\right)\right)$).
If Nofives reported 26 marbles, actual number of marbles will be 21.
This is a possible case.
If Nothrees reported 32 marbles, Nofives would have reported 27 marbles.
If Nothrees reported 32 marbles, actual number of marbles will be 22.
If Nofives reported 27 marbles, actual number of marbles will be 22.
This is another possible case.
Nothrees cannot report 33 marbles, since it is a multiple of 3.

If Nothrees reported 34 marbles, Nofives would have reported 29 marbles.
If Nothrees reported 34 marbles, actual number of marbles will be 23.
If Nofives reported 29 marbles, actual number of marbles will be 24.
This case is not possible. Similarly, for any value greater than 34, the actual number of marbles will differ.
Now we can consider values less than 30.
If Nothrees reported 29 marbles, Nofives would have reported 24 marbles.
If Nothrees reported 29 marbles, actual number of marbles will be 20.
If Nofives reported 24 marbles, actual number of marbles will be 20.
This is one possible case.
If Nothrees reported 28 marbles, Nofives would have reported 23 marbles.
If Nothrees reported 28 marbles, actual number of marbles will be 19.
If Nofives reported 23 marbles, actual number of marbles will be 19.
This is another possible case.
Nothrees cannot report 27 marbles since it is a multiple of 3.
If Nothrees reported 26 marbles, Nofives would have reported 21 marbles.
If Nothrees reported 26 marbles, actual number of marbles will be 18.
If Nofives reported 21 marbles, actual number of marbles will be 17.
This case is not possible. Similarly, for values less than 26, it will not be possible.
Hence, the actual number of marbles can be 19 or 20 or 21 or 22.

The maximum number of mangoes in the pile is 22. Ans: (22)

undefined

DIRECTIONS for questions 25 to 28: Answer the questions on the basis of the information given below.

In a certain kingdom, there were three kinds of people called Nothrees, Nofives and Nosevens. The peculiarity of the three kinds of people lies in the way they count. While counting, a Nothree would skip over any multiple of 3, i.e., if he has to count four items, he will count the four items as one, two, four and five (skipping three); if he has to count six items, he will count the six items as one, two, four, five, seven and eight (skipping three and six).

Similarly, a Nofive would skip over any multiple of 5 while counting and a Noseven would skip over any multiple of 7 while counting.

Q27. DIRECTIONS for questions 25 to 28: Type in your answer in the input box provided below the question.

On counting a pile of mangoes, the number reported by a Nothree was five more than the number reported by a Nofive.

If the number reported by the person from Nofives was two more than the number reported by a person from Nosevens, what is the minimum number of mangoes in the pile?

Your Answer: 17 **Your answer is incorrect**

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	316
Avg. time spent on this question by all students	118
Difficulty Level	VD
Avg. time spent on this question by students who got this question right	140

Time spent / Accuracy Analysis

% of students who attempted this question	17.65
% of students who got the question right of those who attempted	17.36

[Video Solution](#)

Text Solution

If a person from Nothrees reports either 4 or 5, there must be one less marble; if he reports 7 or 8 marbles, there must be 2 less marbles; if he reports 10 or 11 marbles, there must be 3 less marbles and so on.

Hence, if this person reports n marbles, the actual number of marbles will be less by the number of multiples of 3 less than n , i.e., the integer part (INT) of $n/3$.

$$\text{Hence, Actual Number of Marbles} = \text{Marbles Reported} - \text{INT}\left(\frac{\text{Marbles Reported}}{3}\right)$$

Similarly, for a person from Nofives,

$$\text{Actual Number of Marbles} = \text{Marbles Reported} - \text{INT}\left(\frac{\text{Marbles Reported}}{5}\right)$$

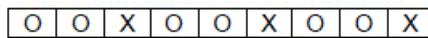
For a person from Nosevens,

$$\text{Actual Number of Marbles} = \text{Marbles Reported} - \text{INT}\left(\frac{\text{Marbles Reported}}{7}\right)$$

To find the reported number of marbles from actual number, we can use the following approach.

Consider that X is the actual number of marbles in a pile. A Nothree will count in the following manner: 1, 2, 4, 5, 7, 8...

We can represent these numbers as boxes and a nothree will place a marble in two boxes and leave one empty, as represented below:



Hence, a nothree will divide the actual number of marbles into pairs. Between each pair, there will be an empty box. The empty box here signifies a skipped number (i.e., a multiple of 3) by nothree.

To find the reported number of marbles for any actual number of marbles, we can divide the actual number of marbles into pairs and find the number of gaps between pairs. If we add these gaps to the actual number of marbles, we get the number reported by a nothree.

For example, consider there are 11 marbles. Using the above approach, we can divide the 10 marbles into 5 pairs and one extra marble. There will be 5 gaps between the five pairs and the one extra marble. Hence, the number reported by nothree will be $11 + 5 = 16$.

This is represented below:

Actual number	1	2		3	4		5	6		7	8		9	10		11
Marbles	O	O	X	O	O	X	O	O	X	O	O	X	O	O	X	O
Number counted by nothree	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Similarly, a nfone will divide the actual number of marbles into groups of 4, while a noseven will divide the actual number of marbles into groups of 6.

The possible values for the number of mangoes in the pile is 19 or 20 or 21 or 22.

The number of mangoes reported by Nosevens in each case will be 22 or 23 or 24 or 25 respectively.

The number of mangoes reported by Nofives in each case will be 23 or 24 or 26 or 27 respectively.

Since the number of mangoes reported by Nofives was two more than that reported by Nosevens, there can be 21 or 22 mangoes in the pile. Hence, the minimum number of mangoes must be 21.

Ans: (21)

undefined

DIRECTIONS for questions 25 to 28: Answer the questions on the basis of the information given below.

In a certain kingdom, there were three kinds of people called Nothrees, Nofives and Nosevens. The peculiarity of the three kinds of people lies in the way they count. While counting, a Nothree would skip over any multiple of 3, i.e., if he has to count four items, he will count the four items as one, two, four and five (skipping three); if he has to count six items, he will count the six items as one, two, four, five, seven and eight (skipping three and six).

Similarly, a Nofive would skip over any multiple of 5 while counting and a Noseven would skip over any multiple of 7 while counting.

Q28. DIRECTIONS for questions 25 to 28: Type in your answer in the input box provided below the question.

Three persons each of whom was of a different kind among Nothrees, Nofives and Nosevens counted a certain number of cars.

Two of the three persons reported 44 and 56 cars. What will be the number reported by the third person?

Enter your answer as -1, if you think the answer cannot be determined.

Your Answer:44 □ **Your answer is incorrect**

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	112
Avg. time spent on this question by all students	131
Difficulty Level	D
Avg. time spent on this question by students who got this question right	174
% of students who attempted this question	19.05
% of students who got the question right of those who attempted	12.14

[Video Solution](#)

[Text Solution](#)

If a person from Nothrees reports either 4 or 5, there must be one less marble; if he reports 7 or 8 marbles, there must be 2 less marbles; if he reports 10 or 11 marbles, there must be 3 less marbles and so on.

Hence, if this person reports n marbles, the actual number of marbles will be less by the number of multiples of 3 less than n , i.e., the integer part (INT) of $n/3$.

$$\text{Hence, Actual Number of Marbles} = \text{Marbles Reported} - \text{INT}\left(\frac{\text{Marbles Reported}}{3}\right)$$

Similarly, for a person from Nofives,

$$\text{Actual Number of Marbles} = \text{Marbles Reported} - \text{INT}\left(\frac{\text{Marbles Reported}}{5}\right)$$

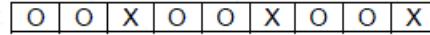
For a person from Nosevens,

$$\text{Actual Number of Marbles} = \text{Marbles Reported} - \text{INT}\left(\frac{\text{Marbles Reported}}{7}\right)$$

To find the reported number of marbles from actual number, we can use the following approach.

Consider that X is the actual number of marbles in a pile. A Nothree will count in the following manner: 1, 2, 4, 5, 7, 8...

We can represent these numbers as boxes and a nothree will place a marble in two boxes and leave one empty, as represented below:



Hence, a nothree will divide the actual number of marbles into pairs. Between each pair, there will be an empty box. The empty box here signifies a skipped number (i.e., a multiple of 3) by nothree.

To find the reported number of marbles for any actual number of marbles, we can divide the actual number of marbles into pairs and find the number of gaps between pairs. If we add these gaps to the actual number of marbles, we get the number reported by a nothree.

For example, consider there are 11 marbles. Using the above approach, we can divide the 10 marbles into 5 pairs and one extra marble. There will be 5 gaps between the five pairs and the one extra marble. Hence, the number reported by nothree will be $11 + 5 = 16$.

This is represented below:

Actual number	1	2		3	4		5	6		7	8		9	10		11
Marbles	O	O	X	O	O	X	O	O	X	O	O	X	O	O	X	O
Number counted by nothree	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Similarly, a nfone will divide the actual number of marbles into groups of 4, while a noseven will divide the actual number of marbles into groups of 6.

Given that one of the three reported 44 cars.

Nothrees could not have reported 44 cars because no person can report a higher number of cars than Nothrees.

If Nofives reported the number of cars, then the actual number of cars = $44 - 8 = 36$

If Nosevens reported the number of cars, then the actual number of cars = $44 - 6 = 38$

Another person reported 56 cars.

If Nothrees reported the number of cars, then the actual number of cars = $56 - 18 = 38$

If Nofives reported the number of cars, then the actual number of cars = $56 - 11 = 45$

Since the actual number of cars must be the same, only one case is possible, i.e., there are 38 cars and Nosevens reported 44 cars, while Nothrees reported 56 cars.

On counting 38 cars, Nofives will report $38 + 9 = 47$ cars (since 38 can be divided into 10 groups for a Nofive).

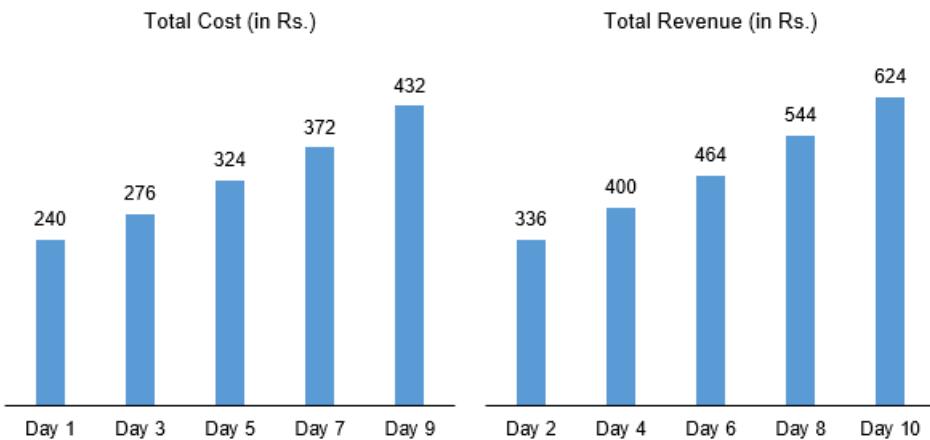
Ans: (47)

undefined

DIRECTIONS for questions 29 to 32: Answer the questions on the basis of the information given below.

Ravi, a fruit merchant, purchased and sold a certain number of apples on ten days – Day 1 through Day 10. The cost at which he purchased each apple and the price at which he sold each apple did not change from one day to the next. He sold all the apples that he purchased in a day on the same day. The profit percentage on any day was greater than 20% and less than 50%. It is known that the price at which he purchased each apple and the price at which he sold each apple were both integers.

The following bar graphs provides the total cost and total revenue from the purchase and sale of apples on certain days:



Q29. DIRECTIONS for questions 29 to 32: Select the correct alternative from the given choices.

What is the total revenue from the sale of apples on Day 5?

- a) **Rs.438**
- b) **Rs.424**
- c) **Rs.432**
- d) **Cannot be determined**

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	262
Avg. time spent on this question by all students	222
Difficulty Level	M
Avg. time spent on this question by students who got this question right	265
% of students who attempted this question	19.2
% of students who got the question right of those who attempted	48.35

[Video Solution](#)

[Text Solution](#)

Given that the cost per apple and the price per apple are both integers. Hence, the cost of the apple should divide the total cost incurred on Days 1, 3, 5, 7 and 9, and the price of an apple must divide the total revenue generated on Days 2, 4, 6, 8 and 10.

The highest number that divides 240, 276, 324, 372 and 432 is 12.

The highest number that divides 336, 400, 464, 544 and 624 is 16.

The cost of an apple can be 1 or 2 or 3 or 4 or 6 or 12.

The price of an apple can be 1 or 2 or 4 or 8 or 16.

If the cost of an apple is ₹1, the price must be between ₹1.20 and ₹1.50 (since the profit percentage is between 20% and 50%). Hence, the cost cannot be 1.

If the cost of an apple is ₹2, the price must be greater than ₹2.40 and less than ₹3. Hence, the cost cannot be ₹2.

If the cost of an apple is ₹3 the price must be between 3.6 and 4.5. Hence, the price can be ₹4.

If the cost of an apple is ₹4, the price must be between ₹4.8 and ₹6. This is not possible.

If the cost of an apple is ₹6, the price must be ₹8.

If the cost of an apple is ₹12, the price must be ₹16.

Hence, there are three possible values for the cost and the price – (3, 4), (6, 8), (12, 16).

The profit percentage is 33.33% in each of the three cases. Hence, the total cost on any day is 3/4ths the revenue on that day and the revenue on any day is 4/3rds the cost on that day.

The revenue on Day 5 = $324 \times \frac{4}{3} = \text{Rs. } 432$.

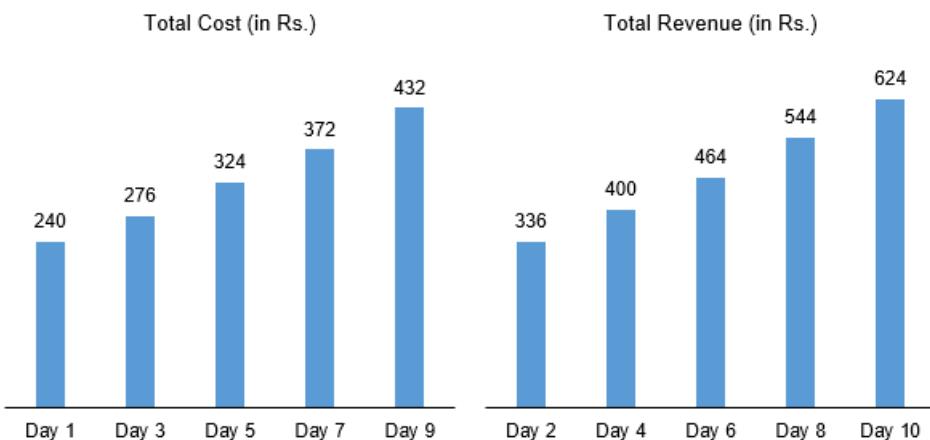
Choice (C)

undefined

DIRECTIONS for questions 29 to 32: Answer the questions on the basis of the information given below.

Ravi, a fruit merchant, purchased and sold a certain number of apples on ten days – Day 1 through Day 10. The cost at which he purchased each apple and the price at which he sold each apple did not change from one day to the next. He sold all the apples that he purchased in a day on the same day. The profit percentage on any day was greater than 20% and less than 50%. It is known that the price at which he purchased each apple and the price at which he sold each apple were both integers.

The following bar graphs provides the total cost and total revenue from the purchase and sale of apples on certain days:



Q29. DIRECTIONS for questions 29 to 32: Select the correct alternative from the given choices.

What is the total revenue from the sale of apples on Day 5?

- a) **Rs.438**
- b) **Rs.424**
- c) **Rs.432**
- d) **Cannot be determined**

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	262
Avg. time spent on this question by all students	222
Difficulty Level	M
Avg. time spent on this question by students who got this question right	265
% of students who attempted this question	19.2
% of students who got the question right of those who attempted	48.35

[Video Solution](#)

[Text Solution](#)

Given that the cost per apple and the price per apple are both integers. Hence, the cost of the apple should divide the total cost incurred on Days 1, 3, 5, 7 and 9, and the price of an apple must divide the total revenue generated on Days 2, 4, 6, 8 and 10.

The highest number that divides 240, 276, 324, 372 and 432 is 12.

The highest number that divides 336, 400, 464, 544 and 624 is 16.

The cost of an apple can be 1 or 2 or 3 or 4 or 6 or 12.

The price of an apple can be 1 or 2 or 4 or 8 or 16.

If the cost of an apple is ₹1, the price must be between ₹1.20 and ₹1.50 (since the profit percentage is between 20% and 50%). Hence, the cost cannot be 1.

If the cost of an apple is ₹2, the price must be greater than ₹2.40 and less than ₹3. Hence, the cost cannot be ₹2.

If the cost of an apple is ₹3 the price must be between 3.6 and 4.5. Hence, the price can be ₹4.

If the cost of an apple is ₹4, the price must be between ₹4.8 and ₹6. This is not possible.

If the cost of an apple is ₹6, the price must be ₹8.

If the cost of an apple is ₹12, the price must be ₹16.

Hence, there are three possible values for the cost and the price – (3, 4), (6, 8), (12, 16).

The profit percentage is 33.33% in each of the three cases. Hence, the total cost on any day is 3/4ths the revenue on that day and the revenue on any day is 4/3rds the cost on that day.

$$\text{The revenue on Day 5} = 324 \times \frac{4}{3} = \text{Rs. } 432.$$

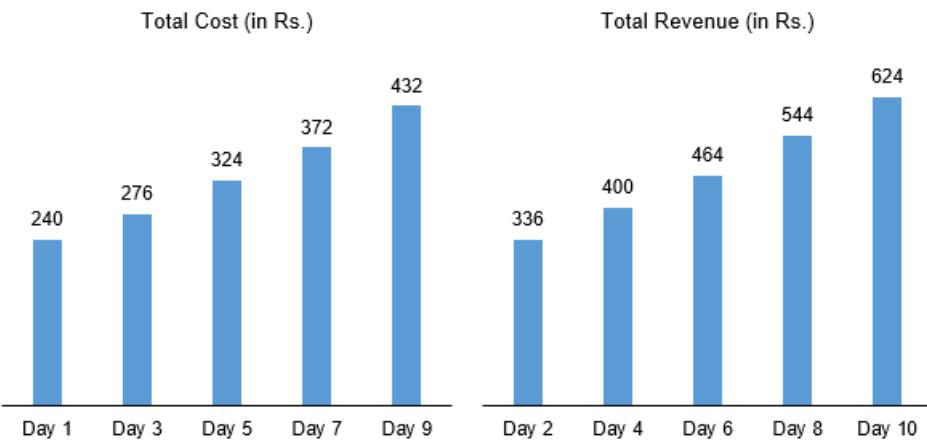
Choice (C)

undefined

DIRECTIONS for questions 29 to 32: Answer the questions on the basis of the information given below.

Ravi, a fruit merchant, purchased and sold a certain number of apples on ten days – Day 1 through Day 10. The cost at which he purchased each apple and the price at which he sold each apple did not change from one day to the next. He sold all the apples that he purchased in a day on the same day. The profit percentage on any day was greater than 20% and less than 50%. It is known that the price at which he purchased each apple and the price at which he sold each apple were both integers.

The following bar graphs provides the total cost and total revenue from the purchase and sale of apples on certain days:



Q30. DIRECTIONS for questions 29 to 32: Select the correct alternative from the given choices.

On how many days did Ravi make a profit more than Rs 120?

- a) 3
- b) 4
- c) 5
- d) Cannot be determined

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	171
Avg. time spent on this question by all students	109
Difficulty Level	M
Avg. time spent on this question by students who got this question right	118
% of students who attempted this question	14.67
% of students who got the question right of those who attempted	60.76

[Video Solution](#)

[Text Solution](#)

Given that the cost per apple and the price per apple are both integers. Hence, the cost of the apple should divide the total cost incurred on Days 1, 3, 5, 7 and 9, and the price of an apple must divide the total revenue generated on Days 2, 4, 6, 8 and 10.

The highest number that divides 240, 276, 324, 372 and 432 is 12.

The highest number that divides 336, 400, 464, 544 and 624 is 16.

The cost of an apple can be 1 or 2 or 3 or 4 or 6 or 12.

The price of an apple can be 1 or 2 or 4 or 8 or 16.

If the cost of an apple is ₹1, the price must be between ₹1.20 and ₹1.50 (since the profit percentage is between 20% and 50%). Hence, the cost cannot be 1.

If the cost of an apple is ₹2, the price must be greater than ₹2.40 and less than ₹3. Hence, the cost cannot be ₹2.

If the cost of an apple is ₹3 the price must be between 3.6 and 4.5. Hence, the price can be ₹4.

If the cost of an apple is ₹4, the price must be between ₹4.8 and ₹6. This is not possible.

If the cost of an apple is ₹6, the price must be ₹8.

If the cost of an apple is ₹12, the price must be ₹16.

Hence, there are three possible values for the cost and the price – (3, 4), (6, 8), (12, 16).

The profit percentage is 33.33% in each of the three cases. Hence, the total cost on any day is 3/4ths the revenue on that day and the revenue on any day is 4/3rds the cost on that day.

Ravi made a profit more than ₹120 on all the days on which his cost was greater than ₹360 OR his Revenue was greater than ₹480. On four days, Day 7, 8, 9 and 10, one of these conditions is satisfied. Hence, Ravi made a profit more than ₹120 on four days.

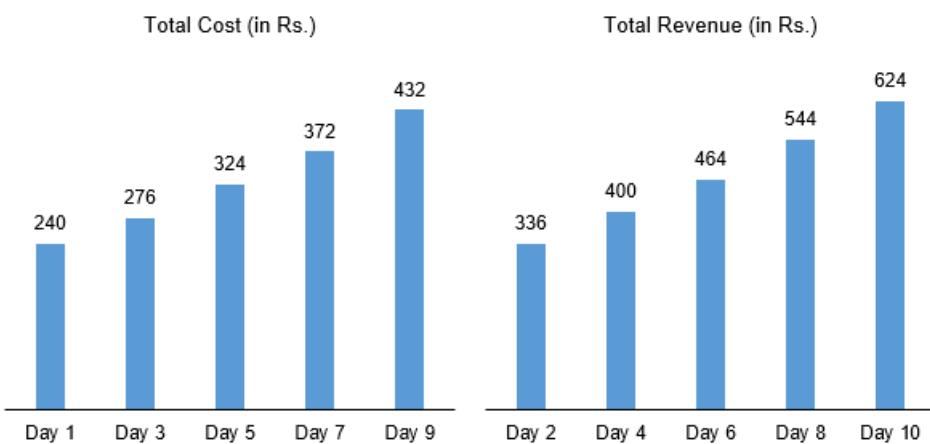
Choice (B)

undefined

DIRECTIONS for questions 29 to 32: Answer the questions on the basis of the information given below.

Ravi, a fruit merchant, purchased and sold a certain number of apples on ten days – Day 1 through Day 10. The cost at which he purchased each apple and the price at which he sold each apple did not change from one day to the next. He sold all the apples that he purchased in a day on the same day. The profit percentage on any day was greater than 20% and less than 50%. It is known that the price at which he purchased each apple and the price at which he sold each apple were both integers.

The following bar graphs provides the total cost and total revenue from the purchase and sale of apples on certain days:



Q31. DIRECTIONS for questions 29 to 32: Select the correct alternative from the given choices.

What is the total profit made by Ravi during the ten days?

- a) **Rs.1280**
- b) **Rs.1360**
- c) **Rs.1060**
- d) **Rs.1140**

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	104
Avg. time spent on this question by all students	108
Difficulty Level	M
Avg. time spent on this question by students who got this question right	116
% of students who attempted this question	8.85
% of students who got the question right of those who attempted	64.3

[Video Solution](#)

[Text Solution](#)

Given that the cost per apple and the price per apple are both integers. Hence, the cost of the apple should divide the total cost incurred on Days 1, 3, 5, 7 and 9, and the price of an apple must divide the total revenue generated on Days 2, 4, 6, 8 and 10.

The highest number that divides 240, 276, 324, 372 and 432 is 12.

The highest number that divides 336, 400, 464, 544 and 624 is 16.

The cost of an apple can be 1 or 2 or 3 or 4 or 6 or 12.

The price of an apple can be 1 or 2 or 4 or 8 or 16.

If the cost of an apple is ₹1, the price must be between ₹1.20 and ₹1.50 (since the profit percentage is between 20% and 50%). Hence, the cost cannot be 1.

If the cost of an apple is ₹2, the price must be greater than ₹2.40 and less than ₹3. Hence, the cost cannot be ₹2.

If the cost of an apple is ₹3 the price must be between 3.6 and 4.5. Hence, the price can be ₹4.

If the cost of an apple is ₹4, the price must be between ₹4.8 and ₹6. This is not possible.

If the cost of an apple is ₹6, the price must be ₹8.

If the cost of an apple is ₹12, the price must be ₹16.

Hence, there are three possible values for the cost and the price – (3, 4), (6, 8), (12, 16).

The profit percentage is 33.33% in each of the three cases. Hence, the total cost on any day is 3/4ths the revenue on that day and the revenue on any day is 4/3rds the cost on that day.

Total cost on the given five days = ₹1644

Profit on these five days = $1644 \times \frac{1}{3} = \text{Rs. } 548$

Total Revenue on the given five days = ₹2368

Profit made by Ravi on these five days = $\frac{2368}{4} = \text{Rs. } 592$

Total profit on the ten days = 548 + 592 = ₹1140

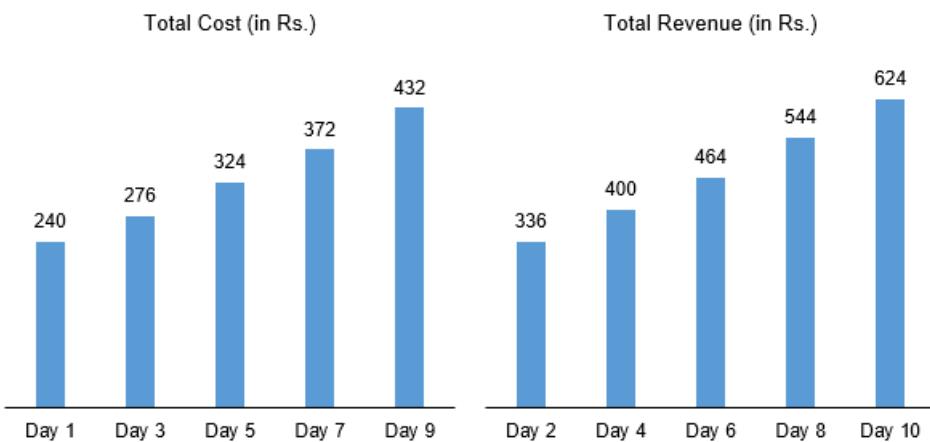
Choice (D)

undefined

DIRECTIONS for questions 29 to 32: Answer the questions on the basis of the information given below.

Ravi, a fruit merchant, purchased and sold a certain number of apples on ten days – Day 1 through Day 10. The cost at which he purchased each apple and the price at which he sold each apple did not change from one day to the next. He sold all the apples that he purchased in a day on the same day. The profit percentage on any day was greater than 20% and less than 50%. It is known that the price at which he purchased each apple and the price at which he sold each apple were both integers.

The following bar graphs provides the total cost and total revenue from the purchase and sale of apples on certain days:



Q32. DIRECTIONS for questions 29 to 32: Select the correct alternative from the given choices.

What is the minimum number of apples that Ravi sold during the ten days?

- a) **285**
- b) **300**
- c) **290**
- d) **280**

You did not answer this question [Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	94
Avg. time spent on this question by all students	116
Difficulty Level	M
Avg. time spent on this question by students who got this question right	98
% of students who attempted this question	7.58
% of students who got the question right of those who attempted	63.96

[Video Solution](#)

[Text Solution](#)

Given that the cost per apple and the price per apple are both integers. Hence, the cost of the apple should divide the total cost incurred on Days 1, 3, 5, 7 and 9, and the price of an apple must divide the total revenue generated on Days 2, 4, 6, 8 and 10.

The highest number that divides 240, 276, 324, 372 and 432 is 12.

The highest number that divides 336, 400, 464, 544 and 624 is 16.

The cost of an apple can be 1 or 2 or 3 or 4 or 6 or 12.

The price of an apple can be 1 or 2 or 4 or 8 or 16.

If the cost of an apple is ₹1, the price must be between ₹1.20 and ₹1.50 (since the profit percentage is between 20% and 50%). Hence, the cost cannot be 1.

If the cost of an apple is ₹2, the price must be greater than ₹2.40 and less than ₹3. Hence, the cost cannot be ₹2.

If the cost of an apple is ₹3 the price must be between 3.6 and 4.5. Hence, the price can be ₹4.

If the cost of an apple is ₹4, the price must be between ₹4.8 and ₹6. This is not possible.

If the cost of an apple is ₹6, the price must be ₹8.

If the cost of an apple is ₹12, the price must be ₹16.

Hence, there are three possible values for the cost and the price – (3, 4), (6, 8), (12, 16).

The profit percentage is 33.33% in each of the three cases. Hence, the total cost on any day is 3/4ths the revenue on that day and the revenue on any day is 4/3rds the cost on that day.

To minimize the number of apples, we can take the cost to be ₹12 and the revenue to be ₹16.

The number of apples sold on the ten days will be 20, 21, 23, 25, 27, 29, 31, 34, 36, 39.

Total number of apples sold = 285

Choice (A)

undefined

Q1. DIRECTIONS for question 1: Type in your answer in the input box provided in the question.

If $\log_{10} 1001 = 3.000434$, find the number of digits in 1001^{101} .

Your Answer:3004 **Your answer is incorrect**

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question **122**

Avg. time spent on this question by all students **196**

Difficulty Level **E**

Avg. time spent on this question by students who got this question right **193**

Time spent / Accuracy Analysis

% of students who attempted this question	36.63
% of students who got the question right of those who attempted	49.89

[Video Solution](#)

[Text Solution](#)

$$\log 1001^{101} = 101 \times 3.000434 = 303.044$$

Hence, the number of digits in $1001^{101} = 303 + 1 = 304$.

Ans: (304)

undefined

Q2. DIRECTIONS for questions 2 to 4: Select the correct alternative from the given choices.

The function $g(x) = |x - 4| + |4.5 - x| + |4.8 - x|$, where x is a real number, attains its minimum value at

- a) **$x = 4.1$**
- b) **$x = 4.4$**
- c) **$x = 4.5$** Your answer is correct
- d) **None of the above**

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	113
Difficulty Level	M
Avg. time spent on this question by students who got this question right	110
% of students who attempted this question	47.91
% of students who got the question right of those who attempted	78.47

[Video Solution](#)

[Text Solution](#)

$$\begin{aligned} \text{If } 4 \leq x \leq 4.5, g(x) &= x - 4 + 4.5 - x + 4.8 - x = 5.3 - x \\ \text{If } 4.5 \leq x \leq 4.8, g(x) &= x - 4 + x - 4.5 + 4.8 - x = -3.7 + x \\ g(x) \text{ decreases with } x \text{ for } x \leq 4.5 \text{ and increases with } x \text{ for } 4.5 < x \\ \therefore g(x) \text{ has minimum value at } x = 4.5 \end{aligned}$$

Choice (C)

undefined

Q3. DIRECTIONS for questions 2 to 4: Select the correct alternative from the given choices.

Each of the numbers $a_1, a_2, a_3, \dots, a_n$, where $n \geq 3m$ is equal to 1 or -1. Suppose $a_1 a_2 a_3 + a_2 a_3 a_4 + a_3 a_4 a_5 + \dots + a_{n-3} a_{n-2} a_{n-1} + a_{n-2} a_{n-1} a_n + a_{n-1} a_n a_1 + a_n a_1 a_2 = 0$, then

- a) **n is a composite integer.**

b) n is a prime number.

c) n is an even number.

d) n is an odd number.

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	115
Difficulty Level	M
Avg. time spent on this question by students who got this question right	121
% of students who attempted this question	14.57
% of students who got the question right of those who attempted	59.17

[Video Solution](#)

Text Solution

Each of the n terms of the sum $a_1, a_2, a_3 + a_2 a_3 a_4 + \dots + a_n a_1 a_2$ is either 1 or -1 as each term is a product of 1's and / or -1's.

Since the sum is zero the number of terms equal to 1 must be same as the number of terms equal to -1. This is possible only when 'n' is even.

Hence, n must be an even number.

Choice (C)

undefined

Q4. DIRECTIONS for questions 2 to 4: Select the correct alternative from the given choices.

There are five pipes P_1, P_2, P_3, P_4 and P_5 which can fill a tank in 45, 30, 15, 10 and 9 minutes respectively. Exactly two of the pipes are now converted into emptying pipes retaining the same respective flow rates. If one filling pipe and one emptying pipe operate, the empty tank gets filled in $12\frac{6}{7}$ minutes, while for another combination of a filling pipe and an emptying pipe, the full tank gets emptied in $22\frac{1}{2}$ minutes. Which of the following pipes may have been converted into emptying pipes?

a) P_1, P_2

b) P_2, P_3

c) P_3, P_4

d) P_4, P_5

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	180
Difficulty Level	M
Avg. time spent on this question by students who got this question right	185
% of students who attempted this question	27.61
% of students who got the question right of those who attempted	40.05

[Video Solution](#)

Text Solution

Considering 90 as the capacity of the tank {LCM of (45, 30, 15, 10, 9)} we can find the rate of flow for the 5 pipes as $\frac{90}{45}$, $\frac{90}{30}$, $\frac{90}{15}$, $\frac{90}{10}$ and $\frac{90}{9}$ respectively.

The time and the rates of the 5 pipes are tabulated below.

	P ₁	P ₂	P ₃	P ₄	P ₅
Rates	2	3	6	9	10
Time in minutes	45	30	15	10	9
Rate (if pipe is converted to emptying)	-2	-3	-6	-9	-10

If the tank gets filled in $12\frac{6}{7}$ min, effective rate of filing

$$= \frac{\frac{90}{7}}{\left(\frac{90}{7}\right)} = 7 \text{ units/min}$$

If the tank gets emptied in $22\frac{1}{2}$ min, effective rate of emptying $= \frac{\frac{90}{2}}{\left(\frac{45}{2}\right)} = 4 \text{ units/min}$

7 units/min can be obtained by making P₄ a filling pipe and P₁ emptying pipe or P₅ filling and P₂ emptying. If P₄ is filling pipe and P₁ emptying pipe, 4 units/min can be obtained by making P₅ emptying pipe and P₃ filling pipe. In the latter case, P₃ emptying and P₁ filling pipe.

Case(i): $7 = 10 - 3 = P_5 - P_2$
 $-4 = 2 - 6 = P_1 - P_3$

Case(ii): $7 = 9 - 2 = P_4 - P_1$
 $-4 = 6 - 10 = P_3 - P_5$

∴ P₁, P₅ or P₃, P₂ may have been converted to emptying pipes. Only P₂, P₃ is listed
 Choice (B)

undefined

Q5. DIRECTIONS for question 5: Type in your answer in the input box provided in the question.

If the sum of the number of zeros at the end of the factorials of each of the first natural numbers is 250, the factorials of how many of these natural numbers will end with an odd number of zeros?

Your Answer:4 □ Your answer is incorrect

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	128
Difficulty Level	D
Avg. time spent on this question by students who got this question right	154
% of students who attempted this question	12.28
% of students who got the question right of those who attempted	15.65

Video Solution

Text Solution

We know factorials of first four numbers have no zeros. But $5!$, $6!$, ..., $9!$ have one zero each. $10!$, $11!$, ..., $14!$ have two zeros each. In this manner $5(0 + 1 + 2 + 3 + 4 + 6 + 7 + 8 + 9 + 10) = 250$. Hence, to have a total of 250 zeros, factorials of first 49 natural numbers should be taken up.

In these $5!$ to $9!$, $15!$ to $19!$, $30!$ to $34!$ and $40!$ to $44!$ will end in an odd number of zeroes. Hence a total of 20 numbers are there.

Ans: (20)

undefined

Q6. DIRECTIONS for questions 6 to 8: Select the correct alternative from the given choices.

If $2x + 3y > 6$ and $y - x > -1$, the sign of which of the following expressions can be uniquely determined?

I.
$$\begin{array}{r} 3x + \\ 7y \end{array}$$

II.
$$\begin{array}{r} 4x + \\ 11y \end{array}$$

III.
$$\begin{array}{r} x + \\ y \end{array}$$

- a) Only I and II
- b) Only I and III
- c) Only II and III
- d) I, II and III Your answer is incorrect

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	2
Avg. time spent on this question by all students	116
Difficulty Level	M
Avg. time spent on this question by students who got this question right	126
% of students who attempted this question	18.71
% of students who got the question right of those who attempted	31.8

[Video Solution](#)

[Text Solution](#)

We are given two inequalities of the same type, i.e., "greater than". We can multiply them by p and q respectively and add the resulting inequalities and get a new inequality, provided p and q have the same sign.

Further, the sign of a given expression of the form $ax + by$ can be determined for some cases of (a, b) , where a, b are obtained by multiplying the first and second inequalities by p and q and adding the resulting inequalities (in the given question $a = 2p - q$ and $b = 3p + q$) provided p, q have the same sign.

For the three given expressions, p, q are tabulated below.

$ax + by$	p	q	R.H.S
$3x + 7y$	2	1	>11
$4x + 11y$	3	2	>16
$x + y$	2/5	-1/5	-

We conclude that the sign of $3x + 7y$ and $4x + 11y$ can be determined but not that of $5(x + y)$ or $x + y$.
Choice (A)

undefined

Q6. DIRECTIONS for questions 6 to 8: Select the correct alternative from the given choices.

If $2x + 3y > 6$ and $y - x > -1$, the sign of which of the following expressions can be uniquely determined?

I.
 $3x +$
 $7y$

II.
 $4x +$
 $11y$

III.
 $x +$
 y

- a) Only I and II
- b) Only I and III
- c) Only II and III
- d) I, II and III Your answer is incorrect

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question

2

Avg. time spent on this question by all students

116

Difficulty Level

M

Avg. time spent on this question by students who got this question right 126

Time spent / Accuracy Analysis

% of students who attempted this question	18.71
% of students who got the question right of those who attempted	31.8

[Video Solution](#)[Text Solution](#)

We are given two inequalities of the same type, i.e., "greater than". We can multiply them by p and q respectively and add the resulting inequalities and get a new inequality, provided p and q have the same sign.

Further, the sign of a given expression of the form $ax + by$ can be determined for some cases of (a, b) , where a, b are obtained by multiplying the first and second inequalities by p and q and adding the resulting inequalities (in the given question $a = 2p - q$ and $b = 3p + q$) provided p, q have the same sign.

For the three given expressions, p, q are tabulated below.

$ax + by$	p	q	R.H.S
$3x + 7y$	2	1	>11
$4x + 11y$	3	2	>16
$x + y$	2/5	-1/5	-

We conclude that the sign of $3x + 7y$ and $4x + 11y$ can be determined but not that of $5(x + y)$ or $x + y$. Choice (A)

undefined

Q7. DIRECTIONS for questions 6 to 8: Select the correct alternative from the given choices.

A graph is defined as a set of points connected by lines called edges. Each edge connects a pair of points. It is possible to reach any point from any other point through a sequence of edges. Consider a graph with 15 points. If the number of edges in the graph is denoted by e , then which of the following best describes?

- a) **$13 \leq e \leq 104$**
- b) **$14 \leq e \leq 104$**
- c) **$14 \leq e \leq 105$**
- d) **$13 \leq e \leq 105$**

You did not answer this question

[Show Correct Answer](#)**Time spent / Accuracy Analysis**

Time taken by you to answer this question	221
Avg. time spent on this question by all students	159
Difficulty Level	M
Avg. time spent on this question by students who got this question right	157
% of students who attempted this question	19.44
% of students who got the question right of those who attempted	76.01

[Video Solution](#)[Text Solution](#)

If a graph has N points, the number of edges has a minimum value of $N - 1$ and a maximum of $\frac{N(N - 1)}{2}$.

As $N = 15$, $14 \leq e \leq 105$

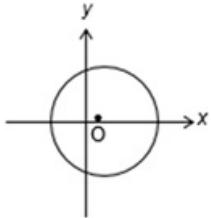
Choice (C)

undefined

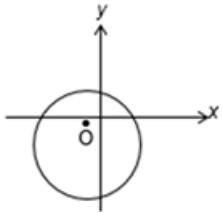
Q8. DIRECTIONS for questions 6 to 8: Select the correct alternative from the given choices.

If the equation $(x - k)^2 + (y + k)^2 = 9$, represents a circle, with centre O, in the co-ordinate plane and k is a positive constant, then which of the following is an appropriate representation of the graph in the co-ordinate plane?

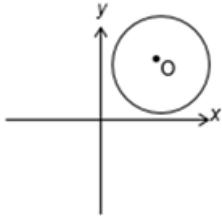
a)



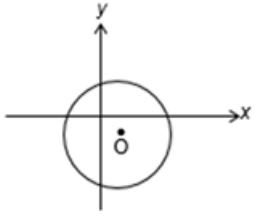
b)



c)



d)



Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question

18

Time spent / Accuracy Analysis

Avg. time spent on this question by all students	89
Difficulty Level	E
Avg. time spent on this question by students who got this question right	84
% of students who attempted this question	42.36
% of students who got the question right of those who attempted	77.52

[Video Solution](#)**Text Solution**

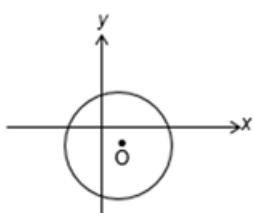
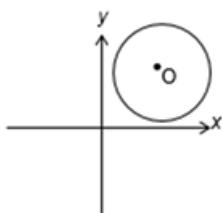
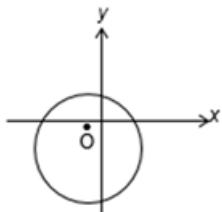
$(x - k^2) + (y + k)^2 = 9$ is an equation of circle with centre at $(k, -k)$ and radius 3 units. As k is positive, the centre of the circle lies in the 4th quadrant in which the x-coordinate is positive and the y-coordinate is negative.

Choice (D)

undefined

Q9. DIRECTIONS for questions 9 and 10: Type in your answer in the input box provided in the question.

In a college of 525 students, each student takes at least two items from among idly, dosa, puri and chapathi for his breakfast. If 375 students take idly, 375 students take dosa, 375 students take puri and 375 students take chapathi for their breakfast, the number of students who take all the four items is at most



Your Answer:371 □ Your answer is incorrect

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	132

Time spent / Accuracy Analysis

Difficulty Level

M

Avg. time spent on this question by students who got this question right 141

28.59

% of students who attempted this question

16.48

% of students who got the question right of those who attempted

16.48

[Video Solution](#)

[Text Solution](#)

Let y students take all four items. Now, y is maximised when all students take either exactly two or exactly four items each (i.e., no student takes exactly three items). Total number of instances = $375 \times 4 = 1500$, of which 525×2 are accounted for by all students taking two items each.

Now let y students take all four items (i.e., 2 items more than the initial assumption of two items each)

$$\text{Then } 1050 + 2y = 1500$$

$$\Rightarrow y = 225$$

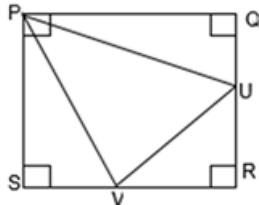
Hence at most 225 students can take all four items.

Ans: (225)

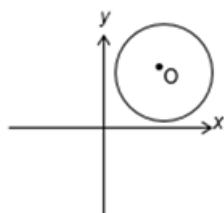
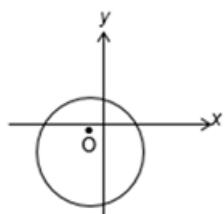
undefined

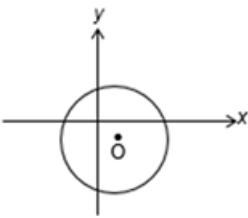
Q10. DIRECTIONS for questions 9 and 10: Type in your answer in the input box provided in the question.

In the figure below PQRS is a square of side 30 cm as shown below.



U and V are points on QR and RS such that $UQ = 12$ cm and $RV = 24$ cm. Find the length (in cm) of the line segment which joins the midpoints of PV and PU.





Your Answer:15 Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	272
Avg. time spent on this question by all students	240
Difficulty Level	E
Avg. time spent on this question by students who got this question right	231
% of students who attempted this question	38.62
% of students who got the question right of those who attempted	70.61

[Video Solution](#)

[Text Solution](#)

As PQRS is a square,

$$PS = QR = 30 \text{ cm}$$

$$UR = QR - QU = 18 \text{ cm}$$

$$UV =$$

$$= \sqrt{24^2 + 18^2} = 30 \text{ cm}$$

The length of the line segment joining the midpoints of PV and PU would be half of UV
and hence equal to 15 cm.

Ans: (15)

undefined

Q11. DIRECTIONS for question 11: Select the correct alternative from the given choices.

The median of a set of eight numbers is m . If a number larger than the largest number in the set is included, the median increases by 4. If the largest number in the set is removed, the median becomes $\frac{m}{2}$. Find the median, if a number smaller than the least number in the set is included.

- a) 4
- b) 6
- c) 8
- d) Cannot be determined

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	301
Avg. time spent on this question by all students	139
Difficulty Level	M
Avg. time spent on this question by students who got this question right	149
% of students who attempted this question	16.17
% of students who got the question right of those who attempted	48.49

[Video Solution](#)[Text Solution](#)

Let T_1, T_2, \dots, T_8 be the terms in ascending order.

$$\text{Median} = \frac{T_4 + T_5}{2} = m \quad (\text{given})$$

$$\Rightarrow T_4 + T_5 = 2m \rightarrow (1)$$

When T_9 , a number greater than T_8 , is included, the median is T_5 .

$$\therefore T_5 = m + 4 \rightarrow (2)$$

when T_8 is removed, the median is T_4 .

$$\therefore T_4 = \frac{m}{2} \rightarrow (3)$$

From (1), (2) and (3), we get

$$m + 4 + \frac{m}{2} = 2m \Rightarrow 4 = \frac{m}{2} \Rightarrow m = 8$$

$$\text{When a number smaller than the least number is added, median} = T_4 = \frac{m}{2} = 4$$

Choice (A)

undefined

Q12. DIRECTIONS for questions 12 and 13: Type in your answer in the input box provided below the question.

On the morning of friendship day, a teacher took n friendship bands to her class, intending to distribute these bands among her students. She calculated that these would be exactly sufficient, if every student of her class gave one band to every other student in the class. However, by noon she observed that exactly two students had not turned up and hence exactly $n - 50$ bands were used up. If in the afternoon, exactly one of these two students turned up, then find the number of bands that remained unused.

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	164
Avg. time spent on this question by all students	164
Difficulty Level	M
Avg. time spent on this question by students who got this question right	185
% of students who attempted this question	16.98
% of students who got the question right of those who attempted	34.27

[Video Solution](#)[Text Solution](#)

Let the total number of students in the class be ' t '.

If every one exchanged a band with every other student, then $t(t - 1)$ bands are needed

$$\Rightarrow t(t - 1) = n$$

But since two students did not turn up $(t - 2)(t - 3)$ bands would have been used.

$$\Rightarrow t(t - 1) - (t - 2)(t - 3) = 50 \quad (\text{given})$$

$$\Rightarrow t^2 - t - t^2 + 5t - 6 = 50$$

$$\Rightarrow 4t = 56 \Rightarrow t = 14$$

If one student did not turn up, $14 \times 13 - 13 \times 12 = 26$ bands remain unused.

Ans: (26)

undefined

Q13. DIRECTIONS for questions 12 and 13: Type in your answer in the input box provided below the question.

Ajay and Balu started a business together by investing some money. At the end of the first year, out of a total profit of Rs.2000, Ajay received Rs.400 more than Balu. If Ajay had invested Rs.6000 more and Balu had invested Rs.6000 less, Ajay would have received 25% more than what he actually received. What would have been the profit share (in Rs.) of Balu, if Ajay's investment and Balu's investment had been less by Rs.3000 and Rs.7000 respectively, and the profit had decreased by 20%?

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	243
Avg. time spent on this question by all students	205
Difficulty Level	M
Avg. time spent on this question by students who got this question right	205
% of students who attempted this question	17.54
% of students who got the question right of those who attempted	42.02

[Video Solution](#)

[Text Solution](#)

Let the profit shares of Ajay and Balu be a and b .

$$a + b = 2000 \rightarrow (1)$$

$$a - b = 400 \rightarrow (2)$$

From (1) and (2), $a = 1200$, $b = 800$.

Hence $a : b = 3 : 2$.

The ratio of investments of Ajay and Balu $= a : b = 3 : 2$.

If the investments of Ajay and Balu are $3x$ and $2x$.

$$\frac{3x+6000}{2x-6000} = \frac{1200 + \frac{25}{100}(1200)}{2000 - \left(1200 + \frac{25}{100}(1200)\right)}$$

$$\frac{3x+6000}{2x-6000} = \frac{3}{1}$$

$$3x + 6000 = 6x - 18000 \Rightarrow x = 8000.$$

If Ajay's investment and Balu's investment were decreased by ₹3000 and ₹7000, respectively, their profit shares would be in the ratio $3x - 3000 : 2x - 7000 = 7 : 3$

$$\text{Profit share of Balu} = \frac{3}{10} \text{ of } 80\% \text{ of } 2000 = ₹480.$$

Ans (480)

undefined

DIRECTIONS for questions 14 and 15: Answer the questions on the basis of the information given below.

Ram Kumar wanted to come down from the first floor to the ground floor of a shopping mall, whereas Kishore wanted to climb up from the ground floor to the first floor. Both used the same escalator (a moving staircase) which was ascending from the ground floor to the first floor and both walked towards their respective destinations at their normal speeds. Both of them started simultaneously from the top and the bottom of the escalator respectively and crossed each other after exactly 21 seconds. If instead, Kishore had walked at $1/3^{\text{rd}}$ of his normal speed while Ram Kumar maintained his normal speed, they would have crossed each other after exactly 28 seconds from the start. Further, if both Ram Kumar and Kishore had climbed up from the ground floor to the first floor using the same ascending escalator, walking at their normal speeds, the number of steps taken by Kishore to reach the first floor would be 20% less than the number of steps taken by Ram Kumar for the same.

Q14. DIRECTIONS for question 14: Type in your answer in the input box provided below the question.

If I were to stand still on the same escalator, how long (in seconds) would it take for the escalator to take me from the ground floor to the first floor?

You did not answer this question [Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	296
Avg. time spent on this question by all students	121
Difficulty Level	D
Avg. time spent on this question by students who got this question right	183
% of students who attempted this question	2.84
% of students who got the question right of those who attempted	3.26

[Video Solution](#)

Text Solution

Let the speeds of Ram Kumar and Kishore be x steps per second and y steps per second respectively. Both having started simultaneously, the total length covered by them to cross each other must be equal to the total length of the escalator.

$$\therefore (x + y)21 = \left(x + \frac{y}{3}\right)28 = \text{Number of steps on the escalator}$$

$$\therefore 9(x + y) = 4(3x + y)$$

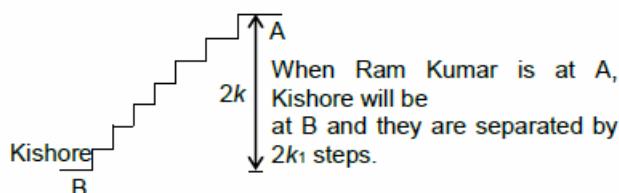
$$5y = 3x$$

$$\frac{y}{x} = \frac{3}{5}$$

Let $x = 5k$ and $y = 3k$.

Total steps in the escalator = $21(5k + 3k) = 168k$

Both having started from the ground floor in the time Ram kumar takes $5k_1$ steps, Kishore will take $3k_1$ steps. So they will be separated by $2k_1$ steps.



$$\text{Total steps taken by Kishore to reach the 1st floor} = 5k_1 - \frac{20}{100} \cdot 5k_1 = 4k_1$$

So in the time Kishore took k_1 steps, the escalator took the remaining $(2k_1 - k_1)$ steps.
Thus speed of Kishore = Speed of the escalator.

Speed of the escalator = $3k$ steps/seconds

$$\text{Time taken by the escalator to take me from the ground floor to the 1st floor} = \frac{168k}{3k} = 56 \text{ seconds.}$$

Ans: (56)

undefined

DIRECTIONS for questions 14 and 15: Answer the questions on the basis of the information given below.

Ram Kumar wanted to come down from the first floor to the ground floor of a shopping mall, whereas Kishore wanted to climb up from the ground floor to the first floor. Both used the same escalator (a moving staircase) which was ascending from the ground floor to the first floor and both walked towards their respective destinations at their normal speeds. Both of them started simultaneously from the top and the bottom of the escalator respectively and crossed each other after exactly 21 seconds. If instead, Kishore had walked at $1/3^{\text{rd}}$ of his normal speed while Ram Kumar maintained his normal speed,

they would have crossed each other after exactly 28 seconds from the start. Further, if both Ram Kumar and Kishore had climbed up from the ground floor to the first floor using the same ascending escalator, walking at their normal speeds, the number of steps taken by Kishore to reach the first floor would be 20% less than the number of steps taken by Ram Kumar for the same.

Q14. DIRECTIONS for question 14: Type in your answer in the input box provided below the question.

If I were to stand still on the same escalator, how long (in seconds) would it take for the escalator to take me from the ground floor to the first floor?

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	296
Avg. time spent on this question by all students	121
Difficulty Level	D
Avg. time spent on this question by students who got this question right	183
% of students who attempted this question	2.84
% of students who got the question right of those who attempted	3.26

[Video Solution](#)

[Text Solution](#)

Let the speeds of Ram Kumar and Kishore be x steps per second and y steps per second respectively. Both having started simultaneously, the total length covered by them to cross each other must be equal to the total length of the escalator.

$$\therefore (x + y)21 = \left(x + \frac{y}{3}\right)28 = \text{Number of steps on the escalator}$$

$$\therefore 9(x + y) = 4(3x + y)$$

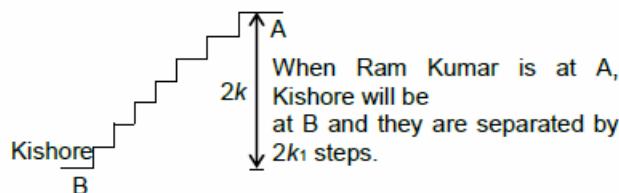
$$5y = 3x$$

$$\frac{y}{x} = \frac{3}{5}$$

Let $x = 5k$ and $y = 3k$.

Total steps in the escalator = $21(5k + 3k) = 168k$

Both having started from the ground floor in the time Ram kumar takes $5k_1$ steps, Kishore will take $3k_1$ steps. So they will be separated by $2k_1$ steps.



$$\text{Total steps taken by Kishore to reach the 1st floor} = 5k_1 - \frac{20}{100} 5k_1 = 4k_1$$

So in the time Kishore took k_1 steps, the escalator took the remaining $(2k_1 - k_1)$ steps.
Thus speed of Kishore = Speed of the escalator.

Speed of the escalator = $3k$ steps/seconds

$$\text{Time taken by the escalator to take me from the ground floor to the 1st floor} = \frac{168k}{3k} = 56 \text{ seconds.}$$

Ans: (56)

undefined

DIRECTIONS for questions 14 and 15: Answer the questions on the basis of the information given below.

Ram Kumar wanted to come down from the first floor to the ground floor of a shopping mall, whereas Kishore wanted to climb up from the ground floor to the first floor. Both used the same escalator (a moving staircase) which was ascending from the ground floor to the first floor and both walked towards their respective destinations at their normal speeds. Both of them started simultaneously from the top and the bottom of the escalator respectively and crossed each other after exactly 21 seconds. If instead, Kishore had walked at $\frac{1}{3}$ rd of his normal speed while Ram Kumar maintained his normal speed, they would have crossed each other after exactly 28 seconds from the start. Further, if both Ram Kumar and Kishore had climbed up from the ground floor to the first floor using the same ascending escalator, walking at their normal speeds, the number of steps taken by Kishore to reach the first floor would be 20% less than the number of steps taken by Ram Kumar for the same.

Q15. DIRECTIONS for question 15: Select the correct alternative from the given choices.

Ram Kumar walked down from the first floor to the ground floor using the same escalator. However, after some time the escalator stopped moving due to a power failure. Find the total time taken by Ram Kumar to reach the ground floor, given that the time for which he walked on the moving escalator was the same as that for which he walked on the stationary escalator.

- a) $25 \frac{11}{13}$ seconds
- b) $37 \frac{1}{3}$ seconds
- c) 48 seconds
- d) 56 seconds

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	94
Avg. time spent on this question by all students	56
Difficulty Level	D
Avg. time spent on this question by students who got this question right	53
% of students who attempted this question	1.31
% of students who got the question right of those who attempted	26.87

[Video Solution](#)

[Text Solution](#)

Let the speeds of Ram Kumar and Kishore be x steps per second and y steps per second respectively. Both having started simultaneously, the total length covered by them to cross each other must be equal to the total length of the escalator.

$$\therefore (x + y)21 = \left(x + \frac{y}{3}\right) 28 = \text{Number of steps on the escalator}$$

$$\therefore 9(x + y) = 4(3x + y)$$

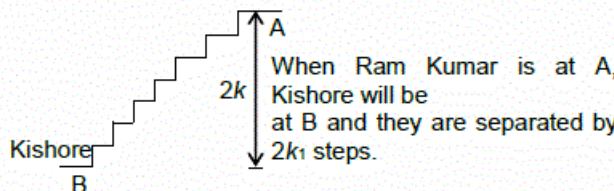
$$5y = 3x$$

$$\frac{y}{x} = \frac{3}{5}$$

Let $x = 5k$ and $y = 3k$.

$$\text{Total steps in the escalator} = 21(5k + 3k) = 168k$$

Both having started from the ground floor in the time Ram kumar takes $5k_1$ steps, Kishore will take $3k_1$ steps. So they will be separated by $2k_1$ steps.



$$\text{Total steps taken by Kishore to reach the 1st floor} = 5k_1 - \frac{20}{100} 5k_1 = 4k_1$$

So in the time Kishore took k_1 steps, the escalator took the remaining $(2k_1 - k_1)$ steps.
Thus speed of Kishore = Speed of the escalator.

Speed of the escalator = $3k$ steps/seconds

Since for half the time Ram Kumar will be walking in opposite direction to that of the escalator, relative speed of Ram Kumar = $5k - 3k = 2k$ steps/seconds.

For the other half of the time, with the escalator being at rest Ram Kumar's speed will be $5k$ steps/seconds.

Let Ram Kumar cover n steps at $2k$ steps/seconds speed and the remaining at $5k$ steps/seconds speed.

$$\text{Since the time taken is same in both cases, } \frac{n}{2k} = \frac{168k - n}{5k}$$

$$5n = 336k - 2n$$

$$7n = 336k \text{ or } n = 48k$$

$$\text{Time taken by Ram Kumar to reach the ground floor} = 2 \times \frac{n}{2k} = 2 \times \frac{48k}{2k} = 48 \text{ seconds}$$

Choice (C)

undefined

Q16. DIRECTIONS for questions 16 to 20: Select the correct alternative from the given choices.

If set A contains five elements and set B contains four elements, how many different onto mappings from A to B are possible?

- a) **216**
- b) **625**
- c) **240**
- d) **None of the above**

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	19
Avg. time spent on this question by all students	120
Difficulty Level	M
Avg. time spent on this question by students who got this question right	137
% of students who attempted this question	26.43
% of students who got the question right of those who attempted	16.98

[Video Solution](#)

[Text Solution](#)

A function is said to be onto if each element in the range has at least one corresponding element in the domain.

⇒ Each of the four elements of B must have at least one corresponding element of A. Two elements of A are mapped to one element of B. The remaining elements are mapped one each to the remaining elements of B.

Two elements from A can be selected in 5C_2 ways and one element from B can be selected in 4C_1 ways.

The remaining three elements can be mapped in 3! ways.

$$\therefore \text{Total ways} = {}^5C_2 \cdot {}^4C_1 \cdot 3! = 240$$

Choice (C)

undefined

Q17. DIRECTIONS for questions 16 to 20: Select the correct alternative from the given choices.

Spending Rs.422, Ranjit bought 35 pens from among three varieties of pens – A, B, C. If each pen of varieties A, B, and C costs Rs.10, Rs.8, and Rs.15 respectively, and Ranjit bought the maximum possible pens of variety C, find the total number of pens of varieties A and B that he bought.

- a) **23**
- b) **20**
- c) **15**
- d) **19**

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	176
Difficulty Level	M
Avg. time spent on this question by students who got this question right	164
% of students who attempted this question	38.29
% of students who got the question right of those who attempted	46.21

[Video Solution](#)

[Text Solution](#)

Let the number of pens of type A, B and C bought by Ranjit be x , y and z respectively.

Given,

$$x + y + z = 35 \rightarrow (1)$$

$$10x + 8y + 15z = 422 \rightarrow (2)$$

$$8x + 8y + 8z = 280 \rightarrow (3)$$

Subtracting (3) from (2), we get

$$2x + 7z = 142$$

The possible values of x and corresponding values of z have been substituted in the equation

$$\begin{array}{ccc} x & z & y \\ 142 = 2(15) + 7(16) & 4 & \\ & = 2(8) + 7(18) & 9 \\ & = 2(1) + 7(20) & 14 \end{array}$$

As he bought as many type C pens as possible (i.e. 20), he bought 15 pens of type A and B. Choice (C)

undefined

Q18. DIRECTIONS for questions 16 to 20: Select the correct alternative from the given choices.

In a class of n students, the students who get more than 70% are awarded Distinction. Among these students, those who get more than 90% are also awarded a Certificate of Merit. In how many possible ways could Distinction and Certificates of Merit be secured by the students in the class?

- a) 2^n
- b) 3^n
- c) 4^n
- d) $2^n - 1$

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	69
Difficulty Level	E
Avg. time spent on this question by students who got this question right	73
% of students who attempted this question	23.09
% of students who got the question right of those who attempted	31

[Video Solution](#)

Text Solution

For each student, there are three instances.

- (i) less than 70%
- (ii) more than 70% but not more than 90% (Distinction)
- (iii) More than 90% (Distinction + certificate of Merit)

Hence each student can be selected in 3 ways.

For n students = $3 \times 3 \times \dots \times n$ times = 3^n

Choice (B)

undefined

Q19. DIRECTIONS for questions 16 to 20: Select the correct alternative from the given choices.

A parallelogram is divided into nine regions of equal area by drawing line segments parallel to one of its diagonals. What is the ratio of the length of the longest of the line segments to that of the shortest?

- a) $\sqrt{2} : 1$
 b) $\sqrt{3} : 1$
 c) $2 : 1$
 d) $\sqrt{5} : 1$

You did not answer this question

[Show Correct Answer](#)

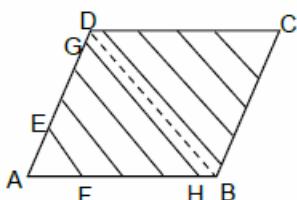
Time spent / Accuracy Analysis

Time taken by you to answer this question	341
Avg. time spent on this question by all students	166
Difficulty Level	E
Avg. time spent on this question by students who got this question right	175
% of students who attempted this question	12.18
% of students who got the question right of those who attempted	27.03

Video Solution

Text Solution

The lines must be drawn as follows:



As EF is parallel to GH, $\triangle AEF$ and $\triangle AGH$ are similar. As the area of each part is equal, let area of $\triangle AEF$ be x .

Then area of $\triangle AGH = 4x$

$$\therefore \frac{GH}{EF} = \sqrt{\frac{4x}{x}} = 2 : 1$$

Choice (C)

undefined

Q20. DIRECTIONS for questions 16 to 20: Select the correct alternative from the given choices.

A had a certain amount of money. B had seven times the amount that A had. A bought a certain number of gold coins and was left with one-third the cost of a gold coin. B bought as many gold coins as he could and found that, if he had Rs.7,500 more, he could have bought one more gold coin. Find the cost of each gold coin.

- a) **Rs.22,500**
- b) **Rs.10,500**
- c) **Rs.11,250**
- d) **Rs.15,000**

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	78
Avg. time spent on this question by all students	139
Difficulty Level	E
Avg. time spent on this question by students who got this question right	140
% of students who attempted this question	15.62
% of students who got the question right of those who attempted	51.58

[Video Solution](#)

Text Solution

Let the cost of each gold coin be x and let the number of gold coins that A could buy with his money be n .

Sum with A = $nx + x/3$

Had the amount left with A been twice more than what it was, then he could have bought one more gold coin i.e., had his amount left been $\frac{2(x)}{3} + \frac{x}{3} = x$, he could have bought another coin.

Sum with B = 7 times the sum with A = $7(nx + x/3)$
 $= 7nx + 2x + x/3$

Now $x/3 + 7500 = x$ [∵ with an extra ₹7500, B would have been able to purchase another gold coin] or, $\frac{2x}{3} = 7500$ or, $x = ₹11,250$

Therefore the cost of each gold coin was ₹11,250.

Choice (C)

undefined

Q21. DIRECTIONS for questions 21: Type in your answer in the input box provided in the question.

The number of solutions of the equation $3p + 4q = 70$, where p and q are positive integers and $p > q$, is

Your Answer:3 Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	142
Avg. time spent on this question by all students	111
Difficulty Level	M
Avg. time spent on this question by students who got this question right	109

Time spent / Accuracy Analysis

% of students who attempted this question	44.49
% of students who got the question right of those who attempted	56.91

[Video Solution](#)**Text Solution**

$$3p + 4q = 70 \Rightarrow p + \frac{4q}{3} = \frac{70}{3}$$

Remainder of $\frac{70}{3} = 1$.

Since p is an integer, $\text{Rem}\left(\frac{4q}{3}\right)$ should also be 1.

The smallest value of q for which $\text{Rem}\left(\frac{4q}{3}\right) = 1$ is $q = 1$.

$$\therefore q = 1 + 3k. \text{ Substituting in } 3p + 4q = 70,$$

$$p = 22 - 4k$$

$$\text{Since } p, q > 0 \Rightarrow 22 - 4k > 0 \Rightarrow 0 \leq k \leq 5$$

$$\text{But given } x > y \Rightarrow 22 - 4k > 3k + 1 \Rightarrow 7k < 21$$

$$\Rightarrow k < 3$$

$$\therefore k = 0, 1, 2. \text{ A total of 3 values exist.}$$

Ans: (3)

undefined

Q22. DIRECTIONS for questions 22 to 34: Select the correct alternative from the given choices.

A rectangular piece of paper is folded in such a way that one pair of diagonally opposite vertices coincide. If the dimensions of the rectangle are $40 \text{ cm} \times 30 \text{ cm}$, what is the length (in cm) of the fold?

- a) $\sqrt{1300}$
- b) $30\sqrt{2}$
- c) 37.5
- d) 40

You did not answer this question

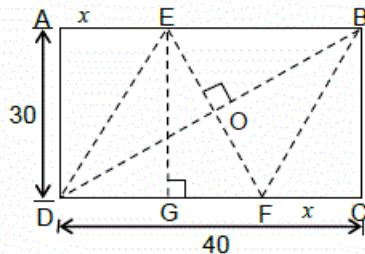
[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	163
Avg. time spent on this question by all students	113
Difficulty Level	D
Avg. time spent on this question by students who got this question right	132
% of students who attempted this question	14.95
% of students who got the question right of those who attempted	20.19

[Video Solution](#)**Text Solution**

Consider the following figure of a rectangular paper ABCD.



The line EF is the fold, which is made such that the corner D meets the diagonally opposite corner B.

As DF coincides with FB upon making the fold $DF = FB$. Similarly, $DE = EB$. Also, as DF is the part of the length of the rectangle that is being folded so that D coincides with the opposite vertex and BE is the part of the length, that is being folded so that B coincides with D, $DF = BE$ (from symmetry), i.e., quadrilateral DFBE is a rhombus ----- (I)

Now assume, $FC = x$ cm

In the right angled triangle $\triangle BFC$, $BF = \sqrt{BC^2 + FC^2} = \sqrt{(30)^2 + x^2} = DF$ (since, EDBF is a rhombus and $BF = DF$)

$$\text{Hence } \sqrt{30^2 + x^2} = 40 - x$$

$$\Rightarrow 900 + x^2 = 1600 + x^2 - 80x$$

$$\Rightarrow x = \frac{700}{80} = \frac{35}{4}$$

Now, consider G on DC, such that $EG \perp DC$. In $\triangle EGF$, $GF = 40 - 2x$ (as $AE = FC = x$), $EG = 30$ and EF is the length of the fold.

$$\therefore GF = 40 - \frac{70}{4} = \frac{90}{4} = \frac{45}{2}$$

$$\Rightarrow EF = \sqrt{\left(\frac{45}{2}\right)^2 + 30^2} = 37.5 \text{ cm}$$

Alternative Solution:

Consider the conclusion (I), i.e., that EDBF is a rhombus. Let the diagonals of the rhombus meet at O. In a rhombus, the diagonals bisect each other at right angles. Hence $\triangle EOB$ is similar to $\triangle DAB$ (both are right angled, with a common angle at B).

$$\text{Hence, } \frac{EO}{OB} = \frac{DA}{AB} \left(EO = \frac{EF}{2} \text{ and } OB = \frac{DB}{2} \right)$$

$$\Rightarrow \frac{EF}{DB} = \frac{DA}{AB} \Rightarrow EF = \frac{30}{40} \times \sqrt{30^2 + 40^2}$$

$$= \frac{3}{4} \times 50 = 37.5 \text{ cm}$$

Choice (C)

undefined

Q23. DIRECTIONS for questions 22 to 34: Select the correct alternative from the given choices.

M workers started a job. At the end of the i^{th} day of the job, where $1 \leq i \leq M$, the i^{th} worker left the job. The job was completed when the M^{th} worker left. If the i^{th} worker can do i units of work per day and the job to be done was equal to 204 units of work, find M.

b) 9

c) 10

d) 7

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	122
Avg. time spent on this question by all students	136
Difficulty Level	D
Avg. time spent on this question by students who got this question right	138
% of students who attempted this question	9.11
% of students who got the question right of those who attempted	67.7

[Video Solution](#)

Text Solution

Part of the job done on the first day = $(1 + 2 + 3 \dots + M)$ units

Part of the job done on the second day = $(2 + 3 + \dots + M)$ units.

Part of the job done on the m^{th} day = $(m + \dots + M)$ units.

And finally, part of the job done on the M^{th} day = M units

$$\begin{aligned} \text{Job} &= 1 + 2 + 3 + \dots + M \\ &\quad + 2 + 3 + \dots + M \\ &\quad + 3 \dots \\ &\quad \quad \quad + M \\ &= (1^2 + 2^2 + 3^2 \dots M^2) \text{ units} \\ &= \frac{(m)(m+1)(2M+1)}{6} \text{ units} \\ &\Rightarrow \frac{(M)(M+1)(2M+1)}{6} = 204 \text{ (given)} \\ &\Rightarrow (M)(M+1)(2M+1) = 1224 = (8)(9)(17) \end{aligned}$$

comparing both sides, $M = 8$

Choice (A)

undefined

Q24. DIRECTIONS for questions 22 to 34: Select the correct alternative from the given choices.

If x and y are positive integers and $x^2 + y^2 = 1800$, then the maximum value of $x + y$ is

a) 60 **Your answer is correct**

b) 52

c) 64

d) 48

Time spent / Accuracy Analysis

Time taken by you to answer this question	242
Avg. time spent on this question by all students	94
Difficulty Level	E
Avg. time spent on this question by students who got this question right	92

Time spent / Accuracy Analysis

% of students who attempted this question	39.06
% of students who got the question right of those who attempted	87.83

[Video Solution](#)**Text Solution**

For maximum value of $x + y$, x and y should be as close as possible i.e., ideally $x = y$.

If $x = y$ and $x^2 + y^2 = 1800 \Rightarrow x = 30$ and $y = 30$ so maximum value of $x + y$ is 60

Choice (A)

undefined

Q25. DIRECTIONS for questions 22 to 34: Select the correct alternative from the given choices.

There are 2272 students in a school. All the students stand in a row, from left to right, holding a number such that the number with any student (except those at the ends) equals the sum of the numbers with the student on his immediate left and the student on his immediate right. If the numbers with the 1136th and 1137th students from the left end are – 57 and 16 respectively, then find the sum of the numbers with all the students.

- a) **46**
- b) **-89**
- c) **130**
- d) **-41**

You did not answer this question

[Show Correct Answer](#)**Time spent / Accuracy Analysis**

Time taken by you to answer this question	169
Avg. time spent on this question by all students	165
Difficulty Level	D
Avg. time spent on this question by students who got this question right	160
% of students who attempted this question	8.35
% of students who got the question right of those who attempted	68.05

[Video Solution](#)**Text Solution**

Let the number with the i^{th} student = N_i
 Given $N_i = N_{i-1} + N_{i+1}$
 Hence the number with 1137^{th} student
 $= N_{1137} = N_{1136} + N_{1138}$
 $\Rightarrow 16 = -57 + N_{1138}$
 $\Rightarrow N_{1138} = 73$
 similarly $N_{1135} = -73$
 and $N_{1139} = 57$
 and $N_{1134} = -16$
 and $N_{1140} = -16$
 ∴ we see that the series of numbers from N_{1134} onwards is as follows
 $-16, -73, -57, 16, 73, 57, -16, -73, -57$ and so on, with the set of six values repeating continuously. Note that the sum of these six values themselves is zero.
 From the pattern, we can say that the number with the student of the form $N = 6k + 1$ will be -73 .
 (∴ $N_{1135} = -73$ and $1135 = 6k + 1$)
 ∴ we can ignore all students till the highest multiple of six under (or equal to) 2272 i.e., till 2268.
 Now only four more students will remain, and they will have the numbers $-73, -57, 16$ and 73 .
 Hence, the sum of the numbers with them will be -41 . Choice (D)

undefined

Q26. DIRECTIONS for questions 22 to 34: Select the correct alternative from the given choices.

If the areas of the six faces of a cuboid are a_1, a_2, \dots, a_6 , then the volume of the cuboid is

- a) $\sqrt[6]{a_1 a_2 a_3 a_4 a_5 a_6}$
- b) $\sqrt[4]{a_1 a_2 a_3 a_4 a_5 a_6}$
- c) $\sqrt[3]{a_1 a_2 a_3 a_4 a_5 a_6}$
- d) $\sqrt[3]{a_1 a_2 a_3 a_4 a_5 a_6}$

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	257
Avg. time spent on this question by all students	81
Difficulty Level	E
Avg. time spent on this question by students who got this question right	85
% of students who attempted this question	36.28
% of students who got the question right of those who attempted	53.61

[Video Solution](#)

[Text Solution](#)

Let $a_1 = a_2 = lb$,

$a_3 = a_4 = bh$,

$a_5 = a_6 = hl$,

$$a_1 a_2 a_3 a_4 a_5 a_6 = l^4 b^4 h^4 = (lbh)^4$$

$$\therefore \text{volume} = \sqrt[4]{a_1 a_2 a_3 a_4 a_5 a_6}$$

Choice (B)

undefined

Q27. DIRECTIONS for questions 22 to 34: Select the correct alternative from the given choices.

If both p and q belong to the set {1, 2, 3, 4}, find the number of equations of the form $x^2 - px + q = 0$, which have real roots.

- a) 6 Your answer is incorrect
- b) 7
- c) 5
- d) 4

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	99
Avg. time spent on this question by all students	103
Difficulty Level	M
Avg. time spent on this question by students who got this question right	98
% of students who attempted this question	30.12
% of students who got the question right of those who attempted	49.89

[Video Solution](#)

[Text Solution](#)

As the roots are real, $p^2 - 4q \geq 0$.

$$p^2 \geq 4q.$$

If $q = 1$, p can be 2 or 3 or 4.

If $q = 2$, p can be 3 or 4.

If $q = 3$, p can be only 4.

If $q = 4$, p can be only 4.

\therefore There are 7 possible equations.

Choice (B)

undefined

Q28. DIRECTIONS for questions 22 to 34: Select the correct alternative from the given choices.

In a certain class, there are two sections – A and B – with equal number of students in each section. The average height of

the students of section A is 155 cms and that of section B is 160 cms. One-fourth of the students from section B move to section A, thereby increasing the average height of section A by 1 cm. What happens to the average height of section B after this movement of students to section A?

- a) Increases
- b) Decreases
- c) Does not change
- d) Cannot be determined

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	9
Avg. time spent on this question by all students	115
Difficulty Level	M
Avg. time spent on this question by students who got this question right	124
% of students who attempted this question	36.72
% of students who got the question right of those who attempted	34.39

[Video Solution](#)

[Text Solution](#)

Let the number of students in each section be $4k$.

The sum of the heights of all the students of section A is $4k \times 155 = 620k$

The sum of the heights of all the students in section A after 1/4th of the students of section B moved to section A is $5k \times 156 = 780k$

The sum of the heights of all the students who moved to section A from section B.
 $780k - 620k = 160k$

$$\text{The average height of the students who moved} = \frac{160k}{k}$$

$$= 160 \text{ cm}$$

As the average height of the students who moved out of section B is the same as the average height of section B, the average height of section B will not change after the movement of students.

Choice (C)

undefined

Q29. DIRECTIONS for questions 22 to 34: Select the correct alternative from the given choices.

Given that $|x| < 1$, find the value of $1 + 4x^2 + 9x^4 + 16x^6 + 25x^8 \dots \infty$.

- a) $\frac{1-x^2}{(1-x^2)^3}$
- b) $\frac{x^2+1}{(x^2-1)^3}$
- c) $\frac{x^3+1}{(x^2-1)^3}$
- d) $\frac{1+x^2}{(1-x^2)^3}$ Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	80
Avg. time spent on this question by all students	140
Difficulty Level	D
Avg. time spent on this question by students who got this question right	146
% of students who attempted this question	15.11
% of students who got the question right of those who attempted	71.42

[Video Solution](#)

Text Solution

Let the value of

$1 + 4x^2 + 9x^4 + 16x^6 + \dots \infty$ be denoted by S.

$$S = 1 + 4x^2 + 9x^4 + 16x^6 + \dots \quad (1)$$

$$Sx^2 = x^2 + 4x^4 + 9x^6 + \dots \quad (2)$$

Subtracting (2) from (1)

$$S(1 - x^2) = 1 + 3x^2 + 5x^4 + 7x^6 \dots \quad (3)$$

Multiplying (3) by x^2 , we have

$$Sx^2(1 - x^2) = x^2 + 3x^4 + 5x^6 + \dots \quad (4)$$

Subtracting (4) from (3),

$$S(1 - x^2 - x^2 + x^4) = 1 + 2x^2 + 2x^4 + 2x^6 + \dots$$

$$S = \frac{1 + \frac{2x^2}{(1-x^2)}}{(1-x^2)^2} = \frac{1+x^2}{(1-x^2)^3}$$

Choice (D)

undefined

Q30. DIRECTIONS for questions 22 to 34: Select the correct alternative from the given choices.

The sum (S) of the squares of the first n natural numbers is equal to the sum of the first 2n natural numbers. What is the remainder when S is divided by 2n?

- a) 8
- b) 7
- c) 6
- d) 5 Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	33
Avg. time spent on this question by all students	114
Difficulty Level	E
Avg. time spent on this question by students who got this question right	112
% of students who attempted this question	26.91
% of students who got the question right of those who attempted	81.55

[Video Solution](#)

Text Solution

Given that
 $1 + 2 + 3 + \dots + 2n = 1^2 + 2^2 + \dots + n^2 = S$
 $\Rightarrow \frac{2n(2n+1)}{2} = \frac{n(n+1)(2n+1)}{6} \Rightarrow n+1=6 \Rightarrow n=5$
 $\therefore S = 5(11) = 55$ and the remainder when S is divided by $2n$ (i.e., 10) is 5.
 Choice (D)

undefined

Q31. DIRECTIONS for questions 22 to 34: Select the correct alternative from the given choices.

Water flowing at a speed of 10 m/s, through a cylindrical pipe of length 20 m and diameter 6 cm, can fill a tank of volume V in 2 hours. The volume of the tank that can be completely filled by water flowing at a speed of 20 m/s, through a cylindrical pipe of length 40 m and of radius 4 cm, in 1 hour is

- a) **4V.**
- b) $\frac{16V}{9}$.
- c) $\frac{9V}{16}$. Your answer is incorrect
- d) $\frac{32V}{9}$.

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	2
Avg. time spent on this question by all students	134
Difficulty Level	E
Avg. time spent on this question by students who got this question right	135
% of students who attempted this question	17.3
% of students who got the question right of those who attempted	42.47

[Video Solution](#)

[Text Solution](#)

Volume \propto (speed) \times (Area of cross-section) \times (time of flow)
 The length of the pipe is irrelevant information for the given question.

Let V_1 be the volume of the tank in the second case $\frac{V_1}{V} = \frac{20 \text{ m/s} \times (\pi \times 4^2) \times 1 \text{ hour}}{10 \text{ m/s} \times (\pi \times 3^2) \times 2 \text{ hour}}$

$$= \frac{16}{9}$$

$$\therefore V_1 = \frac{16V}{9}$$
Choice (B)

undefined

Q32. DIRECTIONS for questions 22 to 34: Select the correct alternative from the given choices.

If $\frac{1}{4} \log_2 M + 4 \log_2 N = 4 \left(1 + \frac{3}{2} \log_{0.008} 5\right)$, which of the following is true?

- a) $M = \frac{256}{N^4}$
- b) $N = \frac{256}{M^{16}}$
- c) $M = \frac{256}{N^8}$
- d) $M = \frac{256}{N^{16}}$

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	2
Avg. time spent on this question by all students	120
Difficulty Level	M
Avg. time spent on this question by students who got this question right	124
% of students who attempted this question	12.19
% of students who got the question right of those who attempted	75.71

[Video Solution](#)

[Text Solution](#)

$$\begin{aligned}
 \log_2 M^{\frac{1}{4}} + \log_2 N^4 &= \left(1 + \frac{3}{2} \log_{0.008} 5\right) 4 \\
 \log_2 M^{\frac{1}{4}} N^4 &= \left(1 + \frac{3}{2} \frac{\log 10 - \log 2}{\log (2^3)(10^{-3})}\right) 4 \\
 &= 4 \left(1 + \frac{3}{2} \left[\frac{\log 10 - \log 2}{3(\log 2 - \log 10)} \right] \right) = 4 \left(\frac{1}{2}\right) = 2 \\
 \therefore M^{\frac{1}{4}} N^4 &= 4 \Rightarrow MN^{16} = 256. \quad \text{Choice (D)}
 \end{aligned}$$

undefined

Q33. DIRECTIONS for questions 22 to 34: Select the correct alternative from the given choices.

The age of a person k years ago was half of what his age would be k years from now. The age of the same person p years from now would be thrice of what his age was p years ago. What is the value of the ratio $k : p$?

- a) 3 : 2
- b) 2 : 3 Your answer is correct
- c) 1 : 4
- d) 4 : 1

Time spent / Accuracy Analysis

Time spent / Accuracy Analysis

Time taken by you to answer this question	58
Avg. time spent on this question by all students	114
Difficulty Level	M
Avg. time spent on this question by students who got this question right	111
% of students who attempted this question	37.88
% of students who got the question right of those who attempted	83.98

[Video Solution](#)

Text Solution

Let the present age of the person be y years.

The given data can be written as:

$$(y - k) = \frac{1}{2}(y + k) \quad \dots (1)$$

$$(y + p) = 3(y - p) \quad \dots (2)$$

$$\text{From (1), } \frac{y + k}{y - k} = \frac{2}{1};$$

$$\Rightarrow \frac{y}{k} = \frac{3}{1} \text{ (by componendo and dividendo)} \quad \dots (3)$$

$$\text{From (2), } \frac{y + p}{y - p} = \frac{3}{1} \Rightarrow \frac{y}{p} = \frac{4}{2} = 2 \quad \dots (4)$$

$$\text{Dividing (4) by (3), } \frac{y}{p} \times \frac{k}{y} = \frac{2}{3}; \Rightarrow k : p = 2 : 3.$$

Choice (B)

undefined

Q34. DIRECTIONS for questions 22 to 34: Select the correct alternative from the given choices.

An alloy A contains two elements, copper and tin in the ratio 2 : 3, whereas alloy B contains the same elements in the ratio 3 : 4. If 20 kg of alloy A is mixed with 28 kg of alloy B and some pure copper to form a third alloy C, containing copper and tin in the ratio 6 : 7, find the quantity of pure copper mixed with the alloys.

a) 4 kg Your answer is correct

b) 5 kg

c) 6 kg

d) 7 kg

Time spent / Accuracy Analysis

Time taken by you to answer this question	51
Avg. time spent on this question by all students	136
Difficulty Level	M
Avg. time spent on this question by students who got this question right	132
% of students who attempted this question	27.39
% of students who got the question right of those who attempted	86.93

[Video Solution](#)

Text Solution

Quantity of copper in 20 kg of Alloy A = $\frac{2}{5}(20) = 8\text{kg}$

Quantity of copper in 28 kg of Alloy B = $\frac{3}{7}(28) = 12\text{kg}$

Total quantity of copper in both alloys A and B = 20 kg.

The total quantity of tin in alloys A and B

$$= 20 - 8 + 28 - 12 = 28 \text{ kg}$$

If x kg of copper is mixed with both alloys,

$$\frac{20+x}{28} = \frac{6}{7} \Rightarrow x = 4$$

Choice (A)