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.

It will surprise no one if I say that Machiavelli is the founder of modern political science.

To be sure, long before Machiavelli, the ancient writers had attempted to establish a science of politics. Plato, Aristotle, Polybius, and Cicero had engaged in serious and systematic efforts to organize and clarify the data of political life, to establish rules and laws by which different regimes come into being and pass away. The failure of the ancients, so it was alleged, came not from their efforts to establish a science of politics but from their want of method in attempting to do so. It is the charge of methodological naïveté that was brought against the ancients by Machiavelli, Bacon, Descartes, Hobbes, and others seeking to put knowledge on a new, more secure foundation.

The idea that Machiavelli is the founder of modern political science is by no means self-evident. He seems to make none of the bold experimental moves more frequently associated with Descartes and Hobbes. His most famous book, *The Prince*, follows a traditional genre of "mirror of princes" that goes back to Xenophon; his longest and greatest book, *Discourses on Livy,* takes the form of a commentary on the first ten books of the Roman historian Livy. What could be more traditional? Yet Machiavelli's modernity consists less in his methodological innovations than in his call to break from the traditional authority of his predecessors.

Machiavelli's modernity is expressed in his preference for novelty, for the new over the old, for the bold and experimental over the tried and true. His embrace of novelty is also tied to his realism, to the "effectual truth of the thing" rather than the imagination. By the effectual truth, he means knowledge of the "is" rather than the "ought," of the way things actually work as opposed to how they ought to be. This is the prior move that made all later methodological innovations possible, namely, Machiavelli's attempt to determine the rules of political life solely from political life rather than subordinating it to the demands of morality, theology, or metaphysics… Machiavelli's praise of the effectual truth is followed by his famous (or infamous) judgement that the prince who hopes to succeed must learn how "not to be good," in other words, learn to break the established rules and conventions. The prince who follows Machiavelli's advice will be not simply a reformer but a revolutionary who established his authority de novo.

Machiavelli's modernity is most often expressed in his conception of the new prince who is the bringer of "new modes and orders," someone on the order of the great founder legislators of the past like Moses, Lycurgus, Cyrus, and Romulus. Machiavelli's appeal to these classical models concealed the fact that his prince expressed a new, highly idealized, conception of the statesman, at once individual, autonomous, and self-legislating. Machiavelli thought of politics as a work of art... He was a product of Renaissance Florence and a contemporary of Michelangelo and Leonardo. The term "Renaissance" may mean rebirth, but the period was a time of extraordinary innovation… In fact, Nietzsche's contemporary, the historian Jacob Burckhardt, remains the most perceptive analyst of this new disposition that assumed the proportions of a new protean image of human nature, a combination of individuality, an unprecedented flowering of the "free personality," and a new attention to the value of private life.

Q1. According to the passage, ancient writers allegedly

- a) failed to establish a methodology for the study of political science.
- b) **did not put enough effort into establishing a discipline of political science.** **Your answer is incorrect**
- c) had a flawed understanding of how rules and laws came in to being and passed away.
- d) did not study the data of political life in a systematic manner.

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**592**
Avg. time spent on this question by all students	**310**
Difficulty Level	**M**
Avg. time spent on this question by students who got this question right	**301**
% of students who attempted this question	**47.25**
% of students who got the question right of those who attempted	**67.95**

Video Solution

Text Solution

Number of words and Explanatory notes for RC:

Number of words: 561

According to the passage, before Machiavelli, "the ancient writers had attempted to establish a science of politics". But they failed to do so.
Option A: According to the author, "The failure of the ancients, so it was alleged, came not from their efforts to establish a science of politics but from their want of method in attempting to do so".
They were not successful "from their want of method" in attempting to establish a science of politics. They lacked a method for establishing the science of politics. Hence, this is the correct answer.
Option B: "The failure of the ancients, so it was alleged, came not from their efforts to establish a science of politics." It is not because they did not put enough effort into the study that they failed. Therefore, this is not the correct answer.
Option C: The ancient writers "engaged in serious and systematic efforts… to establish rules and laws by which different regimes come into being and pass away." However, the author does not mention that they had a flawed understanding of how this happened. Hence, this is not the correct answer.
Option D: The author mentions that they engaged in "systematic efforts to organize and clarify the data of political life". Hence, this is also incorrect.
Therefore, the correct answer is option A. Choice (A)

undefined

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.

It will surprise no one if I say that Machiavelli is the founder of modern political science.

To be sure, long before Machiavelli, the ancient writers had attempted to establish a science of politics. Plato, Aristotle, Polybius, and Cicero had engaged in serious and systematic efforts to organize and clarify the data of political life, to establish rules and laws by which different regimes come into being and pass away. The failure of the ancients, so it was alleged, came not from their efforts to establish a science of politics but from their want of method in attempting to do so. It is the charge of methodological naïveté that was brought against the ancients by Machiavelli, Bacon, Descartes, Hobbes, and others seeking to put knowledge on a new, more secure foundation.

The idea that Machiavelli is the founder of modern political science is by no means self-evident. He seems to make none of the bold experimental moves more frequently associated with Descartes and Hobbes. His most famous book, *The Prince*, follows a traditional genre of "mirror of princes" that goes back to Xenophon; his longest and greatest book, *Discourses on Livy,* takes the form of a commentary on the first ten books of the Roman historian Livy. What could be more traditional? Yet Machiavelli's modernity consists less in his methodological innovations than in his call to break from the traditional authority of his predecessors.

Machiavelli's modernity is expressed in his preference for novelty, for the new over the old, for the bold and experimental over the tried and true. His embrace of novelty is also tied to his realism, to the "effectual truth of the thing" rather than the imagination. By the effectual truth, he means knowledge of the "is" rather than the "ought," of the way things actually work as opposed to how they ought to be. This is the prior move that made all later methodological innovations possible, namely, Machiavelli's attempt to determine the rules of political life solely from political life rather than subordinating it to the demands of morality, theology, or metaphysics… Machiavelli's praise of the effectual truth is followed by his famous (or infamous) judgement that the prince who hopes to succeed must learn how "not to be good," in other words, learn to break the established rules and conventions. The prince who follows Machiavelli's advice will be not simply a reformer but a revolutionary who established his authority de novo.

Machiavelli's modernity is most often expressed in his conception of the new prince who is the bringer of "new modes and orders," someone on the order of the great founder legislators of the past like Moses, Lycurgus, Cyrus, and Romulus. Machiavelli's appeal to these classical models concealed the fact that his prince expressed a new, highly idealized, conception of the statesman, at once individual, autonomous, and self-legislating. Machiavelli thought of politics as a work of art... He was a product of Renaissance Florence and a contemporary of Michelangelo and Leonardo. The term "Renaissance" may mean rebirth, but the period was a time of extraordinary innovation… In fact, Nietzsche's contemporary, the historian Jacob Burckhardt, remains the most perceptive analyst of this new disposition that assumed the proportions of a new protean image of human nature, a combination of individuality, an unprecedented flowering of the "free personality," and a new attention to the value of private life.

Q2. Which of the following can be inferred from the third paragraph of the passage?

a) The author does not expect the founder of a field of study to be non-traditional in his works.

b) **Unlike Hobbes and Descartes, Machiavelli broke away from the traditional authority of his predecessors.**

Your answer is incorrect

c) The author expects the works of the founder of a field of study to be experimental.

d) Machiavelli is called the founder of modern political science not because he was an iconoclast but because of his methodological innovations.

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**198**
Avg. time spent on this question by all students	**172**
Difficulty Level	**D**
Avg. time spent on this question by students who got this question right	**177**
% of students who attempted this question	**42.78**
% of students who got the question right of those who attempted	**17.31**

Video Solution

Text Solution

Number of words and Explanatory notes for RC:

Number of words: 561

At the beginning of the third paragraph of the passage, the author states that "The idea that Machiavelli is the founder of modern political science is by no means self-evident". This is because "He seems to make none of the bold experimental moves more frequently associated with Descartes and Hobbes".
Option A: From the beginning of the third paragraph, we can infer that the author expects the founder of modern political science to make "bold experimental moves" but Machiavelli does not appear to do so. Because of this, it is not self-evident that he is the founder of modern political science. Hence, the author expects the founder to make bold experimental moves. However, this option states the opposite. Hence, choice A is not the correct answer.
Option B: The author mentions that Machiavelli's modernity lies "in his call to break from the traditional authority of his predecessors". However, he does not compare this aspect of Machiavelli's work to that of Hobbes and Descartes. Hence, choice B is not the correct answer.
Option C: The author expects the founder to make bold experimental moves. .... He seems to make none of the bold experimental moves more frequently associated with Descartes and Hobbes. ..... In the next paragraph, we are told that Machiavelli's modernity is expressed in his preference for novelty, for the new over the old, for the bold and experimental over the tried and true. Hence, choice C can be inferred from the passage.
Option D: According to the author, "Machiavelli's modernity consists less in his methodological innovations than in his call to break from the traditional authority of his predecessors". Hence, choice D is inverted.
Hence, the correct answer is option C. Choice (C)

undefined

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.

It will surprise no one if I say that Machiavelli is the founder of modern political science.

To be sure, long before Machiavelli, the ancient writers had attempted to establish a science of politics. Plato, Aristotle,

Polybius, and Cicero had engaged in serious and systematic efforts to organize and clarify the data of political life, to establish rules and laws by which different regimes come into being and pass away. The failure of the ancients, so it was alleged, came not from their efforts to establish a science of politics but from their want of method in attempting to do so. It is the charge of methodological naïveté that was brought against the ancients by Machiavelli, Bacon, Descartes, Hobbes, and others seeking to put knowledge on a new, more secure foundation.

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Machiavelli's modernity is most often expressed in his conception of the new prince who is the bringer of "new modes and orders," someone on the order of the great founder legislators of the past like Moses, Lycurgus, Cyrus, and Romulus. Machiavelli's appeal to these classical models concealed the fact that his prince expressed a new, highly idealized, conception of the statesman, at once individual, autonomous, and self-legislating. Machiavelli thought of politics as a work of art... He was a product of Renaissance Florence and a contemporary of Michelangelo and Leonardo. The term "Renaissance" may mean rebirth, but the period was a time of extraordinary innovation… In fact, Nietzsche's contemporary, the historian Jacob Burckhardt, remains the most perceptive analyst of this new disposition that assumed the proportions of a new protean image of human nature, a combination of individuality, an unprecedented flowering of the "free personality," and a new attention to the value of private life.

Q3. What is the primary aspect of Machiavelli's work that set it apart from the works of others prior to him?

- a) He highlighted that a statesman should be a revolutionary and not a mere reformer.
- b) **He stayed away from prescribing how things should be and focussed on how things are.** **Your answer is correct**
- c) He paid attention to the "free personality" of men and the value of private life.
- d) He devised the rules of politics solely from a political angle.

Time spent / Accuracy Analysis

Time taken by you to answer this question	**78**
Avg. time spent on this question by all students	**116**
Difficulty Level	**VD**
Avg. time spent on this question by students who got this question right	**106**
% of students who attempted this question	**39.96**
% of students who got the question right of those who attempted	**43.92**

Video Solution

Text Solution

Number of words and Explanatory notes for RC:

Number of words: 561

In the second paragraph of the passage, the author talks about the works of the ancient writers who tried to establish the science of politics. He mentions that "The failure of the ancients, so it was alleged, came… from their want of method in attempting to do so". Further, people seeking to put knowledge on a secure foundation accused them of "methodological naïveté".
In the fourth paragraph, the author talks about Machiavelli focusing on the "effectual truth" and says that "This is the prior move that made all later methodological innovations possible".
Option A: While Machiavelli talked about the importance of breaking established rules and conventions, choice A is not what set his work apart from the work of others before him. Choice A does not answer the question.
Option B: The author mentions that Machiavelli's modernity "consists less in his methodological innovations than in his call to break from the traditional authority of his predecessors". Hence, his ***modernity lies in his call to break from traditional authority of his predecessors***. In the next paragraph, he talks about how he broke away from the traditional authority. He focused on how things are rather than how things ought to be (knowledge of the "is" rather than the "ought"). "This is the prior move that made all later methodological innovations possible". The methodological innovation is mentioned next, which is his attempt to determine rules of political life from political life without subordinating it to other fields. Since his modernity lies less in his methodological innovation and more in breaking away from tradition, what sets his work apart is how he focused on how things are rather than how things ought to be. Hence, choice B is the correct answer.
Option C: The last paragraph of the passage talks about the "free personality" of men and the value of private life. While Machiavelli's works may have these aspects (since he was a product of "Renaissance Florence"), this is not the primary aspect which sets his work apart from the work of others before him. Hence, choice C is not the correct answer.
Option D: This is named as one of the methodological innovations of Machiavelli which arose due to his focus on the "effectual truth". However, as explained above, his methodological innovations is not the primary aspect of his modernity. Hence, this is not the correct answer.
Therefore, the correct answer is option B. Choice (B)

undefined

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.

It will surprise no one if I say that Machiavelli is the founder of modern political science.

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The idea that Machiavelli is the founder of modern political science is by no means self-evident. He seems to make none of the bold experimental moves more frequently associated with Descartes and Hobbes. His most famous book, *The Prince*, follows a traditional genre of "mirror of princes" that goes back to Xenophon; his longest and greatest book, *Discourses on Livy,* takes the form of a commentary on the first ten books of the Roman historian Livy. What could be more traditional? Yet Machiavelli's modernity consists less in his methodological innovations than in his call to break from the traditional authority of his predecessors.

Machiavelli's modernity is expressed in his preference for novelty, for the new over the old, for the bold and experimental over the tried and true. His embrace of novelty is also tied to his realism, to the "effectual truth of the thing" rather than the imagination. By the effectual truth, he means knowledge of the "is" rather than the "ought," of the way things actually work as opposed to how they ought to be. This is the prior move that made all later methodological innovations possible, namely, Machiavelli's attempt to determine the rules of political life solely from political life rather than subordinating it to the demands of morality, theology, or metaphysics… Machiavelli's praise of the effectual truth is followed by his famous (or infamous) judgement that the prince who hopes to succeed must learn how "not to be good," in other words, learn to break the established rules and conventions. The prince who follows Machiavelli's advice will be not simply a reformer but a revolutionary who established his authority de novo.

Machiavelli's modernity is most often expressed in his conception of the new prince who is the bringer of "new modes and orders," someone on the order of the great founder legislators of the past like Moses, Lycurgus, Cyrus, and Romulus. Machiavelli's appeal to these classical models concealed the fact that his prince expressed a new, highly idealized, conception of the statesman, at once individual, autonomous, and self-legislating. Machiavelli thought of politics as a work of art... He was a product of Renaissance Florence and a contemporary of Michelangelo and Leonardo. The term "Renaissance" may mean rebirth, but the period was a time of extraordinary innovation… In fact, Nietzsche's contemporary, the historian Jacob Burckhardt, remains the most perceptive analyst of this new disposition that assumed the proportions of a new protean image of human nature, a combination of individuality, an unprecedented flowering of the "free personality," and a new attention to the value of private life.

Q4. Which of the following can be inferred to be the meaning of being "good" from the fourth paragraph of the passage?

- a) Sacrificing one's own well-being for the sake of others.
- b) **Acting in a manner which destroys existing conventions.**
- c) Possessing desired qualities.
- d) **Conforming to set rules.** **Your answer is correct**

Time spent / Accuracy Analysis

Time taken by you to answer this question	**48**
Avg. time spent on this question by all students	**108**
Difficulty Level	**D**
Avg. time spent on this question by students who got this question right	**97**
% of students who attempted this question	**42.74**
% of students who got the question right of those who attempted	**45.62**

Video Solution

Text Solution

Number of words and Explanatory notes for RC:

Number of words: 561

In the fourth paragraph, Machiavelli's famous judgement is mentioned – "the prince who hopes to succeed must learn how "not to be good," in other words, learn to break the established rules and conventions." In this context, not being good implies breaking established rules and conventions. Hence, being good implies following existing rules and conventions. Among the given options, the closest in meaning is option D. Hence, this is the correct answer. Choice (D)

undefined

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.

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Polybius, and Cicero had engaged in serious and systematic efforts to organize and clarify the data of political life, to establish rules and laws by which different regimes come into being and pass away. The failure of the ancients, so it was alleged, came not from their efforts to establish a science of politics but from their want of method in attempting to do so. It is the charge of methodological naïveté that was brought against the ancients by Machiavelli, Bacon, Descartes, Hobbes, and others seeking to put knowledge on a new, more secure foundation.

The idea that Machiavelli is the founder of modern political science is by no means self-evident. He seems to make none of the bold experimental moves more frequently associated with Descartes and Hobbes. His most famous book, *The Prince*, follows a traditional genre of "mirror of princes" that goes back to Xenophon; his longest and greatest book, *Discourses on Livy,* takes the form of a commentary on the first ten books of the Roman historian Livy. What could be more traditional? Yet Machiavelli's modernity consists less in his methodological innovations than in his call to break from the traditional authority of his predecessors.

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Q5. Which of the following is true of Machiavelli's prince, as can be inferred from para 4 and 5 of the passage?

a) Machiavelli's prince has the exact characteristics as those of great founder legislators of the past.

b) **Unlike the great founder legislators of the past, Machiavelli's prince is open to framing new rules and does not confine himself to existing rules.**

c) **Machiavelli's prince alluded to a new, highly idealized conception of the statesman but this fact is obscured by the reference to the great founder legislators of the past.** **Your answer is correct**

d) **Machiavelli's *The Prince* is an amalgamation of the life lessons of Moses, Lycurgus, Cyrus, and Romulus.**

Time spent / Accuracy Analysis

Time taken by you to answer this question	**214**
Avg. time spent on this question by all students	**116**
Difficulty Level	**VD**
Avg. time spent on this question by students who got this question right	**140**
% of students who attempted this question	**37.5**
% of students who got the question right of those who attempted	**25.79**

Video Solution

Text Solution

Number of words and Explanatory notes for RC:

Number of words: 561

According to the last paragraph of the passage, Machiavelli's conception of new prince is "on the order of the great founder legislators of the past like Moses, Lycurgus, Cyrus, and Romulus". However, this conceals the "fact that his prince expressed ***a new, highly idealized, conception*** of the statesman"

Option A: Machiavelli's prince is along the same lines as the great founder legislators of the past. However, he also represents a highly idealized conception of the statesmen. This aspect of the prince is concealed by appealing to the classical models (i.e., the great founder legislators). Hence, Machiavelli's prince represents something more than the great founder legislators of the past. Therefore, choice A is not the correct answer.

Option B: According to the penultimate paragraph of the passage, "The prince who follows Machiavelli's advice will be not simply a reformer but a revolutionary who established his authority de novo". This implies that Machiavelli's prince is open to framing new rules and does not confine himself to existing rules. But "Unlike the great founder legislators of the past" is an incorrect comparison which cannot be deduced from the passage. Hence choice B is not the correct answer.

Option C: According to the passage, "Machiavelli's appeal to these classical models concealed the fact that his prince expressed a new, highly idealized, conception of the statesman". The classical models here refer to the great founder legislators of the past. Hence, choice C is the correct answer.

Option D: The author mentions that *The Prince* "follows a traditional genre of "mirror of princes" that goes back to Xenophon". However, he does not mention that this work is an amalgamation of the life lessons of the great legislators. Hence, choice D is incorrect.

Therefore, the correct answer is option C. Choice (C)

undefined

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Machiavelli's modernity is expressed in his preference for novelty, for the new over the old, for the bold and experimental over the tried and true. His embrace of novelty is also tied to his realism, to the "effectual truth of the thing" rather than the imagination. By the effectual truth, he means knowledge of the "is" rather than the "ought," of the way things actually work as opposed to how they ought to be. This is the prior move that made all later methodological innovations possible, namely, Machiavelli's attempt to determine the rules of political life solely from political life rather than subordinating it to the demands of morality, theology, or metaphysics… Machiavelli's praise of the effectual truth is followed by his famous (or infamous) judgement that the prince who hopes to succeed must learn how "not to be good," in other words, learn to break the established rules and conventions. The prince who follows Machiavelli's advice will be not simply a reformer but a

revolutionary who established his authority de novo.

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Q6. What does Machiavelli mean by the term "effectual truth" (para 4)?

- a) The knowledge that politics is independent of metaphysics and theology.
- b) **The pursuit of the bold and the experimental.**
- c) **Realistic knowledge of how to make things the way they should be.**
- d) **Knowledge about the situation as is.** **Your answer is correct**

Time spent / Accuracy Analysis

Time taken by you to answer this question	**208**
Avg. time spent on this question by all students	**78**
Difficulty Level	**D**
Avg. time spent on this question by students who got this question right	**73**
% of students who attempted this question	**42.78**
% of students who got the question right of those who attempted	**46.24**

Video Solution

Text Solution

Number of words and Explanatory notes for RC:

Number of words: 561

Machiavelli's effectual truth is the knowledge of the "is" rather than the "ought."
Option A: This is not the effectual truth. This is a methodological innovation that arose out of the effectual truth. Hence, this is not the correct answer.
Option B: Machiavelli's modernity lies in the pursuit of the bold and the experimental. Focusing on the "effectual truth" is how he did this. Hence, this is not the correct answer.
Option C: Knowledge of how to make things the way they should be is knowledge of the "ought" rather than the "is". Hence, this is not what Machiavelli means by effectual truth.
Option D: Knowledge of the "is", about how things are, is the effectual truth. Hence, this is the correct answer. Choice (D)

undefined

DIRECTIONS *for questions 7 to 12:* The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

Researchers have puzzled for centuries over how body parts replenish themselves. In the mid-1700s, for instance, Swiss researcher Abraham Trembley noted that when chopped into pieces, hydra… could grow back into complete, new organisms. Other scientists of the era examined the salamander's ability to replace a severed tail. And a century later, Thomas Hunt Morgan scrutinized planaria, flatworms that can regenerate even when whittled into 279 bits. But he decided that regeneration was an intractable problem and forsook planaria in favor of fruit flies.

Mainstream biology has followed in Morgan's wake, focusing on animals suitable for studying genetic and embryonic development. But some researchers have pressed on with studies of regeneration superstars, and they've devised

innovative strategies to tackle the genetics of these organisms. These efforts and investigations of new regeneration models are beginning to reveal the forces that guide regeneration and those that prevent it.

Animals exploit three principal strategies to regenerate organs. First, working organ cells that normally don't divide can multiply and grow to replenish lost tissue, as occurs in injured salamander hearts. Second, specialized cells can undo their training - a process known as dedifferentiation - and assume a more pliable form that can replicate and later respecialize to reconstruct a missing part. Salamanders and newts take this approach to heal and rebuild a severed limb, as do zebrafish to mend clipped fins. Finally, pools of stem cells can step in to perform required renovations. Planaria tap into this resource when reconstructing themselves.

Humans already plug into these mechanisms to some degree. For instance, after surgical removal of part of a liver, healing signals tell remaining liver cells to resume growth and division to expand the organ back to its original size. Researchers have found that when properly enticed, some types of specialized human cells can revert to a more nascent state... So why do our hearts fill with scar tissue, our lenses cloud, and our brain cells perish?

Animals such as salamanders and planaria regenerate tissues by rekindling genetic mechanisms that guide the patterning of body structures during embryonic development. We employ similar pathways to shape our parts as embryos, but over the course of evolution, humans may have lost the ability to tap into it as adults, perhaps because the cell division required for regeneration elevated the likelihood of cancer. And we may have evolved the capacity to heal wounds rapidly to repel infection, even though speeding the pace means more scarring. Regeneration pros such as salamanders heal wounds methodically and produce pristine tissue…

Unraveling the mysteries of regeneration will depend on understanding what separates our wound-healing process from that of animals that are able to regenerate. The difference might be subtle… A relatively modest number of genetic differences seems to underlie the effect. Perhaps altering a handful of genes would be enough to turn us into superhealers, too…

Q7. Which of the following can be inferred about Thomas Hunt Morgan's studies?

a) He initially scrutinized regeneration in planaria but switched to studying regeneration in fruit flies.

b) **He initially studied regeneration in planaria but later switched to studying genetic and embryonic development focusing on fruit flies.** **Your answer is correct**

c) **He found that using fruit flies for studying regeneration helped understand it better than using planaria.**

d) **He found that regeneration cannot be understood by studying planaria and hence, switched to studying genetic and embryonic development in planaria.**

Time spent / Accuracy Analysis

Time taken by you to answer this question	**352**
Avg. time spent on this question by all students	**308**
Difficulty Level	**M**
Avg. time spent on this question by students who got this question right	**312**
% of students who attempted this question	**44.4**
% of students who got the question right of those who attempted	**33.1**

Video Solution

Text Solution

Number of words and Explanatory notes for RC:

Number of words: 473

According to the passage, Thomas Hunt Morgan "scrutinized planaria". After this, "he decided that regeneration was an intractable problem and forsook planaria in favor of fruit flies".
Option A: In the second paragraph of the passage, the author mentions that "Mainstream biology has followed in Morgan's wake, focusing on animals suitable for studying genetic and embryonic development". Combining this with the last sentence of the previous paragraph, we can infer that Morgan studied genetic and embryonic development in fruit flies. Further, since Morgan decided that regeneration was an "intractable problem" (i.e., hard to deal with) we can infer that he did not study regeneration in fruit flies. Therefore, this is not the correct answer.
Option B: From the first and second paragraphs of the passage, we can infer that he initially studied regeneration in planaria. He later forsook this as he felt it was intractable and switched to fruit flies. Mainstream biology followed his line of study and studied genetic and embryonic development. Hence, we can infer that Morgan studied genetic and embryonic development in fruit flies. Therefore, this is the correct answer.
Option C: Since Morgan called studying regeneration as an "intractable problem", we can infer that he did not study regeneration in fruit flies. Hence, this option is incorrect.
Option D: Morgan did not study genetic and embryonic development in planaria. He did so in fruit flies. Hence, this option is also incorrect.
Therefore, the correct answer is option B. Choice (B)

undefined

DIRECTIONS *for questions 7 to 12:* The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

Researchers have puzzled for centuries over how body parts replenish themselves. In the mid-1700s, for instance, Swiss researcher Abraham Trembley noted that when chopped into pieces, hydra… could grow back into complete, new organisms. Other scientists of the era examined the salamander's ability to replace a severed tail. And a century later, Thomas Hunt Morgan scrutinized planaria, flatworms that can regenerate even when whittled into 279 bits. But he decided that regeneration was an intractable problem and forsook planaria in favor of fruit flies.

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Q8. Which of the three strategies (mentioned in para 3) do humans make use of as mentioned in para 4 of the passage?

- a) **All the three strategies.** **Your answer is incorrect**
- b) **The first and the third strategies.**
- c) **The second and the third strategies.**
- d) **The first and the second strategies.**

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**183**
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	**155**
% of students who attempted this question	**44.35**
% of students who got the question right of those who attempted	**34.05**

Video Solution

Text Solution

Number of words and Explanatory notes for RC:

Number of words: 473

In the third paragraph of the passage, the author mentions three strategies which animals use for regenerating tissues. In the fourth paragraph, the author states that "Humans already plug into these mechanisms to some degree". He provides examples of humans using these strategies.
First Example: This talks about how "after surgical removal of part of a liver, healing signals tell remaining liver cells to resume growth and division to expand the organ back to its original size". This is similar to the first strategy mentioned in the previous paragraph, in which, "working organ cells that normally don't divide can multiply and grow to replenish lost tissue". Hence, the first example refers to the first strategy.
Second Example: The second example mentions that "when properly enticed, some types of specialized human cells can revert to a more nascent state". This is an example of the second strategy of dedifferentiation – cells undoing their training and assuming "a more pliable form".
Hence, the two examples refer to the first and the second strategies mentioned in the previous paragraph. Therefore, the correct answer is option D. Choice (D)

undefined

DIRECTIONS *for questions 7 to 12:* The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

Researchers have puzzled for centuries over how body parts replenish themselves. In the mid-1700s, for instance, Swiss researcher Abraham Trembley noted that when chopped into pieces, hydra… could grow back into complete, new organisms. Other scientists of the era examined the salamander's ability to replace a severed tail. And a century later, Thomas Hunt Morgan scrutinized planaria, flatworms that can regenerate even when whittled into 279 bits. But he decided that regeneration was an intractable problem and forsook planaria in favor of fruit flies.

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Q9. Which of the following strategies do salamanders most probably use for replacing a severed tail (as mentioned in para 1 of the passage)?

- a) **Working organ cells that normally do not divide multiply and grow to replenish lost tissue.**
- b) **Pools of stem cells step in to perform required renovations.**
- c) **The process of dedifferentiation.** **Your answer is correct**
- d) **Cannot be determined**

Time spent / Accuracy Analysis

Time taken by you to answer this question	**131**
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	**81**
% of students who attempted this question	**46.22**
% of students who got the question right of those who attempted	**60.95**

Video Solution

Text Solution

Number of words and Explanatory notes for RC:

Number of words: 473

The author mentions that in the mid-1700s, scientists "examined the salamander's ability to replace a severed tail". He also mentions three strategies that animals use for regenerating tissues.
Option A: The example provided for the first strategy is the case of injured salamander hearts. This may not be used for severed limbs.
Option B: This option mentions the third strategy in the passage. "Planaria tap into this resource when reconstructing themselves". There is no mention of salamanders while discussing this strategy. This may not be used for the given case.
Option C: The process of dedifferentiation is when "specialized cells can undo their training" and "assume a more pliable form that can replicate and later respecialize to reconstruct a ***missing part***". This is used by salamanders "***to heal and rebuild a severed limb***". Hence, we can infer that salamanders use this strategy for growing back lost tail (or limb).
Hence, the answer is option C. Choice (C)

undefined

DIRECTIONS *for questions 7 to 12:* The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

Researchers have puzzled for centuries over how body parts replenish themselves. In the mid-1700s, for instance, Swiss researcher Abraham Trembley noted that when chopped into pieces, hydra… could grow back into complete, new organisms. Other scientists of the era examined the salamander's ability to replace a severed tail. And a century later, Thomas Hunt Morgan scrutinized planaria, flatworms that can regenerate even when whittled into 279 bits. But he decided that regeneration was an intractable problem and forsook planaria in favor of fruit flies.

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Animals such as salamanders and planaria regenerate tissues by rekindling genetic mechanisms that guide the patterning of body structures during embryonic development. We employ similar pathways to shape our parts as embryos, but over the course of evolution, humans may have lost the ability to tap into it as adults, perhaps because the cell division required for regeneration elevated the likelihood of cancer. And we may have evolved the capacity to heal wounds rapidly to repel infection, even though speeding the pace means more scarring. Regeneration pros such as salamanders heal wounds methodically and produce pristine tissue…

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Q10. Which of the following can be inferred from the penultimate paragraph of the passage?

- a) **Scarring is absent in animals that are known for their regenerative abilities.**
- b) **Humans cannot regenerate tissues because they do not scar.**
- c) **Regenerating tissues in humans causes cancer.**
- d) **Humans who have the ability to regenerate tissues are prone to suffer from cancer.** **Your answer is incorrect**

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**254**
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	**129**
% of students who attempted this question	**38.91**
% of students who got the question right of those who attempted	**21.18**

Video Solution

Text Solution

Number of words and Explanatory notes for RC:

Number of words: 473

The penultimate paragraph of the passage talks about why humans do not have the ability to regenerate tissues like salamanders do.
Option A: The author states that humans "may have evolved the capacity to heal wounds rapidly to repel infection". But this causes scarring. "Regeneration pros such as salamanders heal wounds methodically and produce pristine tissue". Hence, when these "regenerative pros" heal wounds, there will be no scarring. Hence, this is the correct answer.
Option B: Humans scar because they heal fast. But this is not linked to why humans do not regenerate tissues. Hence, this is not the correct answer.
Option C: The author mentions that humans may have lost the ability to regenerate tissues "perhaps because the cell division required for regeneration elevated the likelihood of cancer". This talks about an effect of regenerating tissues in humans, which is, in itself, non-existent. Hence, this option is incorrect.
Option D: The author mentions that humans do not regenerate tissues like salamanders do. The reason is it may cause cancer. He does not talk about any human being able to regenerate tissues. Hence, this is not the correct answer.
Therefore, the correct answer is option A. Choice (A)

undefined

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Q11. What is a common difference between the examples of animal regenerative mechanisms (para 3) and the examples of human regenerative mechanisms (para 4)?

- a) **The former occur in adult animals, while the latter occur in the embryonic stage.**
- b) **The former has been observed only in laboratories, while the latter is more commonplace.**
- c) **The former occur naturally, while the latter involve human intervention.** **Your answer is correct**
- d) **The former is quicker, while the latter takes a lot of time.**

Time spent / Accuracy Analysis

Time taken by you to answer this question	**162**
Avg. time spent on this question by all students	**100**
Difficulty Level	**VD**
Avg. time spent on this question by students who got this question right	**100**
% of students who attempted this question	**37.17**
% of students who got the question right of those who attempted	**56.11**

Video Solution

Text Solution

Number of words and Explanatory notes for RC:

Number of words: 473

The author provides examples of animals using different strategies for regenerating tissues in the third paragraph of the passage. He further provides examples in which humans also use some of these strategies in the fourth paragraph of the passage.
Option A: The author does not talk about the age of the animals and humans in the examples that he provided. Further, he most probably does not refer human embryos when he talks about humans in the fourth paragraph. Hence, this cannot be inferred from the passage.
Option B: The author does not mention that animal tissue regeneration was observed only in laboratories. However, for the examples that he provides for humans, the first one is after a surgery and the second is most probably in a lab (as it talks about researchers' findings). Hence, this option is incorrect.
Option C: The author mentions the examples of animals as occurring naturally. This can also be inferred from the first paragraph of the passage as it talk of animals growing back tissues without any special stimulation. However, in both the examples that the author provides, there is an element of human intervention. In the first example, it is surgery and in the second it is when they are "properly enticed". Hence, this is a difference in the examples that the author provides.
Option D: The author does not talk about the time taken for regeneration in the examples. Hence, this cannot be inferred.
Therefore, the correct answer is option C. Choice (C)

undefined

DIRECTIONS *for questions 7 to 12:* The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

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Q12. According to the passage, what can be a probable reason that adult humans lost the ability to regenerate tissues?

- a) **Regenerating tissues increases the chances of infection.**
- b) **Regenerating tissues results in scarring, which leads to further complications.** **Your answer is incorrect**
- c) **Regenerating tissues requires abundance of stem cells, which humans do not possess.**
- d) **Regenerating tissues increases the chances of cancer incidence.**

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**133**
Avg. time spent on this question by all students	**64**
Difficulty Level	**D**
Avg. time spent on this question by students who got this question right	**61**
% of students who attempted this question	**43.6**
% of students who got the question right of those who attempted	**78.37**

Video Solution

Text Solution

Number of words and Explanatory notes for RC:

Number of words: 473

The author mentions that we employ genetic mechanisms for regenerating tissues "to shape our parts as embryos". However, "over the course of evolution, humans may have lost the ability to tap into it as adults".
Option A: The author also mentions that "we may have evolved the capacity to heal wounds rapidly to repel infection". Hence, we can infer from this that healing wounds slowly may increase the chances of infection. Therefore, this statement is not correct. Further, this is not a reason why we may have lost the ability to regenerate.
Option B: Scarring occurs because humans heal rapidly. This prevents infections and the author does not talk about any further complications. Hence, this option is also incorrect.
Option C: The author does not talk about the availability of stem cells in humans, when talking about why humans may have lost the ability to regenerate tissues. Hence, this option is incorrect.
Option D: According to the author, regenerating tissues "elevated the likelihood of cancer". This may be a reason why humans lost the ability to regenerate tissues. Hence, this is the correct answer. Choice (D)

undefined

DIRECTIONS *for questions 13 to 15:* The passage given below is accompanied by a set of three questions. Choose the best answer to each question.

In the past decade, researchers have found that between 1% and 4% of the DNA of modern Europeans and their descendants on other continents is of Neanderthal origin. What is less clear is the effect today of the DNA so acquired. Neanderthal DNA is not easy to come by (it must be garnered from well preserved fossils). Doing extensive genetic testing on large numbers of modern humans, which is necessary to untangle the influence of even a relatively small chunk of their genomes, is expensive. Nevertheless, such a comparison has been made by Corinne Simonti of the Vanderbilt Genetics Institute, in Tennessee.

Rather than doing the genetic tests themselves, Dr Simonti and her colleagues used data from the Electronic Medical Records and Genomics Network. This gave them both the medical histories and the genotypes of thousands of people. They picked out 28,416 people of European descent and compared the genomes of these individuals with genetic information recovered from the toe-bone of a Neanderthal woman that was found in a cave in Russia, in 2010. They found 135,000 bits of modern human DNA which they thought were probably of Neanderthal origin.

Previous research had found such Neanderthal DNA to be especially common near parts of the genome associated with illnesses like depression, heart disease and seborrheic keratosis, a complaint in which scaly lumps form on the skin. Because Dr Simonti's data included people who actually suffer from such conditions, she was able to check those associations. She found that particular chunks of Neanderthal DNA were not only correlated with the presence of all three complaints but they also put their carriers at additional risks of obesity, blood-clotting disorders, malnutrition, and smoking.

At first blush, this seems to suggest that Neanderthal DNA is a curse. But that is almost certainly not the case. Forty millennia is plenty of time for evolution to get to work. This means that unfavourable traits should have been weeded out, while beneficial ones spread. There is evidence of exactly this. Some parts of the human genome are unusually free from Neanderthal influence, suggesting natural selection has removed harmful genes. Other parts of the human genome are full of them.

Dr Simonti added that some Neanderthal genes might put their bearers at risk of obesity in the modern world of fatty, sugary snacks. But in a world where food was scarce (as it presumably was in the northern latitudes where modern humans and Neanderthals mixed), those same genes might help their owners through lean periods. Neanderthal DNA seems to put modern humans at risk of a specific sort of malnutrition caused by a lack of thiamine, a B vitamin that is vital for carbohydrate metabolism. But, says Dr Simonti, that same genetic variant may also make it easier to digest fats. Millennia ago, when people obtained less of their energy from refined carbohydrates, the evolution trade-off may have been worthwhile. In a world where grain crops have become a staple food, it may not be.

Q13. Which of the following most accurately describes the organization of the passage?

a) **The passage challenges the validity of a research investigation by exposing the inconsistencies and contradictions in it.**

b) **The passage presents research findings and addresses some speculations arising out of the investigation.**
Your answer is correct

c) **Two parallel investigations are discussed - the findings of one are proved correct and the findings of the other are summarily rejected.**

d) **The passage presents two explanations for an evolutionary phenomenon based on medical records and reconciles the differences between them.**

Time spent / Accuracy Analysis

Time taken by you to answer this question	**303**
Avg. time spent on this question by all students	**258**
Difficulty Level	**D**
Avg. time spent on this question by students who got this question right	**260**
% of students who attempted this question	**25.56**
% of students who got the question right of those who attempted	**38.35**

Video Solution

Text Solution

Number of words and Explanatory notes for RC:

Number of words: 497

What is less clear is the effect today of the (Neanderthal) DNA so acquired in humans. The passage seems to suggest that the Neanderthals gifted some disease-causing genes to humans.
Option A: The passage discusses the research conducted by Corinne Simonti of the Vanderbilt Genetics Institute, in Tennessee. But it does not challenge the validity of the same. There is no discussion of the inconsistencies and the contradictions in the research in the passage. Choice A is not the answer.
Option B: Rather than doing the genetic tests themselves, Dr Simonti and her colleagues used data from the Electronic Medical Records and Genomics Network. They compared the genomes of 28,416 people of European descent with genetic information recovered from the toe-bone of a Neanderthal woman that was found in a cave in Russia, in 2010. The third para mentions some findings of Dr Simonti's research. From statements such as: At first blush, this seems to suggest that Neanderthal DNA is a curse. But that is almost certainly not the case. ..... Some Neanderthal genes might put their bearers at risk of obesity in the modern world of fatty, sugary snacks ..... ; we can infer that the passage addresses some speculations arising out of the investigation. Hence choice B is the answer.
Option C: The passage does not discuss two parallel investigations. It discusses a current investigation in the light of the findings from previous research. Also there is no rejection of the findings of any investigation in the passage. So choice C is not the answer.
Option D: Rather than doing the genetic tests themselves, Dr Simonti and her colleagues used data from the Electronic Medical Records and Genomics Network. This gave them both the medical histories and the genotypes of thousands of people. There is a discussion of an evolutionary phenomenon (An investigation of the effect of the Neanderthal genes which were passed on to humans). But there are no two explanations as such for the same. The passage also does not try to reconcile conflicting viewpoints between two explanations. Choice D is incorrect. Choice (B)

undefined

DIRECTIONS *for questions 13 to 15:* The passage given below is accompanied by a set of three questions. Choose the best answer to each question.

In the past decade, researchers have found that between 1% and 4% of the DNA of modern Europeans and their descendants on other continents is of Neanderthal origin. What is less clear is the effect today of the DNA so acquired. Neanderthal DNA is not easy to come by (it must be garnered from well preserved fossils). Doing extensive genetic testing on large numbers of modern humans, which is necessary to untangle the influence of even a relatively small chunk of their genomes, is expensive. Nevertheless, such a comparison has been made by Corinne Simonti of the Vanderbilt Genetics Institute, in Tennessee.

Rather than doing the genetic tests themselves, Dr Simonti and her colleagues used data from the Electronic Medical Records and Genomics Network. This gave them both the medical histories and the genotypes of thousands of people. They picked out 28,416 people of European descent and compared the genomes of these individuals with genetic information recovered from the toe-bone of a Neanderthal woman that was found in a cave in Russia, in 2010. They found 135,000 bits of modern human DNA which they thought were probably of Neanderthal origin.

Previous research had found such Neanderthal DNA to be especially common near parts of the genome associated with illnesses like depression, heart disease and seborrheic keratosis, a complaint in which scaly lumps form on the skin. Because Dr Simonti’s data included people who actually suffer from such conditions, she was able to check those associations. She found that particular chunks of Neanderthal DNA were not only correlated with the presence of all three complaints but they also put their carriers at additional risks of obesity, blood-clotting disorders, malnutrition, and smoking.

At first blush, this seems to suggest that Neanderthal DNA is a curse. But that is almost certainly not the case. Forty millennia is plenty of time for evolution to get to work. This means that unfavourable traits should have been weeded out, while beneficial ones spread. There is evidence of exactly this. Some parts of the human genome are unusually free from Neanderthal influence, suggesting natural selection has removed harmful genes. Other parts of the human genome are full of them.

Dr Simonti added that some Neanderthal genes might put their bearers at risk of obesity in the modern world of fatty, sugary snacks. But in a world where food was scarce (as it presumably was in the northern latitudes where modern humans and

Neanderthals mixed), those same genes might help their owners through lean periods. Neanderthal DNA seems to put modern humans at risk of a specific sort of malnutrition caused by a lack of thiamine, a B vitamin that is vital for carbohydrate metabolism. But, says Dr Simonti, that same genetic variant may also make it easier to digest fats. Millennia ago, when people obtained less of their energy from refined carbohydrates, the evolution trade-off may have been worthwhile. In a world where grain crops have become a staple food, it may not be.

Q14. According to the passage, Neanderthal DNA is attributed to all of the following conditions in humans EXCEPT?

- a) **It can lead to scaly lump formation on the skin.**
- b) **It may impair carbohydrate metabolism.**
- c) **It can subject a human carrier to risks of obesity and cancer.**
- d) **It can put a human carrier at additional risks of blood-clotting disorders and smoking.** **Your answer is incorrect**

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**26**
Avg. time spent on this question by all students	**110**
Difficulty Level	**E**
Avg. time spent on this question by students who got this question right	**126**
% of students who attempted this question	**32.95**
% of students who got the question right of those who attempted	**33.45**

Video Solution

Text Solution

Number of words and Explanatory notes for RC:

Number of words: 497

Option A: Previous research had found such Neanderthal DNA to be especially common near parts of the genome associated with illnesses like depression, heart disease and seborrheic keratosis, a complaint in which scaly lumps form on the skin. Because Dr Simonti's data included people who actually suffer from such conditions, she was able to check those associations. She found that particular chunks of Neanderthal DNA were not only correlated with the presence of all three complaints…. Hence choice A is true and is not the answer.
Option B: Neanderthal DNA puts modern humans at risk of a specific sort of malnutrition caused by a lack of thiamine, a B vitamin that is vital for carbohydrate metabolism. Choice B is true and is not the answer.
Option C: Neanderthal DNA also puts its carriers at additional risks of obesity, blood-clotting disorders, malnutrition, and smoking ..... Obesity has also been discussed in the last para. But cancer has not been mentioned in the passage. So choice C is not true.
Option D: The team found other phenomena for which Neanderthal genes put their carriers at additional risk. These ranged from obesity and blood-clotting disorders to malnutrition and smoking. Hence choice D is true and is not the answer.

Choice (C)

undefined

DIRECTIONS *for questions 13 to 15:* The passage given below is accompanied by a set of three questions. Choose the best answer to each question.

In the past decade, researchers have found that between 1% and 4% of the DNA of modern Europeans and their descendants on other continents is of Neanderthal origin. What is less clear is the effect today of the DNA so acquired. Neanderthal DNA is not easy to come by (it must be garnered from well preserved fossils). Doing extensive genetic testing on large numbers of modern humans, which is necessary to untangle the influence of even a relatively small chunk of their

genomes, is expensive. Nevertheless, such a comparison has been made by Corinne Simonti of the Vanderbilt Genetics Institute, in Tennessee.

Rather than doing the genetic tests themselves, Dr Simonti and her colleagues used data from the Electronic Medical Records and Genomics Network. This gave them both the medical histories and the genotypes of thousands of people. They picked out 28,416 people of European descent and compared the genomes of these individuals with genetic information recovered from the toe-bone of a Neanderthal woman that was found in a cave in Russia, in 2010. They found 135,000 bits of modern human DNA which they thought were probably of Neanderthal origin.

Previous research had found such Neanderthal DNA to be especially common near parts of the genome associated with illnesses like depression, heart disease and seborrheic keratosis, a complaint in which scaly lumps form on the skin. Because Dr Simonti's data included people who actually suffer from such conditions, she was able to check those associations. She found that particular chunks of Neanderthal DNA were not only correlated with the presence of all three complaints but they also put their carriers at additional risks of obesity, blood-clotting disorders, malnutrition, and smoking.

At first blush, this seems to suggest that Neanderthal DNA is a curse. But that is almost certainly not the case. Forty millennia is plenty of time for evolution to get to work. This means that unfavourable traits should have been weeded out, while beneficial ones spread. There is evidence of exactly this. Some parts of the human genome are unusually free from Neanderthal influence, suggesting natural selection has removed harmful genes. Other parts of the human genome are full of them.

Dr Simonti added that some Neanderthal genes might put their bearers at risk of obesity in the modern world of fatty, sugary snacks. But in a world where food was scarce (as it presumably was in the northern latitudes where modern humans and Neanderthals mixed), those same genes might help their owners through lean periods. Neanderthal DNA seems to put modern humans at risk of a specific sort of malnutrition caused by a lack of thiamine, a B vitamin that is vital for carbohydrate metabolism. But, says Dr Simonti, that same genetic variant may also make it easier to digest fats. Millennia ago, when people obtained less of their energy from refined carbohydrates, the evolution trade-off may have been worthwhile. In a world where grain crops have become a staple food, it may not be.

Q15. What does the author suggest in the concluding para of the passage?

a) **Evolution is a trade-off, and Neanderthal DNA offers multiple advantages to those carrying it.**

b) **Just because some genes are harmful to modern humans, it does not necessarily mean that they were harmful for their recent ancestors.** **Your answer is correct**

c) **Though there was a certain amount of interbreeding going on back in the day, the human genome is completely free from Neanderthal influence today.**

d) **Though some Neanderthal genes can endanger modern human lives in certain aspects, other genes can offer several advantages.**

Time spent / Accuracy Analysis

Time taken by you to answer this question	**61**
Avg. time spent on this question by all students	**95**
Difficulty Level	**M**
Avg. time spent on this question by students who got this question right	**89**
% of students who attempted this question	**30.44**
% of students who got the question right of those who attempted	**44.18**

Video Solution

Text Solution

Number of words and Explanatory notes for RC:

Number of words: 497

Refer to the concluding para of the passage.
Option A: Forty millennia is plenty of time for evolution to get to work. This means that unfavourable traits should have been weeded out, while beneficial ones spread. This is true. But the author does not throw light on the multiple advantages offered by Neanderthal DNA to humans carrying it. Choice A cannot be gathered from the last para of the passage.
Option B: Some genes might put modern humans at risk of obesity. But in a world where food was scarce (as it presumably was in the northern latitudes where modern humans and Neanderthals mixed), those same genes might help their owners through lean periods. Neanderthal DNA puts modern humans at risk of a specific sort of malnutrition caused by a lack of thiamine, a B vitamin that is vital for carbohydrate metabolism (grain crops are a staple food today). But that same genetic variant may also make it easier to digest fats (millennia ago, our ancestors obtained less of their energy from refined carbohydrates and presumably more from fats). We can infer choice B.
Option C: Researchers have found that between 1% and 4% of the DNA of modern Europeans and their descendants on other continents is of Neanderthal origin. The penultimate para mentions: Some parts of the human genome are unusually free from Neanderthal influence, suggesting natural selection has removed harmful genes. Other parts of the human genome are full of them. Choice C is not true and is not specific to the discussion in the conclusion para.
Option D: Choice D is distorted. From the last para, we can only say that though some Neanderthal genes can endanger human lives in certain aspects, those same genes were advantageous to Neanderthals. Choice (B)

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.

There is something up with the Dutch. As one of the six founding members of what became the European Union, the Netherlands claims a special place in the European family - through Benelux (cooperation between Belgium, the Netherlands, and Luxembourg), the Dutch helped inspire Europe's integration project.

Strategically, the Netherlands has worked to maintain a balance in the EU: among large countries and among institutions. It promoted British membership of the European Community in the 1970s to balance against Franco-German dominance.

On foreign policy, the Netherlands favors strong international engagement but rarely takes a controversial position. The country wants a strong EU in international affairs to amplify its own bilateral foreign policy and to keep member states in check. But it wants the European External Action Service to coordinate European foreign policies, not direct them. The Hague has been ambitious on European defense cooperation, particularly by integrating its military forces and capabilities with those of Germany and Belgium; but like most other EU members, the Netherlands has dramatically cut its defense budget in previous years. ...

Since the early 2000s, the Netherlands' image as a mainstream partner has changed: the Dutch have started to view the EU suspiciously. EU enlargement in 2004 altered the union's internal balance and member states' voting weights. The Netherlands has less of a say than some of the newest members, yet it is one of the largest per-capita contributors to the EU budget. Despite the benefits in mutual trade, a larger union meant the Dutch voice became softer. This proved particularly uncomfortable when member states agreed to hand over more powers to Brussels.

The eurozone crisis added further concerns about the EU's direction of travel: the Netherlands became a creditor country that was asked to bail out Southern eurozone members while having to take their word for it that they would make the

reforms necessary to weather the financial storm. The perception that the Dutch were left paying the bill while other countries flouted the rules became fertile ground for Euroskeptic politicians. It boosted the anti-immigrant, anti-EU popularity of Geert Wilders. His Freedom party has taken advantage of rising Dutch anger over the Euro crisis by shifting its focus from a ban on Islam to an exit from the EU. The government saw the commission less as the defender of small countries' interests and more as an overly ambitious regulator with an appetite to expand its reach.

Dutch Euroskepticism is reaching unheard-of heights: A Gallup survey in early June found voters split evenly, 39 per cent each, on whether to exit the EU entirely. Most recent political polls put the Freedom Party in a close fight for the second-largest share of the vote, and one poll has it in the lead. The other strongly Euroskeptic party, the far-left Socialists, is doing nearly as well. The results will alarm eurocrats who have identified Holland, alongside France and Italy, as part of a trio of threats where rising euroscepticism could rip the bloc limb from limb. The poll comes after Dutch voters overwhelmingly rejected an EU Association Agreement with Ukraine granting visa-free access in a referendum last spring (April 2016), only for the result to be ignored by politicians in the Hague and Brussels.

Q16. Which of the following cannot be inferred about the Netherlands?

a. The Netherlands once stood at the heart of the cause of European integration.

b. The Freedom Party's strategy to focus on EU and Islam has started paying off as it has emerged as one of the more popular parties in recent political polls.

c. The Netherlands wanted the European Union to keep member states in check and promote the interests of smaller ones.

d. The Netherlands has dramatically cut its contribution to the EU budget in recent years.

e. A survey found that the voters were nearly evenly split on the decision of the Netherlands leaving the EU.

- a) **a and c**
- b) **b and d**
- c) **a and d**
- d) **b and c**

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**25**
Avg. time spent on this question by all students	**309**
Difficulty Level	**D**
Avg. time spent on this question by students who got this question right	**313**
% of students who attempted this question	**19.18**
% of students who got the question right of those who attempted	**38.18**

Video Solution

Text Solution

Number of words and Explanatory notes for RC:

Number of words: 536

Statement (a): As one of the six founding members of what became the European Union, the Netherlands claims a special place in the European family – through Benelux, cooperation between Belgium, the Netherlands, and Luxembourg, the Dutch helped inspire Europe's integration project. Statement (a) can be inferred.
Statement (b): Wilders' Freedom party has taken advantage of rising Dutch anger over the Euro crisis by shifting its focus from a ban on Islam to an exit from the EU. So statement (b) which mentions "focus on both EU and Islam" is incorrect.
Statement (c): Strategically, the Netherlands has worked to maintain a balance in the EU: among the large countries, and among the institutions. The Netherlands promoted British membership of the European Community in the 1970s to balance against Franco-German dominance. The country wants a strong EU in international affairs to amplify its own bilateral foreign policy, and to keep member states in check. ... the Dutch have started to view the EU with growing suspicion. EU enlargement in 2004 altered the union's internal balance and member states' voting weights. ... The Netherlands' government saw the European commission less as the defender of small countries' interests. So statement (c) can be inferred.
Statement (d): Like most other EU members, the Netherlands has dramatically cut its defense budget in previous years. But since the early 2000s, the Netherlands' image as a mainstream, no-nonsense partner has changed: the Dutch have started to view the EU with growing suspicion. The Netherlands has less of a say than some of the newest members, yet it is one of the largest per-capita contributors to the EU budget. Statement (d) cannot be inferred.
Statement (e): A Gallup survey in early June found voters split evenly, 39 per cent each, on whether to exit the EU entirely. So statement (e) is also true.
So, statements (b) and (d) are incorrect. Choice (B)

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.

There is something up with the Dutch. As one of the six founding members of what became the European Union, the Netherlands claims a special place in the European family - through Benelux (cooperation between Belgium, the Netherlands, and Luxembourg), the Dutch helped inspire Europe's integration project.

Strategically, the Netherlands has worked to maintain a balance in the EU: among large countries and among institutions. It promoted British membership of the European Community in the 1970s to balance against Franco-German dominance.

On foreign policy, the Netherlands favors strong international engagement but rarely takes a controversial position. The country wants a strong EU in international affairs to amplify its own bilateral foreign policy and to keep member states in check. But it wants the European External Action Service to coordinate European foreign policies, not direct them. The Hague has been ambitious on European defense cooperation, particularly by integrating its military forces and capabilities with those of Germany and Belgium; but like most other EU members, the Netherlands has dramatically cut its defense budget in previous years. ...

Since the early 2000s, the Netherlands' image as a mainstream partner has changed: the Dutch have started to view the EU suspiciously. EU enlargement in 2004 altered the union's internal balance and member states' voting weights. The Netherlands has less of a say than some of the newest members, yet it is one of the largest per-capita contributors to the EU budget. Despite the benefits in mutual trade, a larger union meant the Dutch voice became softer. This proved particularly uncomfortable when member states agreed to hand over more powers to Brussels.

The eurozone crisis added further concerns about the EU's direction of travel: the Netherlands became a creditor country that was asked to bail out Southern eurozone members while having to take their word for it that they would make the reforms necessary to weather the financial storm. The perception that the Dutch were left paying the bill while other countries flouted the rules became fertile ground for Euroskeptic politicians. It boosted the anti-immigrant, anti-EU popularity of Geert Wilders. His Freedom party has taken advantage of rising Dutch anger over the Euro crisis by shifting its focus from a ban on Islam to an exit from the EU. The government saw the commission less as the defender of small countries'

interests and more as an overly ambitious regulator with an appetite to expand its reach.

Dutch Euroskepticism is reaching unheard-of heights: A Gallup survey in early June found voters split evenly, 39 per cent each, on whether to exit the EU entirely. Most recent political polls put the Freedom Party in a close fight for the second-largest share of the vote, and one poll has it in the lead. The other strongly Euroskeptic party, the far-left Socialists, is doing nearly as well. The results will alarm eurocrats who have identified Holland, alongside France and Italy, as part of a trio of threats where rising euroscepticism could rip the bloc limb from limb. The poll comes after Dutch voters overwhelmingly rejected an EU Association Agreement with Ukraine granting visa-free access in a referendum last spring (April 2016), only for the result to be ignored by politicians in the Hague and Brussels.

Q17. Which statement related to the EU cannot be inferred from the passage?

a) **The EU's ignoring of the Dutch voters' rejection of the treaty with Ukraine in April 2016 made the Netherlands more wary of the EU.**

b) **There is an increase in the anti-EU feeling in various countries like the Netherlands, France and Italy.**

c) **There are some excesses in the northern states in the European Union which need to be reduced.**

d) **The Dutch government has become increasingly critical of the European commission partly because the Hague has begun to control and direct foreign policy.**

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**1**
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	**124**
% of students who attempted this question	**14.94**
% of students who got the question right of those who attempted	**46.12**

Video Solution

Text Solution

Number of words and Explanatory notes for RC:

Number of words: 536

Option A: The poll comes after Dutch voters overwhelmingly rejected an EU Association Agreement with Ukraine granting visa-free access in a referendum last spring (April 2016), only for the the result to be ignored by politicians in the Hague and Brussels. So choice A is correct and is not the answer.
Option B: The results will alarm eurocrats who have identified Holland, alongside France and Italy, as part of a trio of threats where rising euroscepticism could rip the bloc limb from limb. So choice B is correct and is not the answer.
Option C: The eurozone crisis added further concerns about the EU's direction of travel: the Netherlands became a creditor country that was asked to bail out **Southern** eurozone members while having to take their word for it that they would make the reforms necessary to weather the financial storm. The perception that the Dutch were left paying the bill while other countries flouted the rules became fertile ground for Euroskeptic politicians. So choice C is incorrect and is the answer.
Option D: But the Netherlands wants the European External Action Service to coordinate European foreign policies, not direct them. The Hague has been ambitious on European defense cooperation, particularly by integrating its military forces and capabilities with those of Germany and Belgium. Refer to para 4. The Dutch have started to view the EU suspiciously. EU enlargement in 2004 altered the union's internal balance and member states' voting weights. ... This proved particularly uncomfortable when member states agreed to hand over more powers to Brussels. Hence choice D is true and is not the answer. Choice (C)

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.

There is something up with the Dutch. As one of the six founding members of what became the European Union, the Netherlands claims a special place in the European family - through Benelux (cooperation between Belgium, the Netherlands, and Luxembourg), the Dutch helped inspire Europe's integration project.

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On foreign policy, the Netherlands favors strong international engagement but rarely takes a controversial position. The country wants a strong EU in international affairs to amplify its own bilateral foreign policy and to keep member states in check. But it wants the European External Action Service to coordinate European foreign policies, not direct them. The Hague has been ambitious on European defense cooperation, particularly by integrating its military forces and capabilities with those of Germany and Belgium; but like most other EU members, the Netherlands has dramatically cut its defense budget in previous years. ...

Since the early 2000s, the Netherlands' image as a mainstream partner has changed: the Dutch have started to view the EU suspiciously. EU enlargement in 2004 altered the union's internal balance and member states' voting weights. The Netherlands has less of a say than some of the newest members, yet it is one of the largest per-capita contributors to the EU budget. Despite the benefits in mutual trade, a larger union meant the Dutch voice became softer. This proved particularly uncomfortable when member states agreed to hand over more powers to Brussels.

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Q18. Where is this passage most probably taken from?

- a) **History textbook**
- b) **Encyclopedia**
- c) **Thesis**
- d) **Magazine**

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**1**
Avg. time spent on this question by all students	**51**
Difficulty Level	**M**
Avg. time spent on this question by students who got this question right	**48**
% of students who attempted this question	**25.97**
% of students who got the question right of those who attempted	**47.4**

Video Solution

Text Solution

Number of words and Explanatory notes for RC:

Number of words: 536

Option A: This passage is not culled from a history textbook. This passage deals with a current topic of interest. Choice A is not the answer.
Option B: An encyclopedia contains articles on various topics, often arranged in alphabetical order, dealing either with the whole range of human knowledge or with one particular subject. However, it offers information in varied detail, but does not get into analysis or evaluation. Choice B is not the answer.
Option C: A thesis is where writers go beyond mere presentation of facts, into analysis or evaluation, to be able to offer personal conclusions or findings. Hence choice C is not the correct answer. The passage reports facts and not viewpoints.
Option D: The passage is, most likely, an extract from a magazine. The purpose of a magazine is to report news of some kind, or even fiction, in a longer form that a newspaper but much more flexible than a book. From certain parts of the text, we can gather that the passage is culled from a magazine related to current affairs or international relations. 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.

Ludwig Wittgenstein is one of the most influential philosophers of the twentieth century, and regarded by some as the most important since Immanuel Kant. His early work culminated in the *Tractatus Logico-Philosophicus*, the only philosophy book that Wittgenstein published (1921) during his lifetime. His later work *Philosophical Investigations* (published posthumously in 1953) has also done much to shape subsequent developments in philosophy, especially in the analytic tradition.

And yet in a sense Wittgenstein's thought has made very little impression on the intellectual life of this century. His work is opposed, as Wittgenstein himself realized, to "the spirit which informs the vast stream of European and American civilisation in which all of us stand." Nearly 50 years after his death, we can see, more clearly than ever, that the feeling that he was swimming against the tide was justified. If we wanted a label to describe this tide, we might call it "scientism," the view that every intelligible question has either a scientific solution or no solution at all. It is against this view that Wittgenstein set his face.

Scientism takes many forms. In the humanities, it takes the form of pretending that philosophy, literature, history, music and art can be studied as if they were sciences, with "researchers" compelled to spell out their "methodologies" - a pretence which has led to huge quantities of bad academic writing, characterised by bogus theorising, spurious specialisation and the development of pseudo-technical vocabularies. Wittgenstein would have looked upon these developments and wept.

There are many questions to which we do not have scientific answers, not because they are deep, impenetrable mysteries, but simply because they are not scientific questions. These include questions about love, art, history, culture, music-all questions, in fact, that relate to the attempt to understand ourselves better. There is a widespread feeling today that the great scandal of our times is that we lack a scientific theory of consciousness. And so there is a great interdisciplinary effort, involving physicists, computer scientists, cognitive psychologists and philosophers, to come up with tenable scientific answers to the questions: what is consciousness? What is the self? One of the leading competitors in this crowded field is the theory advanced by the mathematician Roger Penrose, that a stream of consciousness is an orchestrated sequence of quantum physical events taking place in the brain. Penrose's theory is that a moment of consciousness is produced by a sub-protein in the brain called a tubulin. The theory is, on Penrose's own admission, speculative, and it strikes many as being bizarrely implausible. But suppose we discovered that Penrose's theory was correct, would we, as a result, understand ourselves any better? Is a scientific theory the only kind of understanding?

Well, you might ask, what other kind is there? Wittgenstein's answer to that, I think, is his greatest, and most neglected, achievement. Although Wittgenstein's thought underwent changes between his early and his later work, his opposition to scientism was constant. Philosophy, he writes, "is not a theory but an activity." It strives, not after scientific truth, but after conceptual clarity. In the Tractatus, this clarity is achieved through a correct understanding of the logical form of language, which, once achieved, was destined to remain inexpressible, leading Wittgenstein to compare his own philosophical propositions with a ladder, which is thrown away once it has been used to climb up on.

In his later work, Wittgenstein abandoned the idea of logical form and with it the notion of ineffable truths. The difference between science and philosophy, he now believed, is between two distinct forms of understanding: the theoretical and the non-theoretical. Scientific understanding is given through the construction and testing of hypotheses and theories; philosophical understanding, on the other hand, is resolutely non-theoretical. What we are after in philosophy is "the

understanding that consists in seeing connections."

Q19. According to the passage, the author asserts which of the following about Wittgenstein?

- a) **The propositions in the "Tractatus" are nonsensical.**
- b) **Wittgenstein endorsed the view of scientism.**
- c) **Wittgenstein's work deviated from the analytic tradition of philosophy.**
- d) **Wittgenstein's style of thinking was at odds with the style that dominates our present era.**

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	**265**
Difficulty Level	**M**
Avg. time spent on this question by students who got this question right	**286**
% of students who attempted this question	**23.86**
% of students who got the question right of those who attempted	**47.24**

Video Solution

Text Solution

Number of words and Explanatory notes for RC:

Number of words: 633

Ludwig Wittgenstein is one of the most influential philosophers of the twentieth century, and regarded by some as the most important since Immanuel Kant.
Option A: Choice A finds no mention in the passage.
Option B: Nearly 50 years after his death, we can see, more clearly than ever, that the feeling that he was swimming against the tide was justified. If we wanted a label to describe this tide, we might call it "scientism," the view that every intelligible question has either a scientific solution or no solution at all. It is against this view that Wittgenstein set his face. So choice B is contradicted.
Option C: His two great works, *Tractatus Logico-Philosophicus* (1921) and *Philosophical Investigations* (published posthumously in 1953) have done much to shape subsequent developments in philosophy, especially in the analytic tradition. Hence choice C is incorrect.
Option D: And yet in a sense Wittgenstein's thought has made very little impression on the intellectual life of this century. His work is opposed, as he once put it, to "the spirit which informs the vast stream of European and American civilisation in which all of us stand." Hence we can conclude that Wittgenstein's style of thinking was at odds with the style that dominates our present era. This makes choice D the correct 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.

Ludwig Wittgenstein is one of the most influential philosophers of the twentieth century, and regarded by some as the most important since Immanuel Kant. His early work culminated in the *Tractatus Logico-Philosophicus*, the only philosophy book that Wittgenstein published (1921) during his lifetime. His later work *Philosophical Investigations* (published posthumously in 1953) has also done much to shape subsequent developments in philosophy, especially in the analytic tradition.

And yet in a sense Wittgenstein's thought has made very little impression on the intellectual life of this century. His work is opposed, as Wittgenstein himself realized, to "the spirit which informs the vast stream of European and American civilisation in which all of us stand." Nearly 50 years after his death, we can see, more clearly than ever, that the feeling that he was

swimming against the tide was justified. If we wanted a label to describe this tide, we might call it “scientism,” the view that every intelligible question has either a scientific solution or no solution at all. It is against this view that Wittgenstein set his face.

Scientism takes many forms. In the humanities, it takes the form of pretending that philosophy, literature, history, music and art can be studied as if they were sciences, with “researchers” compelled to spell out their “methodologies” - a pretence which has led to huge quantities of bad academic writing, characterised by bogus theorising, spurious specialisation and the development of pseudo-technical vocabularies. Wittgenstein would have looked upon these developments and wept.

There are many questions to which we do not have scientific answers, not because they are deep, impenetrable mysteries, but simply because they are not scientific questions. These include questions about love, art, history, culture, music-all questions, in fact, that relate to the attempt to understand ourselves better. There is a widespread feeling today that the great scandal of our times is that we lack a scientific theory of consciousness. And so there is a great interdisciplinary effort, involving physicists, computer scientists, cognitive psychologists and philosophers, to come up with tenable scientific answers to the questions: what is consciousness? What is the self? One of the leading competitors in this crowded field is the theory advanced by the mathematician Roger Penrose, that a stream of consciousness is an orchestrated sequence of quantum physical events taking place in the brain. Penrose’s theory is that a moment of consciousness is produced by a sub-protein in the brain called a tubulin. The theory is, on Penrose’s own admission, speculative, and it strikes many as being bizarrely implausible. But suppose we discovered that Penrose’s theory was correct, would we, as a result, understand ourselves any better? Is a scientific theory the only kind of understanding?

Well, you might ask, what other kind is there? Wittgenstein’s answer to that, I think, is his greatest, and most neglected, achievement. Although Wittgenstein’s thought underwent changes between his early and his later work, his opposition to scientism was constant. Philosophy, he writes, “is not a theory but an activity.” It strives, not after scientific truth, but after conceptual clarity. In the Tractatus, this clarity is achieved through a correct understanding of the logical form of language, which, once achieved, was destined to remain inexpressible, leading Wittgenstein to compare his own philosophical propositions with a ladder, which is thrown away once it has been used to climb up on.

In his later work, Wittgenstein abandoned the idea of logical form and with it the notion of ineffable truths. The difference between science and philosophy, he now believed, is between two distinct forms of understanding: the theoretical and the non-theoretical. Scientific understanding is given through the construction and testing of hypotheses and theories; philosophical understanding, on the other hand, is resolutely non-theoretical. What we are after in philosophy is “the understanding that consists in seeing connections.”

Q20. According to the passage, Ludwig Wittgenstein developed his theory against which notion?

- a) **The notion that deep, impenetrable mysteries of life can be explained by science.**
- b) **The notion that the answer to any question from any discipline must have a scientific basis.**
- c) **The notion that every question has two answers - a scientific solution and a philosophical solution.**
- d) **The notion that many questions can be understood using philosophy and not just science.**

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**1**
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	**99**
% of students who attempted this question	**25.2**
% of students who got the question right of those who attempted	**48.77**

Video Solution

Text Solution

Number of words and Explanatory notes for RC:

Number of words: 633

Option A: There are many questions to which we do not have scientific answers, not because they are deep, impenetrable mysteries, but simply because they are not scientific questions. ..... And so there is a great interdisciplinary effort, involving physicists, computer scientists, cognitive psychologists and philosophers, to come up with tenable scientific answers to the questions: what is consciousness? What is the self? But choice A does not specifically answer the question.
Option B: ... If we wanted a label to describe this tide, we might call it "scientism," the view that every intelligible question has either a scientific solution or no solution at all. ... In the humanities, scientism takes the form of pretending that philosophy, literature, history, music and art can be studied as if they were sciences, with "researchers" compelled to spell out their "methodologies" – a pretence which has led to huge quantities of bad academic writing, characterised by bogus theorising, spurious specialisation and the development of pseudo-technical vocabularies. Wittgenstein would have looked upon these developments and wept. In the fifth para, we are again told: His opposition to scientism was constant (in his earlier as well as his later works). Hence choice B is correct.
Option C: If we wanted a label to describe this tide, we might call it "scientism," the view that every intelligible question has either a scientific solution or no solution at all. It is against this view that Wittgenstein set his face. Choice C is not the answer.
Option D: There are many questions to which we do not have scientific answers, not because they are deep, impenetrable mysteries, but simply because they are not scientific questions. .... Is a scientific theory the only kind of understanding? .... Philosophy, he writes, "is not a theory but an activity." It strives, not after scientific truth, but after conceptual clarity. Choice D is what encompasses Ludwig Wittgenstein's theory. Choice D does not answer the question. 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.

Ludwig Wittgenstein is one of the most influential philosophers of the twentieth century, and regarded by some as the most important since Immanuel Kant. His early work culminated in the *Tractatus Logico-Philosophicus*, the only philosophy book that Wittgenstein published (1921) during his lifetime. His later work *Philosophical Investigations* (published posthumously in 1953) has also done much to shape subsequent developments in philosophy, especially in the analytic tradition.

And yet in a sense Wittgenstein's thought has made very little impression on the intellectual life of this century. His work is opposed, as Wittgenstein himself realized, to "the spirit which informs the vast stream of European and American civilisation in which all of us stand." Nearly 50 years after his death, we can see, more clearly than ever, that the feeling that he was swimming against the tide was justified. If we wanted a label to describe this tide, we might call it "scientism," the view that every intelligible question has either a scientific solution or no solution at all. It is against this view that Wittgenstein set his face.

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the theory advanced by the mathematician Roger Penrose, that a stream of consciousness is an orchestrated sequence of quantum physical events taking place in the brain. Penrose's theory is that a moment of consciousness is produced by a sub-protein in the brain called a tubulin. The theory is, on Penrose's own admission, speculative, and it strikes many as being bizarrely implausible. But suppose we discovered that Penrose's theory was correct, would we, as a result, understand ourselves any better? Is a scientific theory the only kind of understanding?

Well, you might ask, what other kind is there? Wittgenstein's answer to that, I think, is his greatest, and most neglected, achievement. Although Wittgenstein's thought underwent changes between his early and his later work, his opposition to scientism was constant. Philosophy, he writes, "is not a theory but an activity." It strives, not after scientific truth, but after conceptual clarity. In the Tractatus, this clarity is achieved through a correct understanding of the logical form of language, which, once achieved, was destined to remain inexpressible, leading Wittgenstein to compare his own philosophical propositions with a ladder, which is thrown away once it has been used to climb up on.

In his later work, Wittgenstein abandoned the idea of logical form and with it the notion of ineffable truths. The difference between science and philosophy, he now believed, is between two distinct forms of understanding: the theoretical and the non-theoretical. Scientific understanding is given through the construction and testing of hypotheses and theories; philosophical understanding, on the other hand, is resolutely non-theoretical. What we are after in philosophy is "the understanding that consists in seeing connections."

Q21. According to the passage, all of the following can be inferred to be true of today's times EXCEPT?

- a) **We lack a generally accepted scientific theory of consciousness.**
- b) **Looking for scientific reasoning in everything can have negative academic consequences.**
- c) **Penrose's theory has begun to garner support from cognitive psychologists and philosophers.**
- d) **The study of humanities mimics the study of sciences.**

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**1**
Avg. time spent on this question by all students	**95**
Difficulty Level	**D**
Avg. time spent on this question by students who got this question right	**102**
% of students who attempted this question	**17.65**
% of students who got the question right of those who attempted	**42.2**

Video Solution

Text Solution

Number of words and Explanatory notes for RC:

Number of words: 633

Option A: There is a widespread feeling today that the great scandal of our times is that we lack a scientific theory of consciousness. Choice A is true and is not the answer.
Option B: Scientism takes many forms. In the humanities, it takes the form of pretending that philosophy, literature, history, music and art can be studied as if they were sciences, with "researchers" compelled to spell out their "methodologies" – a pretence which has led to huge quantities of bad academic writing, characterised by bogus theorising, spurious specialisation and the development of pseudo-technical vocabularies. Choice B is also true. Hence it is not the answer.
Option C: One of the leading competitors in this crowded field is the theory advanced by the mathematician Roger Penrose, that a stream of consciousness is an orchestrated sequence of quantum physical events taking place in the brain. Penrose's theory is that a moment of consciousness is produced by a sub-protein in the brain called a tubulin. The theory is, on Penrose's own admission, speculative, and it strikes many as being bizarrely implausible (as of today). So choice C is not correct and is the answer.
Option D: Scientism takes many forms. In the humanities, it takes the form of pretending that philosophy, literature, history, music and art can be studied as if they were sciences, with "researchers" compelled to spell out their "methodologies" .... Choice D is true and is not the answer.

Choice (C)

undefined

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And yet in a sense Wittgenstein's thought has made very little impression on the intellectual life of this century. His work is opposed, as Wittgenstein himself realized, to "the spirit which informs the vast stream of European and American civilisation in which all of us stand." Nearly 50 years after his death, we can see, more clearly than ever, that the feeling that he was swimming against the tide was justified. If we wanted a label to describe this tide, we might call it "scientism," the view that every intelligible question has either a scientific solution or no solution at all. It is against this view that Wittgenstein set his face.

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Well, you might ask, what other kind is there? Wittgenstein's answer to that, I think, is his greatest, and most neglected, achievement. Although Wittgenstein's thought underwent changes between his early and his later work, his opposition to scientism was constant. Philosophy, he writes, "is not a theory but an activity." It strives, not after scientific truth, but after conceptual clarity. In the Tractatus, this clarity is achieved through a correct understanding of the logical form of language, which, once achieved, was destined to remain inexpressible, leading Wittgenstein to compare his own philosophical propositions with a ladder, which is thrown away once it has been used to climb up on.

In his later work, Wittgenstein abandoned the idea of logical form and with it the notion of ineffable truths. The difference between science and philosophy, he now believed, is between two distinct forms of understanding: the theoretical and the non-theoretical. Scientific understanding is given through the construction and testing of hypotheses and theories; philosophical understanding, on the other hand, is resolutely non-theoretical. What we are after in philosophy is "the understanding that consists in seeing connections."

Q22. Which of the following can be correctly inferred from the penultimate para of the passage?

a) **Wittgenstein vehemently opposed scientism in his early works but supported it in his later works.**

b) **Wittgenstein agreed that scientific theory was the only kind of understanding there is.**

c) **Wittgenstein believed that science was an experiential activity and philosophy was purely theoretical in nature.**

d) **Wittgenstein believed that certain propositions in the Tractatus pulled the rug out from under their own feet.**

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	**98**

Time spent / Accuracy Analysis

Difficulty Level	**VD**
Avg. time spent on this question by students who got this question right	**113**
% of students who attempted this question	**21.84**
% of students who got the question right of those who attempted	**50.82**

Video Solution

Text Solution

Number of words and Explanatory notes for RC:

Number of words: 633

Option A: Choice A is not correct. Although Wittgenstein's thought underwent changes between his early and his later work, his opposition to scientism was constant.
Option B: Is a scientific theory the only kind of understanding? Well, you might ask, what other kind is there? Wittgenstein's answer to that, I think, is his greatest, and most neglected, achievement. Although Wittgenstein's thought underwent changes between his early and his later work, his opposition to scientism was constant ..... Choice B is not the answer.
Option C: Choice C is distorted. Philosophy, he writes, "is not a theory but an activity." It strives, not after scientific truth, but after conceptual clarity. In the last para, we are told that scientific understanding is given through the construction and testing of hypotheses and theories; philosophical understanding, on the other hand, is resolutely non-theoretical.
Option D: Philosophy strives, not after scientific truth, but after conceptual clarity. In the Tractatus, this clarity is achieved through a correct understanding of the logical form of language, which, once achieved, was destined to remain inexpressible, leading Wittgenstein to compare his own philosophical propositions with a ladder, which is thrown away once it has been used to climb up on. Choice D can be deduced.

Choice (D)

undefined

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being bizarrely implausible. But suppose we discovered that Penrose's theory was correct, would we, as a result, understand ourselves any better? Is a scientific theory the only kind of understanding?

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In his later work, Wittgenstein abandoned the idea of logical form and with it the notion of ineffable truths. The difference between science and philosophy, he now believed, is between two distinct forms of understanding: the theoretical and the non-theoretical. Scientific understanding is given through the construction and testing of hypotheses and theories; philosophical understanding, on the other hand, is resolutely non-theoretical. What we are after in philosophy is "the understanding that consists in seeing connections."

Q23. What is the correct difference between science and philosophy as can be understood from Wittgenstein's later work which is discussed in the last para of the passage?

a) **Philosophical understanding involves the testing of hypothesis and theories, and scientific understanding involves an analysis of the non-theoretical.**

b) **Philosophical understanding and scientific understanding are too far apart to have any common ground.**

c) **Philosophy deals with the correct interpretation of logical forms and science deals with ineffable truths.**

d) **Philosophy deals purely with the understanding of the theoretical while science deals purely with the understanding of the non-theoretical based on the theoretical.**

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	**101**
Difficulty Level	**D**
Avg. time spent on this question by students who got this question right	**111**
% of students who attempted this question	**22.82**
% of students who got the question right of those who attempted	**45.42**

Video Solution

Text Solution

Number of words and Explanatory notes for RC:

Number of words: 633

The last para of the passage describes the difference between scientific understanding and philosophy, according to Wittgenstein.
Option A: Choice A is reversed. Scientific understanding is given through the construction and testing of hypotheses and theories; philosophical understanding, on the other hand, is resolutely non-theoretical. Choice A is not the answer.
Option B: The difference between science and philosophy, he now believed, is between two **distinct** forms of understanding: the theoretical and the non-theoretical. Scientific understanding is given through the construction and testing of hypotheses and theories; philosophical understanding, on the other hand, is resolutely non-theoretical. Hence choice B can be inferred to be true.
Option C: In his later work, Wittgenstein abandoned the idea of logical form and with it the notion of ineffable truths. In his earlier work, Wittgenstein strove, not after scientific truth, but after conceptual clarity. In the Tractatus, this clarity was achieved through a correct understanding of the logical form of language. But choice C is out of context.
Option D: Scientific understanding is given through the construction and testing of hypotheses and theories; philosophical understanding, on the other hand, is resolutely non-theoretical. What we are after in philosophy is "the understanding that consists in seeing connections." Choice D is incorrect. Choice (B)

undefined

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Ludwig Wittgenstein is one of the most influential philosophers of the twentieth century, and regarded by some as the most important since Immanuel Kant. His early work culminated in the *Tractatus Logico-Philosophicus*, the only philosophy book that Wittgenstein published (1921) during his lifetime. His later work *Philosophical Investigations* (published posthumously in 1953) has also done much to shape subsequent developments in philosophy, especially in the analytic tradition.

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Q24. What is the style of the passage?

- a) **Argumentative**
- b) **Descriptive**
- c) **Analytical**
- d) **Narrative**

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**4**
Avg. time spent on this question by all students	**44**
Difficulty Level	**D**
Avg. time spent on this question by students who got this question right	**40**

Time spent / Accuracy Analysis

% of students who attempted this question	**23.59**
% of students who got the question right of those who attempted	**42.58**

Video Solution

Text Solution

Number of words and Explanatory notes for RC:

Number of words: 633

Option A: The passage is not argumentative. There is no debate i.e. the passage does not present arguments and counterarguments for any idea or concept. The author refrains from delivering an argument; neither does he try to convince people of an argument. Hence choice A is incorrect.
Option B: In a descriptive passage, the author describes facts with a view to make the passage vivid or memorable. A descriptive passage evokes emotions making the discussion vivid. This passage is not descriptive. Choice B is not the answer.
Option C: Analysis involves examining aspects of a situation in its plusses and minuses, and making an evaluation at the end of it. In this passage, the author explains Ludwig Wittgenstein's relevance in today's time with regard to his views and contribution in developing an alternate theory to the theory of scientism. Thus it compares the concept behind the two distinct forms of understanding and is an analytical passage. It does not only give facts but facts are used to support viewpoints. Hence choice C is the answer.
Option D: A narrative passage tells a story, usually from one person's viewpoint based on his personal experience. A narrative passage has details which relate in some way to the main point the writer is making. This passage is not narrative. Hence choice D is not the answer. Choice (C)

undefined

Q25. DIRECTIONS *for questions 25 to 28:* The following question has five sentences. Each sentence is labelled with a number. All but one of the sentences can be rearranged to form a logically coherent paragraph. Key in the number of the sentence that does not fit contextually with the paragraph formed by the other four sentences.

1. It suggests some of the outer limits within which humans operate - feelings, moods, perceptions not available to man because of his biological make-up - can be atleast analyzed.

2. This is a possibility that many reputable astronomers regard as almost inevitable.

3. Yet the biological sciences are developing so rapidly that the balance may well tip within our lifetimes.

4. Research into communication between man and the dolphin may prove to be extremely useful if, and when, man makes contact with extra-terrestrial life.

5. In the meantime, dolphin research is yielding new data on the ways in which man's sensory apparatus differs from that of other animals.

Your Answer:2 **Your answer is incorrect**

Show Correct Answer

Time spent / Accuracy Analysis

Time spent / Accuracy Analysis

Time taken by you to answer this question	**80**
Avg. time spent on this question by all students	**163**
Difficulty Level	**D**
Avg. time spent on this question by students who got this question right	**162**
% of students who attempted this question	**38.85**
% of students who got the question right of those who attempted	**11.12**

Video Solution

Text Solution

On a careful reading of the sentences, it can be observed that sentence 4 is a general sentence that begins the paragraph. It highlights the topic of discussion: Research into communication between man and the dolphin .... Sentence 4 is followed by sentence 2. "This is a possibility" and "almost inevitable" in sentence 2 links with "man makes contact with extra-terrestrial life" in sentence 4. Sentence 2 is followed by sentence 5. "In the meantime" in sentence 5 links with "if and when" in sentence 4 and "possibility ... almost inevitable" in sentence 2. Also "dolphin research" in sentence 5 links with "research into communication between man and the dolphin" given earlier in sentence 4. Also "may prove to be extremely useful" in sentence 4 links with "yielding new data" in sentence 5. So, 425. Sentence 5 is followed by sentence 1. The pronoun "it" in sentence 1 points to "dolphin research" in sentence 5. Also "yielding new data" in sentence 5 links with "some of the outer limits within which humans operate can be atleast analyzed" in sentence 1. Also "feelings, moods, perceptions not available to man because of his biological make-up" in sentence 1 is parallel to "man's sensory apparatus differs from that of other animals" in sentence 5. Hence, 4251. Sentence 3 is the odd sentence out. It does not refer to the research on communication between man and dolphin, that the remaining sentences talk about. Sentence 3 needs a precedent and more substantiation.

Ans: (3)

undefined

Q26. DIRECTIONS *for questions 25 to 28:* The following question has five sentences. Each sentence is labelled with a number. All but one of the sentences can be rearranged to form a logically coherent paragraph. Key in the number of the sentence that does not fit contextually with the paragraph formed by the other four sentences.

1. Value is the predecessor of structure.
2. Our structured reality is preselected on the basis of value, and really to understand structured reality requires an understanding of the value source from which it's derived.
3. Value, the leading edge of reality, is no longer an irrelevant offshoot of structure.
4. It's the preintellectual awareness that gives rise to it.
5. The classic pattern of rationality can be tremendously improved and expanded through the formal recognition of quality in its operation.

Your Answer:3 **Your answer is incorrect**

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**125**
Avg. time spent on this question by all students	**110**
Difficulty Level	**D**
Avg. time spent on this question by students who got this question right	**91**
% of students who attempted this question	**35.16**
% of students who got the question right of those who attempted	**56.64**

Video Solution

Text Solution

On a careful reading of the sentences, it can be observed that sentence 3 is a general sentence that begins the paragraph. It begins to highlights the relationship between value and structure. Sentences 3 and 1 form a mandatory pair. Value is not an offshoot of structure but it is the predecessor of structure. Sentence 1 is followed by sentence 4. The keyword 'predecessor' in sentence 1 is followed by "preintellectual awareness that gives rise to it (structure)" in sentence 4. Sentence 2 again brings in the word 'preselected' and follows sentence 4. "basis of value" and "value source from which it is derived" in sentence 2 point to "(value) gives rise to it (structure)" in sentence 4. Sentence 2 concludes the para. So, 3142. Sentence 5 is the odd sentence out. It brings in new terms "rationality" and "quality". Sentence 5 can be a part of another para as it needs a precedent and more substantiation. Ans: (5)

undefined

Q27. DIRECTIONS *for questions 25 to 28:* The following question has five sentences. Each sentence is labelled with a number. All but one of the sentences can be rearranged to form a logically coherent paragraph. Key in the number of the sentence that does not fit contextually with the paragraph formed by the other four sentences.

1. The answer is that language is a skill acquired laterally - that what children pick up from other children is more important in the acquisition of language as what they pick up at home.

2. Harris concludes that the environmental influence that helps children become who they are - that shapes their character and personality - is their peer group.

3. How is it the children of deaf parents manage to learn how to speak as well and as quickly as children whose parents speak to them from the day they were born?

4. In fact, it may well be an even more difficult strategy than the first, for the simple reason that parents simply don't wield that kind of influence over children.

5. Why, Judith Harris asks, do the children of recent immigrants almost never retain the accent of their parents?

Your Answer:5 **Your answer is incorrect**

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**202**
Avg. time spent on this question by all students	**136**

Time spent / Accuracy Analysis

Difficulty Level	**M**
Avg. time spent on this question by students who got this question right	**129**
% of students who attempted this question	**37.11**
% of students who got the question right of those who attempted	**26.97**

Video Solution

Text Solution

On a careful reading of the sentences, it can be observed that sentence 5 is a general sentence that begins the paragraph. It mentions the name of the person (Judith Hariis) posing a question. The question establishes the background of the discussion: children of immigrants never retain the accent of their parents. Sentence 3 continues the line of thought and follows question 5. So both statements 5 and 3 help to initiate the discussion. Sentence 1 provides the answer to the questions posed in sentences 5 and 3. language is a skill acquired laterally, from other children. Sentence 1 follows sentence 3. Sentence 2 concludes the discussion with the viewpoint of Harris. "what children pick up from other children" in sentence 1 links with "environmental influence" and "peer group" in sentence 2. So, 5312. Sentence 4 is the odd sentence out. "an even more difficult strategy than the first" and "parents don't wield **that** kind of influence over children" needs a precedent and more substantiation. Ans: (4)

undefined

Q28. DIRECTIONS *for questions 25 to 28:* The following question has five sentences. Each sentence is labelled with a number. All but one of the sentences can be rearranged to form a logically coherent paragraph. Key in the number of the sentence that does not fit contextually with the paragraph formed by the other four sentences.

1. Conformity becomes a problem when a country needs to alter an obviously wrong course.

2. Predictability in social and public life makes Japanese cities the safest on Earth.

3. Even today "culture" counts for much as an organizing force and social glue.

4. And a desire for consensus surely helped with the foundations for Japan's phenomenal post-war success - even if living conditions were cramped and salarymen's hours long.

5. What other country could have endured with such fortitude two decades of stagnation, not to mention the disastrous tsunami and nuclear meltdown of March 11th 2011?

Your Answer:3 Your answer is incorrect

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**80**
Avg. time spent on this question by all students	**123**
Difficulty Level	**D**
Avg. time spent on this question by students who got this question right	**112**

Time spent / Accuracy Analysis

% of students who attempted this question	**31.18**
% of students who got the question right of those who attempted	**33.19**

Video Solution

Text Solution

On a careful reading of the sentences, it can be observed that sentence 2 is a general sentence that begins the paragraph. It mentions the reason that Japanese cities are the safest cities on Earth. Sentence 2 is followed by sentence 4. "Predictability in **social** and public life" in sentence 2 links with "And a desire for consensus" in sentence 4. "makes Japanese cities the safest on Earth" in sentence 2 links with "surely helped with the foundations for Japan's phenomenal post-war success" in sentence 4. Sentence 3 (Culture .... **social** glue) continues the line of thought. So, sentences 2, 4 and 3 talk about the positive parameters that make Japanese cities the safest on Earth. Sentence 5 concludes with a rhetorical question. "could have endured with such fortitude" in sentence 2 links with "organizing force and social glue" in sentence 3. So, 2435. Sentence 1 is the odd sentence out. It is a negative sounding sentence and it does not fit in with the remaining sentences which positively explain why Japanese cities are the safest on Earth. The sentence brings in a new term "conformity" and it can be a part of another para. Ans: (1)

undefined

Q29. DIRECTIONS *for questions 29 and 30:* The following question 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.

Blame it on Christopher Fowler. Or the witching hour past midnight when the ghosts of writers past come knocking at our mullioned windows begging to be let in. They had been banished by bell, book and Kindle. They had been disapparated, as the new boy on the block Harry Potter would say, by the march of time, the demands of the market that crave a new author, a new sensation, and an easily marketable genre that captures the flavour of the moment. A crime-writer by choice, Christopher Fowler in *The Book of Forgotten Authors* has twitched the deep red velvet curtains of time and let loose the spirits of 99 writers past and now mostly forgotten. They lie like those bodies often found in wood-panelled libraries, preferably on a patterned Persian carpet in front of a fireplace of dying embers.

_____

a) **As the year draws to a close, here's a strong case for recalling vanished authors of the past.**

b) **Fowler describes how Kyril Bonfiglioli was able to remove shirt buttons at a party with a sword and fry peas in Worcestshire sauce.**

c) **Fowler kneels over them and performs a literary exorcism bringing them back to life.**

d) **Their print runs can be pulped, copies misfiled, manuscripts lost, banned and burnt.**

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**8**
Avg. time spent on this question by all students	**142**
Difficulty Level	**D**
Avg. time spent on this question by students who got this question right	**141**
% of students who attempted this question	**28.83**
% of students who got the question right of those who attempted	**44.25**

Video Solution

Text Solution

Text Solution

The para talks about the reasons that the writers of the past have been forgotten (banished by bell, book and Kindle ..... the march of time, the demands of the market that crave a new author, a new sensation, and an easily marketable genre). It also mentions that Christopher Fowler in *The Book of Forgotten Authors* has let loose the spirits of 99 writers past and now mostly forgotten.
Option A: Choice A does not connect well with the penultimate sentence. "here's a strong case" as given in choice A needs a precedent. Also "As the year draws to a close" seems unnecessary.
Option B: Choice B does not gel well with the theme of the given para which definitely is the introductory para of a larger text. Choice B can be a part of another paragraph which mentions some specific details and introduces personalities such as Kyril Bonfiglioli. Choice B is not the answer.
Option C: Choice C best concludes and completes the paragraph. It mirrors the introduction sentence: Blame it on Christopher Fowler. It connects well with the penultimate sentence: They lie like those bodies often found in wood-panelled libraries .... It echoes the main points mentioned in the para: The ghosts of writers past come knocking at our mullioned windows begging to be let in. He has twitched the deep red velvet curtains of time and let loose the spirits of 99 writers past and now mostly forgotten. Choice C is the answer.
Option D: Choice D is a misdirection. It sounds like an apt concluding sentence (a close answer choice). But it is out of context. It mentions a difficulty, perhaps, in tracking the authors down. But it does not help explain how Christopher Fowler in *The Book of Forgotten Authors* has twitched the deep red velvet curtains of time and let loose the spirits of 99 writers past and now mostly forgotten.
In Choice D there is also a shift of tense (can be). Hence choice D is not the answer.

Choice (C)

undefined

Q30. DIRECTIONS *for questions 29 and 30:* The following question 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.

In 1967 Canada invented a way to remove discrimination and prejudice from the process of choosing which immigrants to let in. The point system ignored an applicant's race and country of origin. Instead, it rewarded education, fluency in English or French and work experience. With the change, Asians supplanted white Europeans as the dominant immigrant group. The idea of basing admission to Canada on merit rather than on a bureaucrat's whim was visionary at the time. Several countries, including Australia, New England and Singapore adopted Canadian-style points systems.

_____

a) **In this, Canada is a follower rather than a leader.**

b) **But critics worry that in shifting from a policy based on civic values to one governed by commercial logic, Canada is making the system more vulnerable to fraud and discrimination.**

c) **Though more open than other countries, Canada has been characteristically hard-nosed about letting in refugees and immigrants' family members.**

d) **In Europe, even politicians hostile to uncontrolled immigration sing the praises of Canada's selective approach.**

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**98**
Avg. time spent on this question by all students	**126**
Difficulty Level	**M**
Avg. time spent on this question by students who got this question right	**125**
% of students who attempted this question	**35.2**
% of students who got the question right of those who attempted	**35.86**

Video Solution

Text Solution

The para is positive in tone and eulogizes the system that Canada invented in letting immigrants in. The system was based on merit rather than on a bureaucrat's whim.
Option A: Choice A is a distortion. It does not summarize the penultimate sentence which talks about other countries adopted Canadian-style points systems (for immigrants). If Choice A had read: In this, Canada is a leader rather than a follower., then it would have attracted some consideration.
Option B: Choice B sounds alarming (and negative). It does not connect well with the penultimate sentence of the para. "shifting from a policy based on civic values to one governed by commercial logic" as given in choice B needs a precedent and further elaboration. Choice B can be a part of another para.
Option C: Choice C is a specific comparison (between Canada and other countries) that seems to resemble the comparison made in the penultimate sentence. But it does not fit the context. It can come later in the thoughtflow.
Option D: Choice D is the best sentence to conclude the para. "sing the praises of Canada's selective approach" is a positive sentence that gels with the overall theme of the para. "Canada's selective approach" points to "Canada rewarded education, fluency in English or French and work experience." Choice (D)

undefined

Q31. DIRECTIONS *for questions 31 to 34:* The sentences given in the question, 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 this sequence of five numbers as your answer, in the input box given below the question.

1. Saimir Tahiri, Albania's interior minister, swoops down in a helicopter to observe the destruction of the plantations as piles of two-metre high bushes are set on fire.

2. It is peak season and dozens of sweat-drenched men are labouring in the fields near the Albanian town of Tragjas, harvesting a bumper crop of cannabis.

3. Europe's drug war is being fought here, he says, and billions of euros are at stake.

4. Overseeing them are policemen with sub-machine-guns and face masks.

5. Mr. Tahiri admits the choking fumes can be a problem for the policemen but adds that this is the least of their concerns.

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	**172**
Difficulty Level	**D**
Avg. time spent on this question by students who got this question right	**166**
% of students who attempted this question	**34.16**
% of students who got the question right of those who attempted	**16.9**

Video Solution

Text Solution

On a careful reading of the sentences, it can be observed that sentence 2 is a general sentence that begins the paragraph. It has the location: Albanian town of Tragjas. It mentions the topic of discussion: men harvesting a crop of cannabis. Sentence 2 is followed by sentence 4. "dozens of sweat-drenched men are labouring in the fields" in sentence 2 links with "overseeing them are policemen" in sentence 4. Sentence 4 is followed by sentence 1. "Overseeing them are policemen" in sentence 4 links with "Albania's interior minister, swoops down in a helicopter to observe ..." in sentence 1. Also "piles of two-metre high bushes are set on fire" in sentence 1 contrasts "harvesting a bumper crop of cannabis" given earlier in sentence 2. Sentence 1 is followed by sentence 5. "choking fumes" in sentence 5 points to "destruction of the plantations as piles of two-metre high bushes are set on fire" in sentence 1. Also "can be a problem for the policemen" in sentence 5 links with "policemen with sub-machine-guns and face masks" given earlier in sentence 4. So, 2415. Sentence 5 is followed by sentence 3. "this is the least of their concerns" in sentence 5 links with "Europe's drug war is being fought here" in sentence 3. The pronoun "he" in sentence 3 points to Mr. Tahiri in sentences 5 and 1. Sentence 3 concludes the para. Hence, 24153. Ans: (24153)

undefined

Q32. DIRECTIONS *for questions 31 to 34:* The sentences given in the question, 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 this sequence of five numbers as your answer, in the input box given below the question.

1. We derive personal pride by doing work that has a purpose, using reason, and exercising independent thinking, in integrity with our principles.

2. It is the accumulation of personal pride when one works in an appropriate environment.

3. In fact, many of the things that we look to as a source of self-esteem (like conspicuous consumption or cosmetic surgery) amount to a very poor substitute for true self-esteem.

4. Self-esteem can't be "granted" or "bestowed" by someone else; "you look good in that dress" isn't really a source of true self-esteem.

5. Real self-esteem comes from doing productive work and from creating value for others.

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	**144**
Difficulty Level	**VD**
Avg. time spent on this question by students who got this question right	**157**
% of students who attempted this question	**29.99**
% of students who got the question right of those who attempted	**17.64**

Video Solution

Text Solution

On a careful reading of the sentences, it can be observed that sentence 4 is a general sentence that begins the para. It establishes the background or topic of discussion: Self-esteem cannot be granted or bestowed. Sentence 3 (In fact ....) reiterates the same point and follows sentence 4. "isn't really a source of true self-esteem" in sentence 4 links with "amount to a very poor substitute for true self-esteem" in sentence 3. Also, "you look good in that dress" in sentence 4 runs parallel to "source of self-esteem (like conspicuous consumption or cosmetic surgery)" in sentence 3. Sentence 3 is followed by sentence 5. "amount to a very poor substitute for true self-esteem" in sentence 3 is contrasted by "Real self-esteem comes from doing ..." in sentence 5. Sentence 5 is followed by sentence 2. The pronoun "it" in sentence 2 points to "real self-esteem" in sentence 5. "when one works in an appropriate environment" in sentence 2 runs parallel to "productive work and from creating value for others" in sentence 5. So, 4352. Sentences 2 and 1 form a mandatory pair. "personal pride when one works in an appropriate environment" in sentence 2 links with "personal pride by doing work that has a purpose, using reason ....." in sentence 1. So, 43521. Ans: (43521)

undefined

Q33. DIRECTIONS *for questions 31 to 34:* The sentences given in the question, 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 this sequence of five numbers as your answer, in the input box given below the question.

1. Agreed 16 years earlier, the mechanism sought to limit damage to the stratospheric ozone layer that protects the planet from harmful ultraviolet radiation.

2. These substances also contribute to global warming.

3. To date, the agreement has averted the equivalent of more than 135 billion tonnes of carbon dioxide emissions.

4. The protocol phased out substances such as chlorofluorocarbons (CFCs) - coolants in devices ranging from air conditioners to refrigerators - which deplete the ozone.

5. "Perhaps the single most successful international agreement to date has been the Montreal protocol," declared Kofi Annan, then head of the United Nations, back in 2003.

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	**146**
Difficulty Level	**M**
Avg. time spent on this question by students who got this question right	**140**
% of students who attempted this question	**31.98**
% of students who got the question right of those who attempted	**19.09**

Video Solution

Text Solution

On a careful reading of the sentences, it can be observed that sentence 5 is a general sentence that begins the paragraph. It introduces the Montreal Protocol to the reader. Sentence 5 is followed by sentence 1 which mentions the objective of the Montreal Protocol (mechanism sought to limit damage to the stratospheric ozone layer ...) and tells us when it was agreed upon (Agreed 16 years earlier). Sentence 1 is followed by sentence 4. "The protocol" in sentence 4 points to "The Montreal protocol" in sentence 5 and also links with "the mechanism sought to" in sentence 1. Also "phased out substances such as chlorofluorocarbons (CFCs) which deplete the ozone" in sentence 4 links with "sought to limit damage to the stratospheric ozone layer" in sentence 1. Sentences 4 and 2 form a mandatory pair. "These substances" in sentence 2 points to "substances such as chlorofluorocarbons (CFCs)" in sentence 4. So sentence 2 follows sentence 4. Sentence 3 concludes the para. Sentence 3 mentions the achievement of the single most successful international agreement i.e. the Montreal protocol. Sentence 3 mirrors the introduction. So, 51423. Ans: (51423)

undefined

Q34. DIRECTIONS *for questions 31 to 34:* The sentences given in the question, 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 this sequence of five numbers as your answer, in the input box given below the question.

1. There is no logical path to these laws; only intuition, resting on sympathetic understanding of experience, can reach them.
2. He then tries to some extent to substitute the cosmos of his for the world of experience, and thus to overcome it.
3. Man tries to make for himself, in the fashion that suits him best, a simplified and intelligible picture of the world.
4. The supreme task is to arrive at those universal elementary laws from which the cosmos can be built up by pure deduction.
5. He makes this cosmos and its construction the pivot of his emotional life in order to find in this way the serenity which he cannot find in the narrow whirlpool of personal experience.

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	**244**
Difficulty Level	**VD**
Avg. time spent on this question by students who got this question right	**214**
% of students who attempted this question	**27.96**
% of students who got the question right of those who attempted	**15.34**

Video Solution

Text Solution

On a careful reading of the sentences, it can be observed that sentence 3 is a general sentence that begins the paragraph. It talks about man making a picture of the world. Sentence 3 is followed by sentence 2. "Man tries to make for himself a simplified and intelligible picture of the world" in sentence 3 links with "he then tries to some extent to substitute the cosmos of his" in sentence 2. Sentence 2 is followed by sentence 5. "for the world of experience" in sentence 2 links with "cannot find in the narrow whirlpool of personal experience" in sentence 5. "thus to overcome it" in sentence 2 links with "pivot of his emotional life in order to find in this way the serenity ... narrow whirlpool" in sentence 5. Sentence 2 (He tries to substitute the cosmos of his) is followed by sentence 5 (He makes this cosmos and its construction) which in turn is followed by sentence 4 (The supreme task), in that order. So, 3254. "makes this cosmos and its construction" in sentence 5 links with "the cosmos can be built up by pure deduction" in sentence 4. Sentences 4 and 1 form a mandatory pair. "arrive at those universal elementary laws" in sentence 4 links with "these laws" in sentence 1. Sentence 1 concludes the paragraph. So, 32541. Ans: (32541)

undefined

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

Three students, Ravi, Ramu and Raju, wrote a test, comprising six questions, with each question having four choices - A, B, C and D. Each correct answer was awarded three marks, while each incorrect answer attracted a penalty of -1 mark. No marks were awarded for questions left unattempted. The following table presents the answers marked for each question by each of the three students and the total marks that each of them obtained in the test:

Question	Ravi	Ramu	Raju
Q1	A	–	D
Q2	C	C	A
Q3	D	C	D
Q4	B	D	D
Q5	B	B	C
Q6	D	A	–
Marks	**10**	**11**	**3**

Note: ' - ' represents an unattempted question.

Q1. DIRECTIONS *for questions 1 and 2:* Select the correct alternative from the given choices.

Which of the following questions was answered correctly by Raju?

- a) **Q1**
- b) **Q2**
- c) **Q3** **Your answer is correct**
- d) **Q5**

Time spent / Accuracy Analysis

Time taken by you to answer this question	**780**
Avg. time spent on this question by all students	**405**
Difficulty Level	**M**
Avg. time spent on this question by students who got this question right	**415**
% of students who attempted this question	**39.78**
% of students who got the question right of those who attempted	**79.53**

Video Solution

Text Solution

Since Ravi, Ramu and Raju scored 10, 11 and 3 respectively, Ravi must have answered four questions correctly and two incorrectly, Ramu must have answered four questions correctly and one incorrectly, while Raju must have answered two questions correctly and three incorrectly.
Since Ramu answered only one question incorrectly, we can start by considering different cases for that incorrect answer by Ramu.
If Ramu answered Q2 incorrectly, then for the other questions he must have marked the right answer. In this case, Q2, Q3, Q4 and Q6 would be incorrect for Ravi. Since Ravi marked a wrong answer to only two questions, Q2 could not have been marked incorrectly by Ramu.
If Q3 was marked incorrectly by Ramu, the correct answers to Q2, Q4, Q5 and Q6 would be C, D, B and A respectively. In this case, Ravi answered Q4 and Q6 incorrectly. Since he answered four questions correctly, he must have answered all the other questions correctly. Hence, the answers for the questions must be A, C, D, D, B, A. In this case, Raju would have answered Q3 and Q4 correctly and the rest (except Q6) incorrectly. This is one possible case.
If Ramu marked Q4 incorrectly, the answers to Q2, Q3, Q5 and Q6 must be C, C, B and A. Ravi's answers to Q3 and Q6 are incorrect, and all his other answers must be correct. In this case, Raju's answers to all the questions will be incorrect. Hence, this case is not possible.
If Q5 was answered incorrectly by Ramu, all his other answers must have been correct. This implies that Ravi's answer to Q3, Q4, Q5, Q6 must have been wrong. Hence, Q5 must have been answered correctly.
If Ramu marked Q6 incorrectly, Ravi must have answered Q3 and Q4 incorrectly and the rest of the question correctly. The answers for the six questions in this case would be A, C, C, D, B, D. For these answers, Raju would have answered only one question, Q4, correctly. Hence, this case is also not possible.
Hence, only one case is possible, in which the answers to the six questions Q1 through Q6 are **A, C, D, D, B and A** respectively.

Raju answered Q3 correctly. Choice (C)

undefined

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

Three students, Ravi, Ramu and Raju, wrote a test, comprising six questions, with each question having four choices - A, B, C and D. Each correct answer was awarded three marks, while each incorrect answer attracted a penalty of -1 mark. No marks were awarded for questions left unattempted. The following table presents the answers marked for each question by each of the three students and the total marks that each of them obtained in the test:

Question	Ravi	Ramu	Raju
Q1	A	–	D
Q2	C	C	A
Q3	D	C	D
Q4	B	D	D
Q5	B	B	C
Q6	D	A	–
Marks	**10**	**11**	**3**

Note: ' - ' represents an unattempted question.

Q2. DIRECTIONS *for questions 1 and 2:* Select the correct alternative from the given choices.

What is the correct answer to Q1?

- a) **B**
- b) **D**
- c) **A** **Your answer is correct**

d) **C**

Time spent / Accuracy Analysis	
Time taken by you to answer this question	**46**
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	**67**
% of students who attempted this question	**37.39**
% of students who got the question right of those who attempted	**84.56**

Video Solution

Text Solution

Since Ravi, Ramu and Raju scored 10, 11 and 3 respectively, Ravi must have answered four questions correctly and two incorrectly, Ramu must have answered four questions correctly and one incorrectly, while Raju must have answered two questions correctly and three incorrectly.
Since Ramu answered only one question incorrectly, we can start by considering different cases for that incorrect answer by Ramu.
If Ramu answered Q2 incorrectly, then for the other questions he must have marked the right answer. In this case, Q2, Q3, Q4 and Q6 would be incorrect for Ravi. Since Ravi marked a wrong answer to only two questions, Q2 could not have been marked incorrectly by Ramu.
If Q3 was marked incorrectly by Ramu, the correct answers to Q2, Q4, Q5 and Q6 would be C, D, B and A respectively. In this case, Ravi answered Q4 and Q6 incorrectly. Since he answered four questions correctly, he must have answered all the other questions correctly. Hence, the answers for the questions must be A, C, D, D, B, A. In this case, Raju would have answered Q3 and Q4 correctly and the rest (except Q6) incorrectly. This is one possible case.
If Ramu marked Q4 incorrectly, the answers to Q2, Q3, Q5 and Q6 must be C, C, B and A. Ravi's answers to Q3 and Q6 are incorrect, and all his other answers must be correct. In this case, Raju's answers to all the questions will be incorrect. Hence, this case is not possible.
If Q5 was answered incorrectly by Ramu, all his other answers must have been correct. This implies that Ravi's answer to Q3, Q4, Q5, Q6 must have been wrong. Hence, Q5 must have been answered correctly.
If Ramu marked Q6 incorrectly, Ravi must have answered Q3 and Q4 incorrectly and the rest of the question correctly. The answers for the six questions in this case would be A, C, C, D, B, D. For these answers, Raju would have answered only one question, Q4, correctly. Hence, this case is also not possible.
Hence, only one case is possible, in which the answers to the six questions Q1 through Q6 are **A, C, D, D, B and A** respectively.

The correct answer to Q1 is choice A. Choice (C)

undefined

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

Three students, Ravi, Ramu and Raju, wrote a test, comprising six questions, with each question having four choices - A, B, C and D. Each correct answer was awarded three marks, while each incorrect answer attracted a penalty of -1 mark. No marks were awarded for questions left unattempted. The following table presents the answers marked for each question by each of the three students and the total marks that each of them obtained in the test:

Question	Ravi	Ramu	Raju
Q1	A	–	D
Q2	C	C	A
Q3	D	C	D
Q4	B	D	D
Q5	B	B	C
Q6	D	A	–
Marks	**10**	**11**	**3**

Note: ' - ' represents an unattempted question.

Q3. DIRECTIONS *for question 3:* Type in your answer in the input box provided below the question.

For how many questions is the correct answer to that question choice A?

Your Answer:2 **Your answer is correct**

Time spent / Accuracy Analysis

Time taken by you to answer this question	**54**
Avg. time spent on this question by all students	**67**
Difficulty Level	**M**
Avg. time spent on this question by students who got this question right	**63**
% of students who attempted this question	**36.78**
% of students who got the question right of those who attempted	**78.4**

Video Solution

Text Solution

Since Ravi, Ramu and Raju scored 10, 11 and 3 respectively, Ravi must have answered four questions correctly and two incorrectly, Ramu must have answered four questions correctly and one incorrectly, while Raju must have answered two questions correctly and three incorrectly.

Since Ramu answered only one question incorrectly, we can start by considering different cases for that incorrect answer by Ramu.

If Ramu answered Q2 incorrectly, then for the other questions he must have marked the right answer. In this case, Q2, Q3, Q4 and Q6 would be incorrect for Ravi. Since Ravi marked a wrong answer to only two questions, Q2 could not have been marked incorrectly by Ramu.

If Q3 was marked incorrectly by Ramu, the correct answers to Q2, Q4, Q5 and Q6 would be C, D, B and A respectively. In this case, Ravi answered Q4 and Q6 incorrectly. Since he answered four questions correctly, he must have answered all the other questions correctly. Hence, the answers for the questions must be A, C, D, D, B, A. In this case, Raju would have answered Q3 and Q4 correctly and the rest (except Q6) incorrectly. This is one possible case.

If Ramu marked Q4 incorrectly, the answers to Q2, Q3, Q5 and Q6 must be C, C, B and A. Ravi's answers to Q3 and Q6 are incorrect, and all his other answers must be correct. In this case, Raju's answers to all the questions will be incorrect. Hence, this case is not possible.

If Q5 was answered incorrectly by Ramu, all his other answers must have been correct. This implies that Ravi's answer to Q3, Q4, Q5, Q6 must have been wrong. Hence, Q5 must have been answered correctly.

If Ramu marked Q6 incorrectly, Ravi must have answered Q3 and Q4 incorrectly and the rest of the question correctly. The answers for the six questions in this case would be A, C, C, D, B, D. For these answers, Raju would have answered only one question, Q4, correctly. Hence, this case is also not possible.

Hence, only one case is possible, in which the answers to the six questions Q1 through Q6 are **A, C, D, D, B and A** respectively.

For two questions, the correct answer to the question is A. Ans: (2)

undefined

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

Three students, Ravi, Ramu and Raju, wrote a test, comprising six questions, with each question having four choices - A, B, C and D. Each correct answer was awarded three marks, while each incorrect answer attracted a penalty of -1 mark. No marks were awarded for questions left unattempted. The following table presents the answers marked for each question by each of the three students and the total marks that each of them obtained in the test:

Question	Ravi	Ramu	Raju
Q1	A	–	D
Q2	C	C	A
Q3	D	C	D
Q4	B	D	D
Q5	B	B	C
Q6	D	A	–
Marks	**10**	**11**	**3**

Note: ' - ' represents an unattempted question.

Q4. DIRECTIONS *for question 4:* Select the correct alternative from the given choices.

Which of the following questions was answered correctly by Raju but incorrectly by Ravi?

a) **Q4** **Your answer is correct**

b) **Q2**

c) **Q1**

d) **Q5**

Time spent / Accuracy Analysis

Time taken by you to answer this question	**26**
Avg. time spent on this question by all students	**51**
Difficulty Level	**M**
Avg. time spent on this question by students who got this question right	**46**
% of students who attempted this question	**36.62**
% of students who got the question right of those who attempted	**81.86**

Video Solution

Text Solution

Since Ravi, Ramu and Raju scored 10, 11 and 3 respectively, Ravi must have answered four questions correctly and two incorrectly, Ramu must have answered four questions correctly and one incorrectly, while Raju must have answered two questions correctly and three incorrectly.
Since Ramu answered only one question incorrectly, we can start by considering different cases for that incorrect answer by Ramu.
If Ramu answered Q2 incorrectly, then for the other questions he must have marked the right answer. In this case, Q2, Q3, Q4 and Q6 would be incorrect for Ravi. Since Ravi marked a wrong answer to only two questions, Q2 could not have been marked incorrectly by Ramu.
If Q3 was marked incorrectly by Ramu, the correct answers to Q2, Q4, Q5 and Q6 would be C, D, B and A respectively. In this case, Ravi answered Q4 and Q6 incorrectly. Since he answered four questions correctly, he must have answered all the other questions correctly. Hence, the answers for the questions must be A, C, D, D, B, A. In this case, Raju would have answered Q3 and Q4 correctly and the rest (except Q6) incorrectly. This is one possible case.
If Ramu marked Q4 incorrectly, the answers to Q2, Q3, Q5 and Q6 must be C, C, B and A. Ravi's answers to Q3 and Q6 are incorrect, and all his other answers must be correct. In this case, Raju's answers to all the questions will be incorrect. Hence, this case is not possible.
If Q5 was answered incorrectly by Ramu, all his other answers must have been correct. This implies that Ravi's answer to Q3, Q4, Q5, Q6 must have been wrong. Hence, Q5 must have been answered correctly.
If Ramu marked Q6 incorrectly, Ravi must have answered Q3 and Q4 incorrectly and the rest of the question correctly. The answers for the six questions in this case would be A, C, C, D, B, D. For these answers, Raju would have answered only one question, Q4, correctly. Hence, this case is also not possible.
Hence, only one case is possible, in which the answers to the six questions Q1 through Q6 are **A, C, D, D, B and A** respectively.

Raju answered Q4 correctly, but Ravi answered it incorrectly. Choice (A)

undefined

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

Eight teams, A through H, participated in a hockey tournament, which comprised quarter-finals, semi-finals and final. All the eight teams participated in the quarter-finals, with the winners of the quarter-finals participating in the semi-finals. The winners of the semi-finals participated in the final and the winner of the final was declared the winner of the tournament. Further, in every match, each team scored at least one goal and there were no matches in which both the teams scored equal number of goals. The following table gives the total goals scored for and the total goals scored against each team in all the matches in the tournament:

Team	A	B	C	D	E	F	G	H
Goals For	1	6	4	1	6	1	2	7
Goals Against	2	3	3	3	4	4	3	6

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

The maximum number of goals scored by any team in the semi-finals is

- 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	**41**
Avg. time spent on this question by all students	**315**
Difficulty Level	**D**
Avg. time spent on this question by students who got this question right	**333**
% of students who attempted this question	**18.38**
% of students who got the question right of those who attempted	**46.12**

Video Solution

Text Solution

From the table, we can say that A, D and F were eliminated in the first round, since the three teams have only one Goal for. G also must have been eliminated in the first round because if G had played two matches, it must have had a minimum score of 2-1 in the first game. Therefore, in the second game it must have had 0-2 score which is not possible since each team scored at least one goal in every match.
Therefore, A, D, F and G were eliminated in the first round and B, C, E, H went to the semi-finals.
C cannot have played with A in the quarter-finals because if it did, it will have remaining Goals For as 2 and Goals against as 2 at the end of the quarter-finals. In this case, C cannot have drawn the semi-finals, nor could it have lost or won.
Similarly, C cannot have played with F, since F has 4 Goals Against whereas C also has 4 goals for. If it advanced to the next round, C could not have scored any goals in the semi-finals, which is not possible.
C cannot have played with G, because, in this case C will have 1 Goal for and 1 goal against.
Hence, by elimination, C must have played with D.
B cannot have played with F, because it would have 2 Goals for and 2 goals against at the end of quarter-finals. As we have seen in the case of C, this score line is not possible.
B cannot have played with G as well, because if it did, it would have 3-1 at the end of quarter-finals. If it won the semi-finals with 2-1, the team playing against B in the finals would not have scored any goals against it. Other scenarios are also not possible in this case.
Hence, B must have played with A.
If G has played against E, E must have 3-2 at the end of quarter-finals. If E has won the semi-finals it must have won the semi-finals 2-1. But this is not possible because the finals would be a draw in this case. Hence, G must have played with H and F must have played with E.
The Goals for and Goals against for the four teams at the end of the quarter-finals is given below:

Team	B	C	E	H
Goals For	4	1	2	4
Goals Against	2	2	3	4

E and C could not have won the semi-finals that each of them played. Further, E could not have played against C, and it could not have played against B. Hence, E must have played against H. B and C must have played against each other.

This implies that after the end of the semi-finals, B would have 2 goals for and 1 against whereas H would have 1 goal for and 2 against. Therefore, B would have won the finals.

H scored the maximum number of goals i.e. 3, in a semi-final. Choice (B)

undefined

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

Eight teams, A through H, participated in a hockey tournament, which comprised quarter-finals, semi-finals and final. All the eight teams participated in the quarter-finals, with the winners of the quarter-finals participating in the semi-finals. The winners of the semi-finals participated in the final and the winner of the final was declared the winner of the tournament. Further, in every match, each team scored at least one goal and there were no matches in which both the teams scored equal number of goals. The following table gives the total goals scored for and the total goals scored against each team in all the matches in the tournament:

Team	A	B	C	D	E	F	G	H
Goals For	1	6	4	1	6	1	2	7
Goals Against	2	3	3	3	4	4	3	6

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

Which team was the winner of the tournament?

- a) **C**
- b) **E**
- c) **H**
- d) **B**

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**1**
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	**79**
% of students who attempted this question	**21.43**
% of students who got the question right of those who attempted	**64.74**

Video Solution

Text Solution

From the table, we can say that A, D and F were eliminated in the first round, since the three teams have only one Goal for. G also must have been eliminated in the first round because if G had played two matches, it must have had a minimum score of 2-1 in the first game. Therefore, in the second game it must have had 0-2 score which is not possible since each team scored at least one goal in every match.
Therefore, A, D, F and G were eliminated in the first round and B, C, E, H went to the semi-finals.
C cannot have played with A in the quarter-finals because if it did, it will have remaining Goals For as 2 and Goals against as 2 at the end of the quarter-finals. In this case, C cannot have drawn the semi-finals, nor could it have lost or won.
Similarly, C cannot have played with F, since F has 4 Goals Against whereas C also has 4 goals for. If it advanced to the next round, C could not have scored any goals in the semi-finals, which is not possible.
C cannot have played with G, because, in this case C will have 1 Goal for and 1 goal against.
Hence, by elimination, C must have played with D.
B cannot have played with F, because it would have 2 Goals for and 2 goals against at the end of quarter-finals. As we have seen in the case of C, this score line is not possible.
B cannot have played with G as well, because if it did, it would have 3-1 at the end of quarter-finals. If it won the semi-finals with 2-1, the team playing against B in the finals would not have scored any goals against it. Other scenarios are also not possible in this case.
Hence, B must have played with A.
If G has played against E, E must have 3-2 at the end of quarter-finals. If E has won the semi-finals it must have won the semi-finals 2-1. But this is not possible because the finals would be a draw in this case. Hence, G must have played with H and F must have played with E.
The Goals for and Goals against for the four teams at the end of the quarter-finals is given below:

Team	B	C	E	H
Goals For	4	1	2	4
Goals Against	2	2	3	4

E and C could not have won the semi-finals that each of them played. Further, E could not have played against C, and it could not have played against B. Hence, E must have played against H. B and C must have played against each other.

This implies that after the end of the semi-finals, B would have 2 goals for and 1 against whereas H would have 1 goal for and 2 against. Therefore, B would have won the finals.

B was the winner of the tournament. Choice (D)

undefined

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

Eight teams, A through H, participated in a hockey tournament, which comprised quarter-finals, semi-finals and final. All the eight teams participated in the quarter-finals, with the winners of the quarter-finals participating in the semi-finals. The winners of the semi-finals participated in the final and the winner of the final was declared the winner of the tournament.

Further, in every match, each team scored at least one goal and there were no matches in which both the teams scored equal number of goals. The following table gives the total goals scored for and the total goals scored against each team in all the matches in the tournament:

Team	A	B	C	D	E	F	G	H
Goals For	1	6	4	1	6	1	2	7
Goals Against	2	3	3	3	4	4	3	6

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

Which of the following teams had the greatest margin of victory, i.e. Goals For - Goals Against, in any single match?

- a) **B**
- b) **E**
- c) **H**
- d) **F**

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**1**
Avg. time spent on this question by all students	**64**
Difficulty Level	**D**
Avg. time spent on this question by students who got this question right	**85**
% of students who attempted this question	**18.3**
% of students who got the question right of those who attempted	**19.71**

Video Solution

Text Solution

From the table, we can say that A, D and F were eliminated in the first round, since the three teams have only one Goal for. G also must have been eliminated in the first round because if G had played two matches, it must have had a minimum score of 2-1 in the first game. Therefore, in the second game it must have had 0-2 score which is not possible since each team scored at least one goal in every match.
Therefore, A, D, F and G were eliminated in the first round and B, C, E, H went to the semi-finals.
C cannot have played with A in the quarter-finals because if it did, it will have remaining Goals For as 2 and Goals against as 2 at the end of the quarter-finals. In this case, C cannot have drawn the semi-finals, nor could it have lost or won.
Similarly, C cannot have played with F, since F has 4 Goals Against whereas C also has 4 goals for. If it advanced to the next round, C could not have scored any goals in the semi-finals, which is not possible.
C cannot have played with G, because, in this case C will have 1 Goal for and 1 goal against.
Hence, by elimination, C must have played with D.
B cannot have played with F, because it would have 2 Goals for and 2 goals against at the end of quarter-finals. As we have seen in the case of C, this score line is not possible.
B cannot have played with G as well, because if it did, it would have 3-1 at the end of quarter-finals. If it won the semi-finals with 2-1, the team playing against B in the finals would not have scored any goals against it. Other scenarios are also not possible in this case.
Hence, B must have played with A.
If G has played against E, E must have 3-2 at the end of quarter-finals. If E has won the semi-finals it must have won the semi-finals 2-1. But this is not possible because the finals would be a draw in this case. Hence, G must have played with H and F must have played with E.
The Goals for and Goals against for the four teams at the end of the quarter-finals is given below:

Team	B	C	E	H
Goals For	4	1	2	4
Goals Against	2	2	3	4

E and C could not have won the semi-finals that each of them played. Further, E could not have played against C, and it could not have played against B. Hence, E must have played against H. B and C must have played against each other.

This implies that after the end of the semi-finals, B would have 2 goals for and 1 against whereas H would have 1 goal for and 2 against. Therefore, B would have won the finals.

E had the greatest margin of victory in the match against F which has a final score of 4-1. Choice (B)

undefined

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

Eight teams, A through H, participated in a hockey tournament, which comprised quarter-finals, semi-finals and final. All the eight teams participated in the quarter-finals, with the winners of the quarter-finals participating in the semi-finals. The winners of the semi-finals participated in the final and the winner of the final was declared the winner of the tournament. Further, in every match, each team scored at least one goal and there were no matches in which both the teams scored equal number of goals. The following table gives the total goals scored for and the total goals scored against each team in all the matches in the tournament:

Team	A	B	C	D	E	F	G	H
Goals For	1	6	4	1	6	1	2	7
Goals Against	2	3	3	3	4	4	3	6

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

What is the total number of goals scored by H in all the matches that it had won?

- a) **4**
- b) **5**
- c) **6**
- d) **7**

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	**61**
Difficulty Level	**D**
Avg. time spent on this question by students who got this question right	**70**
% of students who attempted this question	**15.66**
% of students who got the question right of those who attempted	**39.46**

Video Solution

Text Solution

From the table, we can say that A, D and F were eliminated in the first round, since the three teams have only one Goal for. G also must have been eliminated in the first round because if G had played two matches, it must have had a minimum score of 2-1 in the first game. Therefore, in the second game it must have had 0-2 score which is not possible since each team scored at least one goal in every match.
Therefore, A, D, F and G were eliminated in the first round and B, C, E, H went to the semi-finals.
C cannot have played with A in the quarter-finals because if it did, it will have remaining Goals For as 2 and Goals against as 2 at the end of the quarter-finals. In this case, C cannot have drawn the semi-finals, nor could it have lost or won.
Similarly, C cannot have played with F, since F has 4 Goals Against whereas C also has 4 goals for. If it advanced to the next round, C could not have scored any goals in the semi-finals, which is not possible.
C cannot have played with G, because, in this case C will have 1 Goal for and 1 goal against.
Hence, by elimination, C must have played with D.
B cannot have played with F, because it would have 2 Goals for and 2 goals against at the end of quarter-finals. As we have seen in the case of C, this score line is not possible.
B cannot have played with G as well, because if it did, it would have 3-1 at the end of quarter-finals. If it won the semi-finals with 2-1, the team playing against B in the finals would not have scored any goals against it. Other scenarios are also not possible in this case.
Hence, B must have played with A.
If G has played against E, E must have 3-2 at the end of quarter-finals. If E has won the semi-finals it must have won the semi-finals 2-1. But this is not possible because the finals would be a draw in this case. Hence, G must have played with H and F must have played with E.
The Goals for and Goals against for the four teams at the end of the quarter-finals is given below:

Team	B	C	E	H
Goals For	4	1	2	4
Goals Against	2	2	3	4

E and C could not have won the semi-finals that each of them played. Further, E could not have played against C, and it could not have played against B. Hence, E must have played against H. B and C must have played against each other.

This implies that after the end of the semi-finals, B would have 2 goals for and 1 against whereas H would have 1 goal for and 2 against. Therefore, B would have won the finals.

H scored six goals in the matches that it won. Choice (C)

undefined

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

Six persons, Manish, Nagesh, Hamish, Satish, Lokesh and Brijesh, went to a stadium to watch a cricket match and they reached the stadium at different times. During the match, four events occurred - there was an interruption due to rain, a

bowler took a hat-trick, there was an innings break, and a batsman hit a half-century - each at a different time, not necessarily in the same order. The following information is known about the order in which the six persons reached the stadium and the order in which the events occurred:

i. Nagesh reached the stadium immediately after Brijesh and there was an interruption due to rain immediately after Nagesh reached the stadium.

ii. Manish reached the stadium just as the innings break commenced and he reached before Satish who was able to witness the hat-trick by the bowler.

iii. None of the six persons reached the stadium after Lokesh but before Hamish, and among the two, only Lokesh had reached the stadium by the time the bowler took a hat-trick.

iv. The innings break commenced after the batsman hit a half-century and Brijesh reached the stadium just as the batsman scored a half-century.

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

Who was the last person to reach the stadium?

a)

Lokesh

b)

Satish

c)

Hamish

Your answer is correct

d)

Manish

Time spent / Accuracy Analysis

Time taken by you to answer this question	**534**
Avg. time spent on this question by all students	**371**
Difficulty Level	**E**
Avg. time spent on this question by students who got this question right	**382**
% of students who attempted this question	**41.96**
% of students who got the question right of those who attempted	**43.82**

Video Solution

Text Solution

Let IB represent the innings break, HT represent the hat trick, HC represent the half century and IR represent the interruption due to rain.
Given that Nagesh reached immediately after Brijesh. From (iii), Hamish reached immediately after Lokesh.
From (iv), IB occurred after HC and from (ii), IB occurred before HT. From (iv) and (i), since Brijesh reached the stadium at the same time HC occurred, and since Nagesh reached at the same time IR occurred, HC must have been the first event and IR must have been the second event. From this it follows that IB must be the third event and HT must have been the last event.
From (ii) Manish reached before Satish just as IB occurred and Satish reached in time to witness HT. Hence, from (iii), Hamish must have been the last to reach and Lokesh must have been the fifth to reach. Brijesh and Nagesh must have been the first and second to reach whereas Manish and Satish must have been the third and the fourth respectively.
The following table gives this information.

Person	Brijesh	Nagesh	Manish	Satish	Lokesh	Hamish
Event	HC	IR	IB	HT		

Hamish was the last person to reach the stadium. Choice (C)

undefined

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

Six persons, Manish, Nagesh, Hamish, Satish, Lokesh and Brijesh, went to a stadium to watch a cricket match and they reached the stadium at different times. During the match, four events occurred - there was an interruption due to rain, a bowler took a hat-trick, there was an innings break, and a batsman hit a half-century - each at a different time, not necessarily in the same order. The following information is known about the order in which the six persons reached the stadium and the order in which the events occurred:

i. Nagesh reached the stadium immediately after Brijesh and there was an interruption due to rain immediately after Nagesh reached the stadium.

ii. Manish reached the stadium just as the innings break commenced and he reached before Satish who was able to witness the hat-trick by the bowler.

iii. None of the six persons reached the stadium after Lokesh but before Hamish, and among the two, only Lokesh had reached the stadium by the time the bowler took a hat-trick.

iv. The innings break commenced after the batsman hit a half-century and Brijesh reached the stadium just as the batsman scored a half-century.

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

Which of the following events occurred after the maximum number of persons reached the stadium?

○ a)

Batsman hitting a half-century

b)

Bowler taking a hat-trick

Your answer is correct

c)

Innings break

d)

Interruption due to rain

Time spent / Accuracy Analysis

Time taken by you to answer this question	**19**
Avg. time spent on this question by all students	**71**
Difficulty Level	**E**
Avg. time spent on this question by students who got this question right	**66**
% of students who attempted this question	**41.11**
% of students who got the question right of those who attempted	**85.41**

Video Solution

Text Solution

Let IB represent the innings break, HT represent the hat trick, HC represent the half century and IR represent the interruption due to rain.
Given that Nagesh reached immediately after Brijesh. From (iii), Hamish reached immediately after Lokesh.
From (iv), IB occurred after HC and from (ii), IB occurred before HT. From (iv) and (i), since Brijesh reached the stadium at the same time HC occurred, and since Nagesh reached at the same time IR occurred, HC must have been the first event and IR must have been the second event. From this it follows that IB must be the third event and HT must have been the last event.
From (ii) Manish reached before Satish just as IB occurred and Satish reached in time to witness HT. Hence, from (iii), Hamish must have been the last to reach and Lokesh must have been the fifth to reach. Brijesh and Nagesh must have been the first and second to reach whereas Manish and Satish must have been the third and the fourth respectively.
The following table gives this information.

Person	Brijesh	Nagesh	Manish	Satish	Lokesh	Hamish
Event	HC	IR	IB	HT		

The bowler took a hat-trick after five persons reached the stadium. Choice (B)

undefined

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

Six persons, Manish, Nagesh, Hamish, Satish, Lokesh and Brijesh, went to a stadium to watch a cricket match and they reached the stadium at different times. During the match, four events occurred - there was an interruption due to rain, a bowler took a hat-trick, there was an innings break, and a batsman hit a half-century - each at a different time, not necessarily in the same order. The following information is known about the order in which the six persons reached the stadium and the order in which the events occurred:

i. Nagesh reached the stadium immediately after Brijesh and there was an interruption due to rain immediately after Nagesh reached the stadium.

ii. Manish reached the stadium just as the innings break commenced and he reached before Satish who was able to witness the hat-trick by the bowler.

iii. None of the six persons reached the stadium after Lokesh but before Hamish, and among the two, only Lokesh had reached the stadium by the time the bowler took a hat-trick.

iv. The innings break commenced after the batsman hit a half-century and Brijesh reached the stadium just as the batsman scored a half-century.

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

How many persons reached the stadium by the time there was an interruption due to rain?

a)

0

b)

1

c)

2

Your answer is correct

d)

3

Time spent / Accuracy Analysis

Time taken by you to answer this question	**67**
Avg. time spent on this question by all students	**50**
Difficulty Level	**E**
Avg. time spent on this question by students who got this question right	**47**
% of students who attempted this question	**40.11**
% of students who got the question right of those who attempted	**54.01**

Video Solution

Text Solution

Let IB represent the innings break, HT represent the hat trick, HC represent the half century and IR represent the interruption due to rain.
Given that Nagesh reached immediately after Brijesh. From (iii), Hamish reached immediately after Lokesh.
From (iv), IB occurred after HC and from (ii), IB occurred before HT. From (iv) and (i), since Brijesh reached the stadium at the same time HC occurred, and since Nagesh reached at the same time IR occurred, HC must have been the first event and IR must have been the second event. From this it follows that IB must be the third event and HT must have been the last event.
From (ii) Manish reached before Satish just as IB occurred and Satish reached in time to witness HT. Hence, from (iii), Hamish must have been the last to reach and Lokesh must have been the fifth to reach. Brijesh and Nagesh must have been the first and second to reach whereas Manish and Satish must have been the third and the fourth respectively.
The following table gives this information.

Person	Brijesh	Nagesh	Manish	Satish	Lokesh	Hamish
Event	HC	IR	IB	HT		

Brijesh and Nagesh reached the stadium before there was an interruption due to rain.

Choice (C)

undefined

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

Six persons, Manish, Nagesh, Hamish, Satish, Lokesh and Brijesh, went to a stadium to watch a cricket match and they reached the stadium at different times. During the match, four events occurred - there was an interruption due to rain, a bowler took a hat-trick, there was an innings break, and a batsman hit a half-century - each at a different time, not necessarily in the same order. The following information is known about the order in which the six persons reached the stadium and the order in which the events occurred:

i. Nagesh reached the stadium immediately after Brijesh and there was an interruption due to rain immediately after Nagesh reached the stadium.

ii. Manish reached the stadium just as the innings break commenced and he reached before Satish who was able to witness the hat-trick by the bowler.

iii. None of the six persons reached the stadium after Lokesh but before Hamish, and among the two, only Lokesh had reached the stadium by the time the bowler took a hat-trick.

iv. The innings break commenced after the batsman hit a half-century and Brijesh reached the stadium just as the batsman scored a half-century.

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

If the play before the innings break is referred to as the first innings, which of the following occurred during the first innings of the match?

a)

Nagesh reaching the stadium

Your answer is correct

b)

Lokesh reaching the stadium

c)

Bowler taking a hat-trick

d)

More than one of the above

Time spent / Accuracy Analysis

Time taken by you to answer this question	**30**
Avg. time spent on this question by all students	**63**
Difficulty Level	**E**
Avg. time spent on this question by students who got this question right	**60**
% of students who attempted this question	**36.69**
% of students who got the question right of those who attempted	**75.79**

Video Solution

Text Solution

Let IB represent the innings break, HT represent the hat trick, HC represent the half century and IR represent the interruption due to rain.
Given that Nagesh reached immediately after Brijesh. From (iii), Hamish reached immediately after Lokesh.
From (iv), IB occurred after HC and from (ii), IB occurred before HT. From (iv) and (i), since Brijesh reached the stadium at the same time HC occurred, and since Nagesh reached at the same time IR occurred, HC must have been the first event and IR must have been the second event. From this it follows that IB must be the third event and HT must have been the last event.
From (ii) Manish reached before Satish just as IB occurred and Satish reached in time to witness HT. Hence, from (iii), Hamish must have been the last to reach and Lokesh must have been the fifth to reach. Brijesh and Nagesh must have been the first and second to reach whereas Manish and Satish must have been the third and the fourth respectively.
The following table gives this information.

Person	Brijesh	Nagesh	Manish	Satish	Lokesh	Hamish
Event	HC	IR	IB	HT		

Nagesh reached the stadium during the first innings of the match. Choice (A)

undefined

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

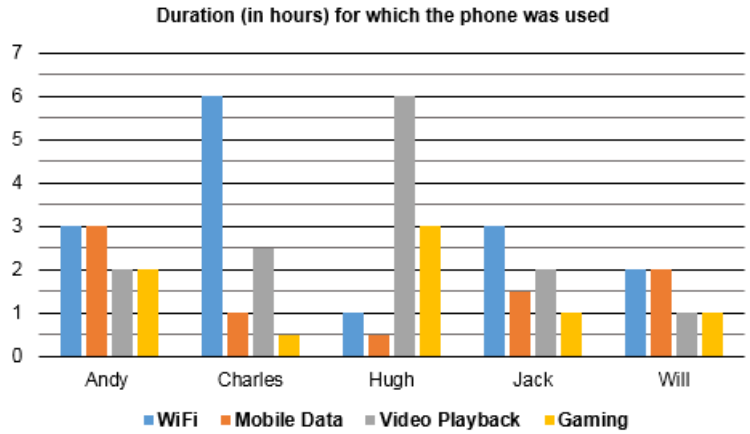
Shyomi Inc. wanted to introduce a new smartphone, Me2, in India. The phone can be used for four different activities - Browsing using

WiFi, Browsing using Mobile Data, Video Playback and Gaming. The battery of Me2 gets discharged uniformly over a certain duration depending on the activity for which the phone is used. A fully discharged battery of the phone takes exactly one hour to charge completely. The phone cannot be used for more than one activity at the same time and the battery will not get discharged in any other way. The following table provides the number of hours that the fully charged battery of the phone will last when the phone is used for different activities:

Activity	Time (hours)
Browsing using WiFi	6
Browsing using Mobile Data	3
Video Playback	4
Gaming	2

On a particular day, at exactly 8:00 AM, Shyomi gave a fully charged Me2 phone to each of five tech reviewers – Andy, Charles, Hugh, Jack and Will. Each reviewer used the phone for a certain period of time over the day. Also, each reviewer charged the phone every time the battery of the phone got completely discharged, irrespective of whether or not he used the phone again. None of them used the phone when it was being charged and they waited until the phone was completely charged before using it again. After using the phone, each reviewer returned the phone back to the company. When the phone was with the reviewers, the phone was never idle, i.e., the phone was either being used by the reviewers or being charged.

The bar graph below provides the duration for which each reviewer used Me2 for each activity during the day.



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

Who among the following would have charged his phone for the maximum number of times during the given period?

a)

Jack

b)

Charles

c)

Hugh

d)

Will

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	**406**
Difficulty Level	**M**
Avg. time spent on this question by students who got this question right	**412**
% of students who attempted this question	**33.26**
% of students who got the question right of those who attempted	**77.31**

Video Solution

Text Solution

Option A: Jack used WiFi on his phone for 3 hours using 50% of the battery (3/6).
He used Mobile Data for 1.5 hours using another 50%.
Video Playback and Gaming will also contribute to 50% and 50% respectively.
Hence, Jack would have charged his phone twice.

Option B: WiFi = 100%
Mobile Data = 33.33%
Video Playback = 2.5/4 = 62.5%
Gaming = 25%
Hence, Charles would have charged his phone twice.

Option C: WiFi = 1/6 = 16.67%
Mobile Data = 16.67%
Video Playback = 6/4 = 150%
Gaming = 150%
Hence, Hugh would have charged his phone thrice.

Option D: WiFi = 33.33%
Mobile Data = 66.67%
Video Playback = 25%
Gaming = 50%
Hence, Will would have charged his phone once.

Hence, Hugh charged his phone for the maximum number of times. Choice (C)

undefined

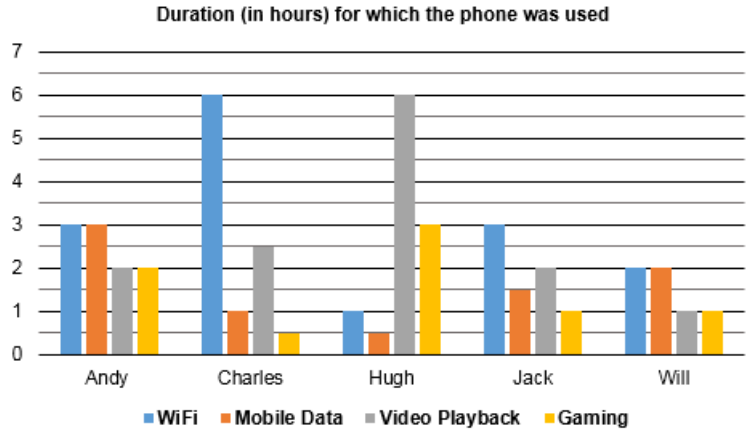
DIRECTIONS*for questions 13 to 16:*Answer the questions on the basis of the information given below.

Shyomi Inc. wanted to introduce a new smartphone, Me2, in India. The phone can be used for four different activities - Browsing using WiFi, Browsing using Mobile Data, Video Playback and Gaming. The battery of Me2 gets discharged uniformly over a certain duration depending on the activity for which the phone is used. A fully discharged battery of the phone takes exactly one hour to charge completely. The phone cannot be used for more than one activity at the same time and the battery will not get discharged in any other way. The following table provides the number of hours that the fully charged battery of the phone will last when the phone is used for different activities:

Activity	Time (hours)
Browsing using WiFi	6
Browsing using Mobile Data	3
Video Playback	4
Gaming	2

On a particular day, at exactly 8:00 AM, Shyomi gave a fully charged Me2 phone to each of five tech reviewers – Andy, Charles, Hugh, Jack and Will. Each reviewer used the phone for a certain period of time over the day. Also, each reviewer charged the phone every time the battery of the phone got completely discharged, irrespective of whether or not he used the phone again. None of them used the phone when it was being charged and they waited until the phone was completely charged before using it again. After using the phone, each reviewer returned the phone back to the company. When the phone was with the reviewers, the phone was never idle, i.e., the phone was either being used by the reviewers or being charged.

The bar graph below provides the duration for which each reviewer used Me2 for each activity during the day.



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

When will Andy start charging his phone for the third time?

a)

8:00 PM

b)

6:00 PM

c)

4:00 PM

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	**1**
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	**139**
% of students who attempted this question	**30.79**
% of students who got the question right of those who attempted	**26.96**

Video Solution

Text Solution

Andy used WiFi on his phone for 3 hours using 50% battery. He used Mobile Data for 3 hours using 100% of the battery. Similarly, Video playback would have utilized 50% battery and gaming would have utilized 100% of the battery. We cannot determine exactly when he could have charged his phone for the first or the second time, since we do not know the exact pattern of his usage. But he must have charged his phone for the third time after using the WiFi for 3 hours, Mobile Data for 3 hours, Video Playback for 2 hours and Gaming for 2 hours. Hence, he would have charged his phone after 10 hours of usage. However, he would have charged his phone twice during the day. Since each charge takes one hour, he must have charged his phone for the third time after 12 hours, i.e., at 8:00 PM. Choice (A)

undefined

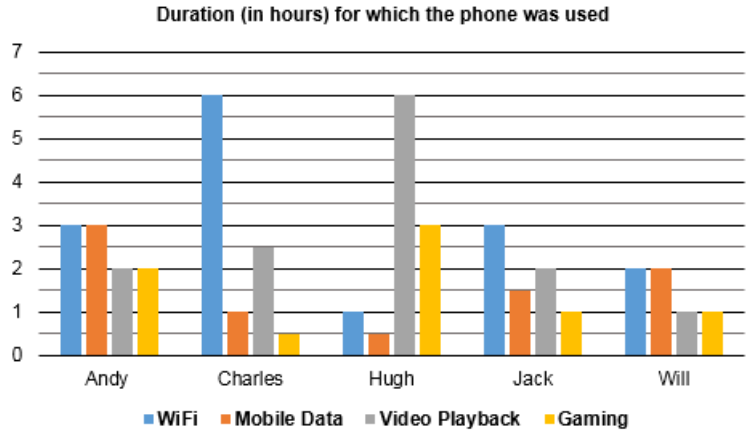
DIRECTIONS*for questions 13 to 16:*Answer the questions on the basis of the information given below.

Shyomi Inc. wanted to introduce a new smartphone, Me2, in India. The phone can be used for four different activities - Browsing using WiFi, Browsing using Mobile Data, Video Playback and Gaming. The battery of Me2 gets discharged uniformly over a certain duration depending on the activity for which the phone is used. A fully discharged battery of the phone takes exactly one hour to charge completely. The phone cannot be used for more than one activity at the same time and the battery will not get discharged in any other way. The following table provides the number of hours that the fully charged battery of the phone will last when the phone is used for different activities:

Activity	Time (hours)
Browsing using WiFi	6
Browsing using Mobile Data	3
Video Playback	4
Gaming	2

On a particular day, at exactly 8:00 AM, Shyomi gave a fully charged Me2 phone to each of five tech reviewers – Andy, Charles, Hugh, Jack and Will. Each reviewer used the phone for a certain period of time over the day. Also, each reviewer charged the phone every time the battery of the phone got completely discharged, irrespective of whether or not he used the phone again. None of them used the phone when it was being charged and they waited until the phone was completely charged before using it again. After using the phone, each reviewer returned the phone back to the company. When the phone was with the reviewers, the phone was never idle, i.e., the phone was either being used by the reviewers or being charged.

The bar graph below provides the duration for which each reviewer used Me2 for each activity during the day.



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

What will be the percentage of charge remaining in Charles' phone when he returned the phone?

a)

65.42%

b)

79.17%

c)

68.45%

d)

74.51%

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**1**
Avg. time spent on this question by all students	**145**
Difficulty Level	**M**
Avg. time spent on this question by students who got this question right	**157**
% of students who attempted this question	**19.9**
% of students who got the question right of those who attempted	**59.21**

Video Solution

Text Solution

Charles used the battery in his phone in the following manner:
WiFi = 100%
Mobile Data = 33.33%
Video Playback = 2.5/4 = 62.5%
Gaming = 25%
Total percentage of battery utilized = 220.83%
Charles must have charged his phone twice.
Hence, the percentage of battery remaining in Charles' phone at the end of the day = 100-20.83 = 79.17%. Choice (B)

undefined

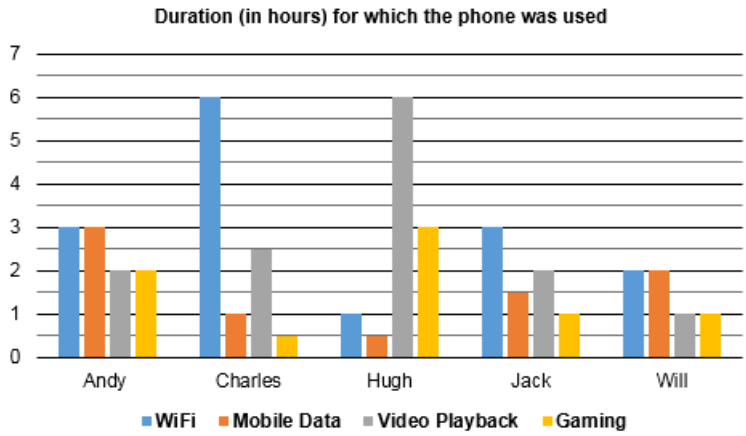
DIRECTIONS*for questions 13 to 16:*Answer the questions on the basis of the information given below.

Shyomi Inc. wanted to introduce a new smartphone, Me2, in India. The phone can be used for four different activities - Browsing using WiFi, Browsing using Mobile Data, Video Playback and Gaming. The battery of Me2 gets discharged uniformly over a certain duration depending on the activity for which the phone is used. A fully discharged battery of the phone takes exactly one hour to charge completely. The phone cannot be used for more than one activity at the same time and the battery will not get discharged in any other way. The following table provides the number of hours that the fully charged battery of the phone will last when the phone is used for different activities:

Activity	Time (hours)
Browsing using WiFi	6
Browsing using Mobile Data	3
Video Playback	4
Gaming	2

On a particular day, at exactly 8:00 AM, Shyomi gave a fully charged Me2 phone to each of five tech reviewers – Andy, Charles, Hugh, Jack and Will. Each reviewer used the phone for a certain period of time over the day. Also, each reviewer charged the phone every time the battery of the phone got completely discharged, irrespective of whether or not he used the phone again. None of them used the phone when it was being charged and they waited until the phone was completely charged before using it again. After using the phone, each reviewer returned the phone back to the company. When the phone was with the reviewers, the phone was never idle, i.e., the phone was either being used by the reviewers or being charged.

The bar graph below provides the duration for which each reviewer used Me2 for each activity during the day.



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

At which of the following times will Jack's phone definitely not be charging?

I.10:20 AM

II.10:50 AM

III.11:45 AM

IV.1:25 PM

V.2:35 PM

VI.3:10 PM

a)

I, II and VI

b)

II, IV and V

c)

I, V and VI

d)

II, III and IV

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	**154**
Difficulty Level	**D**
Avg. time spent on this question by students who got this question right	**179**
% of students who attempted this question	**17.91**
% of students who got the question right of those who attempted	**24.54**

Video Solution

Text Solution

Jack would have charged his phone twice. The earliest that Jack could have charged his phone for the first time is if he used the phone for Gaming first, followed by Mobile Data, Video Playback and WiFi in that order (these activities are arranged in the ascending order of their battery consumption).
Hence, Jack would have started charging his phone by 10:30 AM (after 1 hour of gaming and 1.5 hours of Mobile Data).
Similarly, the latest that Jack could have charged his phone is by 1:00 PM (after 3 hours of WiFi and 2 hours of Video playback).
If Jack charged his phone from 10:30 AM to 11:30 AM, he would have charged his phone for the second time from 4:30 PM (after 5 hours for WiFi and Video Playback). If Jack charged his phone from 1:00 PM to 2:00 PM, Jack would have charged his phone for the second time from 4:30 PM (after 2.5 hours for Gaming and Mobile Data).
Hence, Jack could have charged his phone for the first time between 10:30 AM and 1:00 PM and the second time at 4:30 PM. From the options, he could not be charging his phone at 10:20 AM, 2:35 PM and 3:10 PM. Choice (C)

undefined

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

Five towns, Town A through Town E, are connected by roads as shown in the figure given below. Five motorists – Imran, John, Kalyan, Lee, and Michael – travelled from Town A to Town E. Each motorist used a different route, i.e., no two motorists passed through the same set of towns to go from Town A to Town E. Further, no motorist passed through any town twice. The distance (in km) between any two towns is a distinct natural number. In addition to this, the following information is also known about the roads connecting the five cities and the routes taken by each motorist:

i. The length of the road connecting any two towns is at least 1 km and at most 8 km.

ii. The road connecting Town A and Town E is the longest, while the road connecting Town C and Town E is the shortest.

iii. No motorist who passed through Town B passed through Town D.

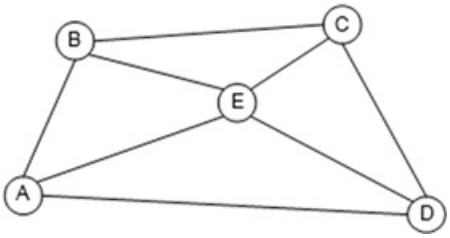
iv. John and Imran passed through Town C, while Kalyan and Michael did not pass through Town D.

v. Kalyan travelled a total distance of 11 km.

vi. The motorist that passed through both Town C and Town D travelled for the longest distance and he travelled a distance of 12 km.

vii. The distance between Towns C and Towns D is 7 km.

iii. The total length of one of the routes that passes through four towns is 2 km less than the length of the longest route among the routes used by the motorists.



Q17. DIRECTIONS *for question 17:* Select the correct alternative from the given choices.

Which of the following routes did Lee take?

- a) **Town A - Town E**
- b) **Town A - Town B - Town E**
- c) **Town A - Town D - Town E**
- d) **Town A - Town D - Town C - Town E**

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**10**
Avg. time spent on this question by all students	**479**
Difficulty Level	**M**
Avg. time spent on this question by students who got this question right	**513**
% of students who attempted this question	**15.36**
% of students who got the question right of those who attempted	**56.91**

Video Solution

Text Solution

The possible routes for going from A to E are ABCE, ABE, AE, ADE and ADCE. ABCDE is not possible because of condition iii.
Also AE is 8 km and CE is 1 km. John and Imran would have taken either of ABCE or ADCE.
Michael and Kalyan did not travel through ADE and ADCE. Therefore, ADE should have been travelled by Lee. Michael and Kalyan would have therefore travelled along AE and ABE. Since Kalyan travelled a total distance of 11 km, he could not have travelled along AE. So, Michael travelled along ABE and Kalyan, along AE.
ADCE = 12 and ABCE = 10. (From vi and viii)
ABE = 11
Since ADCE = 12
AD + DC + CE = 12
AD +DC = 11 (Since CE = 1)
Also DC = 7 km. Hence AD = 4 km.
AB + BC + CE = 10 ➔ AB + BC = 9 ---------- (1)
AB + BE = 11
AB and BE can be 5 or 6. (Cannot be 4 and 7 because AD is already 4 and DC 7)
If AB is 5, BC should be 4. (From (1)) But BC cannot be 4 since AD = 4.
Therefore, AB = 6, BE = 5, and BC = 3. Hence, DE = 2.

ADE should have been travelled by Lee. Choice (C)

undefined

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

Five towns, Town A through Town E, are connected by roads as shown in the figure given below. Five motorists – Imran, John, Kalyan, Lee, and Michael – travelled from Town A to Town E. Each motorist used a different route, i.e., no two motorists passed through the same set of towns to go from Town A to Town E. Further, no motorist passed through any town twice. The distance (in km) between any two towns is a distinct natural number. In addition to this, the following information is also known about the roads connecting the five cities and the routes taken by each motorist:

i. The length of the road connecting any two towns is at least 1 km and at most 8 km.

ii. The road connecting Town A and Town E is the longest, while the road connecting Town C and Town E is the shortest.

iii. No motorist who passed through Town B passed through Town D.

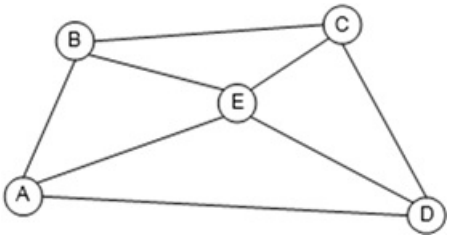
iv. John and Imran passed through Town C, while Kalyan and Michael did not pass through Town D.

v. Kalyan travelled a total distance of 11 km.

vi. The motorist that passed through both Town C and Town D travelled for the longest distance and he travelled a distance of 12 km.

vii. The distance between Towns C and Towns D is 7 km.

iii. The total length of one of the routes that passes through four towns is 2 km less than the length of the longest route among the routes used by the motorists.



Q18. DIRECTIONS *for questions 18 and 19:* Type in your answer in the input box provided below the question.

What is the length of the road (in km) connecting Town B and Town E?

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	**111**
Difficulty Level	**M**
Avg. time spent on this question by students who got this question right	**124**
% of students who attempted this question	**15.33**
% of students who got the question right of those who attempted	**36.63**

Video Solution

Text Solution

The possible routes for going from A to E are ABCE, ABE, AE, ADE and ADCE. ABCDE is not possible because of condition iii.
Also AE is 8 km and CE is 1 km. John and Imran would have taken either of ABCE or ADCE.
Michael and Kalyan did not travel through ADE and ADCE. Therefore, ADE should have been travelled by Lee. Michael and Kalyan would have therefore travelled along AE and ABE. Since Kalyan travelled a total distance of 11 km, he could not have travelled along AE. So, Michael travelled along ABE and Kalyan, along AE.
ADCE = 12 and ABCE = 10. (From vi and viii)
ABE = 11
Since ADCE = 12
AD + DC + CE = 12
AD +DC = 11 (Since CE = 1)
Also DC = 7 km. Hence AD = 4 km.
AB + BC + CE = 10 ➔ AB + BC = 9 ---------- (1)
AB + BE = 11
AB and BE can be 5 or 6. (Cannot be 4 and 7 because AD is already 4 and DC 7)
If AB is 5, BC should be 4. (From (1)) But BC cannot be 4 since AD = 4.
Therefore, AB = 6, BE = 5, and BC = 3. Hence, DE = 2.

BE = 5 km Ans: (5)

undefined

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

Five towns, Town A through Town E, are connected by roads as shown in the figure given below. Five motorists – Imran, John, Kalyan, Lee, and Michael – travelled from Town A to Town E. Each motorist used a different route, i.e., no two motorists passed through the same set of towns to go from Town A to Town E. Further, no motorist passed through any town twice. The distance (in km) between any two towns is a distinct natural number. In addition to this, the following information is also known about the roads connecting the five cities and the routes taken by each motorist:

i. The length of the road connecting any two towns is at least 1 km and at most 8 km.

ii. The road connecting Town A and Town E is the longest, while the road connecting Town C and Town E is the shortest.

iii. No motorist who passed through Town B passed through Town D.

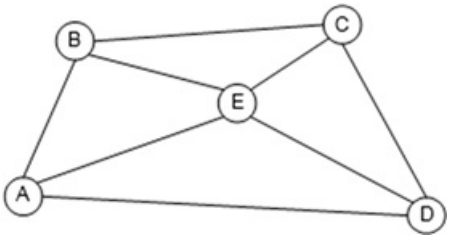
iv. John and Imran passed through Town C, while Kalyan and Michael did not pass through Town D.

v. Kalyan travelled a total distance of 11 km.

vi. The motorist that passed through both Town C and Town D travelled for the longest distance and he travelled a distance of 12 km.

vii. The distance between Towns C and Towns D is 7 km.

viii. The total length of one of the routes that passes through four towns is 2 km less than the length of the longest route among the routes used by the motorists.



Q19. DIRECTIONS *for questions 18 and 19:* Type in your answer in the input box provided below the question.

What is the total distance (in km) travelled by all the motorists combined?

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	**78**

Time spent / Accuracy Analysis

Difficulty Level	**M**
Avg. time spent on this question by students who got this question right	**92**
% of students who attempted this question	**11.77**
% of students who got the question right of those who attempted	**24.38**

Video Solution

Text Solution

The possible routes for going from A to E are ABCE, ABE, AE, ADE and ADCE. ABCDE is not possible because of condition iii.
Also AE is 8 km and CE is 1 km. John and Imran would have taken either of ABCE or ADCE.
Michael and Kalyan did not travel through ADE and ADCE. Therefore, ADE should have been travelled by Lee. Michael and Kalyan would have therefore travelled along AE and ABE. Since Kalyan travelled a total distance of 11 km, he could not have travelled along AE. So, Michael travelled along ABE and Kalyan, along AE.
ADCE = 12 and ABCE = 10. (From vi and viii)
ABE = 11
Since ADCE = 12
AD + DC + CE = 12
AD +DC = 11 (Since CE = 1)
Also DC = 7 km. Hence AD = 4 km.
AB + BC + CE = 10 ➔ AB + BC = 9 ---------- (1)
AB + BE = 11
AB and BE can be 5 or 6. (Cannot be 4 and 7 because AD is already 4 and DC 7)
If AB is 5, BC should be 4. (From (1)) But BC cannot be 4 since AD = 4.
Therefore, AB = 6, BE = 5, and BC = 3. Hence, DE = 2.

The total distance travelled by all the motorists can be calculated by adding the length of individual routes that they took.
Length of ABCE = 6+3+1 = 10
Length of AE = 8
Length of ADE = 4+2 = 6
Length of ABE = 6+5 = 11
Length of ADCE = 4+7+1 = 12
Total distance travelled by all the motorists = 10+8+6+11+12 = 47 km. Ans: (47)

undefined

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

Five towns, Town A through Town E, are connected by roads as shown in the figure given below. Five motorists – Imran, John, Kalyan, Lee, and Michael – travelled from Town A to Town E. Each motorist used a different route, i.e., no two motorists passed through the same set of towns to go from Town A to Town E. Further, no motorist passed through any town twice. The distance (in km) between any two towns is a distinct natural number. In addition to this, the following information is also known about the roads connecting the five cities and the routes taken by each motorist:

i. The length of the road connecting any two towns is at least 1 km and at most 8 km.

ii. The road connecting Town A and Town E is the longest, while the road connecting Town C and Town E is the shortest.

iii. No motorist who passed through Town B passed through Town D.

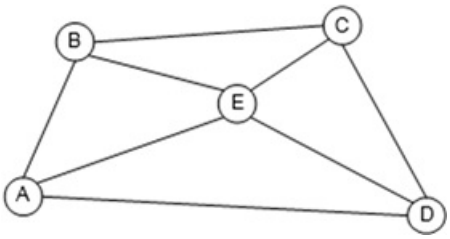
iv. John and Imran passed through Town C, while Kalyan and Michael did not pass through Town D.

v. Kalyan travelled a total distance of 11 km.

vi. The motorist that passed through both Town C and Town D travelled for the longest distance and he travelled a distance of 12 km.

vii. The distance between Towns C and Towns D is 7 km.

iii. The total length of one of the routes that passes through four towns is 2 km less than the length of the longest route among the routes used by the motorists.



Q20. DIRECTIONS *for question 20:* Select the correct alternative from the given choices.

If John did not pass through Town D, which of the following pairs of motorists travelled along the same roads for the longest distance?

- a) **John and Kalyan**
- b) **Lee and Imran**
- c) **John and Michael**
- d) **Michael and Imran**

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	**77**
Difficulty Level	**M**
Avg. time spent on this question by students who got this question right	**96**
% of students who attempted this question	**12.12**
% of students who got the question right of those who attempted	**36.34**

Video Solution

Text Solution

The possible routes for going from A to E are ABCE, ABE, AE, ADE and ADCE. ABCDE is not possible because of condition iii.
Also AE is 8 km and CE is 1 km. John and Imran would have taken either of ABCE or ADCE.
Michael and Kalyan did not travel through ADE and ADCE. Therefore, ADE should have been travelled by Lee. Michael and Kalyan would have therefore travelled along AE and ABE. Since Kalyan travelled a total distance of 11 km, he could not have travelled along AE. So, Michael travelled along ABE and Kalyan, along AE.
ADCE = 12 and ABCE = 10. (From vi and viii)
ABE = 11
Since ADCE = 12
AD + DC + CE = 12
AD +DC = 11 (Since CE = 1)
Also DC = 7 km. Hence AD = 4 km.
AB + BC + CE = 10 ➔ AB + BC = 9 ---------- (1)
AB + BE = 11
AB and BE can be 5 or 6. (Cannot be 4 and 7 because AD is already 4 and DC 7)
If AB is 5, BC should be 4. (From (1)) But BC cannot be 4 since AD = 4.
Therefore, AB = 6, BE = 5, and BC = 3. Hence, DE = 2.

Since John did not pass through Town D, he would have travelled along the route ABCE and Imran, along the route ADCE.
Total distance travelled in common for John and Kalyan = AB = 6 km
Total distance travelled in common for Lee and Imran = AD = 4 km
Total distance travelled in common for John and Michael = 0 km
Total distance travelled in common for Michael and Imran = 0 km
Therefore, John and Kalyan travelled in the same route for the longest distance.

Choice (A)

undefined

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

In a state, anyone who finished high school is classified as a literate and anyone who did not, is classified as an illiterate. Further, anyone who finished his graduation, i.e., a graduate, would have finished high school; anyone who finished his post-graduation, i.e., a post-graduate, would have finished graduation; any person who finished his doctorate, i.e., a doctor, would have finished post-graduation.

The following table provides for each of five districts - District A through District E - in that state, the percentage of people who are literates, the percentage of the literates who are graduates, the percentage of graduates who are post-graduates, the percentage of post-graduates who are doctors and the number (in "000) of people who are not post-graduates:

District	% of Literates	% of Graduates	% of Post-Graduates	% of Doctors	Number of people who are not Post-Graduates (in '000)
District A	68%	75%	$66\frac{2}{3}\%$	50%	66
District B	60%	50%	60%	$33\frac{1}{3}\%$	205
District C	$62\frac{1}{2}\%$	60%	50%	$66\frac{2}{3}\%$	130
District D	$55\frac{5}{9}\%$	70%	80%	$62\frac{1}{2}\%$	124
District E	50%	$66\frac{2}{3}\%$	$62\frac{1}{2}\%$	40%	190

Q21. DIRECTIONS *for question 21:* Select the correct alternative from the given choices.

What is the number of illiterates in District D?

- a) **85000**
- b) **80000**
- c) **75000**
- d) **70000**

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**1158**
Avg. time spent on this question by all students	**354**
Difficulty Level	**M**
Avg. time spent on this question by students who got this question right	**381**
% of students who attempted this question	**10.27**
% of students who got the question right of those who attempted	**39.34**

Video Solution

Text Solution

Number of persons who are not post-graduates = Total number of persons in the district – Number of post graduates
Let x be the total number of persons in District A.
Number of post graduates = 0.68 × 0.75 × 0.667 × x = 0.34x
Number of persons who are not post-graduates = x – 0.34x = 0.66x

$$\therefore 0.66x = 66 \Rightarrow x = 100$$

Let x be the total number of persons in District B.
Number of post graduates = 0.6 × 0.5 × 0.6 × x = 0.18x
Number of persons who are not post-graduates = x – 0.18x = 0.82x

$$\therefore 0.82x = 205 \Rightarrow x = 250$$

We can find the number of people in each of the five districts using the approach described above.
The following table provides the number of people in each district and the number of people who finished high school, who are graduates, who are post-graduates and who are doctors:

District	Number (in '000)				
	People	Literates	Graduates	Post-graduates	Doctorates
District A	100	68	51	34	17
District B	250	150	75	45	15
District C	160	100	60	30	20
District D	180	100	70	56	35
District E	240	120	80	50	20

Number of illiterates in District D = 80000 Choice (B)

undefined

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

In a state, anyone who finished high school is classified as a literate and anyone who did not, is classified as an illiterate. Further, anyone who finished his graduation, i.e., a graduate, would have finished high school; anyone who finished his

post-graduation, i.e., a post-graduate, would have finished graduation; any person who finished his doctorate, i.e., a doctor, would have finished post-graduation.

The following table provides for each of five districts - District A through District E - in that state, the percentage of people who are literates, the percentage of the literates who are graduates, the percentage of graduates who are post-graduates, the percentage of post-graduates who are doctors and the number (in "000) of people who are not post-graduates:

District	% of Literates	% of Graduates	% of Post-Graduates	% of Doctors	Number of people who are not Post-Graduates (in '000)
District A	68%	75%	$66\frac{2}{3}\%$	50%	66
District B	60%	50%	60%	$33\frac{1}{3}\%$	205
District C	$62\frac{1}{2}\%$	60%	50%	$66\frac{2}{3}\%$	130
District D	$55\frac{5}{9}\%$	70%	80%	$62\frac{1}{2}\%$	124
District E	50%	$66\frac{2}{3}\%$	$62\frac{1}{2}\%$	40%	190

Q22. DIRECTIONS *for questions 22 and 23:* Type in your answer in the input box provided below the question.

Across the five districts combined, what is the number of people who finished high school but are not graduates?

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**68**
Avg. time spent on this question by all students	**174**
Difficulty Level	**M**
Avg. time spent on this question by students who got this question right	**389**
% of students who attempted this question	**5.04**
% of students who got the question right of those who attempted	**4.11**

Video Solution

Text Solution

Number of persons who are not post-graduates = Total number of persons in the district – Number of post graduates
Let x be the total number of persons in District A.
Number of post graduates = 0.68 × 0.75 × 0.667 × x = 0.34x
Number of persons who are not post-graduates = x – 0.34x = 0.66x

$$\therefore 0.66x = 66 \Rightarrow x = 100$$

Let x be the total number of persons in District B.
Number of post graduates = 0.6 × 0.5 × 0.6 × x = 0.18x
Number of persons who are not post-graduates = x – 0.18x = 0.82x

$$\therefore 0.82x = 205 \Rightarrow x = 250$$

We can find the number of people in each of the five districts using the approach described above.
The following table provides the number of people in each district and the number of people who finished high school, who are graduates, who are post-graduates and who are doctors:

District	Number (in '000)				
	People	Literates	Graduates	Post-graduates	Doctorates
District A	100	68	51	34	17
District B	250	150	75	45	15
District C	160	100	60	30	20
District D	180	100	70	56	35
District E	240	120	80	50	20

Number of people (in '000) who are literates but not graduates in District A, B, C, D and E are 17, 75, 40, 30 and 40 respectively.
Total number of people (in '000) across the five districts = 17 + 75 + 40 + 30 + 40 = 202
Ans: (202000)

undefined

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

In a state, anyone who finished high school is classified as a literate and anyone who did not, is classified as an illiterate. Further, anyone who finished his graduation, i.e., a graduate, would have finished high school; anyone who finished his post-graduation, i.e., a post-graduate, would have finished graduation; any person who finished his doctorate, i.e., a doctor, would have finished post-graduation.

The following table provides for each of five districts - District A through District E - in that state, the percentage of people who are literates, the percentage of the literates who are graduates, the percentage of graduates who are post-graduates, the percentage of post-graduates who are doctors and the number (in "000) of people who are not post-graduates:

District	% of Literates	% of Graduates	% of Post-Graduates	% of Doctors	Number of people who are not Post-Graduates (in '000)
District A	68%	75%	$66\frac{2}{3}\%$	50%	66
District B	60%	50%	60%	$33\frac{1}{3}\%$	205
District C	$62\frac{1}{2}\%$	60%	50%	$66\frac{2}{3}\%$	130
District D	$55\frac{5}{9}\%$	70%	80%	$62\frac{1}{2}\%$	124
District E	50%	$66\frac{2}{3}\%$	$62\frac{1}{2}\%$	40%	190

Q23. DIRECTIONS *for questions 22 and 23:* Type in your answer in the input box provided below the question.

How many persons are doctors across the five districts combined?

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**7**
Avg. time spent on this question by all students	**124**
Difficulty Level	**M**
Avg. time spent on this question by students who got this question right	**200**
% of students who attempted this question	**4.78**
% of students who got the question right of those who attempted	**5.56**

Video Solution

Text Solution

Number of persons who are not post-graduates = Total number of persons in the district – Number of post graduates
Let x be the total number of persons in District A.
Number of post graduates = 0.68 × 0.75 × 0.667 × x = 0.34x
Number of persons who are not post-graduates = x – 0.34x = 0.66x

$$\therefore 0.66x = 66 \Rightarrow x = 100$$

Let x be the total number of persons in District B.
Number of post graduates = 0.6 × 0.5 × 0.6 × x = 0.18x
Number of persons who are not post-graduates = x – 0.18x = 0.82x

$$\therefore 0.82x = 205 \Rightarrow x = 250$$

We can find the number of people in each of the five districts using the approach described above.
The following table provides the number of people in each district and the number of people who finished high school, who are graduates, who are post-graduates and who are doctors:

District	Number ('000)				
	People	Literates	Graduates	Post-graduates	Doctorates
District A	100	68	51	34	17
District B	250	150	75	45	15
District C	160	100	60	30	20
District D	180	100	70	56	35
District E	240	120	80	50	20

The total number of doctors (in '000) across the five districts = 17 + 15 + 20 + 35 + 20 = 107
Ans: (107000)

undefined

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

In a state, anyone who finished high school is classified as a literate and anyone who did not, is classified as an illiterate. Further, anyone who finished his graduation, i.e., a graduate, would have finished high school; anyone who finished his post-graduation, i.e., a post-graduate, would have finished graduation; any person who finished his doctorate, i.e., a doctor, would have finished post-graduation.

The following table provides for each of five districts - District A through District E - in that state, the percentage of people who are literates, the percentage of the literates who are graduates, the percentage of graduates who are post-graduates, the percentage of post-graduates who are doctors and the number (in "000) of people who are not post-graduates:

District	% of Literates	% of Graduates	% of Post-Graduates	% of Doctors	Number of people who are not Post-Graduates (in '000)
District A	68%	75%	$66\frac{2}{3}\%$	50%	66
District B	60%	50%	60%	$33\frac{1}{3}\%$	205
District C	$62\frac{1}{2}\%$	60%	50%	$66\frac{2}{3}\%$	130
District D	$55\frac{5}{9}\%$	70%	80%	$62\frac{1}{2}\%$	124
District E	50%	$66\frac{2}{3}\%$	$62\frac{1}{2}\%$	40%	190

Q24. DIRECTIONS *for question 24:* Select the correct alternative from the given choices.

In how many districts are there more number of graduates who are not post-graduates than literates who are not graduates?

○ 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	**20**
Avg. time spent on this question by all students	**77**
Difficulty Level	**D**
Avg. time spent on this question by students who got this question right	**135**
% of students who attempted this question	**6.22**
% of students who got the question right of those who attempted	**9.47**

Video Solution

Text Solution

Number of persons who are not post-graduates = Total number of persons in the district – Number of post graduates
Let x be the total number of persons in District A.
Number of post graduates = 0.68 × 0.75 × 0.667 × x = 0.34x
Number of persons who are not post-graduates = x – 0.34x = 0.66x

$$\therefore 0.66x = 66 \Rightarrow x = 100$$

Let x be the total number of persons in District B.
Number of post graduates = 0.6 × 0.5 × 0.6 × x = 0.18x
Number of persons who are not post-graduates = x – 0.18x = 0.82x

$$\therefore 0.82x = 205 \Rightarrow x = 250$$

We can find the number of people in each of the five districts using the approach described above.
The following table provides the number of people in each district and the number of people who finished high school, who are graduates, who are post-graduates and who are doctors:

District	Number (in '000)				
	People	Literates	Graduates	Post-graduates	Doctorates
District A	100	68	51	34	17
District B	250	150	75	45	15
District C	160	100	60	30	20
District D	180	100	70	56	35
District E	240	120	80	50	20

Number of graduates who are not post-graduates in District A, B, C, D and E are 13, 30, 30, 14 and 30 respectively.
Number of literates who are not graduates = 17, 75, 40, 30 and 40
In none of the districts, the given condition is satisfied. Choice (A)

undefined

DIRECTIONS *for questions 25 to 28:* Answer the questions on the basis of the information given below.

Rahul was reminiscing about the year 2017, during which five events occurred - he finished his graduation, his girlfriend broke up with him, he sold his bike, he ran a marathon and he learnt to swim.

However, no two events occurred in the same month.

It is known that

i. he ran a marathon three months before his girlfriend broke up with him.

ii. he sold his bike in July but he did not learn to swim in August or September.

iii. none of the five events occurred in January or June.

iv. he finished his graduation after he sold his bike.

v. he learnt to swim three months before he finished his graduation.

Q25. DIRECTIONS *for questions 25 to 27:* Select the correct alternative from the given choices.

In which month did he run a marathon?

a) **September** **Your answer is correct**

b) **May**

c) **February**

d) **Cannot be determined**

Time spent / Accuracy Analysis

Time taken by you to answer this question	**396**
Avg. time spent on this question by all students	**338**
Difficulty Level	**E**
Avg. time spent on this question by students who got this question right	**357**
% of students who attempted this question	**39.24**
% of students who got the question right of those who attempted	**42.21**

Video Solution

Text Solution

From (ii), he sold his bike in July. From (iv), he finished his graduation after he sold his bike, i.e., in August/September/October/November/December.
In each case, he would have learnt to swim in May/June/July/August/September. However, he could not have learnt to swim in June (from (iii)). He could not have learnt to swim in July (because he sold his bike in the same month). He could not have learnt to swim in August or September (from (ii)). Hence, he must have learnt to swim in May and he must have finished his graduation in August.
From (i), he ran a marathon three months before his girlfriend broke up with him. The only possibility for these events is if he ran a marathon in September and his girlfriend broke up with him in December. For all the other months, it is not possible to fit these two events.
The following table provides the month in which each event happened:

Event	Month
Learnt to swim	May
Sold his bike	July
Finished graduation	August
Ran a marathon	September
Girlfriend broke up with	December

He ran a marathon in September. Choice (A)

undefined

DIRECTIONS *for questions 25 to 28:* Answer the questions on the basis of the information given below.

Rahul was reminiscing about the year 2017, during which five events occurred - he finished his graduation, his girlfriend broke up with him, he sold his bike, he ran a marathon and he learnt to swim.

However, no two events occurred in the same month.

It is known that

i. he ran a marathon three months before his girlfriend broke up with him.

ii. he sold his bike in July but he did not learn to swim in August or September.

iii. none of the five events occurred in January or June.

iv. he finished his graduation after he sold his bike.

v. he learnt to swim three months before he finished his graduation.

Q26. DIRECTIONS *for questions 25 to 27:* Select the correct alternative from the given choices.

Which of the following events happened in April?

- a) **He learnt to swim**
- b) **He finished his graduation**
- c) **He ran a marathon**
- d) **None of the above** **Your answer is correct**

Time spent / Accuracy Analysis

Time taken by you to answer this question	**17**
Avg. time spent on this question by all students	**62**
Difficulty Level	**E**
Avg. time spent on this question by students who got this question right	**58**
% of students who attempted this question	**37.99**
% of students who got the question right of those who attempted	**71.71**

Video Solution

Text Solution

From (ii), he sold his bike in July. From (iv), he finished his graduation after he sold his bike, i.e., in August/September/October/November/December.
In each case, he would have learnt to swim in May/June/July/August/September. However, he could not have learnt to swim in June (from (iii)). He could not have learnt to swim in July (because he sold his bike in the same month). He could not have learnt to swim in August or September (from (ii)). Hence, he must have learnt to swim in May and he must have finished his graduation in August.
From (i), he ran a marathon three months before his girlfriend broke up with him. The only possibility for these events is if he ran a marathon in September and his girlfriend broke up with him in December. For all the other months, it is not possible to fit these two events.
The following table provides the month in which each event happened:

Event	Month
Learnt to swim	May
Sold his bike	July
Finished graduation	August
Ran a marathon	September
Girlfriend broke up with	December

None of the five events happened in April. Choice (D)

undefined

DIRECTIONS *for questions 25 to 28:* Answer the questions on the basis of the information given below.

Rahul was reminiscing about the year 2017, during which five events occurred - he finished his graduation, his girlfriend broke up with him, he sold his bike, he ran a marathon and he learnt to swim.

However, no two events occurred in the same month.

It is known that

i. he ran a marathon three months before his girlfriend broke up with him.

ii. he sold his bike in July but he did not learn to swim in August or September.

iii. none of the five events occurred in January or June.

iv. he finished his graduation after he sold his bike.

v. he learnt to swim three months before he finished his graduation.

Q27. DIRECTIONS *for questions 25 to 27:* Select the correct alternative from the given choices.

In which month did the first of the five events occur?

a) **March**

b) **February**

c) **May** **Your answer is correct**

d) **July**

Time spent / Accuracy Analysis

Time taken by you to answer this question	**35**
Avg. time spent on this question by all students	**55**
Difficulty Level	**E**
Avg. time spent on this question by students who got this question right	**53**
% of students who attempted this question	**35.16**
% of students who got the question right of those who attempted	**56.25**

Video Solution

Text Solution

From (ii), he sold his bike in July. From (iv), he finished his graduation after he sold his bike, i.e., in August/September/October/November/December.
In each case, he would have learnt to swim in May/June/July/August/September. However, he could not have learnt to swim in June (from (iii)). He could not have learnt to swim in July (because he sold his bike in the same month). He could not have learnt to swim in August or September (from (ii)). Hence, he must have learnt to swim in May and he must have finished his graduation in August.
From (i), he ran a marathon three months before his girlfriend broke up with him. The only possibility for these events is if he ran a marathon in September and his girlfriend broke up with him in December. For all the other months, it is not possible to fit these two events.
The following table provides the month in which each event happened:

Event	Month
Learnt to swim	May
Sold his bike	July
Finished graduation	August
Ran a marathon	September
Girlfriend broke up with	December

The first of the five events occurred in May. Choice (C)

undefined

DIRECTIONS *for questions 25 to 28:* Answer the questions on the basis of the information given below.

Rahul was reminiscing about the year 2017, during which five events occurred - he finished his graduation, his girlfriend broke up with him, he sold his bike, he ran a marathon and he learnt to swim.

However, no two events occurred in the same month.

It is known that

i. he ran a marathon three months before his girlfriend broke up with him.

ii. he sold his bike in July but he did not learn to swim in August or September.

iii. none of the five events occurred in January or June.

iv. he finished his graduation after he sold his bike.

v. he learnt to swim three months before he finished his graduation.

Q28. DIRECTIONS *for question 28:* Type in your answer in the input box provided below the question.

How many of the five events occurred before October?

Your Answer:4 **Your answer is correct**

Time spent / Accuracy Analysis

Time taken by you to answer this question	**15**
Avg. time spent on this question by all students	**43**
Difficulty Level	**E**
Avg. time spent on this question by students who got this question right	**38**
% of students who attempted this question	**35.47**
% of students who got the question right of those who attempted	**64.77**

Video Solution

Text Solution

From (ii), he sold his bike in July. From (iv), he finished his graduation after he sold his bike, i.e., in August/September/October/November/December.
In each case, he would have learnt to swim in May/June/July/August/September. However, he could not have learnt to swim in June (from (iii)). He could not have learnt to swim in July (because he sold his bike in the same month). He could not have learnt to swim in August or September (from (ii)). Hence, he must have learnt to swim in May and he must have finished his graduation in August.
From (i), he ran a marathon three months before his girlfriend broke up with him. The only possibility for these events is if he ran a marathon in September and his girlfriend broke up with him in December. For all the other months, it is not possible to fit these two events.
The following table provides the month in which each event happened:

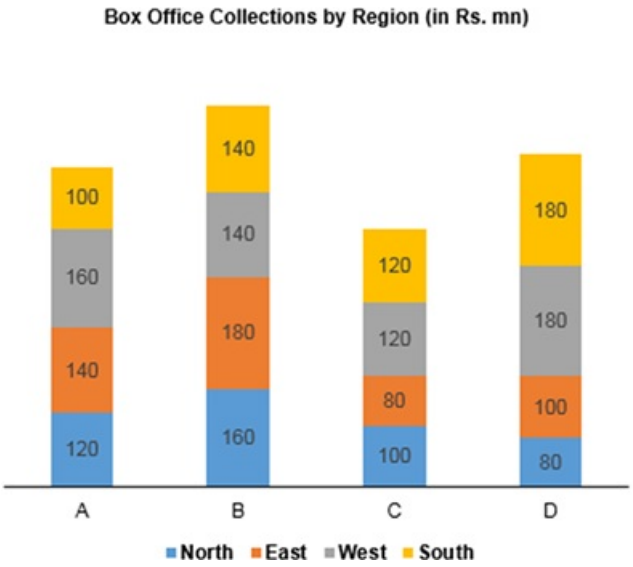
Event	Month
Learnt to swim	May
Sold his bike	July
Finished graduation	August
Ran a marathon	September
Girlfriend broke up with	December

Four events occurred before October. Ans: (4)

undefined

DIRECTIONS *for questions 29 to 32:* Answer the questions on the basis of the information given below.

During a particular year, five movies - A through E - were released in the four regions of a country - North, South, East and West. Each movie was ranked from 1 to 5 in each region, in the descending order of the box office collections of the movie in that region. In any region, no two movies had the same box office collections. The bar graph below provides the box office collections of four of the five movies, A, B, C and D, in each of the four regions - North, South, East and West. The table adjacent to the bar graph provides the sum of the ranks obtained by these four movies in the four regions.



Movie	Sum of Ranks
A	13
B	10
C	18
D	10

Q29. DIRECTIONS *for questions 29 and 30:* Type in your answer in the input box provided below the question.

What is the sum of the ranks obtained by E across the four regions?

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**183**
Avg. time spent on this question by all students	**320**
Difficulty Level	**M**
Avg. time spent on this question by students who got this question right	**411**
% of students who attempted this question	**13.31**
% of students who got the question right of those who attempted	**28.1**

Video Solution

Text Solution

Since the sum of the ranks for each movie is given, we should first rank the four movies in the bar graph in each region from 1 to 4, excluding E. Since we do not know the position of E, it can be in any position. Hence, the rank of each movie in each region can vary by 1 depending on the position of E.
The following table provides the possible ranks:

Movie	North	East	West	South
A	2/3	2/3	2/3	4/5
B	1/2	1/2	3/4	2/3
C	3/4	4/5	4/5	3/4
D	4/5	3/4	1/2	1/2

The sums of the ranks of A, B, C and D in the given table are 10, 7, 14 and 9 respectively. The sum of ranks of C is given as 18. Hence, in each region, the rank of C must increase by 1. Hence, C's ranks must be 4, 5, 5 and 4 in North, East, West and South respectively. Since C's rank in North is 4, D's rank must be 5. Similarly, since C's rank in South is 4, A's rank in South must be 5.
D's rank is 5 in North. Further, the sum of D's ranks is 10. This is possible only if the ranks of D in East, West and South are 3, 1 and 1 respectively. Since the rank of D in East is 3, A's rank must be 2.
The sum of the ranks of A is 13. The sum of the ranks of A in East and South is 7. In the other, two regions, the sum must be 6. From the available possibilities, the rank of A in North and West must be 3 and 3 respectively.
Since the rank of A in West in 3, the rank of B in West must be 4. Hence, the rank of E in West must be 2.
Since the rank of A in East is 2, the rank of B in East must be 1. Hence, E's rank in East must be 4.
The sum of B's rank in the four regions is 10. The sum of B's ranks in East and West is 5. Hence, the sum of the ranks in North and South is 5. This is only possible if B's ranks in North and South are 2 and 3 respectively. Hence, E's ranks in North and South are 1 and 2 respectively.
The following table provides the ranks of each movie in each region:

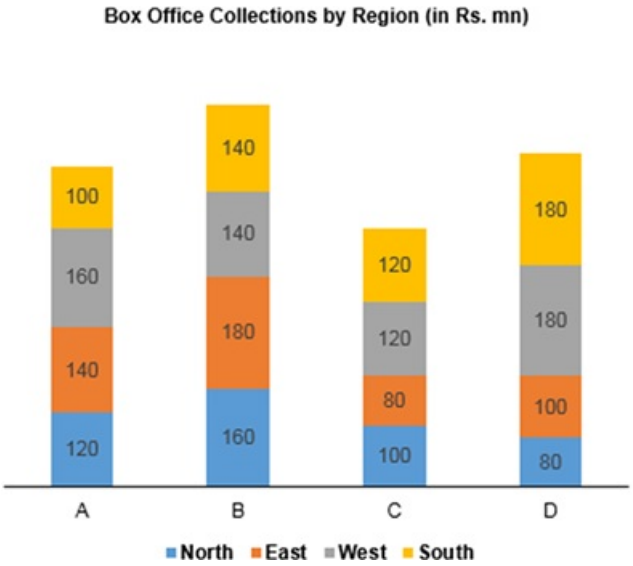
Movie	North	East	West	South
A	3	2	3	5
B	2	1	4	3
C	4	5	5	4
D	5	3	1	1
E	1	4	2	2

The sum of the ranks of E is 9. Ans: (9)

undefined

DIRECTIONS *for questions 29 to 32:* Answer the questions on the basis of the information given below.

During a particular year, five movies - A through E - were released in the four regions of a country - North, South, East and West. Each movie was ranked from 1 to 5 in each region, in the descending order of the box office collections of the movie in that region. In any region, no two movies had the same box office collections. The bar graph below provides the box office collections of four of the five movies, A, B, C and D, in each of the four regions - North, South, East and West. The table adjacent to the bar graph provides the sum of the ranks obtained by these four movies in the four regions.



Movie	Sum of Ranks
A	13
B	10
C	18
D	10

Q30. DIRECTIONS *for questions 29 and 30:* Type in your answer in the input box provided below the question.

In how many of the four regions was B's rank better, i.e., numerically lower, than that of E?

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**8**
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	**98**
% of students who attempted this question	**12.57**
% of students who got the question right of those who attempted	**22.1**

Video Solution

Text Solution

Since the sum of the ranks for each movie is given, we should first rank the four movies in the bar graph in each region from 1 to 4, excluding E. Since we do not know the position of E, it can be in any position. Hence, the rank of each movie in each region can vary by 1 depending on the position of E.
The following table provides the possible ranks:

Movie	North	East	West	South
A	2/3	2/3	2/3	4/5
B	1/2	1/2	3/4	2/3
C	3/4	4/5	4/5	3/4
D	4/5	3/4	1/2	1/2

The sums of the ranks of A, B, C and D in the given table are 10, 7, 14 and 9 respectively.
The sum of ranks of C is given as 18. Hence, in each region, the rank of C must increase by 1. Hence, C's ranks must be 4, 5, 5 and 4 in North, East, West and South respectively.
Since C's rank in North is 4, D's rank must be 5. Similarly, since C's rank in South is 4, A's rank in South must be 5.
D's rank is 5 in North. Further, the sum of D's ranks is 10. This is possible only if the ranks of D in East, West and South are 3, 1 and 1 respectively. Since the rank of D in East is 3, A's rank must be 2.
The sum of the ranks of A is 13. The sum of the ranks of A in East and South is 7. In the other, two regions, the sum must be 6. From the available possibilities, the rank of A in North and West must be 3 and 3 respectively.
Since the rank of A in West in 3, the rank of B in West must be 4. Hence, the rank of E in West must be 2.
Since the rank of A in East is 2, the rank of B in East must be 1. Hence, E's rank in East must be 4.
The sum of B's rank in the four regions is 10. The sum of B's ranks in East and West is 5. Hence, the sum of the ranks in North and South is 5. This is only possible if B's ranks in North and South are 2 and 3 respectively. Hence, E's ranks in North and South are 1 and 2 respectively.
The following table provides the ranks of each movie in each region:

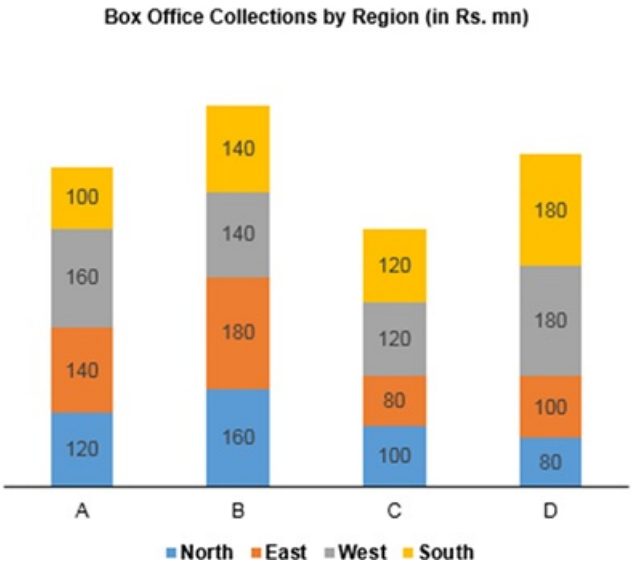
Movie	North	East	West	South
A	3	2	3	5
B	2	1	4	3
C	4	5	5	4
D	5	3	1	1
E	1	4	2	2

B was ranked better than E in one region (East). Ans: (1)

undefined

DIRECTIONS *for questions 29 to 32:* Answer the questions on the basis of the information given below.

During a particular year, five movies - A through E - were released in the four regions of a country - North, South, East and West. Each movie was ranked from 1 to 5 in each region, in the descending order of the box office collections of the movie in that region. In any region, no two movies had the same box office collections. The bar graph below provides the box office collections of four of the five movies, A, B, C and D, in each of the four regions - North, South, East and West. The table adjacent to the bar graph provides the sum of the ranks obtained by these four movies in the four regions.



Movie	Sum of Ranks
A	13
B	10
C	18
D	10

Q31. DIRECTIONS *for questions 31 and 32:* Select the correct alternative from the given choices.

Which of the following can be the total box office collections of E in East and South combined?

a) **Rs.320 mn**

b) **Rs.300 mn**

c) **Rs.260 mn**

d) **Rs.200 mn**

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	**96**
Difficulty Level	**D**
Avg. time spent on this question by students who got this question right	**99**
% of students who attempted this question	**6.63**
% of students who got the question right of those who attempted	**40.75**

Video Solution

Text Solution

Since the sum of the ranks for each movie is given, we should first rank the four movies in the bar graph in each region from 1 to 4, excluding E. Since we do not know the position of E, it can be in any position. Hence, the rank of each movie in each region can vary by 1 depending on the position of E.
The following table provides the possible ranks:

Movie	North	East	West	South
A	2/3	2/3	2/3	4/5
B	1/2	1/2	3/4	2/3
C	3/4	4/5	4/5	3/4
D	4/5	3/4	1/2	1/2

The sums of the ranks of A, B, C and D in the given table are 10, 7, 14 and 9 respectively.
The sum of ranks of C is given as 18. Hence, in each region, the rank of C must increase by 1. Hence, C's ranks must be 4, 5, 5 and 4 in North, East, West and South respectively.
Since C's rank in North is 4, D's rank must be 5. Similarly, since C's rank in South is 4, A's rank in South must be 5.
D's rank is 5 in North. Further, the sum of D's ranks is 10. This is possible only if the ranks of D in East, West and South are 3, 1 and 1 respectively. Since the rank of D in East is 3, A's rank must be 2.
The sum of the ranks of A is 13. The sum of the ranks of A in East and South is 7. In the other, two regions, the sum must be 6. From the available possibilities, the rank of A in North and West must be 3 and 3 respectively.
Since the rank of A in West in 3, the rank of B in West must be 4. Hence, the rank of E in West must be 2.
Since the rank of A in East is 2, the rank of B in East must be 1. Hence, E's rank in East must be 4.
The sum of B's rank in the four regions is 10. The sum of B's ranks in East and West is 5. Hence, the sum of the ranks in North and South is 5. This is only possible if B's ranks in North and South are 2 and 3 respectively. Hence, E's ranks in North and South are 1 and 2 respectively.
The following table provides the ranks of each movie in each region:

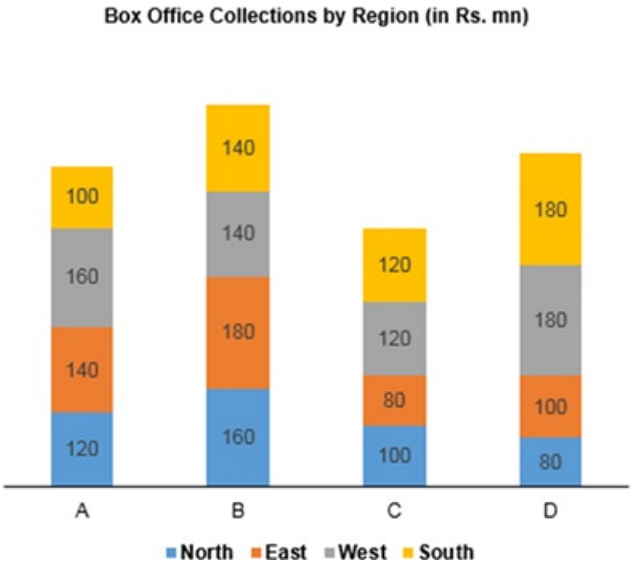
Movie	North	East	West	South
A	3	2	3	5
B	2	1	4	3
C	4	5	5	4
D	5	3	1	1
E	1	4	2	2

In East, E was ranked 4. Hence, the collections of E must be between ₹80 mn and ₹100 mn (since D and C were ranked 3 and 5 respectively).
In South, E was ranked 2. Hence, the collections of E must be between ₹140 mn and ₹180 mn.
Hence, the total collections of E must be between ₹220 mn and ₹280 mn. Among the given options, only option C falls within this range. Choice (C)

undefined

DIRECTIONS *for questions 29 to 32:* Answer the questions on the basis of the information given below.

During a particular year, five movies - A through E - were released in the four regions of a country - North, South, East and West. Each movie was ranked from 1 to 5 in each region, in the descending order of the box office collections of the movie in that region. In any region, no two movies had the same box office collections. The bar graph below provides the box office collections of four of the five movies, A, B, C and D, in each of the four regions - North, South, East and West. The table adjacent to the bar graph provides the sum of the ranks obtained by these four movies in the four regions.



Movie	Sum of Ranks
A	13
B	10
C	18
D	10

Q32. DIRECTIONS *for questions 31 and 32:* Select the correct alternative from the given choices.

Which of the following statements is definitely true?

- a) **The box office collections of E across the four regions combined is greater than Rs.540 mn.**
- b) **The box office collections of E across the four regions combined is less than Rs.540 mn.**
- c) **The box office collections of E across the four regions combined is greater than Rs.640 mn.**
- d) **The box office collections of E across the four regions combined is less than Rs.640 mn.**

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	**333**
Difficulty Level	**D**
Avg. time spent on this question by students who got this question right	**234**
% of students who attempted this question	**6.46**
% of students who got the question right of those who attempted	**37.1**

Video Solution

Text Solution

Since the sum of the ranks for each movie is given, we should first rank the four movies in the bar graph in each region from 1 to 4, excluding E. Since we do not know the position of E, it can be in any position. Hence, the rank of each movie in each region can vary by 1 depending on the position of E.
The following table provides the possible ranks:

Movie	North	East	West	South
A	2/3	2/3	2/3	4/5
B	1/2	1/2	3/4	2/3
C	3/4	4/5	4/5	3/4
D	4/5	3/4	1/2	1/2

The sums of the ranks of A, B, C and D in the given table are 10, 7, 14 and 9 respectively.
The sum of ranks of C is given as 18. Hence, in each region, the rank of C must increase by 1. Hence, C's ranks must be 4, 5, 5 and 4 in North, East, West and South respectively.
Since C's rank in North is 4, D's rank must be 5. Similarly, since C's rank in South is 4, A's rank in South must be 5.
D's rank is 5 in North. Further, the sum of D's ranks is 10. This is possible only if the ranks of D in East, West and South are 3, 1 and 1 respectively. Since the rank of D in East is 3, A's rank must be 2.
The sum of the ranks of A is 13. The sum of the ranks of A in East and South is 7. In the other, two regions, the sum must be 6. From the available possibilities, the rank of A in North and West must be 3 and 3 respectively.
Since the rank of A in West in 3, the rank of B in West must be 4. Hence, the rank of E in West must be 2.
Since the rank of A in East is 2, the rank of B in East must be 1. Hence, E's rank in East must be 4.
The sum of B's rank in the four regions is 10. The sum of B's ranks in East and West is 5. Hence, the sum of the ranks in North and South is 5. This is only possible if B's ranks in North and South are 2 and 3 respectively. Hence, E's ranks in North and South are 1 and 2 respectively.
The following table provides the ranks of each movie in each region:

Movie	North	East	West	South
A	3	2	3	5
B	2	1	4	3
C	4	5	5	4
D	5	3	1	1
E	1	4	2	2

Since E's rank in North is 1, the upper limit of E's collections cannot be defined. It only has to be greater than ₹160 mn.
In East, E's collections must lie between ₹80 mn and ₹100 mn.
In West, E's collections must lie between ₹160 mn and ₹180 mn.
In South, E's collections must lie between ₹140 mn and ₹180 mn.
Hence, we can only say that E's collections across the four regions must be greater than 160 + 80 + 160 + 140 = ₹540 mn
Therefore, option A is definitely true. Choice (A)

undefined

Q1. DIRECTIONS *for question 1:* Type in your answer in the input box provided below the question.

If the total cost of two pencils, three erasers and one sharpener is Rs.23, and that of four pencils, five erasers and seven sharpeners is Rs.67, how much will 24 pencils, 33 erasers and 27 sharpeners cost (in Rs.)?

Rs.

Your Answer:339 **Your answer is correct**

Time spent / Accuracy Analysis

Time taken by you to answer this question	**285**
Avg. time spent on this question by all students	**247**
Difficulty Level	**E**
Avg. time spent on this question by students who got this question right	**226**
% of students who attempted this question	**22.89**
% of students who got the question right of those who attempted	**73.44**

Video Solution

Text Solution

Let the price of each pencil, eraser and sharpener be p, e and s respectively.
$\Rightarrow 2p + 3e + 5 = 23$ and $4p + 5e + 75 = 67$
In such questions, where there are only two equations and three unknowns, we should try to find whether the third equation (the required value) can be obtained by a linear combination of the other two equations or not.
For this, we multiply the $2p + 3e + s$ and $4p + 5e + 7s = 67$ with x and y respectively and add them.
On equating co-efficients of p and e, we get $2x + 4y = 24$ and $3x + 5y = 33$
Solving $2x + 4y = 24$ and $3x + 5y = 33$, we get $x = 6$ and $y = 3$.
Which also satisfies the co-efficient of s in the equations.
$\therefore$ The required value $= 6(23) + 3(67) = 138 + 201 = 339$. Ans: (339)

undefined

Q2. DIRECTIONS *for questions 2 and 3:* Select the correct alternative from the given choices.

In a town, the population of males increased by 20% from 2013 to 2014, while the population of females increased by 25% in the same period. If females comprised 36% of the population in 2013, approximately what percentage of the population in 2014 are males?

a) **64%**

b) **63%** **Your answer is correct**

c) **62%**

d) **61%**

Time spent / Accuracy Analysis

Time taken by you to answer this question	**280**
Avg. time spent on this question by all students	**220**
Difficulty Level	**E**
Avg. time spent on this question by students who got this question right	**218**
% of students who attempted this question	**34.01**
% of students who got the question right of those who attempted	**67.42**

Video Solution

Text Solution

Let total population in 2013 be 100, i.e., males = 64 and females = 36.
In 2014, males = $64 \times 1.2 = 76.8$ and
females = $36 \times 1.25 = 45$

$\therefore$ Required percentage = $\frac{76.8}{(76.8+45)} \cong 63.05\%$ Choice (B)

undefined

Q3. DIRECTIONS *for questions 2 and 3:* Select the correct alternative from the given choices.

How many ordered pairs (a, b) exist such that HCF(a, b) = 1 and $a \times b = 1386$?

- a) **4**
- b) **8**
- c) **12**
- d) **16**

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**179**
Avg. time spent on this question by all students	**178**
Difficulty Level	**M**
Avg. time spent on this question by students who got this question right	**188**
% of students who attempted this question	**21.53**
% of students who got the question right of those who attempted	**17.99**

Video Solution

Text Solution

$1386 = 2 \times 3^2 \times 7 \times 11$, i.e., there are four prime factors.
HCF (a, b) = 1, means a and b are co-prime numbers. We need to find the number of ways 1386 can be written as a product of 2 co-prime numbers.
No. of ways = $2^{n-1} = 2^{4-1} = 2^3 = 8$ ways (here n is the number of prime factors.)
Each product can be written as 2 ordered pairs, like (18, 77) and (77, 18).
$\therefore$ Number of ordered pairs = $8 \times 2 = 16$ Choice (D)

undefined

Q4. DIRECTIONS *for questions 4 and 5:* Type in your answer in the input box provided below the question.

If two pipes, P and Q, which can empty a full tank in 20 mins and 80 mins respectively, and a pipe R, which can fill the empty tank in 40 mins, are all opened simultaneously, how many minutes will it take for the full tank to be emptied?

Enter your answer as a decimal value, rounded off to two decimal places.

Your Answer:11.43 Your answer is incorrect

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	**E**
Avg. time spent on this question by students who got this question right	**149**
% of students who attempted this question	**24.37**
% of students who got the question right of those who attempted	**37.07**

Video Solution

Text Solution

The effective rate at which the tank is emptied when all three pipes are opened = $\frac{1}{20}+\frac{1}{80}-\frac{1}{40}=\frac{3}{80}$

$\therefore$ The time taken for the full tank to be emptied is 80/3 minutes, i.e., 26.67 minutes.

Ans: (26.67)

undefined

Q5. DIRECTIONS *for questions 4 and 5:* Type in your answer in the input box provided below the question.

In a race, A beats B by 50 m and C by 80 m. If B's speed is 30% higher than that of C, find the distance (in m) over which the race was run.

Your Answer:180 Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	**137**
Avg. time spent on this question by all students	**171**
Difficulty Level	**E**
Avg. time spent on this question by students who got this question right	**186**
% of students who attempted this question	**20.84**
% of students who got the question right of those who attempted	**44.73**

Video Solution

Text Solution

Let the distance over which the race was run be L. Let the speeds of A, B and C be S_a, S_b and S_c respectively.

$$\frac{S_a}{S_b}=\frac{L}{L-50}$$

$$\frac{S_a}{S_c}=\frac{L}{L-80}$$

$$S_b=\frac{13}{10}S_c$$

$$\frac{S_b}{S_c}=\frac{\left(\frac{S_a}{S_c}\right)}{\left(\frac{S_a}{S_b}\right)}=\frac{L-50}{L-80}=\frac{13}{10}$$

$\Rightarrow$ L = 180 m

Ans: (180)

undefined

Q6. DIRECTIONS *for question 6:* Select the correct alternative from the given choices.

In a triangle PQR, a line AB is drawn parallel to the side QR, whose length is 36 cm. If AB divides PQ in the ratio 4:5, what is the length of the line AB?

- a) **16 cm** **Your answer is correct**
- b) **20 cm**
- c) **24 cm**
- d) **28 cm**

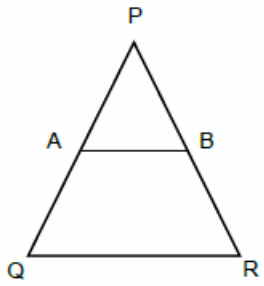
Time spent / Accuracy Analysis

Time taken by you to answer this question	**56**
Avg. time spent on this question by all students	**127**
Difficulty Level	**E**
Avg. time spent on this question by students who got this question right	**116**
% of students who attempted this question	**27.85**
% of students who got the question right of those who attempted	**69.06**

Video Solution

Text Solution

In the triangle PQR, since AB is parallel to QR, AB divides both PQ and QR in the same ratio i.e. 4 : 5.



Also, AB = QR*4/(4+5) = 36 * 4/9 = 16 cm. Choice (A)

undefined

Q7. DIRECTIONS *for questions 7 to 10:* Type in your answer in the input box provided below the question.

The book-value of a machine depreciates at the rate of 12.5% every year. What was the book-value (in Rs.) of the machine three years ago, if the difference between its book-value two years ago and its present book-value is Rs.1,31,250?

Rs.

Your Answer:630000 **Your answer is incorrect**

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**259**
Avg. time spent on this question by all students	**267**
Difficulty Level	**M**
Avg. time spent on this question by students who got this question right	**267**
% of students who attempted this question	**18.23**
% of students who got the question right of those who attempted	**20.06**

Video Solution

Text Solution

Let the present value of the machine be ₹m.
Let the value of the machine two years ago be ₹v.

$\Rightarrow v(1-\frac{12.5}{100})(1-\frac{12.5}{100}) = m$

$\Rightarrow v(\frac{7}{8})(\frac{7}{8}) = m \Rightarrow v = \frac{64}{49}m$

$\Rightarrow v - \frac{49}{64}v = 1{,}31{,}250$

$\Rightarrow v = 131250 \times \frac{64}{15}$

Now, the value of the machine three years ago $\times (1-\frac{12.5}{100})$
= the value of the machine two years ago i.e., v.

$\therefore$ The required value $= \left(\frac{8}{7}\right)(v) = \left(\frac{8}{7}\right) \times \left(\frac{64}{15}\right) \times 131250$

= 6,40,000. Ans: (640000)

undefined

Q8. DIRECTIONS *for questions 7 to 10:* Type in your answer in the input box provided below the question.

How many natural numbers less than 1000 leave a remainder of 4 when divided by both 5 and 11?

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	**174**
Difficulty Level	**E**
Avg. time spent on this question by students who got this question right	**157**
% of students who attempted this question	**20.62**
% of students who got the question right of those who attempted	**16.21**

Video Solution

Text Solution

The numbers should be of the form 55k + 4, where k is a integer. Since the number must be less than thousand, 55k + 4 < 1000, i.e., k can take values from 0 to 18.
$\therefore$ There are 19 numbers which leave a remainder 4, when divided by 5 and 11.
Ans: (19)

undefined

Q9. DIRECTIONS *for questions 7 to 10:* Type in your answer in the input box provided below the question.

If the arithmetic mean of $(80)_9$ and $(80)_{16}$ is $(40)_n$ then n =

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**4**
Avg. time spent on this question by all students	**93**
Difficulty Level	**E**
Avg. time spent on this question by students who got this question right	**96**
% of students who attempted this question	**11.27**
% of students who got the question right of those who attempted	**40.25**

Video Solution

Text Solution

The value of $(80)_9$ in decimal system is 8(9) = 72
The value of $(80)_{16}$ in decimal system is 8(16) = 128
The average of $(80)_9$ and $(80)_{16}$ is $\frac{72+128}{2} = 100$
The value of $(40)_n$ in decimal system is 4n.
$\Rightarrow$ 4n = 100
$\Rightarrow$ n = 25.
$\therefore$ The value of n is 25. Ans: (25)

undefined

Q10. DIRECTIONS *for questions 7 to 10:* Type in your answer in the input box provided below the question.

There are ten children, each of a distinct age from 1 to 10 years, initially having an equal amount of money with each of them. First, the eldest child gives ten rupees to every child younger to him. Then, the second eldest child gives nine rupees to every child younger to him, after which, the third eldest child gives eight rupees to every child younger to him, and so on, till the two-year old gives two rupees to the youngest child. If the ratio of the money with the four-year old and the seven-year old is finally 7 : 5, find the initial amount (in Rs.) with each child.

Rs.

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	**309**
Difficulty Level	**M**
Avg. time spent on this question by students who got this question right	**335**
% of students who attempted this question	**18.51**
% of students who got the question right of those who attempted	**33.92**

Video Solution

Text Solution

Let the initial amount with each of them be x.
The money received by the four year old
= 10 + 9 + 8 + 7 + 6 + 5 = 45.
The money which four year old gave to the younger ones = 3(4) = ₹12.
∴ The final amount with the four year old
= x + 45 – 12 = x + 33.
Similarly, the final amount with the seven year old
= x + (10 + 9 + 8) – 6(7) = x + 27 – 42 = x – 15.

$\Rightarrow \frac{x+33}{x-15} = \frac{7}{5}$

⇒ 5x + 165 = 7x – 105
⇒ x = 135.
∴ The initial amount with each child is ₹135. Ans: (135)

undefined

Q11. DIRECTIONS *for questions 11 to 15:* Select the correct alternative from the given choices.

The sum of the LCM and the HCF of two natural numbers*a* and *b* is 57. What is the minimum value of*a* + *b*, if *a* and *b* are not co-primes?

- a) **33**
- b) **27**
- c) **15**
- d) **58**

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**11**
Avg. time spent on this question by all students	**134**
Difficulty Level	**D**
Avg. time spent on this question by students who got this question right	**176**
% of students who attempted this question	**8.82**
% of students who got the question right of those who attempted	**20.7**

Video Solution

Text Solution

Let the numbers a and b be px and qx, where p and q are co-prime and x is H. C. F of the numbers.
$\Rightarrow$ l . c . m of a and $b = pq\,x$.
$\Rightarrow pqx + x = 57$
$x(pq + 1) = 57$
$x(pq + 1)$ 57
$x(pq + 1) = 1 \times 57$ or 3×19
Since, a and b are not co – prime x cannot be 1.
$\Rightarrow x = 3$ and $pq + 1 = 19$ OR x = 19 and pq + 1 = 3
First, consider x = 3
$\Rightarrow pq = 18$, to find the minimum value of p and q should be as close as possible. p and q cannot be 3 and 6 since they are co – prime.
$\Rightarrow$ The values of p and q are 2 and 9.
$\therefore$ The minimum value of $a + b = px + qx = 2(3) + 9(3) = 33$.
Now, consider x = 19.
$\Rightarrow$ pq = 2, i.e., p and q are 2 and 1.
$\therefore$ value of a + b = 2.19 + 1.19 = 57.
Hence, minimum value of a + b = 33 Choice (A)

undefined

Q12. DIRECTIONS *for questions 11 to 15:* Select the correct alternative from the given choices.

If $a \oplus b = \frac{ab}{a+b}$, then find the value of $3 \oplus (4 \oplus 5)$.

- a) $\frac{20}{19}$
- b) $\frac{60}{47}$ Your answer is correct
- c) $\frac{60}{49}$
- d) $\frac{17}{13}$

Time spent / Accuracy Analysis

Time taken by you to answer this question	**39**
Avg. time spent on this question by all students	**66**
Difficulty Level	**E**
Avg. time spent on this question by students who got this question right	**65**
% of students who attempted this question	**31.47**
% of students who got the question right of those who attempted	**94.04**

Video Solution

Text Solution

$$4 \oplus 5 = \frac{(4)(5)}{4+5} = \frac{20}{9}$$

$$3 \oplus (4 \oplus 5) = 3 \oplus \left(\frac{20}{9}\right) = \frac{3\left(\frac{20}{9}\right)}{3+\frac{20}{9}} = \frac{\left(\frac{60}{9}\right)}{\left(\frac{47}{9}\right)} = \frac{60}{47}$$

Choice (B)

undefined

Q13. DIRECTIONS *for questions 11 to 15:* Select the correct alternative from the given choices.

If three acidic solutions of concentrations 35%, 50% and 65% respectively are mixed in the ratio 3 : 2 : 1, what is the concentration of the resultant solution?

- a) **52.5%**
- b) **42.5%**
- c) **47.5%**
- d) **45%** **Your answer is correct**

Time spent / Accuracy Analysis

Time taken by you to answer this question	**78**
Avg. time spent on this question by all students	**110**
Difficulty Level	**E**
Avg. time spent on this question by students who got this question right	**109**
% of students who attempted this question	**24.14**
% of students who got the question right of those who attempted	**78.84**

Video Solution

Text Solution

Let the solutions be A, B, C
They are mixed in ratio 3:2:1
Concentration of the resulted solution

$$= \left(\frac{3}{6} \times \frac{35}{100} + \frac{2}{6} \times \frac{50}{100} + \frac{1}{6} \times \frac{65}{100}\right) \times 100\%$$

$$= \frac{105+100+65}{600} \times 100 = \frac{270}{600} \times 100 = 45\%$$

Choice (D)

undefined

Q14. DIRECTIONS *for questions 11 to 15:* Select the correct alternative from the given choices.

Three men, Bharat, Pradeep and Ravi, together can complete a work in one hour less than what Pradeep would take working alone, one-half the time that Ravi would take working alone and 6 hours less than what Bharat would take working alone. How much time would Bharat and Pradeep, working together, take to complete the work?

- a) $\frac{3}{2}$ **hours**
- b) $\frac{4}{3}$ **hours**
- c) $\frac{5}{4}$ **hours**
- d) $\frac{3}{4}$ **hours**

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**20**
Avg. time spent on this question by all students	**168**
Difficulty Level	**M**
Avg. time spent on this question by students who got this question right	**190**
% of students who attempted this question	**5.49**
% of students who got the question right of those who attempted	**37.46**

Video Solution

Text Solution

Let the time taken by the three men working together be h hours. Time taken by each of Bharat, Pradeep and Ravi, working alone, will be (h + 6) hours, (h + 1) hours and 2h hours respectively.

$\therefore \frac{1}{h} = \frac{1}{h+6} + \frac{1}{h+1} + \frac{1}{2h}$

$\Rightarrow \frac{1}{2h} = \frac{2h+7}{(h+1)(h+6)}$

$\Rightarrow h^2 + 7h + 6 = 4h^2 + 14h$

$\Rightarrow 3h^2 + 7h - 6 = 0$

$\Rightarrow 3h^2 + 9h - 2h - 6 = 0$

$\Rightarrow 3h(h+3) - 2(h + 3) = 0$

$(3h - 2)(h + 3) = 0$

$h = \frac{2}{3}$ (or) -3

As time taken cannot be negative, h = $\frac{2}{3}$ hours.

Let time taken by Bharat and Pradeep together = t

$\Rightarrow \frac{1}{t} = \frac{1}{h+6} + \frac{1}{h+1} = \frac{1}{2h} = \frac{1}{\left(\frac{4}{3}\right)} = \frac{3}{4}$

$\Rightarrow t = \frac{4}{3}$ hours. Choice (B)

undefined

Q15. DIRECTIONS *for questions 11 to 15:* Select the correct alternative from the given choices.

If (*x*, *y*, *z*) is an ordered triplet such that 6*x* + 5*y* + 2*z* = 53, where *x*, *y* and *z* are positive integers, what is the difference between maximum and minimum value of *x* + *y* + *z*?

- a) **10**
- b) **11**

c) **12**

d) **13**

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**178**
Avg. time spent on this question by all students	**163**
Difficulty Level	**M**
Avg. time spent on this question by students who got this question right	**171**
% of students who attempted this question	**9.53**
% of students who got the question right of those who attempted	**27.5**

Video Solution

Text Solution

We get maximum value of x + y + z. when x and y are minimum i.e. x = y = 1, z = 21. x + y + z = 23.
From the options, we can say that minimum value of x + y + z can be10/11/12/13. If x + y + z = 10, then 6x + 5y + 2z = 53 can be written as 4x + 3y = 33. Ordered triplet (x, y, z) = (6, 3, 1).
∴ Difference between maximum and minimum value of x + y + z = 13.

Choice (D)

undefined

Q16. DIRECTIONS *for question 16:* Type in your answer in the input box provided below the question.

Krishna borrowed Rs.42,000 at 10% p.a. under compound interest, interest being compounded annually. If he has to repay this in two equal annual investments, find the value (in Rs.) of each installment.

Rs.

Your Answer:24200 **Your answer is correct**

Time spent / Accuracy Analysis

Time taken by you to answer this question	**177**
Avg. time spent on this question by all students	**149**
Difficulty Level	**M**
Avg. time spent on this question by students who got this question right	**171**
% of students who attempted this question	**24.6**
% of students who got the question right of those who attempted	**25.42**

Video Solution

Text Solution

Let the amount of one instalment be ₹x.

$$\Rightarrow 42{,}000 = \frac{x}{\left(1+\frac{10}{100}\right)} + \frac{x}{\left(1+\frac{10}{100}\right)^2} = \frac{x}{1.1} + \frac{x}{1.21}$$

$$= (1.21)(42{,}000) = 1.1x + x$$

$$\therefore x = \frac{(42{,}000)(1.21)}{2.1} = 24{,}200$$

$\therefore$ The value of each instalment = ₹24,200.

Alternative Solution:

Amount outstanding at end of one year
= 42,000 × (1.1) – x.
This becomes (1.1) [42,000 × (1.1) – x] by the end of 2nd year.
$\therefore$ (1.1) [42,000 (1.1) – x] = x
$\Rightarrow$ 42,000 × 1.21 = 2.1x
$\Rightarrow$ x = ₹24,200 Ans: (24200)

undefined

Q17. DIRECTIONS *for questions 17 and 18:* Select the correct alternative from the given choices.

An ATM machine had money only in notes of denominations of Rs.1000, Rs.500 and Rs.100. The total number of notes ejected by the machine on a certain day is 400. However, due to a malfunction, the machine wrongly ejected Rs.500 notes instead of Rs.100 notes and Rs.100 notes instead of Rs.500 notes. Owing to this error, the machine calculated the total amount ejected by it during the day to be Rs.1,80,000. If the correct amount that was ejected during the day by the machine was Rs.1,16,000, what is the number of Rs.1000 notes ejected by the machine during the day?

- a) **40**
- b) **45**
- c) **50**
- d) **60**

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**17**
Avg. time spent on this question by all students	**259**
Difficulty Level	**M**
Avg. time spent on this question by students who got this question right	**301**
% of students who attempted this question	**9.93**
% of students who got the question right of those who attempted	**57.81**

Video Solution

Text Solution

Let x, y and z be the correct number of notes of ₹1000, ₹500 and ₹100 respectively.
Given
x + y + z = 400 → (1)
1000x + 500y + 100z = 1,16,000
10x + 5y + z = 1160 → (2)
1000x + 500z + 100y = 1,80,000
10x + y + 5z = 1800 → (3)
Solving (1), (2) and (3)
We get x = 40, y = 100 and z = 260
Hence, number of ₹ 1000 notes is 40. Choice (A)

undefined

Q18. DIRECTIONS *for questions 17 and 18:* Select the correct alternative from the given choices.

The monthly incomes of Amit and Bharath are in the ratio 4 : 5. If the ratio of the monthly expenditures of Amit and Bharath is 3 : 4, which of the following can be the ratio of the savings of Amit and Bharath?

- a) **2 : 3**
- b) **4 : 5**
- c) **5 : 7**
- d) **8 : 9**

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	**172**
Difficulty Level	**M**
Avg. time spent on this question by students who got this question right	**184**
% of students who attempted this question	**18.89**
% of students who got the question right of those who attempted	**33.67**

Video Solution

Text Solution

Let the incomes of Amit and Bharath be 4x and 5x respectively and their expenditures be 3y and 4y respectively.

Ratio of Savings = $\frac{4x-3y}{5x-4y} = \frac{4(x-\frac{4}{5}y)+\frac{y}{5}}{5(x-\frac{4}{5}y)}$

$= \frac{4(x-\frac{4}{5}y)}{5(x-\frac{4}{5}y)} + \frac{\left(\frac{y}{5}\right)}{5x-4y} = \frac{4}{5} + \frac{\left(\frac{y}{5}\right)}{5x-4y}$

$\therefore$ The ratio will definitely be greater than $\frac{4}{5}$, which is satisfied only by options (D) i.e. 8 : 9

Alternative Solution:

The ratio of incomes is 4 : 5.
Now, since Amit spends less than Bharat (i.e., the ratio of expenditures is 3 : 4), the ratio of savings will only improve (i.e., increase) over the ratio of incomes, i.e., 4 : 5..
Hence, the ratio of savings must be greater than 4 : 5.
From the choices, only option (D) is possible. Choice (D)

undefined

Q19. DIRECTIONS *for question 19:* Type in your answer in the input box provided below the question.

Three runners, P, Q and R, run around a circular track, of length ℓ m, at speeds of 2 m/s, 6 m/s and 8 m/s respectively. If all three of them start at the same time, from the same point, and run in the same direction, at how many distinct points on the track would any two runners (but not all three) meet?

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**8**
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	**109**
% of students who attempted this question	**10.88**
% of students who got the question right of those who attempted	**18.83**

Video Solution

Text Solution

Let x be the distance travelled by P when he meets Q for the first time.
P, Q meet when the distance travelled by Q is one lap more than the distance travelled by P.

$\Rightarrow \frac{x}{x+\ell} = \frac{2}{6}$

$\Rightarrow \frac{x}{x+\ell} = \frac{1}{3}$

$\Rightarrow x = \frac{\ell}{2}$.

So, P and Q meet exactly at the point diametrically opposite to their starting for the first time and they will meet at their starting point for the second time and the cycle continues.
Similarly, P and R meet at three different points including the starting point, i.e., ℓ/3, 2ℓ/3 and ℓ.
Similarly, Q and R meet only at the starting point, i.e., ℓ.
$\therefore$ Exactly two of P, Q and R meet at only ℓ/3, ℓ/2 and 2ℓ/3, i.e., three distinct points.
Ans: (3)

undefined

Q20. DIRECTIONS *for questions 20 to 25:* Select the correct alternative from the given choices.

The number of five-letter words which start with T, that can be formed using the letters of the word CASKET, without repeating any letter, is

- a) **180.**
- b) **720.**
- c) **120.**
- d) **24.**

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**5**
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	**65**
% of students who attempted this question	**28.4**
% of students who got the question right of those who attempted	**78.98**

Video Solution

Text Solution

Since T is the first letter, the remaining four letters are to be filled using the remaining five letters (C, A, S, K, E). This can be done in ${}^5P_4$ ways i.e. 120 ways. Choice (C)

undefined

Q21. DIRECTIONS *for questions 20 to 25:* Select the correct alternative from the given choices.

Consider the following series 1, 1, 2, 2, 2, 2, 3, 3, 3, 3, 3, 3, 4, 4 …. and so on. What is the sum of the first 1000 terms of the series?

- a) **21088**
- b) **21120**
- c) **20118**
- d) **21808**

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	**140**

Time spent / Accuracy Analysis

Difficulty Level	**D**
Avg. time spent on this question by students who got this question right	**195**
% of students who attempted this question	**4.98**
% of students who got the question right of those who attempted	**28.5**

Video Solution

Text Solution

By observation, we can see that a natural number n is written for 2n times.
$\Rightarrow k^{th}$ term of the series will be equal to x if $(x)(x-1) < k < (x)(x+1)$ where $(x)(x-1)$ represents twice the sum of the first $x-1$ natural numbers and $(x)(x+1)$ represents twice the sum of the first x natural numbers.
$\Rightarrow$ The 1000^{th} term will be equal to 32.
Since, each number till 31 is repeated twice the number of times of its value.
The first term equal to 32 = The last term equal to 31 + 1
$= (31)(32) + 1 = 993.$

$\therefore$ The require sum $= 2\sum_{n=1}^{31} n^2 + (1000 - 93 + 1)32$

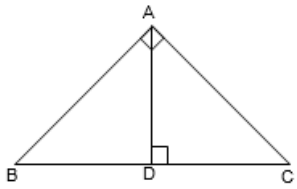
$= \frac{(2)(31)(32)(63)}{6} + (8)(32)$

$= 32((31(21) + 8) = 32(659) = 21088$ Choice (A)

undefined

Q22. DIRECTIONS *for questions 20 to 25:* Select the correct alternative from the given choices.

Find the length $\overline{CD}$ in the figure given below, if $\overline{BD} = 4$ units, $\overline{AC} = 2\sqrt{3}$ units and $\angle BAC = \angle ADC = 90°$.



- a) $\sqrt{3}$
- b) **1**
- c) **2**
- d) $\frac{2}{\sqrt{3}}$

You did not answer this question Show Correct Answer

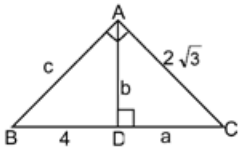
Time spent / Accuracy Analysis

Time taken by you to answer this question	**176**
Avg. time spent on this question by all students	**194**
Difficulty Level	**M**
Avg. time spent on this question by students who got this question right	**210**
% of students who attempted this question	**14.73**
% of students who got the question right of those who attempted	**52.42**

Video Solution

Text Solution

Given BD = 4 units and AC = $2\sqrt{3}$ units.



Let CD = a units, AD = b units, and AC = c units.
It can be observed that ∠C belongs to both the right-triangles ΔABC and ΔADC.

In ΔABC, $\cos C = \frac{2\sqrt{3}}{4+a}$

In ΔADC, $\cos C = \frac{a}{2\sqrt{3}}$

$\Rightarrow \frac{2\sqrt{3}}{4+a} = \frac{a}{2\sqrt{3}}$

From the choices, it can be seen that a = 2 satisfies.

OR

$12 = 4a + a^2$
$\Rightarrow a^2 + 4a - 12 = 0$
$\Rightarrow (a + 6)(a - 2) = 0$
$\Rightarrow a = 2.$

Alternative Solution 1:

From ΔABC
$AB^2 + AC^2 = BC^2$
$c^2 + (2\sqrt{3})^2 = (4 + a)^2$ _____ (1)
From ΔABD
$AD^2 + BD^2 = AB^2$
$4^2 + b^2 = c^2$ _____ (2)
From Δ^{le} ADC
$(2\sqrt{3})^2 = a^2 + b^2$ _____ (3)
Adding (1), (2) and (3), we get
$c^2 + (2\sqrt{3})^2 + 4^2 + b^2 + \left(2\sqrt{3}\right)^2$
$= (4 + a)^2 + c^2 + a^2 + b^2$
$\Rightarrow 12 + 16 + 12 = 16 + a^2 + 8a + a^2$
$\Rightarrow 2a^2 + 8a - 24 = 0$
$\Rightarrow a^2 + 4a - 12 = 0$
$\Rightarrow (a + 6)(a - 2) = 0$
$\Rightarrow a = -6$ (or) 2
As a cannot be negative a = 2 units

Alternative Solution 2:

It can be seen that there are three similar triangles in the given figure, i.e., ΔABC, ΔABD and ΔADC. From these, we get $\frac{AD}{BD} = \frac{DC}{AD}$, i.e., $AD^2 = BD.DC$.

Now, from the choices, if CD = 2, $AD^2 = AC^2 - CD^2 = 8$, which is equal to BD.DC, i.e., 4 × 2. Hence, choice (C).

Choice (C)

undefined

Q23. DIRECTIONS *for questions 20 to 25:* Select the correct alternative from the given choices.

Find the area (in sq. units) of the region which satisfies the relations $x + 3y \le 9$, $3x + y \le 9$, $x \ge 0$ and $y \ge 0$.

- a) $\frac{27}{4}$
- b) $\frac{13}{2}$
- c) $\frac{64}{9}$
- d) **9**

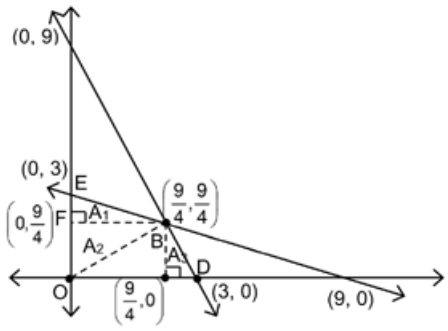
You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**122**
Avg. time spent on this question by all students	**168**
Difficulty Level	**M**
Avg. time spent on this question by students who got this question right	**197**
% of students who attempted this question	**7.87**
% of students who got the question right of those who attempted	**55.85**

Video Solution

Text Solution



The required region can be divided into three regions of which two are rightangled triangles and the other is a square.

The area of the square $(A_2) = \left(\frac{9}{4}\right)^2 = \frac{81}{16}\text{cm}^2$.

The area of each triangle (A_1 or A_3) $= \left(\frac{1}{2}\right)\left(\frac{9}{4}\right)\left(3-\frac{9}{4}\right)$

$= \left(\frac{1}{2}\right)\left(\frac{9}{4}\right)\left(\frac{3}{4}\right) = \frac{27}{32}\text{cm}^2$

$\therefore$ The required area

$= \frac{81}{16} + 2\left(\frac{27}{32}\right) = \frac{81}{16} + \frac{27}{16} = \frac{108}{16} = \frac{27}{4}$ sq.units.

Alternative Solution:

From symmetry, we can see that the required region comprises two identical triangles, ΔOBE and ΔOBD, area of each being $\frac{1}{2} \times OE \times FB = \frac{1}{2} \times 3 \times \frac{9}{4}$.

Hence, total area $= 2 \times \left(\frac{1}{2} \times 3 \times \frac{9}{4}\right) = \frac{27}{4}$ sq. units. Choice (A)

undefined

Q24. DIRECTIONS *for questions 20 to 25:* Select the correct alternative from the given choices.

What is the square of the product of all the factors of 53900?

a)

$2^{110}\,5^{110}\,7^{110}\,11^{55}$

b)

$2^{106}\,5^{106}\,7^{106}\,11^{53}$

○ c)

$2^{108}\,5^{108}\,7^{108}\,11^{54}$

○ d)

$2^{112}\,5^{112}\,7^{112}\,11^{56}$

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**82**
Avg. time spent on this question by all students	**127**
Difficulty Level	**M**
Avg. time spent on this question by students who got this question right	**142**
% of students who attempted this question	**6.28**
% of students who got the question right of those who attempted	**66.18**

Video Solution

Text Solution

Since, $53900(2^2\,5^2\,7^2\,11)$ is not a perfect square the required product is $\left[(53900)^{\frac{N}{2}}\right]^2$,

where N is the number of factors of 53900.
The number of factors of $53900(2^2\,5^2\,7^2\,11)$
$= (2 + 1)\,(2 + 1)\,(2 + 1)\,(1 + 1) = 54.$
∴ The required value is $(2^2\,5^2\,7^2\,11)^{54}$
$= 2^{108}\,5^{108}\,7^{108}\,11^{54}.$ Choice (C)

undefined

Q25. DIRECTIONS *for questions 20 to 25:* Select the correct alternative from the given choices.

If, for x > 0, $f(x) = \frac{f(x-1)}{1+x.f(x-1)}$ and $f(1) = 1$, then find the value of $f(100)$.

○ a) $\frac{1}{4950}$

○ b) $\frac{1}{5000}$

○ c) $\frac{1}{5050}$

○ d) $\frac{1}{2550}$

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time spent / Accuracy Analysis

Time taken by you to answer this question	**1**
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	**133**
% of students who attempted this question	**5.58**
% of students who got the question right of those who attempted	**52.01**

Video Solution

Text Solution

$$f(x) = \frac{f(x-1)}{1+x.f(x-1)}$$

$$\frac{1}{f(x)} = \frac{1+x.f(x-1)}{f(x-1)}$$

$$\frac{1}{f(x)} = \frac{1}{f(x-1)} + x$$

$$\frac{1}{f(2)} = \frac{1}{f(1)} + 2 = 2 + 1$$

$$\frac{1}{f(3)} = 3 + \frac{1}{f(2)} = 3 + 2 + 1$$

$$\frac{1}{f(4)} = 4 + \frac{1}{f(3)} = 4 + 3 + 2 + 1$$

$$\frac{1}{f(n)} = n + (n-1) + \ldots\ldots 1$$

$$\Rightarrow f(n) = \frac{1}{\Sigma n} = \frac{2}{n(n+1)}$$

$$f(100) = \frac{2}{100 \times 101} = \frac{1}{5050}$$

Alternative Solution:

Given f(1) = 1,

$$f(2) = \frac{1}{1+1.1} = \frac{1}{2}$$

$$f(3) = \frac{\left(\frac{1}{2}\right)}{1+3\left(\frac{1}{2}\right)} = \frac{1}{6}$$

$$f(4) = \frac{\left(\frac{1}{6}\right)}{1+4\left(\frac{1}{6}\right)} = \frac{1}{10}$$

Observing the pattern, it may be concluded that $f(n) = \frac{1}{\Sigma n}$

Hence, $f(100) = \frac{1}{\left(\frac{100 \times 101}{2}\right)} = \frac{1}{5050}$ Choice (C)

undefined

Q26. DIRECTIONS *for question 26:* Type in your answer in the input box provided below the question.

What is the sum of all the natural numbers from 101 to 200 excluding those that end in 7?

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time spent / Accuracy Analysis

Time taken by you to answer this question	**3**
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	**168**
% of students who attempted this question	**16.01**
% of students who got the question right of those who attempted	**39.17**

Video Solution

Text Solution

Sum of all numbers from 101 to 200
= (100/2) [2(101) + 99] = 15,050
Sum of numbers between 101 and 200 ending in 7
= 107 + 117 + . . . + 197
= (10/2) [2(107) + 9(10)] = 1,520
∴ The required sum = 15,050 – 1,520 = 13,530 Ans: (13530)

undefined

Q27. DIRECTIONS *for question 27:* Select the correct alternative from the given choices.

Peejay went to a shop to purchase chocolates. The shopkeeper said to him, “You can purchase a chocolate either by paying Re.1 or by giving me three empty wrappers of the chocolate”. If the maximum number of chocolates Peejay can purchase is 50, then find the amount of money with him.

- a) **Rs.30**
- b) **Rs.32**
- c) **Rs.34**
- d) **Rs.36**

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**8**
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	**163**
% of students who attempted this question	**19.64**
% of students who got the question right of those who attempted	**46.66**

Video Solution

Text Solution

The best way of solving this type of questions is a combination of using the choices and trail and error.
Lets check a middle value among the given options.
If Peejay had ₹32 initially, the maximum number of chocolates he could have purchased

$= 32 + 10\left(\frac{30}{3}, 2\right) + 4\left(\frac{10+2}{3}\right) + 1\left(\frac{3}{3}, 1\right) = 47.$

∴ The initial amount with Peejay should be more than ₹32. On checking the other options, we get the initial amount with him to be ₹34. Choice (C)

undefined

Q28. DIRECTIONS *for question 28:* Type in your answer in the input box provided below the question.

Find the sum of all four-digit even numbers that can be formed using the digits 0, 2, 3 and 5, if no digit occurs more than once in each number.

Your Answer:39088 **Your answer is correct**

Time spent / Accuracy Analysis

Time taken by you to answer this question	**182**
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	**187**
% of students who attempted this question	**11.49**
% of students who got the question right of those who attempted	**27.44**

Video Solution

Text Solution

The number of four-digit even numbers which end with 0 is 3! = 6.
The numbers 2, 3 and 5 each of them will be in tens, hundredths and thousands place in two instances in these 6 numbers.
= 2(2 + 3 + 5) (1000 + 100 + 10)
= 2(10) (1110) = 22,200.
The number of four-digit even numbers which end with 2 is 4.
The numbers 3 and 5 each of them will be in thousands place in 2 distinct numbers.
The numbers 3 and 5 will be in tens and hundreds place exactly one in these 4 numbers.
∴ The sum of the digits of these numbers
= (3 + 5) (2) (1,000) + (3 + 5) (110) + (2) (4)
= 16,000 + 880 + 8 = 16,888.
∴ The required number = 22,200 + 16,888 = 39,088. Ans: (39088)

undefined

Q29. DIRECTIONS *for question 29:* Select the correct alternative from the given choices.

Find the range of all real values of x for which $|5x+3| > 11x + 2$.

- a) $\left(\frac{-3}{5}, \frac{-5}{3}\right]$
- b) $\left(\frac{-3}{5}, \frac{-5}{16}\right)$
- c) $\left(-\infty, \frac{1}{6}\right]$

○ d) $\left(-\infty, \frac{1}{6}\right)$

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	**107**
Difficulty Level	**E**
Avg. time spent on this question by students who got this question right	**118**
% of students who attempted this question	**11.37**
% of students who got the question right of those who attempted	**50.62**

Video Solution

Text Solution

If $x < \frac{-3}{5}$

$-5x - 3 > 11x + 2$

$-5 > 16x$

$\Rightarrow x < \frac{-5}{16}$

$\Rightarrow x \in \left(-\infty, \frac{-3}{5}\right)$

If $x \geq \frac{-3}{5}$

$5x + 3 > 11x + 2$

$1 > 6x$

$\Rightarrow x < \frac{1}{6} \Rightarrow x \in \left[\frac{-3}{5}, \frac{1}{6}\right)$

$\therefore$ The range of x is $\left(-\infty, \frac{1}{6}\right)$

Alternative Solution:

Checking for x = 0, eliminates options (A) and (B). Now, checking for x = $\frac{1}{6}$, we get option (D) as the answer. Choice (D)

undefined

Q30. DIRECTIONS *for questions 30 and 31:* Type in your answer in the input box provided below the question.

If α^2 and $\frac{1}{\alpha^2}$ are the roots of the equation $2x^2 + bx + a = 0$, while α and $\frac{1}{\alpha}$ are the roots of the equation $x^2 - ax + c = 0$, what is the value of b?

Your Answer:-6 Your answer is incorrect

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**153**
Avg. time spent on this question by all students	**120**
Difficulty Level	**E**
Avg. time spent on this question by students who got this question right	**134**

Time spent / Accuracy Analysis

% of students who attempted this question	**8.36**
% of students who got the question right of those who attempted	**39.78**

Video Solution

Text Solution

Since α^2 and $\frac{1}{\alpha^2}$ are reciprocals of each other, we get a = 2.

Also α and $\frac{1}{\alpha}$ are reciprocals.

Hence, c = 1.

$\Rightarrow x^2 - 2x + 1 = 0$ is the second equation.

$\Rightarrow \alpha$ and $\frac{1}{\alpha}$ are 1, 1.

$\Rightarrow \alpha^2$ and $\frac{1}{\alpha^2}$ are also 1, 1.

$\Rightarrow$ The first equation must be $2x^2 - 4x + 2 = 0$

$\Rightarrow b = -4$. Ans: (–4)

undefined

Q31. DIRECTIONS *for questions 30 and 31:* Type in your answer in the input box provided below the question.

What is the remainder when 17^{432} is divided by 109?

Your Answer:71 **Your answer is incorrect**

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	**96**
Difficulty Level	**M**
Avg. time spent on this question by students who got this question right	**91**
% of students who attempted this question	**8.68**
% of students who got the question right of those who attempted	**43.36**

Video Solution

Text Solution

Using Fermat's Little theorem, since 17 and 109 are co-prime $\text{Rem}\left[\frac{17^{108}}{109}\right] = 1$

$\Rightarrow \text{Rem}\left[\frac{17^{432}}{109}\right] = 1$ [$\because$ 432 = 108 × 4] Ans: (1)

undefined

Q32. DIRECTIONS *for questions 32 to 34:* Select the correct alternative from the given choices.

A trader increases the selling price of an article by exactly the same amount by which the cost price of the article goes up. Which of the following statements is necessarily true regarding P_1 and P_2, which are his profit percentages before and after the price hike respectively? (Negative profit percentage indicates a loss)

- a) **If $P_1 < 0$, then $|P_1| < |P_2|$**
- b) **If $P_1 > 0$, then $|P_1| > |P_2|$**
- c) **$P_1 = P_2$**
- d) **$P_1 \neq P_2$**

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**42**
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	**110**
% of students who attempted this question	**9.08**
% of students who got the question right of those who attempted	**39**

Video Solution

Text Solution

Let initial Cost price = C
and initial Selling price = S
i.e. $P_1 > 0$
$\therefore$ if $\frac{S}{C} > 1$, then $\frac{S+x}{C+x}$ is always less than $\frac{S}{C}$ (where x is the increase in cost price that the seller passes on to the buyer.)
$\therefore$ Choice (B) is correct.
While if $P_1 < 0$ then the ratio $\frac{S}{C} < 1 = \frac{S+x}{C+x} > \frac{S}{C}$
$\Rightarrow$ He makes lesser loss percentage in second case
$\Rightarrow |P_2| < |P_1|$
$\therefore$ Choice (A) is incorrect.
Choices (C) and (D) are not necessarily true always.
(Because, if the sales price is the same as the cost price, $P_1 = P_2 = 0$. But this need not be the case always).

Choice (B)

undefined

Q33. DIRECTIONS *for questions 32 to 34:* Select the correct alternative from the given choices.

If $a = \sqrt{b} = \sqrt[3]{c} = \sqrt[4]{d} = \sqrt[5]{e}$, then find the value of $\log_e(a.b.c.d.e)$.

- a) **3**
- b) **$3\frac{1}{5}$**
- c) **$3\frac{2}{5}$**

○ d) $3\frac{3}{5}$

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	**200**
Avg. time spent on this question by all students	**106**
Difficulty Level	**E**
Avg. time spent on this question by students who got this question right	**114**
% of students who attempted this question	**7.9**
% of students who got the question right of those who attempted	**74.61**

Video Solution

Text Solution

$$\log_e(a\ b\ c\ d\ e) = \log_e\left(e^{\frac{1}{5}}e^{\frac{2}{5}}e^{\frac{3}{5}}e^{\frac{4}{5}}e\right)$$

$$= \log_e\left(e^{\frac{1}{5}+\frac{2}{5}+\frac{3}{5}+\frac{4}{5}+1}\right) = \log_e e^3 = 3.$$ Choice (A)

undefined

Q34. DIRECTIONS *for questions 32 to 34:* Select the correct alternative from the given choices.

In a certain institute, out of every seven students studying Accountancy, three study Economics as well. For every student studying at least one of these two courses, there are three students who study neither. If 10% of the students study only Accountancy, then what percentage of students study only Economics?

○ a) **17½%**

○ b) **7½%**

○ c) **21½%**

○ d) **Cannot be determined**

You did not answer this question Show Correct Answer

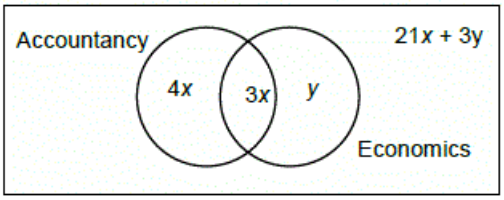
Time spent / Accuracy Analysis

Time taken by you to answer this question	**465**
Avg. time spent on this question by all students	**179**
Difficulty Level	**M**
Avg. time spent on this question by students who got this question right	**239**
% of students who attempted this question	**5.8**
% of students who got the question right of those who attempted	**22.75**

Video Solution

Text Solution

Out of a total of 7 students taking Accountancy 4 take only Accountancy and 3 take Accountancy and Economics.
Let the number of students taking Economics be y.



Given that students taking none of the two courses
$= 3\ (7x + y) = 21x + 3y$
Since, the question is asked about percentage, let the total number of students in the institute be 100.
Given that $4x = 10\% \Rightarrow x = 2.5\%$
$\Rightarrow 4x + 3x + y + 21x + 3y = 100 \Rightarrow 28x + 4y = 100$
$\Rightarrow 28(2.5\%) + 4y = 100$
$\therefore y = 7.5\%$ Choice (B)