

Q1. DIRECTIONS for questions 1 and 2: Five sentences (labelled 1, 2, 3, 4, 5) are given in each of the following questions. Four of them can be put together to form a meaningful and coherent short paragraph and **one sentence is the odd one out**. Decide on the proper logical order for the sentences and key in the sequence **of four** numbers as your answer, even as you **omit the contextually unrelated sentence**.

1. Most of them still do much of their shopping on foreign jaunts, as they have done since the oil money started flowing in the 1970s, but now they also have plenty of places back home to splash their cash.
2. Bain and Company reckons that luxury spending in the region grew by 10% last year, to just over \$8 billion, a bit less than half the amount spent in mainland China.
3. The Middle East's rich will soon have yet another way to flaunt their wealth, when the Burj al-Arab hotel starts selling its guests custom-made 24-carat gold iPads.
4. The conservativeness of Arab society also drives demand for custom-made entertainment.
5. And the Gulf's malls are drawing foreign shoppers from Russia, India and Africa, too.

Your Answer:3125 □ Your answer is incorrect

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	185
Avg. time spent on this question by all students	182
Difficulty Level	VD
Avg. time spent on this question by students who got this question right	177
% of students who attempted this question	39.21
% of students who got the question right of those who attempted	3.2

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In sentence 1, we have 'them' and 'they' which refer to a plural noun that we need to look for in the five sentences. Sentence 2 has an interesting connective, 'the region' which means that we need to look for a proper noun that probably indicates a region. Sentence 3 gives us that region 'The Middle East' and it also explains the 'they' and 'them' in the first sentence – the rich people of the Middle East. The confusing bit in sentence 3 is 'yet another way' which many may mistake for a connection to another sentence. It is a connection, but not necessarily in the same para (one way of confirming that would be to see if the remaining four sentences talk about another way of flaunting wealth, but the whole para only talks about shopping). Sentence 4 talks about entertainment, which doesn't fit with the remaining sentences, so far, which are about shopping/spending. Sentence 4 also talks about "conservativeness" which is the opposite of "luxury spending" – the theme of the para. Therefore sentence 4 is the odd-one out. Sentence 5 talks about 'malls' alluding to shopping by using the word 'shoppers' and also uses the positive connection 'and'.

The pronoun sentence follows the noun sentence. So, 31 is a mandatory pair. In sentence 1, "Most of them" refers to "The Middle East's rich" in sentence 3. Further, "yet another way to flaunt their wealth" in sentence 3 links with "now they also have plenty of places back home to splash their cash" in sentence 1. Also, "the Burj al-Arab hotel starts selling its guests custom-made 24-carat gold iPads" in sentence 3 contrasts "Most of them big spenders still do much of their shopping on foreign jaunts" in sentence 1. Sentence 5 starts with 'And' and also has 'too' in the end which explains that apart from domestic shoppers, malls are drawing in foreign shoppers as well. So, 315 is a logical block. Sentence 2 talks about the region. Since, sentence 2 cannot be inserted inside the tightly knit logical block, and cannot come at the beginning, the logical order has to be 3152. Also note, that a student doesn't have to use general knowledge to connect 'Gulf' with the Middle East. It is a grammatical and logical connection. So sentence 5 is followed by sentence 2. "luxury spending in the region" in sentence 2 points to "Gulf's malls drawing foreign shoppers" in sentence 5 and "Middle East's big spenders ... splash their cards" in sentence 1. Sentence 2 concludes the para. So, 3152.

Ans: (3152)

undefined

Q2. DIRECTIONS for questions 1 and 2: Five sentences (labelled 1, 2, 3, 4, 5) are given in each of the following questions. Four of them can be put together to form a meaningful and coherent short paragraph and **one sentence is the odd one out**. Decide on the proper logical order for the sentences and key in the sequence of **four** numbers as your answer, even as you **omit the contextually unrelated sentence**.

1. Having developed such a sophisticated health-care system, and being deeply embedded in the global and regional economy, Korea sees a duty and an opportunity to share its medical expertise with the wider world, and thus to spread the warmth of jeong to global society.

2. The outcomes speak for themselves: OECD data on five-year survival rates for cervical cancer shows Korea in second place, behind only Norway, and the country ranks first in survival rates for colorectal cancer.
3. Demonstrating the country's strength in medical research, theses from Korean institutions are frequently cited in international journals, particularly in the field of liver transplantation.
4. Medical Korea has also been enhanced by the national affinity for science and high technology that created electronics and automotive superstars like Samsung and Hyundai.
5. Indicators show a high penetration of advanced medical equipment: in 2015, Korea ranked fourth in the OECD for MRI units per capita and sixth for CT scanners.

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	120
Avg. time spent on this question by all students	139
Difficulty Level	VD
Avg. time spent on this question by students who got this question right	138
% of students who attempted this question	32.65
% of students who got the question right of those who attempted	0.45

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Sentence 1 is independent and introduces a key term 'jeong'. Sentence 2 talks about 'the outcomes' of something. Sentence 3 is an independent sentence. Sentence 4 talks about 'medical Korea' which has been advanced by national affinity for science and high technology. Sentence 5 talks about advanced medical equipment. 'The outcomes' in 2 is paired up with 5 which has 'indicators' and 'high penetration' (cause and effect). So, 52 is a mandatory pair. Neither of them can be the odd-one out. 3 talks about medical research and hence, connects to 52, leaving us with 1 and 4. 4 talks about science and technology, closer to 'advanced' medical research and equipment, than 'jeong' is. So, 1 is the odd-one out. Now, 4 talks about science, the biggest of all the ideas and hence comes ahead of all the other sentences. It is upstream to medical research and advancement. Also 4 introduces the idea of brand Korea in the medical world (Think of medical Korea the way we say digital India). 3 talks about the idea of medical research, upstream to medical equipment in 5. "Medical Korea national affinity for science and high technology" in sentence 4 links with "demonstrating the country's strength in medical research" in sentence 3. "theses from Korean institutions are frequently cited in international journals, particularly in the field of liver transplantation" in sentence 3 points to "Medical Korea" in sentence 4. So, 4352 is the logical block. Sentence 1 is the odd sentence out. It needs further elaboration and substantiation and can be a part of another paragraph. "share its medical expertise with the wider world, and thus to spread the warmth of jeong to global society" is a new thought and needs to be further explained.

Ans: (4352)

undefined

DIRECTIONS for questions 3 to 8: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

Two black holes circle one another and merge. The single black hole settles down to a stable form and any distortion in the shape is dissipated as more gravitational waves. Three suns' worth of mass has been turned into energy, in the form of

gravitational waves: travelling ripples that stretch and compress space, and thereby all in their path. ...

Then, 1.3 billion years later, on 14th September 2015, on a small planet orbiting a yellow sun, at facilities known as the Advanced Laser Interferometer Gravitational-wave Observatory (LIGO), the faintest slice of those waves was caught. That slice, called GW150914 by LIGO's masters, is the first gravitational wave to be detected directly.

The idea of gravitational waves emerged from the general theory of relativity, Albert Einstein's fundamental exposition of gravity, unveiled 100 years before GW150914's discovery. Mass, Einstein realised, deforms the space and time around itself. Gravity is the effect of this, the behaviour of objects dutifully moving along the curves of mass-warped spacetime. It is a simple idea, but the equations that give it mathematical heft are hard to solve. One approximation led Einstein to an odd prediction: any accelerating mass should make ripples in spacetime. Einstein would argue for such waves and then, after redoing the sums, against them. But, while many stretched and squeezed the maths, experimentalists set about trying to catch the putative waves in the act of stretching and squeezing matter.

Their problem was that the expected effect was a transient change in dimensions equivalent to perhaps a thousandth of the width of a proton in an apparatus several kilometres across. Indirect proof of gravitational waves' existence has been found, most notably by measuring radio emissions from pairs of dead stars called pulsars that are orbiting one another, and deducing from this how the distance between them is shrinking as they broadcast gravitational waves into the cosmos. But the waves themselves proved elusive until the construction of LIGO.

LIGO is an interferometer and works by splitting a laser beam in two, sending the halves to and fro along paths identical in length but set at right angles to one another, and then looking for interference patterns when the halves are recombined. If the half-beams' paths are undisturbed, the waves will arrive at the detector in lock-step. But a passing gravitational wave will alternately stretch and compress the half-beams' paths. Those half-beams, now out of step, will then interfere with each other at the detector in a way that tells of their experience. The shape of the resulting interference pattern contains information about the wave's source, including what masses were involved and how far away it was.

To make absolutely certain that what is seen really is a gravitational wave requires taking great care. First, LIGO is actually two facilities, one in Louisiana and the other in Washington. The tiny shifts in the length of their arms are continually compared and significant patterns which appear to arise synchronously are followed up to determine whether a gravitational wave may have been detected or if some other cause was responsible. Between 2002 when LIGO opened and 2010, when it was closed for upgrades, nary a wave was seen. In 2015, Advanced LIGO, which was four times as sensitive as the previous incarnation began its work. The system's operators were still kicking its metaphorical tyres and had yet to begin its official first run when GW150914 turned up, first at the Louisiana site, and about a hundredth of a second later in Washington. The likelihood that the signal was a fluke is infinitesimal. Four more observations of gravitational waves were made in 2017, including GW170817, the first observed merger of binary neutron stars, which was also observed in electromagnetic radiation.

For gravitational astronomy, this is just the beginning. Soon, LIGO will not be alone but it will be accompanied by four other observatories. Together, by forming a telescope that will permit astronomers to pinpoint whence the waves come, these devices will open a new vista on the universe. As technology improves, waves of lower frequency - corresponding to events involving larger masses - will become detectable. Eventually, astronomers should be able to peer at the first 380,000 years after the Big Bang, an epoch of history that remains inaccessible to every other kind of telescope yet designed.

The real prize, though, lies in proving Einstein wrong. For all its prescience, the theory of relativity is inconsistent with the theory of quantum mechanics. Many physicists suspect that it is in places with extreme conditions - like those which launch gravitational waves - that the first chinks in relativity's armour may be found, and with them a glimpse of a more all-embracing theory leading to the unseating of Einstein's theory of relativity.

Q3. What does the author imply by saying: "... the equations that give it mathematical heft are hard to solve. ... ripples in space time." (para 3)?

- a) Gravity is a simple idea but the mathematical equations that fuse the three dimensions of space and the concept of time in a four dimensional continuum are unnecessarily complicated.
- b) The equations that strengthen the fledgling concept of gravitational waves cannot be solved under any circumstance.
- c) The equations that explain the relationship between gravity and spacetime deformation by mass are difficult to solve but certain approximations can help make predictions.
- d) The equations governing the behaviour of objects accelerating along the curves of mass-warped spacetime can be solved only by making certain approximations.

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question

11

Time spent / Accuracy Analysis

Avg. time spent on this question by all students	262
Difficulty Level	D
Avg. time spent on this question by students who got this question right	267
% of students who attempted this question	50.66
% of students who got the question right of those who attempted	68.04

[Video Solution](#)

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Number of words and Explanatory notes for RC:

Number of words: 787

Option A: Gravity is the effect of this, the behaviour of objects dutifully moving along the curves of mass-warped spacetime. It is a simple idea but the equations that give it (gravity and gravitational waves) mathematical heft are hard to solve. We cannot say from this that the mathematical equations that describe spacetime (the concepts of time and three-dimensional space regarded as fused in a four-dimensional continuum) are difficult to solve. Hence choice A is incorrect.

Option B: Mass, Einstein realised, deforms the space and time around itself. Gravity is the effect of this, the behaviour of objects dutifully moving along the curves of mass-warped spacetime. It is a simple idea, but the equations that give it mathematical heft are hard to solve. So "cannot be solved under any circumstance" cannot be deduced from the para. Choice B is not the answer.

Option C: "It is a simple idea, but the equations that give it mathematical heft are hard to solve." The 'it' in this sentence refers to 'gravity being an effect of this'. Going back to the preceding sentence, 'this' in this sentence refers to mass deformation of space and time around itself. Hence, the 'simple idea' can be rephrased as gravity being an effect of mass deformation of spacetime. The 'mathematical heft' means that mathematically proving the equations. Further, 'One approximation led Einstein to an odd prediction: any accelerating mass should make ripples in spacetime.' We can infer from this that using certain approximations (as the one that Einstein used), we can make certain predictions (however odd). The passage goes on to tell us: Einstein would argue for such waves and then, after redoing the sums, against them. But, while many stretched and squeezed the maths, experimentalists set about trying to catch the putative waves in the act of stretching and squeezing matter. "While many stretched and squeezed the maths" again strengthens "mathematical heft" and "approximations" in the question statement. Hence choice C is the answer.

Option D: "**only** by making certain approximations" in choice D is narrow and extreme in scope. Choice D is not the answer.

Choice (C)

undefined

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Two black holes circle one another and merge. The single black hole settles down to a stable form and any distortion in the shape is dissipated as more gravitational waves. Three suns' worth of mass has been turned into energy, in the form of gravitational waves: travelling ripples that stretch and compress space, and thereby all in their path. ...

Then, 1.3 billion years later, on 14th September 2015, on a small planet orbiting a yellow sun, at facilities known as the Advanced Laser Interferometer Gravitational-wave Observatory (LIGO), the faintest slice of those waves was caught. That slice, called GW150914 by LIGO's masters, is the first gravitational wave to be detected directly.

The idea of gravitational waves emerged from the general theory of relativity, Albert Einstein's fundamental exposition of gravity, unveiled 100 years before GW150914's discovery. Mass, Einstein realised, deforms the space and time around itself. Gravity is the effect of this, the behaviour of objects dutifully moving along the curves of mass-warped spacetime. It is a simple idea, but the equations that give it mathematical heft are hard to solve. One approximation led Einstein to an odd prediction: any accelerating mass should make ripples in spacetime. Einstein would argue for such waves and then, after redoing the sums, against them. But, while many stretched and squeezed the maths, experimentalists set about trying to catch the putative waves in the act of stretching and squeezing matter.

Their problem was that the expected effect was a transient change in dimensions equivalent to perhaps a thousandth of the

width of a proton in an apparatus several kilometres across. Indirect proof of gravitational waves' existence has been found, most notably by measuring radio emissions from pairs of dead stars called pulsars that are orbiting one another, and deducing from this how the distance between them is shrinking as they broadcast gravitational waves into the cosmos. But the waves themselves proved elusive until the construction of LIGO.

LIGO is an interferometer and works by splitting a laser beam in two, sending the halves to and fro along paths identical in length but set at right angles to one another, and then looking for interference patterns when the halves are recombined. If the half-beams' paths are undisturbed, the waves will arrive at the detector in lock-step. But a passing gravitational wave will alternately stretch and compress the half-beams' paths. Those half-beams, now out of step, will then interfere with each other at the detector in a way that tells of their experience. The shape of the resulting interference pattern contains information about the wave's source, including what masses were involved and how far away it was.

To make absolutely certain that what is seen really is a gravitational wave requires taking great care. First, LIGO is actually two facilities, one in Louisiana and the other in Washington. The tiny shifts in the length of their arms are continually compared and significant patterns which appear to arise synchronously are followed up to determine whether a gravitational wave may have been detected or if some other cause was responsible. Between 2002 when LIGO opened and 2010, when it was closed for upgrades, nary a wave was seen. In 2015, Advanced LIGO, which was four times as sensitive as the previous incarnation began its work. The system's operators were still kicking its metaphorical tyres and had yet to begin its official first run when GW150914 turned up, first at the Louisiana site, and about a hundredth of a second later in Washington. The likelihood that the signal was a fluke is infinitesimal. Four more observations of gravitational waves were made in 2017, including GW170817, the first observed merger of binary neutron stars, which was also observed in electromagnetic radiation.

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Q4. Four of the following statements can be inferred from the passage. Pick the exception and enter the number of the 'odd man out' choice as your answer in the input box given below the question.

1. The waveform GW150914, detected by both LIGO observatories, was in line with the general theory of relativity.
2. Virtually no gravitational waves were observed by LIGO between 2002 and 2010.
3. The idea of gravitational waves which change the distances between everything by a tiny amount is a consequence of Einstein's theory of relativity.
4. GW170817 is the first gravitational wave to be detected directly by human scientists.
5. The LIGO detectors had not yet begun a formal experimental phase when the faintest slice of the gravitational waves was caught.

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	284
Avg. time spent on this question by all students	154
Difficulty Level	M
Avg. time spent on this question by students who got this question right	151

Time spent / Accuracy Analysis

% of students who attempted this question	43.2
% of students who got the question right of those who attempted	51.48

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[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 787

- (1) (1) can be deduced from the first and second paragraphs and the first sentence of para 3. We can infer that the waveform GW150914, detected by both LIGO observatories, matched the predictions of general relativity. (1) is not the answer.
- (2) Even so, between 2002 when LIGO opened and 2010, when it was closed for upgrades, nary a (gravitational) wave was seen. (2) is true and is not the answer.
- (3) Gravitational waves are travelling ripples that stretch and compress space, and thereby all in their path. The expected effect was a transient change in dimensions equivalent to perhaps a thousandth of the width of a proton in an apparatus several kilometres across. The idea of gravitational waves emerged from the general theory of relativity, Albert Einstein's fundamental exposition of gravity, unveiled 100 years before GW150914's discovery. Hence (3) is true and is not the answer.
- (4) That slice, called GW150914 by LIGO's masters is the first gravitational wave to be detected directly by human scientists. Hence (4) which mentions GW170817 is not true. GW170817 is the first observed merger of binary neutron stars, which was also observed in electromagnetic radiation. (4) is the answer.
- (5) The system's operators were still kicking its metaphorical tyres and had yet to begin its official first run when GW150914 turned up, first at the Louisiana site, and about a hundredth of a second later in Washington. So (5) is true and is not the answer.

Ans: (4)

undefined

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alternately stretch and compress the half-beams' paths. Those half-beams, now out of step, will then interfere with each other at the detector in a way that tells of their experience. The shape of the resulting interference pattern contains information about the wave's source, including what masses were involved and how far away it was.

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Q5. What has been mentioned in the passage as a notable, though indirect, proof of the existence of gravitational waves?

- a) Einstein's prediction that any accelerating mass should make ripples in spacetime.
- b) The observation of X-rays and gamma rays in the universe.
- c) The measurement of radio emissions from pairs of pulsars that are orbiting one another.
- d) The merging of stars which are part of binary star system.

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	81
Avg. time spent on this question by all students	90
Difficulty Level	M
Avg. time spent on this question by students who got this question right	91
% of students who attempted this question	46.39
% of students who got the question right of those who attempted	74.03

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 787

Option A: Mass, Einstein realised, deforms the space and time around itself. Gravity is the effect of this, the behaviour of objects dutifully moving along the curves of mass-warped spacetime. A prediction need not result in proof of the existence of gravitational waves. Choice A has not been mentioned as a notable proof of the existence of gravitational waves.

Option B: Choice B is a general choice and has not been specifically mentioned as a notable or indirect proof of the existence of gravitational waves.

Option C: Indirect proof of gravitational waves' existence has been found over the years, most notably by measuring radio emissions from pairs of dead stars called pulsars that are orbiting one another, and deducing from this how the distance between them is shrinking as they broadcast gravitational waves into the cosmos. This makes choice C the specific answer.

Option D: We cannot say whether merging of two stars (which need not be neutron stars) which are part of binary star systems will emit gravitational waves. Choice D is not the answer.

Choice (C)

undefined

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Q6. What is the underlying principle in the working of LIGO in its attempt to catch the putative gravitational waves in their act of stretching and squeezing matter?

- a) A passing gravitational wave will make the half-beams of laser to arrive at the detector in lock-step and they will interfere with each other at the detector in a way that tells of their experience and the gravitational wave's source.
- b) A passing gravitational wave will make the half-beams of laser out of step and they will interfere with each other at the detector in a way that tells of their experience and the gravitational wave's source.
- c) A passing gravitational wave will make the half-beams of laser to arrive at the detector out of step and they will interfere with each other at the detector to form a full-beam of laser.
- d) Only something which is observed almost, but not quite, simultaneously by both the LIGO facilities could possibly be a gravitational wave.

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	119
Difficulty Level	M
Avg. time spent on this question by students who got this question right	116
% of students who attempted this question	39.32
% of students who got the question right of those who attempted	69.55

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 787

LIGO is an interferometer which works by splitting a laser beam in two, sending the halves to and fro along paths identical in length but set at right angles to one another, and then looking for interference patterns when the halves are recombined. If the half-beams' paths are undisturbed, the waves will arrive at the detector in lock-step. But a passing gravitational wave will alternately stretch and compress the half-beams' paths. Those half-beams, now out of step, will then interfere with each other at the detector in a way that tells of their experience. The shape of the resulting interference pattern contains all manner of information about the wave's source, including what masses were involved and how far away it was.

Further, choice B is confirmed by the observation: Indeed, the system's operators were still kicking its metaphorical tyres and had yet to begin its official first run when GW150914 turned up, first at the Louisiana site, and about a hundredth of a second later in Washington. Since then, the team have been checking their sums and counting their lucky stars. This makes choice B the correct answer.

Option A: The words "arrive at the detector in lock-step" in choice A makes it incorrect.

Option C: The first sentence in choice C is incorrect.

Option D: Choice D is a conclusion drawn from the observations of the LIGO observatories. It is not the underlying principle. LIGO is actually two facilities, one in Louisiana and the other in Washington state. The tiny shifts in the length of their arms are continually compared and significant patterns which appear to arise synchronously are followed up to determine whether a gravitational wave may have been detected.

Choice (B)

undefined

DIRECTIONS for questions 3 to 8: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

Two black holes circle one another and merge. The single black hole settles down to a stable form and any distortion in the shape is dissipated as more gravitational waves. Three suns' worth of mass has been turned into energy, in the form of gravitational waves: travelling ripples that stretch and compress space, and thereby all in their path.

Then, 1.3 billion years later, on 14th September 2015, on a small planet orbiting a yellow sun, at facilities known as the Advanced Laser Interferometer Gravitational-wave Observatory (LIGO), the faintest slice of those waves was caught. That slice, called GW150914 by LIGO's masters, is the first gravitational wave to be detected directly.

The idea of gravitational waves emerged from the general theory of relativity, Albert Einstein's fundamental exposition of gravity, unveiled 100 years before GW150914's discovery. Mass, Einstein realised, deforms the space and time around itself. Gravity is the effect of this, the behaviour of objects dutifully moving along the curves of mass-warped spacetime. It is a simple idea, but the equations that give it mathematical heft are hard to solve. One approximation led Einstein to an odd prediction: any accelerating mass should make ripples in spacetime. Einstein would argue for such waves and then, after redoing the sums, against them. But, while many stretched and squeezed the maths, experimentalists set about trying to catch the putative waves in the act of stretching and squeezing matter.

Their problem was that the expected effect was a transient change in dimensions equivalent to perhaps a thousandth of the width of a proton in an apparatus several kilometres across. Indirect proof of gravitational waves' existence has been found, most notably by measuring radio emissions from pairs of dead stars called pulsars that are orbiting one another, and deducing from this how the distance between them is shrinking as they broadcast gravitational waves into the cosmos. But the waves themselves proved elusive until the construction of LIGO.

LIGO is an interferometer and works by splitting a laser beam in two, sending the halves to and fro along paths identical in

length but set at right angles to one another, and then looking for interference patterns when the halves are recombined. If the half-beams' paths are undisturbed, the waves will arrive at the detector in lock-step. But a passing gravitational wave will alternately stretch and compress the half-beams' paths. Those half-beams, now out of step, will then interfere with each other at the detector in a way that tells of their experience. The shape of the resulting interference pattern contains information about the wave's source, including what masses were involved and how far away it was.

To make absolutely certain that what is seen really is a gravitational wave requires taking great care. First, LIGO is actually two facilities, one in Louisiana and the other in Washington. The tiny shifts in the length of their arms are continually compared and significant patterns which appear to arise synchronously are followed up to determine whether a gravitational wave may have been detected or if some other cause was responsible. Between 2002 when LIGO opened and 2010, when it was closed for upgrades, nary a wave was seen. In 2015, Advanced LIGO, which was four times as sensitive as the previous incarnation began its work. The system's operators were still kicking its metaphorical tyres and had yet to begin its official first run when GW150914 turned up, first at the Louisiana site, and about a hundredth of a second later in Washington. The likelihood that the signal was a fluke is infinitesimal. Four more observations of gravitational waves were made in 2017, including GW170817, the first observed merger of binary neutron stars, which was also observed in electromagnetic radiation.

For gravitational astronomy, this is just the beginning. Soon, LIGO will not be alone but it will be accompanied by four other observatories. Together, by forming a telescope that will permit astronomers to pinpoint whence the waves come, these devices will open a new vista on the universe. As technology improves, waves of lower frequency - corresponding to events involving larger masses - will become detectable. Eventually, astronomers should be able to peer at the first 380,000 years after the Big Bang, an epoch of history that remains inaccessible to every other kind of telescope yet designed.

The real prize, though, lies in proving Einstein wrong. For all its prescience, the theory of relativity is inconsistent with the theory of quantum mechanics. Many physicists suspect that it is in places with extreme conditions - like those which launch gravitational waves - that the first chinks in relativity's armour may be found, and with them a glimpse of a more all-embracing theory leading to the unseating of Einstein's theory of relativity.

Q7. "Soon, LIGO will not be alone." (para 7) The collaborative effort of the observatories may serve to achieve all of the following EXCEPT?

- a) A new window onto the universe will be opened in terms of understanding astronomical events.
- b) Researchers will get a means to peer at hitherto inaccessible happenings, perhaps as far back in time as the Big Bang.
- c) Gravitational waves of lower frequency will be discovered.
- d) Einstein's theory of relativity will be removed from school textbooks.

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	84
Difficulty Level	M
Avg. time spent on this question by students who got this question right	83
% of students who attempted this question	47.05
% of students who got the question right of those who attempted	78.87

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 787

Option A: Together, by jointly forming a telescope that will permit astronomers to pinpoint whence the waves come, these devices will open a new vista on the universe. Hence choice A is true.

Option B: Eventually, astronomers should be able to peer at the first 380,000 years after the Big Bang, an epoch of history that remains inaccessible to every other kind of telescope yet designed. So choice B is correct.

Option C: As technology improves, waves of lower frequency – corresponding to events involving larger masses – will become detectable. Therefore choice C is also true.

Option D: The real prize, though, lies in proving Einstein wrong. That does not mean that he and his theories will no longer be the subject of study. Choice D is extreme and cannot be inferred. Choice D is the answer.

Choice (D)

undefined

DIRECTIONS for questions 3 to 8: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

Two black holes circle one another and merge. The single black hole settles down to a stable form and any distortion in the shape is dissipated as more gravitational waves. Three suns' worth of mass has been turned into energy, in the form of gravitational waves: travelling ripples that stretch and compress space, and thereby all in their path. ...

Then, 1.3 billion years later, on 14th September 2015, on a small planet orbiting a yellow sun, at facilities known as the Advanced Laser Interferometer Gravitational-wave Observatory (LIGO), the faintest slice of those waves was caught. That slice, called GW150914 by LIGO's masters, is the first gravitational wave to be detected directly.

The idea of gravitational waves emerged from the general theory of relativity, Albert Einstein's fundamental exposition of gravity, unveiled 100 years before GW150914's discovery. Mass, Einstein realised, deforms the space and time around itself. Gravity is the effect of this, the behaviour of objects dutifully moving along the curves of mass-warped spacetime. It is a simple idea, but the equations that give it mathematical heft are hard to solve. One approximation led Einstein to an odd prediction: any accelerating mass should make ripples in spacetime. Einstein would argue for such waves and then, after redoing the sums, against them. But, while many stretched and squeezed the maths, experimentalists set about trying to catch the putative waves in the act of stretching and squeezing matter.

Their problem was that the expected effect was a transient change in dimensions equivalent to perhaps a thousandth of the width of a proton in an apparatus several kilometres across. Indirect proof of gravitational waves' existence has been found, most notably by measuring radio emissions from pairs of dead stars called pulsars that are orbiting one another, and deducing from this how the distance between them is shrinking as they broadcast gravitational waves into the cosmos. But the waves themselves proved elusive until the construction of LIGO.

LIGO is an interferometer and works by splitting a laser beam in two, sending the halves to and fro along paths identical in length but set at right angles to one another, and then looking for interference patterns when the halves are recombined. If the half-beams' paths are undisturbed, the waves will arrive at the detector in lock-step. But a passing gravitational wave will alternately stretch and compress the half-beams' paths. Those half-beams, now out of step, will then interfere with each other at the detector in a way that tells of their experience. The shape of the resulting interference pattern contains information about the wave's source, including what masses were involved and how far away it was.

To make absolutely certain that what is seen really is a gravitational wave requires taking great care. First, LIGO is actually two facilities, one in Louisiana and the other in Washington. The tiny shifts in the length of their arms are continually compared and significant patterns which appear to arise synchronously are followed up to determine whether a gravitational

wave may have been detected or if some other cause was responsible. Between 2002 when LIGO opened and 2010, when it was closed for upgrades, nary a wave was seen. In 2015, Advanced LIGO, which was four times as sensitive as the previous incarnation began its work. The system's operators were still kicking its metaphorical tyres and had yet to begin its official first run when GW150914 turned up, first at the Louisiana site, and about a hundredth of a second later in Washington. The likelihood that the signal was a fluke is infinitesimal. Four more observations of gravitational waves were made in 2017, including GW170817, the first observed merger of binary neutron stars, which was also observed in electromagnetic radiation.

For gravitational astronomy, this is just the beginning. Soon, LIGO will not be alone but it will be accompanied by four other observatories. Together, by forming a telescope that will permit astronomers to pinpoint whence the waves come, these devices will open a new vista on the universe. As technology improves, waves of lower frequency - corresponding to events involving larger masses - will become detectable. Eventually, astronomers should be able to peer at the first 380,000 years after the Big Bang, an epoch of history that remains inaccessible to every other kind of telescope yet designed.

The real prize, though, lies in proving Einstein wrong. For all its prescience, the theory of relativity is inconsistent with the theory of quantum mechanics. Many physicists suspect that it is in places with extreme conditions - like those which launch gravitational waves - that the first chinks in relativity's armour may be found, and with them a glimpse of a more all-embracing theory leading to the unseating of Einstein's theory of relativity.

Q8. The author begins the last paragraph with the comment "The real prize, though, lies in proving Einstein wrong." Which of the following can be inferred from the last para of the passage?

- a) Einstein's theory of relativity predicted gravitational waves, and in doing so it points to its own inadequacy and may be overtaken by another suitable theory.
- b) Gravitational waves may yield a peek at the Big Bang, an event Einstein knew his theory was inadequate to describe.
- c) The theory of quantum mechanics will be superceded by another all-embracing theory in physics.
- d) Einstein's theory of relativity predicted gravitational waves, and in doing so, it may have paved the way for its own demise.

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	15
Avg. time spent on this question by all students	91
Difficulty Level	D
Avg. time spent on this question by students who got this question right	93
% of students who attempted this question	37.93
% of students who got the question right of those who attempted	59.06

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 787

Option A: The idea of gravitational waves emerged from the general theory of relativity, Albert Einstein's fundamental exposition of gravity, unveiled 100 years before GW150914's discovery. Many physicists suspect that it is in places where conditions are most extreme – the very places which launch gravitational waves – that the first chinks in (Einstein's theory of relativity) armour may be found, and with them a glimpse of a more all-embracing theory leading to the unseating of Einstein's theory of relativity. Hence choice A is correct.

Option B: Eventually, astronomers should be able to peer at the first 380,000 years after the Big Bang, an epoch of history that remains inaccessible to every other kind of telescope yet designed. The real prize, though, lies in proving Einstein wrong. For all its prescience, the theory of relativity is inconsistent with the theory of quantum mechanics. But choice B is incomplete and is not specific to ".... proving Einstein wrong" given in the question.

Option C: with them a glimpse of a more all-embracing theory leading to the unseating of Einstein's theory of relativity. Einstein's theory of relativity may be unseated and not the theory of quantum mechanics. Choice C is incorrect.

Option D: Choice D is too dramatic a statement. 'A more all-embracing theory' points to the inadequacy of Einstein's theory, not necessarily to its complete irrelevance. Also 'unseated' only means overtaken in primacy, it doesn't mean "killed". So choice D is incorrect.

Choice (A)

undefined

Q9. DIRECTIONS for questions 9 and 10: Each of the following questions consists of a highlighted sentence followed by the context from where the sentence may have been drawn. The context given provides exactly three successive paragraphs, which may or may not have any other paragraph preceding or succeeding them. The paragraphs have a total of four blanks numbered as (2), (3), (4) and (5). Choose the number of the blank where the highlighted sentence can best be reinserted and key in that number in the input box provided below the context.

Further:

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

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

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

Yet the coming slaughter, which would leave 35m dead or wounded, was not inevitable.

Viewed from the capitals of Western Europe, the world looked pretty good in 1913. There were many, it is true, who heard rumblings of war; but this was so often the case in Europe, even after two decades of peace. *The Economist* was not

alarmed. _____ (2) _____ In June 1913, it described the recent entente cordiale between Britain and France as “the expression of tendencies which are slowly but surely making war between the civilized communities of the world an impossibility.”

We got that wrong. _____ (3) _____ Europe was not only peaceful but also richer, healthier and arguably more stable than it had ever been. It was also more interconnected. Kaiser Wilhelm II, King George V and Tsar Nicholas II were cousins and socialized together. The latter two monarchs looked very much alike, and the societies they presided over were also close kin.

_____ (4) _____ A hybridised elite travelled the continent, patronising its hybridised music and art. A swelling European middle-class went shopping for the same luxuries in London as in Vienna. And Europe's workers at least had the consolation of socialism - as preached by the 553 delegates from 23 countries who gathered in Switzerland in November 1912 to rededicate themselves to peace. Despite expressions of nationalist fervour, in Europe, a multi-tiered continental identity was emerging. _____ (5) _____

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	142
Difficulty Level	VD
Avg. time spent on this question by students who got this question right	136
% of students who attempted this question	30.69
% of students who got the question right of those who attempted	8.08

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Note that the highlighted sentence contains the contrast conjunction “Yet”. Also “not inevitable” in the highlighted sentence means “avoidable”.

On a careful reading of the paragraph, it can be inferred that the highlighted sentence does not belong to blank (2). The sentence is completely out of place in blank (2), as it interrupts the flow of thought. “In June 1913, it described the recent entente cordiale between Britain and France as “the expression of tendencies” in the sentence after blank (2) needs to continue after the sentence preceding blank (2) (*The Economist* was not alarmed).

The highlighted sentence can be a part of blank (3). “We got that wrong” (in the second para reproduced) points to “making war between the civilized communities of the world an impossibility” given in the first para. Now, the highlighted sentence best follows: We got that wrong. The contrast conjunction “Yet” in the highlighted sentence contrasts the sentence before it “We got that (making war an impossibility) wrong”. The highlighted sentence is also justified by the sentence following blank (3): i.e. Europe was not only peaceful but also richer, healthier and arguably more stable than it had ever been.

The highlighted sentence cannot be a part of blank (4). If the highlighted sentence is placed in blank (4), then there will be a complete distortion of thoughtflow. The second reproduced para talks about a peaceful, richer, healthier and stable Europe and the third reproduced para also describes the life in Europe in a similar positive vein. So, the third para best begins with the sentence “A hybridised elite travelled the continent, patronising its hybridised music and art.”

The highlighted sentence would not continue the thoughtflow if placed in blank (5). Since blank (3) needs a contrast conjunction, the highlighted sentence has to be in blank (3).

The highlighted sentence would be redundant if placed before or after the reproduced paras of the passage. So (1) and (6) do not apply as answers. Ans: (3)

undefined

Q10. DIRECTIONS for questions 9 and 10: Each of the following questions consists of a highlighted sentence followed by the context from where the sentence may have been drawn. The context given provides exactly three successive paragraphs, which may or may not have any other paragraph preceding or succeeding them. The paragraphs have a total

of four blanks numbered as (2), (3), (4) and (5). Choose the number of the blank where the highlighted sentence can best be reinserted and key in that number in the input box provided below the context.

Further:

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

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

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

Since she took over the helm at Yahoo in 2012, Ms Mayer has been skating on some rather thin ice.

Towards the end of this tale about one of the world's best known and worst run internet companies is a vivid description of a Christmas party thrown at Marissa Mayer's Silicon Valley home in 2013. Along with the real snow shipped in for the occasion, she had ordered a large ice rink to be set up in her back garden.

(2) _____ The latest in a long line of bosses to try and revive the web firm's fortunes, she has seen Yahoo's share price soar thanks largely to its stake in Alibaba, a giant Chinese e-commerce outfit whose flotation last year produced a massive payday for the American firm. But its core businesses in areas such as online advertising are still stuck in the doldrums.

(3) _____ Much of the first half of Nicholas Carlson's book, "Marissa Mayer and the Fight to Save Yahoo!", is devoted to explaining how the firm began life as a simple web directory created by David Filo and Jerry Yang and then grew into a web giant. It then goes on to discuss how the firm got itself into the pickle that Ms Mayer inherited. (4) _____ Some strategic blunders and an excess of Byzantine boardroom intrigue are to blame. The speed with which Yahoo's directors decapitated successive chief executives brings to mind the French Revolution rather than the internet one. (5) _____

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	27
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	97
% of students who attempted this question	29.23
% of students who got the question right of those who attempted	37.51

[Video Solution](#)

[Text Solution](#)

If you're skating on thin ice, you're doing something risky, or you're in a situation that could quickly become dangerous.

The highlighted sentence is too specific to be upstream of the first reproduced para. So (1) is not the answer.

The highlighted sentence best fits in blank (2). The pronoun "she" in the sentence following blank (2) {The latest in a long line of bosses to try and revive the web firm's fortunes, she has seen Yahoo's share price soar thanks largely to its stake in Alibaba, a giant Chinese e-commerce outfit whose flotation last year produced a massive payday for the American firm.} refers to "Ms Mayer. "skating on thin ice" is explained through the last sentence of the second reproduced para: But its core businesses in areas such as online advertising are still stuck in the doldrums.

The highlighted sentence cannot be a part of blank (3). The sentence following blank (3) is a positive sentence. "skating on some rather thin ice" has not been justified in the sentence following blank (3) which begins to mention a feature of Nicholas Carlson's book, "Marissa Mayer and the Fight to Save Yahoo!"

There would be a shift of tense if the highlighted sentence (.... has been skating) were inserted in blank (4). So (4) is not the answer.

Blank (5) is not the location where the highlighted sentence could be inserted. The highlighted sentence needs to be placed much earlier in the passage.

It would be difficult to say whether the highlighted sentence which is specific in tone would be positioned in a paragraph that comes later in the flow, after the question paragraphs. So (6) is not the answer.

Ans: (2)

undefined

DIRECTIONS for questions 11 to 13: The passage given below is accompanied by a set of three questions. Choose the best answer to each question.

More than half of American states have legalised medical cannabis, often rather loosely defined. Eight have voted to legalise the drug for recreational purposes. The cannabis industry was worth about \$6 bn last year, a figure that is likely to rise sharply in 2018 when recreational sales begin in California.

Yet in Washington, DC, the mellow mood has soured. Donald Trump said in 1990 that "You have to legalise drugs to win that war", but in politics he became more conservative. Campaigning for the presidency he called Colorado's legal cannabis market a "real problem". His press secretary, Sean Spicer, recently said he expected to see "greater enforcement" of the laws that still ban cannabis at the federal level.

That worries pot-peddlars whose profits could be affected. In 2013 the deputy attorney-general of the day, James Cole, published a memo reassuring states that had legalised cannabis that federal agents would not interfere unless the states allowed the industry to cross certain red lines, such as selling to minors, funding crime or leaking their product into jurisdictions that had not chosen to legalise.

Mr Trump's attorney-general, Jeff Sessions, has made clear that he sees things differently. In his confirmation hearings before the Senate he refused to endorse the Cole memo, saying: "I won't commit to never enforcing federal law." A letter from the Department of Justice is all it takes to shut any cannabis firm.

This has given some investors an attack of paranoia. An index of 50 cannabis stocks kept by Viridian Capital Advisors, a pot-industry consultancy, slid by about a tenth in the week after Mr Spicer issued his warning on February 23rd. The worst-hit were those companies dealing directly with the drug, which are on shakier legal ground than those providing ancillary products and services, such as chemical-extraction machinery or security.

But most investors have kept calm. Viridian's index is still up by 18% this year. Medical marijuana, which accounts for the bulk of the industry, is expressly protected by a federal law that bans federal agents from interfering in states where it is legal. Mr Trump backs medical cannabis "100%", as do most Americans. And although only a smallish majority of people favour legalising recreational weed, a large one (including most Republicans) support the right of states to set their policy on the matter, says a poll by Quinnipiac University.

For now the main impact of Mr Trump's harder line may be to make entrepreneurs stick extra-carefully to state regulations, rather than "pushing the boundaries" of the law, says Sam Kamin, a professor of marijuana law and policy at the University of Denver. Some have bypassed rules outlawing interstate commerce, for instance, by trading as intellectual-property companies. That sort of thing looks a bit riskier now. But cannabis backers are hardly strangers to risk, Mr Kamin notes.

Q11. "That worries pot-pedlars." (para 3) Which of the following is the most apt reason for pot-pedlars to be worried?

- a) They are in breach of federal law and their profits could be impacted if they are forced to shut shop. **Your answer is correct**
- b) The United States will change its focus from decriminalizing consumption of marijuana for medical and recreational uses to sentencing pot-pedlars to life imprisonment.
- c) Companies dealing directly with cannabis will be on shakier legal ground.
- d) The stock price index of cannabis firms has shown a steady downfall after the enforcement of federal laws which ban the use of cannabis.

Time spent / Accuracy Analysis

Time taken by you to answer this question	5
Avg. time spent on this question by all students	183
Difficulty Level	M
Avg. time spent on this question by students who got this question right	185
% of students who attempted this question	53.51
% of students who got the question right of those who attempted	72

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 469

Option A: Sean Spicer, recently said he expected to see "greater enforcement" of the laws that still ban cannabis at the federal level. That worries pot-pedlars whose profits could be affected. A letter from the Department of Justice is all it takes to shut any cannabis firm. Hence choice A is the correct answer.

Option B: More than half the country's states have legalised medical cannabis, often rather loosely defined. Eight have voted to legalise the drug for recreational purposes. Medical marijuana, which accounts for the bulk of the industry, is expressly protected by a federal law that bans federal agents from interfering in states where it is legal. So the first part of choice B (change its focus from decriminalizing consumption of marijuana for medical and recreational uses) is incorrect. Also "sentencing pot-pedlars to life imprisonment" has not been explicitly mentioned in the passage.

Option C: Choice C finds a mention in para 5 of the passage. But that is not the reason for pot-pedlars to worry about. Choice C is not the answer.

Option D: His press secretary, Sean Spicer, recently said he expected to see "greater enforcement" of the laws that still ban cannabis at the federal level. Choice D mentions that "the enforcement of federal laws which ban the use of cannabis" has already happened. "An index of 50 cannabis stocks kept by Viridian Capital Advisors, a pot-industry consultancy, slid by about a tenth in the week after Mr Spicer issued his warning on February 23rd." This will worry the investors and not the pot-pedlars. Choice D is not the answer.

Choice (A)

undefined

DIRECTIONS for questions 11 to 13: The passage given below is accompanied by a set of three questions. Choose the best answer to each question.

More than half of American states have legalised medical cannabis, often rather loosely defined. Eight have voted to legalise the drug for recreational purposes. The cannabis industry was worth about \$6 bn last year, a figure that is likely to rise sharply in 2018 when recreational sales begin in California.

Yet in Washington, DC, the mellow mood has soured. Donald Trump said in 1990 that "You have to legalise drugs to win that war", but in politics he became more conservative. Campaigning for the presidency he called Colorado's legal cannabis market a "real problem". His press secretary, Sean Spicer, recently said he expected to see "greater enforcement" of the laws that still ban cannabis at the federal level.

That worries pot-pedlars whose profits could be affected. In 2013 the deputy attorney-general of the day, James Cole, published a memo reassuring states that had legalised cannabis that federal agents would not interfere unless the states allowed the industry to cross certain red lines, such as selling to minors, funding crime or leaking their product into jurisdictions that had not chosen to legalise.

Mr Trump's attorney-general, Jeff Sessions, has made clear that he sees things differently. In his confirmation hearings before the Senate he refused to endorse the Cole memo, saying: "I won't commit to never enforcing federal law." A letter from the Department of Justice is all it takes to shut any cannabis firm.

This has given some investors an attack of paranoia. An index of 50 cannabis stocks kept by Viridian Capital Advisors, a pot-industry consultancy, slid by about a tenth in the week after Mr Spicer issued his warning on February 23rd. The worst-hit were those companies dealing directly with the drug, which are on shakier legal ground than those providing ancillary products and services, such as chemical-extraction machinery or security.

But most investors have kept calm. Viridian's index is still up by 18% this year. Medical marijuana, which accounts for the bulk of the industry, is expressly protected by a federal law that bans federal agents from interfering in states where it is legal. Mr Trump backs medical cannabis "100%", as do most Americans. And although only a smallish majority of people favour legalising recreational weed, a large one (including most Republicans) support the right of states to set their policy on the matter, says a poll by Quinnipiac University.

For now the main impact of Mr Trump's harder line may be to make entrepreneurs stick extra-carefully to state regulations, rather than "pushing the boundaries" of the law, says Sam Kamin, a professor of marijuana law and policy at the University of Denver. Some have bypassed rules outlawing interstate commerce, for instance, by trading as intellectual-property companies. That sort of thing looks a bit riskier now. But cannabis backers are hardly strangers to risk, Mr Kamin notes.

Q12. Which of the following can be understood from the passage?

- a) Stricter federal law enforcement would ban federal agents from interfering in the US states that had legalised the use of cannabis.
- b) Stricter federal law enforcement would allow state regulations outlawing interstate commercial exploitation of cannabis to be bypassed. Your answer is incorrect
- c) Federal law bans federal agents from interfering in the US states where the use of medical marijuana has been legalised.
- d) Latin American governments will work together in the fight against drug trade.

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	108
Difficulty Level	E
Avg. time spent on this question by students who got this question right	106
% of students who attempted this question	42.27
% of students who got the question right of those who attempted	54.61

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 469

Option A: James Cole, published a memo reassuring states that had legalised cannabis that federal agents would not interfere unless the states allowed the industry to cross certain red lines, such as selling to minors, funding crime or leaking their product into jurisdictions that had not chosen to legalise. Mr Trump's attorney-general, Jeff Sessions, has made clear that he sees things differently. In his confirmation hearings before the Senate he refused to endorse the Cole memo, saying: "I won't commit to never enforcing federal law." This means that federal agents will interfere in the US states that had legalised the use of cannabis. Choice A is negated.

Option B: Entrepreneurs will stick extra-carefully to state regulations, rather than "pushing the boundaries" of the law. Some have bypassed rules outlawing interstate commerce, for instance, by trading as intellectual-property companies. That sort of thing looks a bit riskier now. Choice B is not true.

Option C: Medical marijuana, which accounts for the bulk of the industry, is expressly protected by a federal law that bans federal agents from interfering in states where it is legal. Mr Trump backs medical cannabis "100%", as do most Americans. Hence choice C is correct.

Option D: Nothing specific has been mentioned about the role of Latin American countries in fighting drug trade. Hence choice D is not correct. Choice (C)

undefined

DIRECTIONS for questions 11 to 13: The passage given below is accompanied by a set of three questions. Choose the best answer to each question.

More than half of American states have legalised medical cannabis, often rather loosely defined. Eight have voted to legalise the drug for recreational purposes. The cannabis industry was worth about \$6 bn last year, a figure that is likely to rise sharply in 2018 when recreational sales begin in California.

Yet in Washington, DC, the mellow mood has soured. Donald Trump said in 1990 that "You have to legalise drugs to win that war", but in politics he became more conservative. Campaigning for the presidency he called Colorado's legal cannabis market a "real problem". His press secretary, Sean Spicer, recently said he expected to see "greater enforcement" of the laws that still ban cannabis at the federal level.

That worries pot-pedlars whose profits could be affected. In 2013 the deputy attorney-general of the day, James Cole, published a memo reassuring states that had legalised cannabis that federal agents would not interfere unless the states allowed the industry to cross certain red lines, such as selling to minors, funding crime or leaking their product into jurisdictions that had not chosen to legalise.

Mr Trump's attorney-general, Jeff Sessions, has made clear that he sees things differently. In his confirmation hearings before the Senate he refused to endorse the Cole memo, saying: "I won't commit to never enforcing federal law." A letter from the Department of Justice is all it takes to shut any cannabis firm.

This has given some investors an attack of paranoia. An index of 50 cannabis stocks kept by Viridian Capital Advisors, a pot-industry consultancy, slid by about a tenth in the week after Mr Spicer issued his warning on February 23rd. The worst-hit were those companies dealing directly with the drug, which are on shakier legal ground than those providing ancillary products and services, such as chemical-extraction machinery or security.

But most investors have kept calm. Viridian's index is still up by 18% this year. Medical marijuana, which accounts for the bulk of the industry, is expressly protected by a federal law that bans federal agents from interfering in states where it is legal. Mr Trump backs medical cannabis "100%", as do most Americans. And although only a smallish majority of people favour legalising recreational weed, a large one (including most Republicans) support the right of states to set their policy on the matter, says a poll by Quinnipiac University.

For now the main impact of Mr Trump's harder line may be to make entrepreneurs stick extra-carefully to state regulations, rather than "pushing the boundaries" of the law, says Sam Kamin, a professor of marijuana law and policy at the University of Denver. Some have bypassed rules outlawing interstate commerce, for instance, by trading as intellectual-property companies. That sort of thing looks a bit riskier now. But cannabis backers are hardly strangers to risk, Mr Kamin notes.

Q13. Which of the following will best complete the blank in the last paragraph of the passage?

- a) "These are high times for America's marijuana industrial complex."
- b) "If you've invested your personal fortune in a product that's prohibited by the federal government, you're comfortable with a certain amount of uncertainty." Your answer is correct
- c) "You have to be able to make the case that having American drug enforcement agents involved with your local partners is good for the bottom line of those countries."
- d) "Weed killer? The president is in perilous territory. America's pot industry shrugs off Donald Trump's harder line on drugs."

Time spent / Accuracy Analysis

Time taken by you to answer this question	6
Avg. time spent on this question by all students	82
Difficulty Level	M
Avg. time spent on this question by students who got this question right	79
% of students who attempted this question	37.74
% of students who got the question right of those who attempted	63.94

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 469

Option A: Choice A sounds too positive. It can be inserted just before the first sentence of the first paragraph of the passage. But it cannot serve as the conclusion sentence of the last para of the passage as it does not connect with the penultimate sentence of the last para.

Option B: Bypassing rules outlawing interstate commerce by trading as intellectual-property companies looks a bit riskier now. But cannabis backers are hardly strangers to risk. Choice B (you're comfortable with a certain amount of uncertainty) best links with the ideas in the sentences just preceding the blank in the last para. Also, the fifth and sixth paras of the passage have focussed on investors in the cannabis industry. There would be a "greater enforcement" of the laws that still ban cannabis at the federal level, but cannabis backers who have invested in the banned product have kept their calm in the face of the consequences of stricter laws. Choice B is the correct answer.

Option C: The passage does not discuss any interaction or partnership of American drug enforcement agents with local partners. Hence choice C cannot be a suitable conclusion sentence to the last para of the passage.

Option D: Though choice D seems like a close answer choice, there is an unnecessary shift in focus from cannabis backers (in the penultimate sentence of the last para) to the US president. Choice D does not exactly connect with the viewpoint: you're comfortable with a certain amount of uncertainty. Choice D is not the answer.

Choice (B)

undefined

Q14. DIRECTIONS for questions 14 and 15: Given below is a paragraph with three blanks. For each blank choose one numbered word/ phrase from the corresponding column of choices that will best complete the text. Key in the appropriate numbers of the words/ phrases for each blank, in the correct sequential order, in the input box given below the question. For example, if you think that words/ phrases labelled (1), (5) and (9) can complete the text correctly, then enter 159 as your answer in the input box. (Note: Only one word/ phrase in each column can fill the respective blank correctly.)

Suppose that one day the government of a large and fast-growing economy became convinced that its highest priority was

to _____ (i) _____ the country of black-economy millionaires hoarding piles of illicit cash. Seeking popular approval, it sent the printing presses into overdrive, hoping to inflate away the value of these secret piles of wealth. It worked: rising prices _____ (ii) _____ against the undeserving rich, and by egging on others to deposit their money in banks (where it could at least earn interest), the shadow economy shrank. The government could _____ (iii) _____ the newly created money into tax breaks and public-works schemes.

Blank (i)	Blank (ii)	Blank (iii)
(1) relinquish	(4) rhapsodized	(7) plough
(2) purge	(5) repudiated	(8) dissemble
(3) cozen	(6) struck a blow	(9) itemize

Your Answer:167 □ Your answer is incorrect

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	130
Difficulty Level	D
Avg. time spent on this question by students who got this question right	134
% of students who attempted this question	41.28
% of students who got the question right of those who attempted	11.43

[Video Solution](#)

Text Solution

The first sentence of the given para talks about the objective of the government of a fast-growing economy. The first blank in the paragraph needs a synonym of 'rid' (rid the country of illicit cash). The best word for the first blank would be 'purge' which means 'rid or remove something completely'. 'relinquish' means voluntarily cease to keep or claim; give up. One relinquishes a post, a role or a bad habit. 'relinquish' does not collocate with 'the country of illicit cash'. 'relinquish' cannot fit the first blank. 'cozen' means to trick or deceive or obtain by cheating. Now 'cozen' is a transitive verb and is negative in tone. The word 'cozen' can be attributed to the black-economy millionaires hoarding piles of illicit cash. 'cozen' cannot be attributed to the action of the government with reference to the country. Hence the best word that can complete the first blank is 'purge'. (2) is the answer for the first blank.

The second sentence of the para highlights the specific action undertaken by the government: printing presses were sent into overdrive with a view to inflate away the value of these secret piles of illicit cash. The second blank needs a word to indicate the success of the rising prices (because of the step mentioned in the second sentence of the para) against the undeserving black-economy millionaires hoarding piles of illicit cash. So the best word in this case is 'struck a blow'. Rhapsodized means to speak or write about someone or something with great enthusiasm and delight. Rhapsodized is out of context here. 'repudiate' is too mild for the context. It means 'deny, reject, abandon, forsake'. Also "repudiate against" is incorrect usage. {One can say 'repudiated the policies' or 'repudiated the allegations' and not 'repudiated against the rich'}. The correct answer for the second blank is 7 (struck a blow)

Rising prices worked against the undeserving rich, and by egging on others to deposit their money in banks (where it could at least earn interest), the shadow economy shrank. So the last sentence is talking about how the newly created money could be used by the government. The last blank can take the word 'plough'. 'plough into' is correct usage. 'plough into' is a phrasal verb which means 'to invest a lot of money in (something)'. 'dissemble' means 'conceal or disguise one's true feelings or beliefs'. 'dissemble' can be easily eliminated. 'itemize' means 'present as a list of individual items' or 'break down (a whole) into its constituent parts' (eg. An itemized bill). But 'itemize into' is incorrect usage. Hence 'itemize' cannot fill the third blank.

The correct answers are 'purge', 'struck a blow' and 'plough'. Hence the answer is 267.

Ans: (267)

Q15. DIRECTIONS for questions 14 and 15: Given below is a paragraph with three blanks. For each blank choose one numbered word/ phrase from the corresponding column of choices that will best complete the text. Key in the appropriate numbers of the words/ phrases for each blank, in the correct sequential order, in the input box given below the question. For example, if you think that words/ phrases labelled (1), (5) and (9) can complete the text correctly, then enter 159 as your answer in the input box. (Note: Only one word/ phrase in each column can fill the respective blank correctly.)

For now, the Mekong, which began as a trickle of snowmelt high up in Tibetan cloud-country,

(i) riots of tropical green to meet the South China Sea in a network of river mouths known as the “nine dragon river delta” in what appears to be much the same way as it always has. Tourists who watch women

(ii) floating markets over baskets of mangosteen and fresh fish, or who see peasants in conical hats farming paddies by hand, imagine that they are witnessing something timeless - life as it always has been, its rhythms dictated by seasons, land and sea. But though it seems they are witnessing a pastoral, what they are seeing is in fact the opening scene of a tragedy: the part where the characters act as they always have, but their fate

(iii). Life as it has been is not life as it will be. The sense of an ending for this river is heightened and the days of stepping into the river are numbered.

Blank (i)	Blank (ii)	Blank (iii)
(1) dispenses with	(4) wrangling	(7) engenders life
(2) encumbered by	(5) haggling in	(8) is one of trepidation
(3) slices through	(6) carefully scrutinizing	(9) looms large

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	113
Difficulty Level	D
Avg. time spent on this question by students who got this question right	116
% of students who attempted this question	32.88
% of students who got the question right of those who attempted	12.53

[Video Solution](#)

[Text Solution](#)

The paragraph is a brief description of the Mekong river. The first two sentences talk about the current state of affairs as far as the Mekong river is concerned. The last three sentences (But though river is heightened) highlight the fact that changes are on the anvil and that the days of the river are numbered (the river will not survive). The first blank needs a synonym of 'passes or flows through'. The correct word is 'slices through' which means 'to cut through something (green vegetation) with slicing motions'. 'dispenses with' means 'get rid of or stop using something or someone that you do not need' and is out of context here. 'encumbered by' means 'hampered' or 'restrict or impede (someone or something) in such a way that free action or movement is difficult'. The opposite sense is indicated here, so 'unencumbered by' should have been mentioned because the river is not impeded or obstructed by the riots of tropical green. The best answer for the first blank is 3 (slices through).

The second blank talks about some scenes around the river. The action of women in floating markets has been mentioned. 'haggling in' would work for the second blank. 'haggling' means 'bargain persistently, especially over the cost of something. 'wrangling' also means to have a long, complicated dispute or argument. But 'wrangling' would need the preposition 'over' after it. So 'wrangling' does not work for the second blank. 'carefully scrutinizing floating markets over baskets of mangosteen and fresh fish' sounds absurd. So 6 is incorrect. The correct answer for the second blank is 5: 'haggling in'.

The last two sentences of the para give us the clue for the third blank. We can only say that the fate of the people in the region around the Mekong river looms large. 'looms large' means 'appear imminent in a threatening, magnified form'. 'one of trepidation' means 'a feeling of fear or anxiety about something that may happen'. While this is contextually relevant, one wouldn't say that one's fate is one of trepidation. Hence 9 is a better option than 8. Also the idea of 'fate engendering life' is not logical here. "Fate engendering (giving rise to) "refers to the capacity of fate. But the context needs something negative to point to 'opening scene of a tragedy' in the part of the text just before blank (iii)}.

The correct answer for the last blank is 'looms large' (expected outcome). Hence 9 is the answer for the last blank.

The correct answer is 359.

Ans: (359)

undefined

DIRECTIONS for questions 16 to 21: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

No historian would deny that the achievement of the Greeks was one of the most remarkable in the history of the world. With no great expanse of fertile soil or abundance of mineral resources they succeeded in developing a higher and more varied civilization than any of the most richly favoured nations of the Near East. With only a limited cultural inheritance from the past to build upon, they produced intellectual and artistic achievements which have served ever since as models of perfection for the culture of the West. It may be argued as well that the Greeks achieved a more leisureed and rational mode of living than most other peoples who strutted and fretted their hour upon this planet. The infrequency of brutal crimes and the contentment with simple amusements and modest wealth all point to a comparatively happy and satisfied experience.

It is necessary to be on guard, however, against uncritical adulation of the ancient Greeks. We must not assume that all of the natives of Hellas were as cultured, wise, and free as the citizens of Athens and of the Ionian states across the Aegean. The Spartans, the Arcadians, the Thessalians, and the majority of the Boeotians remained much less culturally advanced. Further, Athenian civilization itself was not without its defects. It permitted some exploitation of the weak, especially of the slaves who toiled in the mines. It was based upon a principle of racial exclusiveness which reckoned every man a foreigner whose parents were not both Athenians, and consequently denied political rights to the majority of the inhabitants. It was also characterized by the overt repression of the female members of the society. Its statecraft was not sufficiently enlightened to avoid the pitfalls of imperialism and aggressive war. Finally, the attitude of its citizens was not always tolerant and just. Socrates was put to death for his opinions, and two other philosophers, Anaxagoras and Protagoras, were forced to leave the city. It must be conceded, however, that the record of the Athenians for tolerance was better than that of most other nations, both ancient and modern. There was probably more freedom of expression in Athens during the war with Sparta than there was in the United States during World War I.

Nor is it true that the Greek influence has been as great as is often supposed. No well-informed student could accept the sentimental verdict of Shelley: "We are all Greeks; our laws, our literature, our religion, our arts have their roots in Greece." Our laws do not really have their roots in Greece but chiefly in Hellenistic and Roman sources. Our religion is no more than partly Greek except, as it was influenced by Plato and the Romans, it reflects primarily the spirit of the Near East. Even our arts derive from other sources almost as much as from Greece. Actually, modern civilization has been the result of the convergence of numerous influences coming from many different periods and places.

In spite of all this, the Hellenic adventure was of profound significance for the history of the world. For the Greeks were the

founders of nearly all those ideals commonly thought of as peculiar to the West. Culture in the Near Eastern empires served mainly as an instrument to magnify the power of the state and to enhance the prestige of rulers and priests. The civilizations of the ancient Near East, with the exception, to a certain extent, of the Hebrew and Egyptian, were dominated by absolutism, supernaturalism, ecclesiasticism, the denial of both body and mind, and the subjection of the individual to the group. In contrast, the civilization of Greece, was founded upon ideals of freedom, optimism, secularism, rationalism, the glorification of both body and mind, and a high regard for the dignity and worth of the individual. The culture of the Greeks was the first to be based upon the primacy of intellect - upon the supremacy of the spirit of free inquiry.

The supreme tragedy of the Greeks was, of course, their failure to solve the problem of political conflict. This conflict was the product of social and cultural dissimilarities. Not even the danger of Asian conquest sufficed to dispel the distrust and antagonism of Greeks for one another. Thus, the war that finally broke out between Athens and Sparta sealed the doom of Hellenic civilization even though Greece remained undefeated by foreigners.

Q16. Which of the following is NOT an assumption made by the author in commending the achievements of the Greeks?

- a) A civilization can be successful only when its citizens can afford leisure.
- b) Intellectual and artistic achievements without a cultural inheritance are indicators of a remarkable civilization.
- c) It is difficult to build a diverse civilization without mineral resources and fertile soil.
- d) The hallmark of an accomplished civilization is how happy and satisfied its citizens are.

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	131
Avg. time spent on this question by all students	229
Difficulty Level	D
Avg. time spent on this question by students who got this question right	236
% of students who attempted this question	44.75
% of students who got the question right of those who attempted	53.81

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 730

No historian would deny that the achievement of the Greeks was one of the most **remarkable** in the history of the world. With **no great expanse of fertile soil** or **abundance of mineral resources** they succeeded in developing a **higher and more varied** civilization than any of the most richly favoured nations of the Near East. With only a **limited cultural inheritance** from the past to build upon, they produced **intellectual and artistic achievements** which have served ever since as models of perfection for the culture of the West. It may be argued as well that the Greeks achieved a more **leisured and rational mode of living** than most other peoples who strutted and fretted their hour upon this planet. The **infrequency of brutal crimes** and the **contentment with simple amusements** and modest wealth all point to a comparatively **happy and satisfied** experience.

In the first para, the author pronounces the Greek civilization to be a remarkable one and proceeds to give the reasons why he thinks they were remarkable (underlined portions). Based on the reasons the author offers for his praise of the Greeks, we can understand the assumptions being made.

Option A: According to the author, the Greeks can be commended for ensuring its citizens had a leisured life that they could enjoy. While this adds to the glory of the Greeks, it doesn't in any way say that the only way a civilization can be great is by attaining leisure. In other words, while leisure seems to be, according to the author, an important parameter, there is no evidence to believe every single successful civilization necessarily must toil towards this end. Hence, Choice A is not an assumption. Choice A is the answer.

Option B: Based on the usage of words like 'remarkable' and 'succeed' we can understand that the author is in awe/admiration of some of the things the Greeks have achieved. When the author says, With only a **limited cultural inheritance** from the past to build upon, they produced **intellectual and artistic achievements**, it can be understood that according to the author producing intellectual and artistic 'achievements' is remarkable, especially when there isn't much cultural inheritance that has been passed on from the previous generations. Hence, Choice B is an assumption.

Option C: From 'With **no great expanse of fertile soil** or **abundance of mineral resources** they succeeded in developing a **higher and more varied** civilization', we could understand that the author assumes that building a remarkable and diverse (from **higher and more varied**) civilization without natural gifts like vast expanses of fertile soil and mineral resources is difficult. Hence, Choice C is an assumption.

Option D: The hallmark of an accomplished civilization is how happy and satisfied its citizens are. There are a couple of interesting angles in this line. Firstly, you should check the difference between the framing of this option and A. While, A says that a civilization can be successful only if it offers a leisured mode of living, D says the happiness of its citizens is a hallmark. (and not – a civilization is remarkable ONLY if its citizens are happy). From the line - The **infrequency of brutal crimes** and the **contentment with simple amusements** and modest wealth all point to a comparatively **happy and satisfied** experience – it can be seen that while the author starts the para with how remarkable the Greeks are, it ends the para with a different set of keywords – happy and satisfied. So, it can be understood that the author assumes 'a happy and satisfied experience' is a part of making a civilization remarkable. Hence, Choice D is also an assumption.

Choice (A)

DIRECTIONS for questions 16 to 21: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

No historian would deny that the achievement of the Greeks was one of the most remarkable in the history of the world. With no great expanse of fertile soil or abundance of mineral resources they succeeded in developing a higher and more varied civilization than any of the most richly favoured nations of the Near East. With only a limited cultural inheritance from the past to build upon, they produced intellectual and artistic achievements which have served ever since as models of perfection for the culture of the West. It may be argued as well that the Greeks achieved a more leisured and rational mode of living than most other peoples who strutted and fretted their hour upon this planet. The infrequency of brutal crimes and the contentment with simple amusements and modest wealth all point to a comparatively happy and satisfied experience.

It is necessary to be on guard, however, against uncritical adulation of the ancient Greeks. We must not assume that all of the natives of Hellas were as cultured, wise, and free as the citizens of Athens and of the Ionian states across the Aegean. The Spartans, the Arcadians, the Thessalians, and the majority of the Boeotians remained much less culturally advanced. Further, Athenian civilization itself was not without its defects. It permitted some exploitation of the weak, especially of the slaves who toiled in the mines. It was based upon a principle of racial exclusiveness which reckoned every man a foreigner whose parents were not both Athenians, and consequently denied political rights to the majority of the inhabitants. It was also characterized by the overt repression of the female members of the society. Its statecraft was not sufficiently enlightened to avoid the pitfalls of imperialism and aggressive war. Finally, the attitude of its citizens was not always tolerant and just. Socrates was put to death for his opinions, and two other philosophers, Anaxagoras and Protagoras, were forced to leave the city. It must be conceded, however, that the record of the Athenians for tolerance was better than that of most other nations, both ancient and modern. There was probably more freedom of expression in Athens during the war with Sparta than there was in the United States during World War I.

Nor is it true that the Greek influence has been as great as is often supposed. No well-informed student could accept the sentimental verdict of Shelley: "We are all Greeks; our laws, our literature, our religion, our arts have their roots in Greece." Our laws do not really have their roots in Greece but chiefly in Hellenistic and Roman sources. Our religion is no more than partly Greek except, as it was influenced by Plato and the Romans, it reflects primarily the spirit of the Near East. Even our arts derive from other sources almost as much as from Greece. Actually, modern civilization has been the result of the convergence of numerous influences coming from many different periods and places.

In spite of all this, the Hellenic adventure was of profound significance for the history of the world. For the Greeks were the founders of nearly all those ideals commonly thought of as peculiar to the West. Culture in the Near Eastern empires served mainly as an instrument to magnify the power of the state and to enhance the prestige of rulers and priests. The civilizations of the ancient Near East, with the exception, to a certain extent, of the Hebrew and Egyptian, were dominated by absolutism, supernaturalism, ecclesiasticism, the denial of both body and mind, and the subjection of the individual to the group. In contrast, the civilization of Greece, was founded upon ideals of freedom, optimism, secularism, rationalism, the glorification of both body and mind, and a high regard for the dignity and worth of the individual. The culture of the Greeks was the first to be based upon the primacy of intellect - upon the supremacy of the spirit of free inquiry.

The supreme tragedy of the Greeks was, of course, their failure to solve the problem of political conflict. This conflict was the product of social and cultural dissimilarities. Not even the danger of Asian conquest sufficed to dispel the distrust and antagonism of Greeks for one another. Thus, the war that finally broke out between Athens and Sparta sealed the doom of Hellenic civilization even though Greece remained undefeated by foreigners.

Q17. The author mentions Anaxagoras and Protagoras in the passage to drive home which of the following ideas?

- a) To show that the record of Athenians for tolerance was at least better than most other nations.
- b) To demonstrate that most of the inhabitants were denied political rights owing to their lineage.
- c) To show that while Socrates was put to death, some thinkers escaped a similar fate.
- d) To suggest that Athenians intermittently demonstrated intolerance.

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	131
Avg. time spent on this question by all students	97
Difficulty Level	M
Avg. time spent on this question by students who got this question right	93

Time spent / Accuracy Analysis

% of students who attempted this question	48.9
% of students who got the question right of those who attempted	62.91

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 730

Finally, the attitude of its citizens was not always tolerant and just. Socrates was put to death for his opinions, and two other philosophers, Anaxagoras and Protagoras, were forced to leave the city. It must be conceded, however, that the record of the Athenians for tolerance was better than that of most other nations, both ancient and modern.

An understanding of the tone and structure of the sentences here will help in identifying why the example of Anaxagoras and Protagoras was used. The example is sandwiched between negative (not always tolerant) and positive (the record was better than some of the others). This contrast was brought out by 'however'. So, the example was, most definitely, to explain something negative and not something positive.

Option A: This line is positive. It can be eliminated since we are looking for something negative. The example was not to demonstrate their tolerance but to highlight their intolerance. Choice A is not the answer.

Option B: 'To demonstrate that most of the inhabitants were denied political rights owing to their lineage.' The example doesn't discuss lineage of the people in question. While lineage has been discussed in the same para (Athenians discriminated between those who were born in Athens and outside it), the word 'Finally' before the starting of this idea (where Socrates, Anaxagoras and Protagoras are discussed) separates the two ideas. Hence, Choice B is not the answer.

Option C: 'To show that while Socrates was put to death, some thinkers escaped a similar fate' indicates a positive tone for Anaxagoras and Protagoras. However, as we have already established, their example was to prove something negative and not something positive. One can arrive at C as the answer only if they are reading the text 'literally' and are not considering the tone/logical flow of the idea. Hence, Choice C can be eliminated and therefore, not the answer.

Option D: This line suggests that their example was used to prove the intolerance that was sometimes seen amongst Athenians, Socrates being the other example, which as discussed above is the right reason. Hence, Choice D is the answer.

Choice (D)

undefined

DIRECTIONS for questions 16 to 21: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

No historian would deny that the achievement of the Greeks was one of the most remarkable in the history of the world. With no great expanse of fertile soil or abundance of mineral resources they succeeded in developing a higher and more varied civilization than any of the most richly favoured nations of the Near East. With only a limited cultural inheritance from the past to build upon, they produced intellectual and artistic achievements which have served ever since as models of perfection for the culture of the West. It may be argued as well that the Greeks achieved a more leisureed and rational mode of living than most other peoples who strutted and fretted their hour upon this planet. The infrequency of brutal crimes and the contentment with simple amusements and modest wealth all point to a comparatively happy and satisfied experience.

It is necessary to be on guard, however, against uncritical adulation of the ancient Greeks. We must not assume that all of the natives of Hellas were as cultured, wise, and free as the citizens of Athens and of the Ionian states across the Aegean. The Spartans, the Arcadians, the Thessalians, and the majority of the Boeotians remained much less culturally advanced. Further, Athenian civilization itself was not without its defects. It permitted some exploitation of the weak, especially of the slaves who toiled in the mines. It was based upon a principle of racial exclusiveness which reckoned every man a foreigner whose parents were not both Athenians, and consequently denied political rights to the majority of the inhabitants. It was also characterized by the overt repression of the female members of the society. Its statecraft was not sufficiently enlightened to avoid the pitfalls of imperialism and aggressive war. Finally, the attitude of its citizens was not always tolerant and just. Socrates was put to death for his opinions, and two other philosophers, Anaxagoras and Protagoras, were forced to leave the city. It must be conceded, however, that the record of the Athenians for tolerance was better than that of most

other nations, both ancient and modern. There was probably more freedom of expression in Athens during the war with Sparta than there was in the United States during World War I.

Nor is it true that the Greek influence has been as great as is often supposed. No well-informed student could accept the sentimental verdict of Shelley: "We are all Greeks; our laws, our literature, our religion, our arts have their roots in Greece." Our laws do not really have their roots in Greece but chiefly in Hellenistic and Roman sources. Our religion is no more than partly Greek except, as it was influenced by Plato and the Romans, it reflects primarily the spirit of the Near East. Even our arts derive from other sources almost as much as from Greece. Actually, modern civilization has been the result of the convergence of numerous influences coming from many different periods and places.

In spite of all this, the Hellenic adventure was of profound significance for the history of the world. For the Greeks were the founders of nearly all those ideals commonly thought of as peculiar to the West. Culture in the Near Eastern empires served mainly as an instrument to magnify the power of the state and to enhance the prestige of rulers and priests. The civilizations of the ancient Near East, with the exception, to a certain extent, of the Hebrew and Egyptian, were dominated by absolutism, supernaturalism, ecclesiasticism, the denial of both body and mind, and the subjection of the individual to the group. In contrast, the civilization of Greece, was founded upon ideals of freedom, optimism, secularism, rationalism, the glorification of both body and mind, and a high regard for the dignity and worth of the individual. The culture of the Greeks was the first to be based upon the primacy of intellect - upon the supremacy of the spirit of free inquiry.

The supreme tragedy of the Greeks was, of course, their failure to solve the problem of political conflict. This conflict was the product of social and cultural dissimilarities. Not even the danger of Asian conquest sufficed to dispel the distrust and antagonism of Greeks for one another. Thus, the war that finally broke out between Athens and Sparta sealed the doom of Hellenic civilization even though Greece remained undefeated by foreigners.

Q18. Which of the following differences between the Greeks and the Near East can be inferred as per the evidence given in the passage?

- a) Intellect was more important amongst the Greeks than it was amongst their Near Eastern counterparts.
- b) The Greeks veered away from rationalisation, while their Near Eastern counterparts digressed from supernaturalism and absolutism.
- c) The Greeks utilised their natural resources well unlike their counterparts from the richly favoured regions of the Near East.
- d) Unlike the nations of the Near East, the Greeks were doomed not because of foreign attacks but because of internal strife.

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	193
Avg. time spent on this question by all students	113
Difficulty Level	M
Avg. time spent on this question by students who got this question right	118
% of students who attempted this question	43.62
% of students who got the question right of those who attempted	50.63

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 730

From,

'they succeeded in developing a higher and more varied civilization than any of the most richly favoured nations of the Near East',

'Culture in the Near Eastern empires served mainly as an instrument to magnify the power of the state and to enhance the prestige of rulers and priests', and

'In contrast, the civilization of Greece, was founded upon ideals of freedom, optimism, secularism, rationalism, the glorification of both body and mind, and a high regard for the dignity and worth of the individual',

differences between the Greeks and the Near East can be understood.

Option A: From 'The culture of the Greeks was the first to be based upon the **primacy of intellect** – upon **the supremacy of the spirit of free inquiry**', it can be understood that Greeks gave the highest priority to intellect (primacy). So, Choice A can be inferred from the passage since importance given to intellect by Greeks was more than that given by those of the Near East. Hence, Choice A is the answer.

Option B: The Greeks **veered away** from rationalisation while their Near Eastern counterparts **digressed from** supernaturalism and absolutism. The given option misrepresents the data. The Greeks upheld rationalisation and freedom and did not veer away (move/turn away). Similarly, the Near East believed in supernaturalism and not 'digress from' it. Choice B cannot be inferred. Hence, Choice B is not the answer.

Option C: The Greeks utilised their natural resources **unlike their counterparts** from the richly favoured regions of the Near East. From 'they succeeded in developing a higher and more varied civilization than any of the most richly favoured nations of the Near East', it can be understood that the Greeks achieved a lot more with limited resources than their Near Eastern counterparts had. This is not to say that those from the Near East didn't utilise their resources. The author is comparing the two, rather than trying to portray the Near East in a negative light. Hence, 'unlike their counterparts' cannot be justified. C is not the answer.

Option D: '**Unlike the nations of the Near East**, the Greeks were doomed not because of foreign attacks but because of internal strife.' The second part of the option is true, but the passage doesn't talk about the doom of the Near East. So, using Near East in the comparison is not justified. D is not the answer.

Choice (A)

undefined

DIRECTIONS for questions 16 to 21: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

No historian would deny that the achievement of the Greeks was one of the most remarkable in the history of the world. With no great expanse of fertile soil or abundance of mineral resources they succeeded in developing a higher and more varied civilization than any of the most richly favoured nations of the Near East. With only a limited cultural inheritance from the past to build upon, they produced intellectual and artistic achievements which have served ever since as models of perfection for the culture of the West. It may be argued as well that the Greeks achieved a more leisureed and rational mode of living than most other peoples who strutted and fretted their hour upon this planet. The infrequency of brutal crimes and the contentment with simple amusements and modest wealth all point to a comparatively happy and satisfied experience.

It is necessary to be on guard, however, against uncritical adulation of the ancient Greeks. We must not assume that all of the natives of Hellas were as cultured, wise, and free as the citizens of Athens and of the Ionian states across the Aegean. The Spartans, the Arcadians, the Thessalians, and the majority of the Boeotians remained much less culturally advanced. Further, Athenian civilization itself was not without its defects. It permitted some exploitation of the weak, especially of the

slaves who toiled in the mines. It was based upon a principle of racial exclusiveness which reckoned every man a foreigner whose parents were not both Athenians, and consequently denied political rights to the majority of the inhabitants. It was also characterized by the overt repression of the female members of the society. Its statecraft was not sufficiently enlightened to avoid the pitfalls of imperialism and aggressive war. Finally, the attitude of its citizens was not always tolerant and just. Socrates was put to death for his opinions, and two other philosophers, Anaxagoras and Protagoras, were forced to leave the city. It must be conceded, however, that the record of the Athenians for tolerance was better than that of most other nations, both ancient and modern. There was probably more freedom of expression in Athens during the war with Sparta than there was in the United States during World War I.

Nor is it true that the Greek influence has been as great as is often supposed. No well-informed student could accept the sentimental verdict of Shelley: "We are all Greeks; our laws, our literature, our religion, our arts have their roots in Greece." Our laws do not really have their roots in Greece but chiefly in Hellenistic and Roman sources. Our religion is no more than partly Greek except, as it was influenced by Plato and the Romans, it reflects primarily the spirit of the Near East. Even our arts derive from other sources almost as much as from Greece. Actually, modern civilization has been the result of the convergence of numerous influences coming from many different periods and places.

In spite of all this, the Hellenic adventure was of profound significance for the history of the world. For the Greeks were the founders of nearly all those ideals commonly thought of as peculiar to the West. Culture in the Near Eastern empires served mainly as an instrument to magnify the power of the state and to enhance the prestige of rulers and priests. The civilizations of the ancient Near East, with the exception, to a certain extent, of the Hebrew and Egyptian, were dominated by absolutism, supernaturalism, ecclesiasticism, the denial of both body and mind, and the subjection of the individual to the group. In contrast, the civilization of Greece, was founded upon ideals of freedom, optimism, secularism, rationalism, the glorification of both body and mind, and a high regard for the dignity and worth of the individual. The culture of the Greeks was the first to be based upon the primacy of intellect - upon the supremacy of the spirit of free inquiry.

The supreme tragedy of the Greeks was, of course, their failure to solve the problem of political conflict. This conflict was the product of social and cultural dissimilarities. Not even the danger of Asian conquest sufficed to dispel the distrust and antagonism of Greeks for one another. Thus, the war that finally broke out between Athens and Sparta sealed the doom of Hellenic civilization even though Greece remained undefeated by foreigners.

Q19. All the following can be inferred to be 'ideals commonly thought of as peculiar to the West' EXCEPT:

- a) Treating an individual's sense of freedom with a high level of respect
- b) Encouraging a questioning attitude that arose from an adulation for reason.
- c) Avoiding a condescending approach towards the flesh while elevating the significance of the mind.
- d) Cultivating a sense of obeisance towards figures of higher authority.

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	365
Avg. time spent on this question by all students	99
Difficulty Level	M
Avg. time spent on this question by students who got this question right	99
% of students who attempted this question	28.81
% of students who got the question right of those who attempted	55.51

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 730

The fourth para which talks about the 'ideals', first moves on to describe the focus areas of the Near East and then comes back to talk about the ideals again. 'In contrast, the civilization of Greece, was founded upon ideals of freedom, optimism, secularism, rationalism, the glorification of both body and mind, and a high regard for the dignity and worth of the individual. The culture of the Greeks was the first to be based upon the primacy of intellect – upon the supremacy of the spirit of free inquiry.' The underlined portions are the ideals.

Option A: This line could be seen as rephrasing of 'high regard (respect) for the dignity and worth of the individual'. Choice A is one of the ideals. Hence, Choice A is not the answer.

Option B: This line could be seen as rephrasing 'the supremacy of the spirit of free inquiry'. 'Adulation for reason' is rephrasing of 'primacy of intellect'. B is talking about Greek ideals. Hence, it is not the answer.

Option C: 'Avoiding a condescending approach towards the flesh while elevating the significance of the mind' could be seen as rephrasing of 'glorification of both body and mind'. The Greeks didn't give varying degrees of importance to flesh (body) and mind. 'Condescending approach' means looking down upon. The Greeks didn't look down upon flesh to glorify mind. It should be noted here that 'primacy of intellect' shouldn't be confused as stating 'Mind is more important than body'. The author's intention in talking about primacy of intellect is to show that intellect was focused upon more than 'absolutism, supernaturalism, ecclesiasticism, the denial of both body and mind'. Hence, Choice C is an ideal and therefore, not the answer.

Option D: We can look at 'a sense of obeisance towards figures of higher authority' as rephrasing of 'Culture in the Near Eastern empires served mainly as an instrument to magnify the power of the state and to enhance the prestige of rulers and priests'. This was a feature of the Near East and not amongst the Greeks. Hence, this line doesn't point to a Greek ideal. Choice D is the answer. Choice (D)

undefined

DIRECTIONS for questions 16 to 21: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

No historian would deny that the achievement of the Greeks was one of the most remarkable in the history of the world. With no great expanse of fertile soil or abundance of mineral resources they succeeded in developing a higher and more varied civilization than any of the most richly favoured nations of the Near East. With only a limited cultural inheritance from the past to build upon, they produced intellectual and artistic achievements which have served ever since as models of perfection for the culture of the West. It may be argued as well that the Greeks achieved a more leisureed and rational mode of living than most other peoples who strutted and fretted their hour upon this planet. The infrequency of brutal crimes and the contentment with simple amusements and modest wealth all point to a comparatively happy and satisfied experience.

It is necessary to be on guard, however, against uncritical adulation of the ancient Greeks. We must not assume that all of the natives of Hellas were as cultured, wise, and free as the citizens of Athens and of the Ionian states across the Aegean. The Spartans, the Arcadians, the Thessalians, and the majority of the Boeotians remained much less culturally advanced. Further, Athenian civilization itself was not without its defects. It permitted some exploitation of the weak, especially of the slaves who toiled in the mines. It was based upon a principle of racial exclusiveness which reckoned every man a foreigner whose parents were not both Athenians, and consequently denied political rights to the majority of the inhabitants. It was also characterized by the overt repression of the female members of the society. Its statecraft was not sufficiently enlightened to avoid the pitfalls of imperialism and aggressive war. Finally, the attitude of its citizens was not always tolerant and just. Socrates was put to death for his opinions, and two other philosophers, Anaxagoras and Protagoras, were forced

to leave the city. It must be conceded, however, that the record of the Athenians for tolerance was better than that of most other nations, both ancient and modern. There was probably more freedom of expression in Athens during the war with Sparta than there was in the United States during World War I.

Nor is it true that the Greek influence has been as great as is often supposed. No well-informed student could accept the sentimental verdict of Shelley: "We are all Greeks; our laws, our literature, our religion, our arts have their roots in Greece." Our laws do not really have their roots in Greece but chiefly in Hellenistic and Roman sources. Our religion is no more than partly Greek except, as it was influenced by Plato and the Romans, it reflects primarily the spirit of the Near East. Even our arts derive from other sources almost as much as from Greece. Actually, modern civilization has been the result of the convergence of numerous influences coming from many different periods and places.

In spite of all this, the Hellenic adventure was of profound significance for the history of the world. For the Greeks were the founders of nearly all those ideals commonly thought of as peculiar to the West. Culture in the Near Eastern empires served mainly as an instrument to magnify the power of the state and to enhance the prestige of rulers and priests. The civilizations of the ancient Near East, with the exception, to a certain extent, of the Hebrew and Egyptian, were dominated by absolutism, supernaturalism, ecclesiasticism, the denial of both body and mind, and the subjection of the individual to the group. In contrast, the civilization of Greece, was founded upon ideals of freedom, optimism, secularism, rationalism, the glorification of both body and mind, and a high regard for the dignity and worth of the individual. The culture of the Greeks was the first to be based upon the primacy of intellect - upon the supremacy of the spirit of free inquiry.

The supreme tragedy of the Greeks was, of course, their failure to solve the problem of political conflict. This conflict was the product of social and cultural dissimilarities. Not even the danger of Asian conquest sufficed to dispel the distrust and antagonism of Greeks for one another. Thus, the war that finally broke out between Athens and Sparta sealed the doom of Hellenic civilization even though Greece remained undefeated by foreigners.

Q20. All the following were defects of the Athenian society as seen in the passage EXCEPT:

- a) Their preference for racial exclusiveness and slavery
- b) The inherent male-chauvinism that was evident in their society
- c) Their record in showing tolerance and offering freedom of expression to the citizens
- d) Their internal unrest caused by the absence of a unifying social and cultural narrative

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	182
Avg. time spent on this question by all students	80
Difficulty Level	M
Avg. time spent on this question by students who got this question right	76
% of students who attempted this question	44.84
% of students who got the question right of those who attempted	63.61

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 730

Further, Athenian civilization itself was not without its defects. It permitted some exploitation of the weak, especially of the slaves who toiled in the mines. It was based upon a principle of racial exclusiveness which reckoned every man a foreigner whose parents were not both Athenians, and consequently denied political rights to the majority of the inhabitants. It was also characterized by the overt repression of the female members of the society.

Option A: The Athenian civilization permitted exploitation of slaves. It also denied political rights to many if their parents were not both Athenians. Hence, A talks about one of the defects of the Athenian society. Choice A is not the answer.

Option B: There was overt repression of the female members of the Athenian society. So, choice B is rephrasing of the same (male-chauvinism) highlights one of the defects of the Athenian society. Choice B is not the answer.

Option C: From the line, '*It must be conceded, however, that the record of the Athenians for tolerance was better than that of most other nations, both ancient and modern*', it can be understood that the author's opinion about their record in tolerance is not bad, even though there are some bad examples of the same (Socrates, for example). So, C doesn't depict a defect of the Athenian society, as understood from the passage. C is the answer.

Option D: From 'The supreme tragedy of the Greeks was, of course, their failure to solve the problem of political conflict. This conflict was the product of social and cultural dissimilarities' it can be understood that one of the defects of the Athenian society is their political conflict and it was caused by social and cultural variance. So, 'Their internal unrest caused by the absence of a unifying social and cultural narrative' is the correct depiction of one of the defects of the Athenian society. Choice D is not the answer.

Choice (C)

undefined

DIRECTIONS for questions 16 to 21: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

No historian would deny that the achievement of the Greeks was one of the most remarkable in the history of the world. With no great expanse of fertile soil or abundance of mineral resources they succeeded in developing a higher and more varied civilization than any of the most richly favoured nations of the Near East. With only a limited cultural inheritance from the past to build upon, they produced intellectual and artistic achievements which have served ever since as models of perfection for the culture of the West. It may be argued as well that the Greeks achieved a more leisureed and rational mode of living than most other peoples who strutted and fretted their hour upon this planet. The infrequency of brutal crimes and the contentment with simple amusements and modest wealth all point to a comparatively happy and satisfied experience.

It is necessary to be on guard, however, against uncritical adulation of the ancient Greeks. We must not assume that all of the natives of Hellas were as cultured, wise, and free as the citizens of Athens and of the Ionian states across the Aegean. The Spartans, the Arcadians, the Thessalians, and the majority of the Boeotians remained much less culturally advanced. Further, Athenian civilization itself was not without its defects. It permitted some exploitation of the weak, especially of the slaves who toiled in the mines. It was based upon a principle of racial exclusiveness which reckoned every man a foreigner whose parents were not both Athenians, and consequently denied political rights to the majority of the inhabitants. It was

also characterized by the overt repression of the female members of the society. Its statecraft was not sufficiently enlightened to avoid the pitfalls of imperialism and aggressive war. Finally, the attitude of its citizens was not always tolerant and just. Socrates was put to death for his opinions, and two other philosophers, Anaxagoras and Protagoras, were forced to leave the city. It must be conceded, however, that the record of the Athenians for tolerance was better than that of most other nations, both ancient and modern. There was probably more freedom of expression in Athens during the war with Sparta than there was in the United States during World War I.

Nor is it true that the Greek influence has been as great as is often supposed. No well-informed student could accept the sentimental verdict of Shelley: "We are all Greeks; our laws, our literature, our religion, our arts have their roots in Greece." Our laws do not really have their roots in Greece but chiefly in Hellenistic and Roman sources. Our religion is no more than partly Greek except, as it was influenced by Plato and the Romans, it reflects primarily the spirit of the Near East. Even our arts derive from other sources almost as much as from Greece. Actually, modern civilization has been the result of the convergence of numerous influences coming from many different periods and places.

In spite of all this, the Hellenic adventure was of profound significance for the history of the world. For the Greeks were the founders of nearly all those ideals commonly thought of as peculiar to the West. Culture in the Near Eastern empires served mainly as an instrument to magnify the power of the state and to enhance the prestige of rulers and priests. The civilizations of the ancient Near East, with the exception, to a certain extent, of the Hebrew and Egyptian, were dominated by absolutism, supernaturalism, ecclesiasticism, the denial of both body and mind, and the subjection of the individual to the group. In contrast, the civilization of Greece, was founded upon ideals of freedom, optimism, secularism, rationalism, the glorification of both body and mind, and a high regard for the dignity and worth of the individual. The culture of the Greeks was the first to be based upon the primacy of intellect - upon the supremacy of the spirit of free inquiry.

The supreme tragedy of the Greeks was, of course, their failure to solve the problem of political conflict. This conflict was the product of social and cultural dissimilarities. Not even the danger of Asian conquest sufficed to dispel the distrust and antagonism of Greeks for one another. Thus, the war that finally broke out between Athens and Sparta sealed the doom of Hellenic civilization even though Greece remained undefeated by foreigners.

Q21. Which of the following best summarises the contents of the passage?

- a) The Athenians created a remarkable civilization with a rich, cultural heritage despite all odds, but failed when it comes to gender equality, tolerance or justice, succumbing eventually to political strife that marked the end of their dominance.
- b) The end of the Greeks came about not because of foreigners but because of internal strife which came about despite their society's egalitarian foundation favouring the fundamental tenets of freedom and inquiry, not to mention a general proclivity towards art, culture, and leisure.
- c) While the Greeks can be complimented for succeeding in creating a rich culture despite the lack of a natural advantage, their intolerance and gender disparity pushed them towards political conflict that led to their eventual doom.
- d) The Greeks did remarkably well as a civilization, despite lacking in natural resources, building a rational society, although racial tolerance and gender equality were missing and political strife grew into a problem big enough to lead to their eventual doom.

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	129
Avg. time spent on this question by all students	99
Difficulty Level	D
Avg. time spent on this question by students who got this question right	99
% of students who attempted this question	37.26
% of students who got the question right of those who attempted	59.47

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 730

Option A: The Greeks created a remarkable civilization with a rich, cultural heritage despite all odds, but failed when it comes to gender equality, tolerance or justice, succumbing eventually to political strife that marked the end of their dominance. While a bigger part of the option is true, it cannot be said that the Greeks failed when it came to tolerance. While there are bad examples, the author clearly states that the record of the Greeks with respect to tolerance was better than most of the other nations, modern and ancient. Hence, Choice A is not a good summary. Choice A is not the answer.

Option B: The end of the Greeks came about not because of foreigners but because of internal strife which came about despite their society's egalitarian foundation favouring the fundamental tenets of freedom and inquiry, not to mention a general proclivity towards art, culture, and leisure. While most of the summary is true as per the data in the passage, the Greek society was not exactly egalitarian (equality of all, no bias). The Athenians, for example, believed in racial exclusiveness, denying political rights to those whose parents weren't both Athenians. Also, women were repressed. Therefore, Choice B is not the answer.

Option C: While the Greeks can be complimented for succeeding in creating a rich culture despite the lack of a natural advantage, their intolerance and gender disparity pushed them towards political conflict that led to their eventual doom. The reason for the eventual doom of the Greeks was their political conflict caused by social and cultural dissimilarities. So, saying that intolerance and gender disparity pushed them towards conflict is making a very broad assumption that is not accurate as per the passage. Hence, Choice C is not the answer.

Option D: The Greeks did remarkably well as a civilization, despite lacking in natural resources (fertile lands and minerals), building a rational society (a society where freedom and inquiry were promoted), although racial tolerance and gender equality were missing and political strife grew into a problem big enough to lead to their eventual doom. This option highlights all the sub-ideas of the passage – where the Greeks did well, where the Greeks didn't do well, and where the Greeks faltered. Hence, Choice D is the answer.

Choice (D)

undefined

Q22. DIRECTIONS for questions 22 and 23: Each of the following questions has a paragraph from which the last sentence has been deleted. From the given options, choose the one that completes the paragraph in the most appropriate way and enter the number of the correct choice in the input box given below the question.

For anyone (and that is almost everyone) who has shaken and thumped a bottle of ketchup to squeeze the last dollop out of it, or flattened and then rolled up a tube of toothpaste to eject one final squirt onto their brush, help may soon be at hand. For more than a decade, Kripa Varanasi and his colleagues at the Massachusetts Institute of Technology (MIT) have been creating and studying slippery surfaces for use in industrial equipment such as steam turbines and desalination plants. More recently, they have found ways to apply their ideas to create internal coatings for containers so that their contents will flow out easily and completely, with no shaking, thumping or squeezing.

1. To create a completely empty-able container for a substance, be it ketchup, toothpaste, shampoo or face cream, means matching that substance to a specific surface structure and a bespoke lubrication fluid.
2. Dr Varanasi's work started with what are known as super-hydrophobic water-shedding surfaces, a classic natural example of which is a lotus leaf.
3. And now they think they have discovered a way to adapt these super-slippery coatings to steer liquids across flat surfaces, opening up the possibility of pumping fluids around without the need for pipes.

4. If Dr Varanasi has his way the days of shake and thump are numbered.
5. The trick, says Dr Varanasi, is to have the right combination of surface structure and lubricating fluid, so that the oiling liquid does not get swept away by what is flowing over it.

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

Time spent / Accuracy Analysis

Time taken by you to answer this question	230
Avg. time spent on this question by all students	124
Difficulty Level	D
Avg. time spent on this question by students who got this question right	118
% of students who attempted this question	47.16
% of students who got the question right of those who attempted	21.75

[Video Solution](#)

Text Solution

The main idea of the paragraph is given in the penultimate sentence: the contents (of a bottle of ketchup or a tube of toothpaste) will flow out easily and completely, with no shaking, thumping or squeezing.

- (1) (1) needs a precedent and more substantiation. "specific surface structure and a bespoke lubrication fluid" needs to be explained. (1) would seem out of place if placed at the end of the para. It can be a part of another para, after a discussion of "lubricating fluid and surface structure".
- (2) Para 2 does not connect well with the penultimate sentence of the para. It sounds like the introductory sentence of the very next para which will go on to discuss the origins of Dr Varanasi's work.
- (3) (3) links with the penultimate sentence of the para. "they think they have discovered a way to adapt these super-slippery coatings" in (3) links with "they have found ways to apply their ideas to create internal coatings for containers" given in penultimate sentence of the para, just before the blank. (3) also brings the para to a close.
- (4) (4) sounds too conclusive to be a part of the given para. It can come as a final statement of the article, much later in the text, in another para. (4) would need a lot of discussion of the details of the work of Kripa Varanasi.
- (5) (5) mentions some process details which need a precedent and more substantiation. It cannot be a part of the given paragraph. "right combination of surface structure and lubricating fluid" implies that the para has discussed "surface structure" and "lubricating fluid". The given para has not thrown light on these fine points. (5) cannot complete the para.

Ans: (3)

undefined

Q23. DIRECTIONS for questions 22 and 23: Each of the following questions has a paragraph from which the last sentence has been deleted. From the given options, choose the one that completes the paragraph in the most appropriate way and enter the number of the correct choice in the input box given below the question.

Many of India's "modern slaves" labour in appalling conditions in brick kilns or breaking stones in quarries. Typically they are recruited by agents offering real jobs and then trapped by accepting an advance on earnings, which turns out to be a loan at exorbitant interest that no worker can ever hope to repay. The boss then suggests that the worker bring in his wife and children, and soon the entire family is enslaved.

1. Despite having been illegal in India for several decades, such practices continue.

2. Yet, there are examples of activists successfully intervening to free such slaves and, crucially, to keep them free.
3. Freeing those enslaved in quarries and brick kilns is a slow process.
4. Unpaid debts can be bequeathed from one generation to the next.
5. The Freedom Fund is now piloting a “hotspot” strategy that seeks to show how bonded labour can be eradicated from entire districts by helping the most effective NGOs to work together.

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	251
Avg. time spent on this question by all students	101
Difficulty Level	M
Avg. time spent on this question by students who got this question right	101
% of students who attempted this question	46.89
% of students who got the question right of those who attempted	37.14

[Video Solution](#)

[Text Solution](#)

The para talks about the condition of slaves in India. The slaves are trapped when they accept a loan at high interest, which is cleverly disguised as an advance on earnings, but they cannot repay this ever. The penultimate sentence of the para ends with the comment: the entire family is enslaved.

- (1) (1) runs tangent to the given para. “such practices” sounds out of place as the para mentions just one illegal practice – that of trapping slaves in a vicious circle of debt.
- (2) (2) begins with the contrast conjunction ‘yet’. But (2) sounds too positive which does not gel well with the positive tone of the para. (2) resembles a “solution to the problem” statement that can come much later in the flow.
- (3) (3) again talks about freeing the slaves. This thought or idea can be a part of another para. This “solution to the problem” statement, however, is also incomplete. “is a slow process” needs further substantiation. (3) cannot serve as a conclusion sentence of the para.
- (4) (4) is the best sentence that can complete the given para. “Unpaid debts” in (4) links with “loan at exorbitant interest that no worker can ever hope to repay” in the para. “bequeathed from one generation to the next” in (4) links with “the worker brings in his wife and children, and soon the entire family is enslaved” in the para. (4) best concludes and completes the para.
- (5) (5) sounds completely out of scope of the given para. It brings in a lot of new nouns and ideas that seem out of sync with the main idea of the para. “now piloting a “hotspot” strategy” and “helping the most effective NGOs to work together” needs a precedent and more substantiation.

Ans: (4)

undefined

DIRECTIONS for questions 24 to 26: The passage given below is accompanied by a set of three questions. Choose the best answer to each question.

Iran has begun uranium enrichment at a new underground site. Kayhan Daily, which is close to Iran's ruling clerics, said Tehran has begun injecting uranium gas into sophisticated centrifuges at the Fordo facility near the holy city of Qom. Uranium enrichment lies at the heart of Iran's dispute with the West. The technology can be used to produce nuclear fuel, but also materials for atomic bombs.

The US and other countries accuse Iran of developing weapons, but Tehran says it only seeks reactors for energy and research, and refuses to halt its uranium enrichment activities. Kayhan's manager is a representative of Iran's Supreme Leader Ayatollah Ali Khamenei.

Iran has a major uranium enrichment facility in Natanz in central Iran where nearly 8,000 centrifuges are operating. Tehran began enrichment at Natanz in April 2006. The Fordo centrifuges, however, are reportedly more efficient, and the site better shielded from aerial attack.

Built next to a military complex, Fordo was only acknowledged by Iran after it was identified by Western intelligence agencies in September 2009. Both the US and Israel have not ruled out a military strike should Iran continue with its programme. Tehran, however, says it needs its enrichment program to produce fuel for future nuclear reactors and medical radioisotopes needed for cancer patients.

The country has been enriching uranium to less than 5% for years, but it began to further enrich part of its uranium stockpile to nearly 20%, saying it needs the higher-grade material to produce fuel for a Tehran reactor that makes medical radioisotopes needed for cancer patients. Weapons-grade uranium is usually about 90% enriched.

Iran says the higher enrichment activities - of nearly 20% - will be carried out at Fordo. These operations are of particular concern to the West because uranium at 20% enrichment can be converted into fissile material for a nuclear warhead much more quickly than that at 3.5%.

Buried under 300 feet of rock, the facility is a hardened tunnel and is protected by air defence missile batteries and the Revolutionary Guard, Iran's most powerful military force. The site is located about 12 miles north of Qom, the religious nerve centre of Iran's ruling system.

Q24. Which of the following statements is true about uranium enrichment from the passage?

- a) 20% enriched uranium can only be used to fuel nuclear reactors.
- b) 5% enriched uranium cannot be converted into fissile material for nuclear warheads.
- c) 90% enriched uranium can be used for nuclear weapons. Your answer is correct
- d) 3.5% enriched uranium is just as dangerous as 20% enriched uranium.

Time spent / Accuracy Analysis

Time taken by you to answer this question	228
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	175
% of students who attempted this question	50.4
% of students who got the question right of those who attempted	78.77

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 361

Option A: From the line, 'it began to further enrich part of its uranium stockpile to nearly 20%, saying it needs the higher-grade material to produce fuel for a Tehran reactor' it is understandable that 20% uranium enrichment is required to produce fuel for nuclear reactors. However, information about whether this uranium is useful for any other purpose or not cannot be found in the passage. So, we cannot assert that 20% enriched uranium can ONLY be used to fuel nuclear reactors. Hence, Choice A is not the correct answer.

Option B: From the line, 'uranium at 20% enrichment can be converted into fissile material for a nuclear warhead much more quickly than that at 3.5%', it can clearly be understood that even 3.5% enriched uranium can be enriched further to be used for warheads. It won't be quick enough – that's the problem. So, we cannot assert that 5% enriched uranium cannot be converted into fissile material. Hence, Choice B is not the correct answer.

Option C: From the line 'Weapons-grade uranium is usually about 90% enriched', we can understand that 90% enrichment is required to make the material feasible for nuclear weapons. Hence, Choice C is the answer.

Option D: Both 3.5% and 20% enriched uranium can be converted into fissile material that is used for nuclear weapons. However, the level of danger or risk is not the same as can be understood from the sentence, 'uranium at 20% enrichment can be converted into fissile material for a nuclear warhead much more quickly than that at 3.5%'. We cannot use 'just as dangerous'. Hence, Choice D is not the answer.

Choice (C)

undefined

DIRECTIONS for questions 24 to 26: The passage given below is accompanied by a set of three questions. Choose the best answer to each question.

Iran has begun uranium enrichment at a new underground site. Kayhan Daily, which is close to Iran's ruling clerics, said Tehran has begun injecting uranium gas into sophisticated centrifuges at the Fordo facility near the holy city of Qom. Uranium enrichment lies at the heart of Iran's dispute with the West. The technology can be used to produce nuclear fuel, but also materials for atomic bombs.

The US and other countries accuse Iran of developing weapons, but Tehran says it only seeks reactors for energy and research, and refuses to halt its uranium enrichment activities. Kayhan's manager is a representative of Iran's Supreme Leader Ayatollah Ali Khamenei.

Iran has a major uranium enrichment facility in Natanz in central Iran where nearly 8,000 centrifuges are operating. Tehran began enrichment at Natanz in April 2006. The Fordo centrifuges, however, are reportedly more efficient, and the site better shielded from aerial attack.

Built next to a military complex, Fordo was only acknowledged by Iran after it was identified by Western intelligence agencies in September 2009. Both the US and Israel have not ruled out a military strike should Iran continue with its programme. Tehran, however, says it needs its enrichment program to produce fuel for future nuclear reactors and medical radioisotopes needed for cancer patients.

The country has been enriching uranium to less than 5% for years, but it began to further enrich part of its uranium stockpile to nearly 20%, saying it needs the higher-grade material to produce fuel for a Tehran reactor that makes medical

radioisotopes needed for cancer patients. Weapons-grade uranium is usually about 90% enriched.

Iran says the higher enrichment activities - of nearly 20% - will be carried out at Fordo. These operations are of particular concern to the West because uranium at 20% enrichment can be converted into fissile material for a nuclear warhead much more quickly than that at 3.5%.

Buried under 300 feet of rock, the facility is a hardened tunnel and is protected by air defence missile batteries and the Revolutionary Guard, Iran's most powerful military force. The site is located about 12 miles north of Qom, the religious nerve centre of Iran's ruling system.

Q25. All of the statements can be understood from the passage EXCEPT:

- a) Iran has started enriching its uranium stockpile to 20% instead of the usual 5% that it has been indulging in for a long time.
- b) Iran has refused to halt its nuclear enrichment despite veiled threats, citing the need for fuel for future nuclear reactors and for reactors that make medical radioisotopes needed for cancer patients. Your answer is incorrect
- c) Iran didn't acknowledge the existence of the Fordo facility until it was identified by the Western intelligence agencies.
- d) The Fordo facility, Iran is using for uranium enrichment, used to be a clandestine site.

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	129
Avg. time spent on this question by all students	110
Difficulty Level	M
Avg. time spent on this question by students who got this question right	121
% of students who attempted this question	45.85
% of students who got the question right of those who attempted	7.71

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 361

Option A: 'The country has been enriching uranium to less than 5% for years, but it began to further enrich part of its uranium stockpile to nearly 20%.' From the underlined portion it can be understood that Iran didn't follow a 5% benchmark earlier. Also, it isn't entirely enriching the uranium to 20%; only a part of it. So, Choice A doesn't accurately depict the information provided in the passage. Hence, Choice A is the answer.

Option B: 'Both the US and Israel have not ruled out a military strike should Iran continue with its programme.' This line shows Iran has been issued veiled threats from the West which wants it to stop enriching uranium beyond the usual limit. 'Tehran says it only seeks reactors for energy and research, and refuses to halt its uranium enrichment activities.' The underscored part shows that Tehran (understood as the same as Iran from the passage – no need of relying general knowledge) hasn't heeded to Western threats. Hence, Choice B is true, and is therefore, not the answer.

Option C: 'Fordo was only acknowledged by Iran after it was identified by Western intelligence agencies.' This line clearly shows that Choice C is true and hence, not the answer.

Option D: 'Buried under 300 feet of rock, the facility is a hardened tunnel and is protected by air defence missile batteries and the Revolutionary Guard.' 'Iran has begun uranium enrichment at a new underground site.' The underscored parts clearly show that the Fordo facility is kept under wraps (clandestine is something kept a secret) and is well-protected. Most importantly, 'Fordo was only acknowledged by Iran after it was identified by Western intelligence agencies in September 2009' clearly shows that Iran had kept it a secret until it was unravelled by intelligence agencies. Hence, Choice D is true and therefore, not the answer. Choice (A)

undefined

DIRECTIONS for questions 24 to 26: The passage given below is accompanied by a set of three questions. Choose the best answer to each question.

Iran has begun uranium enrichment at a new underground site. Kayhan Daily, which is close to Iran's ruling clerics, said Tehran has begun injecting uranium gas into sophisticated centrifuges at the Fordo facility near the holy city of Qom. Uranium enrichment lies at the heart of Iran's dispute with the West. The technology can be used to produce nuclear fuel, but also materials for atomic bombs.

The US and other countries accuse Iran of developing weapons, but Tehran says it only seeks reactors for energy and research, and refuses to halt its uranium enrichment activities. Kayhan's manager is a representative of Iran's Supreme Leader Ayatollah Ali Khamenei.

Iran has a major uranium enrichment facility in Natanz in central Iran where nearly 8,000 centrifuges are operating. Tehran began enrichment at Natanz in April 2006. The Fordo centrifuges, however, are reportedly more efficient, and the site better shielded from aerial attack.

Built next to a military complex, Fordo was only acknowledged by Iran after it was identified by Western intelligence agencies in September 2009. Both the US and Israel have not ruled out a military strike should Iran continue with its programme. Tehran, however, says it needs its enrichment program to produce fuel for future nuclear reactors and medical radioisotopes needed for cancer patients.

The country has been enriching uranium to less than 5% for years, but it began to further enrich part of its uranium stockpile to nearly 20%, saying it needs the higher-grade material to produce fuel for a Tehran reactor that makes medical radioisotopes needed for cancer patients. Weapons-grade uranium is usually about 90% enriched.

Iran says the higher enrichment activities - of nearly 20% - will be carried out at Fordo. These operations are of particular concern to the West because uranium at 20% enrichment can be converted into fissile material for a nuclear warhead much more quickly than that at 3.5%.

Buried under 300 feet of rock, the facility is a hardened tunnel and is protected by air defence missile batteries and the Revolutionary Guard, Iran's most powerful military force. The site is located about 12 miles north of Qom, the religious nerve centre of Iran's ruling system.

Q26. All of the following are the advantages offered by the Fordo facility as understood from the passage EXCEPT:

- a) The Revolutionary Guard is available to protect the hardened tunnel.
- b) The facility is much more efficient than Natanz which boasts of 8000 centrifuges.
- c) The facility offers close proximity to Qom, Iran's religious nerve centre. Your answer is correct
- d) The underground facility, buried under 300 feet of rock, is better protected against aerial threats as compared to Iran's other major uranium enrichment site.

Time spent / Accuracy Analysis

Time taken by you to answer this question	133
Avg. time spent on this question by all students	116
Difficulty Level	E
Avg. time spent on this question by students who got this question right	116
% of students who attempted this question	44.41
% of students who got the question right of those who attempted	42.27

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 361

Option A: From 'Buried under 300 feet of rock, the facility is a hardened tunnel and is protected by air defence missile batteries and the Revolutionary Guard, Iran's most powerful military force', it is understandable that Choice A points to one of the advantages of the Fordo facility. Hence, Choice A is not the answer.

Option B: 'Tehran began enrichment at Natanz in April 2006. The Fordo centrifuges, however, are reportedly more efficient.' From this line, it can be easily understood that Choice B is true. 'Tehran has begun injecting uranium gas into sophisticated centrifuges at the Fordo facility. This line talks about sophisticated centrifuges.' Hence, Choice B is not the answer.

Option C: While the information represented here is true, the passage doesn't offer any information around whether this proximity with Qom offers any advantages to Fordo. Hence, Choice C is the answer.

Option D: The expression, 'the site better shielded from aerial attack' indicates that the facility is not as exposed as another site, Natanz, is. (Thanks to usage of the word 'better'). Hence, Choice D represents an advantage and is therefore, not the answer.

Choice (C)

undefined

Q27. DIRECTIONS for questions 27 and 28: The sentences given in each of the following questions, when properly sequenced, form a coherent paragraph. Each sentence is labelled with a number. Decide on the proper order for the sentences and key in the sequence of five numbers as your answer, in the input box given below the question.

1. The US president is hoping that several measures announced on June 4th will have a similarly paralysing effect on their modern incarnation, the patent troll.
2. In one much-cited example last year, MPHJ Technologies and dozens of associated shell companies sent letters to thousands of small businesses demanding \$900 - 1200 per employee for using scanners which they claimed infringed patents.
3. Often, their victims pay up rather than face the costs of a legal battle.
4. According to this new saga of intellectual property misanthropy, these creatures roam the business world, buying up patents and then using them to demand extravagant payouts from companies they accuse of infringing them.
5. The solitary lumbering trolls of Scandinavian mythology would sometimes be turned to stone by exposure to sunlight.

Your Answer:51423 □ Your answer is incorrect

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	119
Avg. time spent on this question by all students	145
Difficulty Level	VD
Avg. time spent on this question by students who got this question right	153

Time spent / Accuracy Analysis

% of students who attempted this question	27.24
% of students who got the question right of those who attempted	15.87

[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 is also a standalone sentence that is best left at the beginning of the para. It has the proper adjective "Scandinavian mythology" and introduces the background: lumbering trolls being turned to stone by exposure to sunlight. Sentence 5 is followed by sentence 1. "solitary lumbering trolls of Scandinavian mythology" in sentence 5 links with "their modern incarnation, the patent troll" in sentence 1. Also "similarly paralysing effect" in sentence 1 links with "sometimes be turned to stone by exposure to sunlight" in sentence 5. Sentence 1 is followed by sentence 4. "these creatures" in sentence 4 points to "the patent trolls" in sentence 1. So the "measures announced on June 4th in the US" as given in sentence 1 will have a paralyzing effect on "these creatures (patent trolls) roaming the business world, buying up patents and then using them to demand extravagant payouts from companies they accuse of infringing them" mentioned in sentence 4. So, 514. Sentences 4 and 3 form a mandatory pair. "their victims pay up" in sentence 3 links with "buying up patents and then using them to demand extravagant payouts from companies they accuse of infringing them" in sentence 4. So sentence 3 follows sentence 4. Sentence 2 exemplifies the point made in sentences 4 and 3. "MPHJ Technologies and dozens of associated shell companies demanding \$900 – 1200 per employee for using scanners which they claimed infringed patents" in sentence 2 links with "using them to demand extravagant payouts from companies they accuse of infringing them" in sentence 4. Sentence 2 concludes the para. Hence, 51432.

Ans: (51432)

undefined

Q28. DIRECTIONS for questions 27 and 28: The sentences given in each of the following questions, when properly sequenced, form a coherent paragraph. Each sentence is labelled with a number. Decide on the proper order for the sentences and key in the sequence of five numbers as your answer, in the input box given below the question.

1. Even in peace, the oil business dominated stock markets, bankrolled despots and propped up the economies of entire countries.
2. Oil shaped the 20th century.
3. Cheap natural gas, renewable energy, electric vehicles and coordinated efforts to tackle global warming together mean that the power source of choice will be electricity.
4. In war, the French leader Georges Clemenceau had said, petroleum was "as vital as blood".
5. But the 21st century will see oil's influence wane.

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	129
Avg. time spent on this question by all students	116
Difficulty Level	D
Avg. time spent on this question by students who got this question right	112
% of students who attempted this question	37.87
% of students who got the question right of those who attempted	48.02

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[Text Solution](#)

Sentences 1, 2 and 4 are given in the past tense while sentences 3 and 5 are futuristic in tone.

On a careful reading of the sentences, it can be observed that sentence 2 is a general sentence that can begin the para. It mentions the background: Oil shaped the 20th century. Sentence 2 is followed by sentence 4. "Oil shaped the 20th century" in sentence 2 links with "petroleum was "as vital as blood"" in sentence 4. Sentence 4 and sentence 1 gel well together. Sentence 4 which mentions the significance of petroleum in war is best followed by sentence 1 which highlights the importance of the oil business in peace times. So, 241 form a logical block as it reflects the situation in the 20th century, which was shaped by oil. Sentence 1 is followed by sentence 5. Sentence 5 shifts focus to the 21st century. "In the 20th century, oil's influence will wane" in sentence 5 contrasts "Oil shaped the 20th century" given in sentence 2. Sentence 5 and sentence 3 form a mandatory pair. "oil's influence wane" in sentence 5 is substantiated by "..... power source of choice will be electricity" in sentence 3. Sentence 3 concludes the para. So, 24153.

Ans: (24153)

undefined

DIRECTIONS for questions 29 to 34: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

In the seventeenth and eighteenth centuries, the British East India Company had the mother-of-all strategic positions. The company completely monopolized trade in four countries, had worldwide interests ranging from coffee and woollens to opium, had its own private army and navy, was empowered by the crown to declare war when its business interests were threatened, and effectively ruled over a fifth of the world's population. The British East Indian Company surely would have been at the top of any 'most admired and feared companies' list in its day. Yet, despite all its economies of scale and scope, its barriers to competition, its privileged relationships and its many core competencies, such as brutally oppressing the natives, its massive wall of competitive advantage crumbled in the face of technological innovation and the entry of new competitors, and in 1873, the company went out of business. Although, the British East India Company had a good, long run, in the end, the world changed and it didn't.

All competitive advantage is temporary. Some advantages last longer than others, but all sources of advantage have a finite shelf life. While this may sound like a truism, the observation is often forgotten in the never-ending quest for 'excellent' companies that build sustainable competitive advantages and allegedly outperform their industry peers, year after year. There are books which tell the inspiring stories of such great companies, what they did to succeed, and how if your company does the same things they did, it can be a great company too. There are also 'Why great companies fail' books, which tell the terrifying stories of how big, once-successful companies blew it; of how industry-changing innovations, cumbersome bureaucracy, and hubris caused once-mighty institutions to go down in flames.

The fascinating thing about all these books is that the same companies show up on both sides of the shelf. Apple, for example, has traversed the full length of the bookshelf, starting off as a young up-and-comer moving into 'excellent' territory, then shifting to 'blew it' and now has moved back to the 'excellent' side with its successes under Steve Jobs. A shockingly large number of companies which featured in the original lists of 'excellent' companies though, have fallen into bankruptcy, breakup or acquisition exemplified by Enron which blew itself up in spectacular and tragic fashion in 2002.

But while many companies fail, surely there must be some 'excellent' companies that have built sustainable competitive advantages and maintained high levels of performance over long periods. Dick Foster and Sarah Kaplan, examine this question in their book *Creative Destruction* by looking at the oldest league table in business, the Forbes 100. In 1917, Bertie Forbes, the founder of Forbes magazine, published his first Forbes 100 list of the largest US companies. In 1987, the magazine republished the original list and asked, 'Where are they now?' The majority of the one-hundred companies on the original list, sixty-one, had in one way or another ceased to exist, either merging into other companies or going bankrupt. Of

the survivors, twenty-one had dropped out of the top hundred, and only eighteen, including such venerable names as Procter & Gamble, Exxon, and Citibank, were still in the elite group. These eighteen companies, as Foster and Kaplan note, were grand-champion survivors, weathering the storms of the Great Depression, World War II, the inflationary 1970s, the merger-and-acquisition turmoil of the 1980s, and the technology revolution of the 1990s.

So, they must be great performers, the truly ‘excellent’ companies, right? Wrong. With the exception of GE and Kodak, every one of them underperformed the average growth in stock market value during that seventy-year period, and since 1987, Kodak’s performance has dropped off as well, leaving GE the sole original Forbes 100 company to survive and outperform the market over the past eight decades. As another reference point, Foster and Kaplan also looked at the five hundred companies that started in the S&P 500, when it was formed in 1957, and found that only seventy-four survived until 1997. Moreover, as a group, the seventy-four survivors underperformed the overall S&P 500 index by 20 percent.

Taken together and viewed over a longer time frame, the story the ‘excellent company’ books tell is not one of sustainable competitive advantage and enduring high performance. Rather, it is a story of the ephemeral nature of competitive advantage, and the incredible dynamism of markets as companies rise and fall.

Q29. The main conclusion of the passage is:

- a) Competitive advantage is temporary in a dynamic market where companies rise and fall. Your answer is correct
- b) Excellent companies are excellent because they sustain competitive advantage and high performance through rising and falling markets.
- c) The incredible dynamism of markets is the reason why great companies rise and fall.
- d) The dynamism of markets and competitive advantage are both ephemeral in nature.

Time spent / Accuracy Analysis

Time taken by you to answer this question	112
Avg. time spent on this question by all students	242
Difficulty Level	D
Avg. time spent on this question by students who got this question right	250
% of students who attempted this question	40.36
% of students who got the question right of those who attempted	44.65

[Video Solution](#)

[Text Solution](#)

The main conclusion of the passage has been highlighted by the author in the last two lines. Taken together and viewed over a longer time frame, the story the 'excellent company' books tell is **not one** of sustainable competitive advantage and enduring high performance. **Rather**, it is a story of **the ephemeral nature of competitive advantage**, and **the incredible dynamism of markets as companies rise and fall**.

To summarise, the author concludes that it is hard to single out companies which have been the epitomes of sustainable competitive advantage or enduring high performance. More importantly, it must be observed that competitive advantage is always temporary (ephemeral) and that there is incredible dynamism of the markets.

Option A: This option highlights all the key ideas discussed in the above para – temporariness of competitive advantage, dynamism of the markets and the rise and fall of the companies. Hence, this option represents not only the main conclusion of the passage but also its theme which is to talk about the ups and downs faced by the so-called excellent companies in a dynamic market. Hence, Choice A is the answer.

Option B: As per the line, 'the story the 'excellent company' books tell is **not one** of sustainable competitive advantage and enduring high performance', it should be understood that an excellent company is not necessarily about sustainable competitive advantage or high performance. In fact, the story is not about how great companies became great or remained great. The story is that of the market that changes so much that it is a rare event for a company to have survived over a long time and to have outperformed the market. Hence, Choice B is not the answer.

Option C: This is classic 'cum hoc ergo propter hoc' fallacy. Correlation doesn't necessarily mean causation. The author doesn't seem to give a reason why companies rise and fall. The author seems to suggest that the dynamism of the markets is a reality as much as the rise and fall of companies is a reality. Hence, Choice C is not the answer.

Option D: The essence of this option depends on the comma in front of a coordinating conjunction – 'and' in this case – in '**Rather**', it is a story of **the ephemeral nature of competitive advantage**, and **the incredible dynamism of markets as companies rise and fall**.' So, according to the line, there are two different storylines – the ephemeral nature of competitive advantage and second, the incredible dynamism of markets. The option wrongly applies 'ephemeral nature' even to 'incredible dynamism' which is incorrect because of the comma after 'advantage. Hence, Choice D is not the answer.

Choice (A)

undefined

DIRECTIONS for questions 29 to 34: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

In the seventeenth and eighteenth centuries, the British East India Company had the mother-of-all strategic positions. The company completely monopolized trade in four countries, had worldwide interests ranging from coffee and woollens to opium, had its own private army and navy, was empowered by the crown to declare war when its business interests were threatened, and effectively ruled over a fifth of the world's population. The British East Indian Company surely would have been at the top of any 'most admired and feared companies' list in its day. Yet, despite all its economies of scale and scope, its barriers to competition, its privileged relationships and its many core competencies, such as brutally oppressing the

natives, its massive wall of competitive advantage crumbled in the face of technological innovation and the entry of new competitors, and in 1873, the company went out of business. Although, the British East India Company had a good, long run, in the end, the world changed and it didn't.

All competitive advantage is temporary. Some advantages last longer than others, but all sources of advantage have a finite shelf life. While this may sound like a truism, the observation is often forgotten in the never-ending quest for 'excellent' companies that build sustainable competitive advantages and allegedly outperform their industry peers, year after year. There are books which tell the inspiring stories of such great companies, what they did to succeed, and how if your company does the same things they did, it can be a great company too. There are also 'Why great companies fail' books, which tell the terrifying stories of how big, once-successful companies blew it; of how industry-changing innovations, cumbersome bureaucracy, and hubris caused once-mighty institutions to go down in flames.

The fascinating thing about all these books is that the same companies show up on both sides of the shelf. Apple, for example, has traversed the full length of the bookshelf, starting off as a young up-and-comer moving into 'excellent' territory, then shifting to 'blew it' and now has moved back to the 'excellent' side with its successes under Steve Jobs. A shockingly large number of companies which featured in the original lists of 'excellent' companies though, have fallen into bankruptcy, breakup or acquisition exemplified by Enron which blew itself up in spectacular and tragic fashion in 2002.

But while many companies fail, surely there must be some 'excellent' companies that have built sustainable competitive advantages and maintained high levels of performance over long periods. Dick Foster and Sarah Kaplan, examine this question in their book *Creative Destruction* by looking at the oldest league table in business, the Forbes 100. In 1917, Bertie Forbes, the founder of Forbes magazine, published his first Forbes 100 list of the largest US companies. In 1987, the magazine republished the original list and asked, 'Where are they now?' The majority of the one-hundred companies on the original list, sixty-one, had in one way or another ceased to exist, either merging into other companies or going bankrupt. Of the survivors, twenty-one had dropped out of the top hundred, and only eighteen, including such venerable names as Procter & Gamble, Exxon, and Citibank, were still in the elite group. These eighteen companies, as Foster and Kaplan note, were grand-champion survivors, weathering the storms of the Great Depression, World War II, the inflationary 1970s, the merger-and-acquisition turmoil of the 1980s, and the technology revolution of the 1990s.

So, they must be great performers, the truly 'excellent' companies, right? Wrong. With the exception of GE and Kodak, every one of them underperformed the average growth in stock market value during that seventy-year period, and since 1987, Kodak's performance has dropped off as well, leaving GE the sole original Forbes 100 company to survive and outperform the market over the past eight decades. As another reference point, Foster and Kaplan also looked at the five hundred companies that started in the S&P 500, when it was formed in 1957, and found that only seventy-four survived until 1997. Moreover, as a group, the seventy-four survivors underperformed the overall S&P 500 index by 20 percent.

Taken together and viewed over a longer time frame, the story the 'excellent company' books tell is not one of sustainable competitive advantage and enduring high performance. Rather, it is a story of the ephemeral nature of competitive advantage, and the incredible dynamism of markets as companies rise and fall.

Q30. In the line 'With the exception of GE and Kodak, every one of them underperformed the average growth in stock market value during that seventy-year period' (para 5), the author is trying to negate which of the following assumptions?

- a) Companies which weathered the Great Depression, World War II and the technology revolution are 'excellent' companies.
- b) Companies which are grand-champion survivors are great performers.
- c) Only the truly excellent companies survive across ages without succumbing to innovations, inflation and depressions. Your answer is incorrect
- d) Most companies in the original Forbes 100 list dropped off the radar a few decades later.

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	139
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	119
% of students who attempted this question	39.8
% of students who got the question right of those who attempted	36.01

[Video Solution](#)

Text Solution

Number of words and Explanatory notes for RC:

Number of words: 734

The premise state of the argument is – 'These eighteen companies, as Foster and Kaplan note, were grand-champion survivors, weathering the storms of the Great Depression, World War II, the inflationary 1970s, the merger-and-acquisition turmoil of the 1980s, and the technology revolution of the 1990s.' The conclusion statement is – 'So, they must be great performers, the truly 'excellent' companies, right? Wrong.' The assumption that the author is trying to negate is between the above two lines. It is that the companies which survived all the adverse situations were great performers/the truly excellent companies. The author is trying to negate this argument by talking about stock market performance of these 'grand-champion-survivors'.

Option A: This seems like a good representation of the assumption that the author is trying to negate. But, we aren't literally talking about companies that survived three specific events mentioned in the option - World War II, Depression, and technology revolution. We are discussing companies that have survived every single test of time. Hence, Choice A is not the answer.

Option B: 'Companies which are grand-champion survivors survive because they are great performers.' This line hits the nail on the head in terms of identifying the exact assumption which is equating survival across the ages to great performance. Hence, Choice B is the answer.

Option C: 'Only the truly excellent companies survive across ages without succumbing to innovations, inflation and depressions.' The assumption that the author was trying to bust is that companies which survive without succumbing to wars, inflations and depressions are great performers and by that logic, excellent. This option turns the assumption around to create an altogether different assumption that the reverse is true, that ONLY excellent companies survive. (Survivors are excellent is not the same as only excellent ones survive). Hence, Choice C is not the answer.

Option D: 'Most companies in the original Forbes 100 list dropped off the radar a few decades later.' This option should be one of the easiest ones to eliminate for two reasons. Firstly, unlike an assumption this piece of information has actually been mentioned in the passage. Secondly, the author's negation comes against a positive assumption – 'that companies which survived tough times were great performers'. This option is clearly a negative statement and hence, not the assumption. Choice D is not the answer.

Choice (B)

undefined

DIRECTIONS for questions 29 to 34: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

In the seventeenth and eighteenth centuries, the British East India Company had the mother-of-all strategic positions. The company completely monopolized trade in four countries, had worldwide interests ranging from coffee and woollens to opium, had its own private army and navy, was empowered by the crown to declare war when its business interests were threatened, and effectively ruled over a fifth of the world's population. The British East Indian Company surely would have been at the top of any 'most admired and feared companies' list in its day. Yet, despite all its economies of scale and scope, its barriers to competition, its privileged relationships and its many core competencies, such as brutally oppressing the natives, its massive wall of competitive advantage crumbled in the face of technological innovation and the entry of new competitors, and in 1873, the company went out of business. Although, the British East India Company had a good, long run, in the end, the world changed and it didn't.

All competitive advantage is temporary. Some advantages last longer than others, but all sources of advantage have a finite shelf life. While this may sound like a truism, the observation is often forgotten in the never-ending quest for 'excellent' companies that build sustainable competitive advantages and allegedly outperform their industry peers, year after year. There are books which tell the inspiring stories of such great companies, what they did to succeed, and how if your company does the same things they did, it can be a great company too. There are also 'Why great companies fail' books, which tell the terrifying stories of how big, once-successful companies blew it; of how industry-changing innovations, cumbersome bureaucracy, and hubris caused once-mighty institutions to go down in flames.

The fascinating thing about all these books is that the same companies show up on both sides of the shelf. Apple, for example, has traversed the full length of the bookshelf, starting off as a young up-and-comer moving into 'excellent' territory, then shifting to 'blew it' and now has moved back to the 'excellent' side with its successes under Steve Jobs. A shockingly large number of companies which featured in the original lists of 'excellent' companies though, have fallen into bankruptcy, breakup or acquisition exemplified by Enron which blew itself up in spectacular and tragic fashion in 2002.

But while many companies fail, surely there must be some ‘excellent’ companies that have built sustainable competitive advantages and maintained high levels of performance over long periods. Dick Foster and Sarah Kaplan, examine this question in their book *Creative Destruction* by looking at the oldest league table in business, the Forbes 100. In 1917, Bertie Forbes, the founder of Forbes magazine, published his first Forbes 100 list of the largest US companies. In 1987, the magazine republished the original list and asked, ‘Where are they now?’ The majority of the one-hundred companies on the original list, sixty-one, had in one way or another ceased to exist, either merging into other companies or going bankrupt. Of the survivors, twenty-one had dropped out of the top hundred, and only eighteen, including such venerable names as Procter & Gamble, Exxon, and Citibank, were still in the elite group. These eighteen companies, as Foster and Kaplan note, were grand-champion survivors, weathering the storms of the Great Depression, World War II, the inflationary 1970s, the merger-and-acquisition turmoil of the 1980s, and the technology revolution of the 1990s.

So, they must be great performers, the truly ‘excellent’ companies, right? Wrong. With the exception of GE and Kodak, every one of them underperformed the average growth in stock market value during that seventy-year period, and since 1987, Kodak’s performance has dropped off as well, leaving GE the sole original Forbes 100 company to survive and outperform the market over the past eight decades. As another reference point, Foster and Kaplan also looked at the five hundred companies that started in the S&P 500, when it was formed in 1957, and found that only seventy-four survived until 1997. Moreover, as a group, the seventy-four survivors underperformed the overall S&P 500 index by 20 percent.

Taken together and viewed over a longer time frame, the story the ‘excellent company’ books tell is not one of sustainable competitive advantage and enduring high performance. Rather, it is a story of the ephemeral nature of competitive advantage, and the incredible dynamism of markets as companies rise and fall.

Q31. All of the following points have been demonstrated by the author using the example of the British East India Company EXCEPT?

- a) Diversified interests of a company cannot save it if it doesn’t evolve along with the world.
- b) Competitive advantage of a company might vanish in the face of disruptive changes.
- c) Monopoly in an industry does not guarantee everlasting existence.
- d) Technological innovation is important to maintain monopoly. Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	146
Avg. time spent on this question by all students	112
Difficulty Level	D
Avg. time spent on this question by students who got this question right	105
% of students who attempted this question	37.8
% of students who got the question right of those who attempted	45.16

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 734

The British East Indian Company, according to the author, had monopolized trade, its own army and navy. Yet, despite all its economies of scale and scope, its barriers to competition, its privileged relationships and its many core competencies, such as brutally oppressing the natives, its massive wall of competitive advantage crumbled in the face of technological innovation and the entry of new competitors, and in 1873, the company went out of business. Although, the British East India Company had a good, long run, in the end, the world changed and it didn't. In short, despite all the advantages, the British East Indian Company crumbled because it didn't change along with the world when technological innovation took place and new competitors entered into the arena.

Option A: From the terms 'economies of scale and scope', 'its many core competencies' and 'worldwide interests ranging from coffee and woollens to opium', we can understand that The British East Indian Company had diversified interests. Despite that, the company disappeared, according to the author. So, Choice A has been demonstrated by the author using the example. Choice A is not the answer.

Option B: Disruptive changes, or in other words, changes that alter the status quo could be inferred from the line 'competitive advantage crumbled in the face of technological innovation'. Technological innovation could be considered a disruptive force, because a traditional company couldn't deal with it. Hence, Choice B is not the answer.

Option C: From 'the British East India Company had the mother-of-all strategic positions. The company completely monopolized trade in four countries' we can understand that the author is demonstrating that monopoly in an industry does not guarantee everlasting existence. Hence, Choice C is not the answer.

Option D: Technological innovation is important to maintain monopoly. This line is an extreme extrapolation. Technological innovation ended the company's monopoly, true. But, the reverse may not be true. Also, the company was an example of monopolies biting the dust because of various reasons. The focus was not on technology or innovations. Hence, Choice D is the answer.

Choice (D)

undefined

DIRECTIONS for questions 29 to 34: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

In the seventeenth and eighteenth centuries, the British East India Company had the mother-of-all strategic positions. The company completely monopolized trade in four countries, had worldwide interests ranging from coffee and woollens to opium, had its own private army and navy, was empowered by the crown to declare war when its business interests were threatened, and effectively ruled over a fifth of the world's population. The British East Indian Company surely would have been at the top of any 'most admired and feared companies' list in its day. Yet, despite all its economies of scale and scope,

its barriers to competition, its privileged relationships and its many core competencies, such as brutally oppressing the natives, its massive wall of competitive advantage crumbled in the face of technological innovation and the entry of new competitors, and in 1873, the company went out of business. Although, the British East India Company had a good, long run, in the end, the world changed and it didn't.

All competitive advantage is temporary. Some advantages last longer than others, but all sources of advantage have a finite shelf life. While this may sound like a truism, the observation is often forgotten in the never-ending quest for 'excellent' companies that build sustainable competitive advantages and allegedly outperform their industry peers, year after year. There are books which tell the inspiring stories of such great companies, what they did to succeed, and how if your company does the same things they did, it can be a great company too. There are also 'Why great companies fail' books, which tell the terrifying stories of how big, once-successful companies blew it; of how industry-changing innovations, cumbersome bureaucracy, and hubris caused once-mighty institutions to go down in flames.

The fascinating thing about all these books is that the same companies show up on both sides of the shelf. Apple, for example, has traversed the full length of the bookshelf, starting off as a young up-and-comer moving into 'excellent' territory, then shifting to 'blew it' and now has moved back to the 'excellent' side with its successes under Steve Jobs. A shockingly large number of companies which featured in the original lists of 'excellent' companies though, have fallen into bankruptcy, breakup or acquisition exemplified by Enron which blew itself up in spectacular and tragic fashion in 2002.

But while many companies fail, surely there must be some 'excellent' companies that have built sustainable competitive advantages and maintained high levels of performance over long periods. Dick Foster and Sarah Kaplan, examine this question in their book *Creative Destruction* by looking at the oldest league table in business, the Forbes 100. In 1917, Bertie Forbes, the founder of Forbes magazine, published his first Forbes 100 list of the largest US companies. In 1987, the magazine republished the original list and asked, 'Where are they now?' The majority of the one-hundred companies on the original list, sixty-one, had in one way or another ceased to exist, either merging into other companies or going bankrupt. Of the survivors, twenty-one had dropped out of the top hundred, and only eighteen, including such venerable names as Procter & Gamble, Exxon, and Citibank, were still in the elite group. These eighteen companies, as Foster and Kaplan note, were grand-champion survivors, weathering the storms of the Great Depression, World War II, the inflationary 1970s, the merger-and-acquisition turmoil of the 1980s, and the technology revolution of the 1990s.

So, they must be great performers, the truly 'excellent' companies, right? Wrong. With the exception of GE and Kodak, every one of them underperformed the average growth in stock market value during that seventy-year period, and since 1987, Kodak's performance has dropped off as well, leaving GE the sole original Forbes 100 company to survive and outperform the market over the past eight decades. As another reference point, Foster and Kaplan also looked at the five hundred companies that started in the S&P 500, when it was formed in 1957, and found that only seventy-four survived until 1997. Moreover, as a group, the seventy-four survivors underperformed the overall S&P 500 index by 20 percent.

Taken together and viewed over a longer time frame, the story the 'excellent company' books tell is not one of sustainable competitive advantage and enduring high performance. Rather, it is a story of the ephemeral nature of competitive advantage, and the incredible dynamism of markets as companies rise and fall.

Q32. Which of the following theories is the author least likely to agree with, based on the evidence given in the passage?

- a) Companies can fall from the top and get back once again to glory days.
- b) 'Excellent' companies are not truly excellent over a long period of time unless they perform at least at par with the market. Your answer is incorrect
- c) Companies can consistently outperform a dynamic market over a reasonably long period of time.
- d) Companies which have survived the test of time have done so because they evolved with the world around them.

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	22
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	96
% of students who attempted this question	35.85
% of students who got the question right of those who attempted	63.47

[Video Solution](#)

Text Solution

Number of words and Explanatory notes for RC:

Number of words: 734

Option A: The author mentions the example of Apple, which slid from the top to a bad position and then came back to the top. The author is likely to agree with the theory that companies can fall and then rise again. Hence, Choice A is not the answer.

Option B: The author concludes in the last para that 'So, they must be great performers, the truly 'excellent' companies, right? **Wrong**. With the exception of GE and Kodak, every one of them underperformed the average growth in stock market value during that seventy-year period'. According to the author, these companies aren't excellent really because they underperformed the average growth in stock market. The author is likely to agree with the theory that excellent companies have to perform at par with the market. Hence, Choice B is not the answer.

Option C: Companies in the Forbes' list, with the exception of GE, haven't outperformed the market. That indicates that the author will definitely disagree with the false hypothesis that companies can consistently outperform a 'dynamic' market and that too 'over a long period of time'. The author clearly states that the dynamism of the markets is the constant but doesn't conclude about whether or not companies can ever outperform them. Hence, Choice C is the answer.

Option D: The author mentions that The British East Indian Company couldn't survive because the world evolved, but the former didn't. So, the author is likely to agree with the theory that long-enduring companies do so because they evolve with the times. Hence, Choice D is not the answer.

Choice (C)

undefined

DIRECTIONS for questions 29 to 34: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

In the seventeenth and eighteenth centuries, the British East India Company had the mother-of-all strategic positions. The company completely monopolized trade in four countries, had worldwide interests ranging from coffee and woollens to opium, had its own private army and navy, was empowered by the crown to declare war when its business interests were threatened, and effectively ruled over a fifth of the world's population. The British East Indian Company surely would have been at the top of any 'most admired and feared companies' list in its day. Yet, despite all its economies of scale and scope, its barriers to competition, its privileged relationships and its many core competencies, such as brutally oppressing the natives, its massive wall of competitive advantage crumbled in the face of technological innovation and the entry of new competitors, and in 1873, the company went out of business. Although, the British East India Company had a good, long run, in the end, the world changed and it didn't.

All competitive advantage is temporary. Some advantages last longer than others, but all sources of advantage have a finite shelf life. While this may sound like a truism, the observation is often forgotten in the never-ending quest for 'excellent' companies that build sustainable competitive advantages and allegedly outperform their industry peers, year after year. There are books which tell the inspiring stories of such great companies, what they did to succeed, and how if your company does the same things they did, it can be a great company too. There are also 'Why great companies fail' books, which tell the terrifying stories of how big, once-successful companies blew it; of how industry-changing innovations, cumbersome bureaucracy, and hubris caused once-mighty institutions to go down in flames.

The fascinating thing about all these books is that the same companies show up on both sides of the shelf. Apple, for example, has traversed the full length of the bookshelf, starting off as a young up-and-comer moving into 'excellent' territory, then shifting to 'blew it' and now has moved back to the 'excellent' side with its successes under Steve Jobs. A shockingly large number of companies which featured in the original lists of 'excellent' companies though, have fallen into bankruptcy, breakup or acquisition exemplified by Enron which blew itself up in spectacular and tragic fashion in 2002.

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So, they must be great performers, the truly ‘excellent’ companies, right? Wrong. With the exception of GE and Kodak, every one of them underperformed the average growth in stock market value during that seventy-year period, and since 1987, Kodak’s performance has dropped off as well, leaving GE the sole original Forbes 100 company to survive and outperform the market over the past eight decades. As another reference point, Foster and Kaplan also looked at the five hundred companies that started in the S&P 500, when it was formed in 1957, and found that only seventy-four survived until 1997. Moreover, as a group, the seventy-four survivors underperformed the overall S&P 500 index by 20 percent.

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Q33. All of the following have been mentioned in the passage as reasons that cause successful companies to go down EXCEPT:

- a) **Conceited attitude**
- b) **Not keeping up with latest trends**
- c) **Cumbersome bureaucracy**
- d) **Massive scale and scope** Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	26
Avg. time spent on this question by all students	96
Difficulty Level	E
Avg. time spent on this question by students who got this question right	95
% of students who attempted this question	37.25
% of students who got the question right of those who attempted	60.21

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[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 734

There are also ‘Why great companies fail’ books, which tell the terrifying stories of how big, once-successful companies blew it; of how **industry-changing innovations**, **cumbersome bureaucracy**, and **hubris** caused once-mighty institutions to go down in flames.

Option A: In the above line, the usage of the word ‘hubris’ (excessive pride) justifies calling conceited attitude one of the reasons for companies’ downfall. Hence, Choice A is not the answer.

Option B: It is mentioned that industry-changing innovations caused the downfall of mighty institutions. So, not keeping up with the latest trends is indeed a cause for companies to blow it up. Choice B is not the answer.

Option C: There is mention of ‘cumbersome bureaucracy’ as a cause for the downfall of companies. Hence, Choice C is not the answer.

Option D: The organisational structure of companies has not been discussed in the passage, since a distinction between big and small companies has not been made in terms of what caused their downfall. In such a scenario, making ‘massive scale and scope’ a reason for the downfall is false conjecture. Companies did bite the dust despite their massive scale and scope, like The British East India Company, but not necessarily because of it. Hence, Choice D is the answer. Choice (D)

undefined

DIRECTIONS for questions 29 to 34: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

In the seventeenth and eighteenth centuries, the British East India Company had the mother-of-all strategic positions. The company completely monopolized trade in four countries, had worldwide interests ranging from coffee and woollens to opium, had its own private army and navy, was empowered by the crown to declare war when its business interests were threatened, and effectively ruled over a fifth of the world's population. The British East Indian Company surely would have been at the top of any 'most admired and feared companies' list in its day. Yet, despite all its economies of scale and scope, its barriers to competition, its privileged relationships and its many core competencies, such as brutally oppressing the natives, its massive wall of competitive advantage crumbled in the face of technological innovation and the entry of new competitors, and in 1873, the company went out of business. Although, the British East India Company had a good, long run, in the end, the world changed and it didn't.

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Q34. Which of the following best represents the tone of the passage?

- a) **Critical**
- b) **Argumentative**
- c) **Didactic** Your answer is incorrect
- d) **Informative**

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	102
Difficulty Level	M
Avg. time spent on this question by students who got this question right	98
% of students who attempted this question	32.6
% of students who got the question right of those who attempted	22.15

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[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 734

Option A: The author presents studies and facts and goes on to analyse them as to what such studies indicate. Hence, the tone of the passage is largely neutral and analytical. The author does go a little further and use the analysis to disprove a commonly held belief that companies that stand the test of time are excellent. But, that is not as criticism of any particular entity. It is more a neutral analysis of facts. Hence, Choice A is not the answer.

Option B: The author talks about books that talk about great companies and books that talk about companies which failed after achieving greatness. The author then moves on to point that those two sets overlap thereby, disproving the idea that excellent companies are just companies which survived all adversities using the point that most of them didn't perform up to average in the market. So, the author's tone is argumentative. Hence, Choice B is the answer.

Option C: The author hasn't tried to preach or teach any theory to the audience. The author is merely building a case with the help of data. Hence, the tone of the passage is not didactic (Designed to teach). Choice C is not the answer.

Option D: The passage is indeed informative, but the tone of the passage is derived from what the author tends to do with the information. Does the author leave it at that or uses the information to build a case? In this case, the latter is what happens. Hence, Choice D is not the answer.

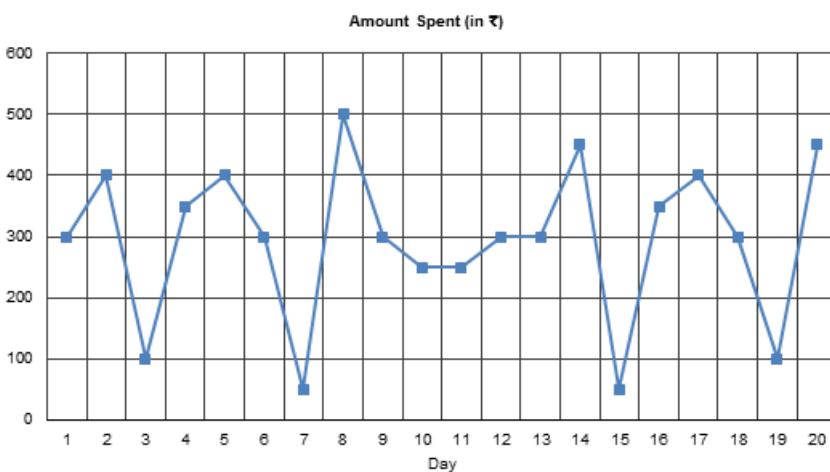
Choice (B)

undefined

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

Pritam usually spends money on restaurants, fuel, groceries, movies and mobile data. During a period of 20 days, from Day 1 through Day 20, Pritam spent exactly Rs.200 per day on restaurants on exactly two days out of every four days (i.e., for any period of four consecutive days, there were exactly two days on which he spent on restaurants). He spent exactly Rs.200 per day on fuel on exactly one day out of every three days. He spent exactly Rs.50 per day on groceries on exactly two days out of every three days. He spent exactly Rs.250 per day on movies on exactly one day out of every four days and he spent exactly Rs.50 per day on mobile data on exactly three days out of every five days. He did not spend any money on any other days or on any other items except those mentioned above.

The graph given below provides the amount spent by Pritam during this period.



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

On which of the following days did Pritam not spend on groceries?

- a) Day 1

b) Day 2

c) Day 10

d) Day 18

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	172
Avg. time spent on this question by all students	397
Difficulty Level	D
Avg. time spent on this question by students who got this question right	415
% of students who attempted this question	25.8
% of students who got the question right of those who attempted	72.02

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From the graph, we can see that Pritam spent ₹400 on Day 2, Day 5 and Day 17. On these days, he must have spent ₹200 each on restaurants and fuel.

Since he spent ₹200 on fuel on Day 2, he must have spent on Fuel on Day 5, Day 8, Day 11, Day 14, Day 17 and Day 20.

On Day 2, he spent ₹200 on restaurants. Since he spent on restaurants twice every four days, he could have spent on restaurants every alternate day or he could have spent on restaurants for two consecutive days, followed by two consecutive days of not spending in a restaurant.

If he spent on a restaurant every alternate day, he must have spent on restaurants on Day 4, Day 6, Day 8 and so on. However, he must have spent on restaurants on Day 5 as well. Hence, this is not possible.

Hence, he must have spent on restaurants for two consecutive days, followed by two consecutive days of not spending in a restaurant.

On Day 3, he could not have spent on a restaurant. Hence, he must have spent on restaurant on Day 1.

Hence, he must have spent on restaurants on Day 1, Day 2, Day 5, Day 6, Day 9, Day 10, Day 13, Day 14, Day 17 and Day 18.

On Day 8, he spent ₹500. He could have spent ₹200, ₹200, ₹50 and ₹50 OR ₹250, ₹200 and ₹50. The first case is not possible as he did not spend at a restaurant on Day 8. Hence, he must have spent ₹250 on movies, ₹200 on fuel and ₹50 on either groceries or mobile data on Day 8.

Since he spent ₹250 on movies on Day 8, he must have spent on movies on Day 4, Day 8, Day 12, Day 16 and Day 20.

From the data that we have inferred till now, we can see that on Day 20, he spent ₹250 on movies and ₹200 on fuel. The total that he spent on Day 20 is only ₹450. Hence, he did not spend on anything else on this day. Since he spends ₹50 on buying groceries twice every three days, he must have spent on groceries the two days before Day 20 (i.e., Day 18 and Day 19).

Hence, he must have spent ₹50 on groceries on Day 1, Day 3, Day 4, Day 6, Day 7, Day 9, Day 10, Day 12, Day 13, Day 15, Day 16, Day 18 and Day 19.

Since we have determined the days on which he spent on four of the five things, we can find the days on which he spent ₹50 on mobile data. He would have spent on mobile data on Day 1, Day 3, Day 4, Day 6, Day 8, Day 9, Day 11, Day 13, Day 14, Day 16, Day 18 and Day 19.

The following table provides the above information:

	1	2	3	4	5	6	7	8	9	10
Fuel	✗	✓	✗	✗	✓	✗	✗	✓	✗	✗
Restaurants	✓	✓	✗	✗	✓	✓	✗	✗	✓	✓
Movies	✗	✗	✗	✓	✗	✗	✗	✓	✗	✗
Groceries	✓	✗	✓	✓	✗	✓	✓	✗	✓	✓
Mobile	✓	✗	✓	✓	✗	✓	✗	✓	✓	✗

	11	12	13	14	15	16	17	18	19	20
Fuel	✓	✗	✗	✓	✗	✗	✓	✗	✗	✓
Restaurants	✗	✗	✓	✓	✗	✗	✓	✓	✗	✗
Movies	✗	✓	✗	✗	✗	✓	✗	✗	✗	✓
Groceries	✗	✓	✓	✗	✓	✓	✗	✓	✓	✗
Mobile	✓	✗	✓	✓	✗	✓	✗	✓	✓	✗

On Day 2, Pritam did not spend on groceries.

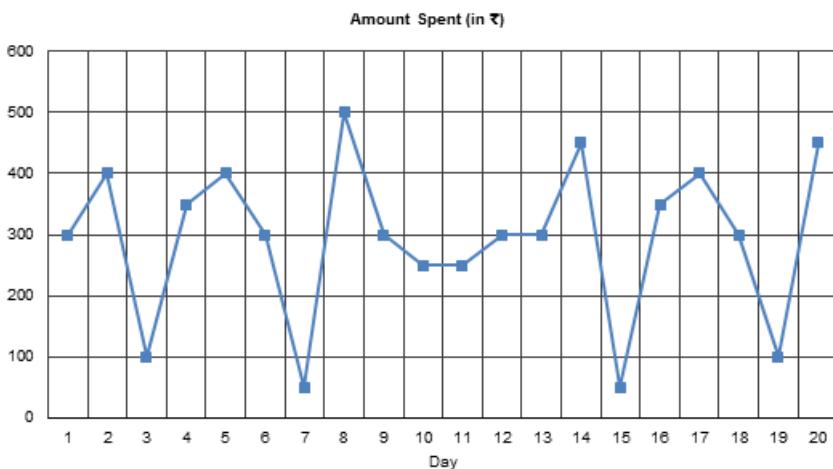
Choice (B)

undefined

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

Pritam usually spends money on restaurants, fuel, groceries, movies and mobile data. During a period of 20 days, from Day 1 through Day 20, Pritam spent exactly Rs.200 per day on restaurants on exactly two days out of every four days (i.e., for any period of four consecutive days, there were exactly two days on which he spent on restaurants). He spent exactly Rs.200 per day on fuel on exactly one day out of every three days. He spent exactly Rs.50 per day on groceries on exactly two days out of every three days. He spent exactly Rs.250 per day on movies on exactly one day out of every four days and he spent exactly Rs.50 per day on mobile data on exactly three days out of every five days. He did not spend any money on any other days or on any other items except those mentioned above.

The graph given below provides the amount spent by Pritam during this period.



Q2. On how many days during the given period did Pritam spend on both mobile data and restaurants?

- a) 5
- b) 6
- c) 7
- d) 8

You did not answer this question

[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	212
Difficulty Level	D
Avg. time spent on this question by students who got this question right	227
% of students who attempted this question	12.5
% of students who got the question right of those who attempted	44.99

[Video Solution](#)

[Text Solution](#)

From the graph, we can see that Pritam spent ₹400 on Day 2, Day 5 and Day 17. On these days, he must have spent ₹200 each on restaurants and fuel.

Since he spent ₹200 on fuel on Day 2, he must have spent on Fuel on Day 5, Day 8, Day 11, Day 14, Day 17 and Day 20.

On Day 2, he spent ₹200 on restaurants. Since he spent on restaurants twice every four days, he could have spent on restaurants every alternate day or he could have spent on restaurants for two consecutive days, followed by two consecutive days of not spending in a restaurant.

If he spent on a restaurant every alternate day, he must have spent on restaurants on Day 4, Day 6, Day 8 and so on. However, he must have spent on restaurants on Day 5 as well. Hence, this is not possible.

Hence, he must have spent on restaurants for two consecutive days, followed by two consecutive days of not spending in a restaurant.

On Day 3, he could not have spent on a restaurant. Hence, he must have spent on restaurant on Day 1.

Hence, he must have spent on restaurants on Day 1, Day 2, Day 5, Day 6, Day 9, Day 10, Day 13, Day 14, Day 17 and Day 18.

On Day 8, he spent ₹500. He could have spent ₹200, ₹200, ₹50 and ₹50 OR ₹250, ₹200 and ₹50. The first case is not possible as he did not spend at a restaurant on Day 8. Hence, he must have spent ₹250 on movies, ₹200 on fuel and ₹50 on either groceries or mobile data on Day 8.

Since he spent ₹250 on movies on Day 8, he must have spent on movies on Day 4, Day 8, Day 12, Day 16 and Day 20.

From the data that we have inferred till now, we can see that on Day 20, he spent ₹250 on movies and ₹200 on fuel. The total that he spent on Day 20 is only ₹450. Hence, he did not spend on anything else on this day. Since he spends ₹50 on buying groceries twice every three days, he must have spent on groceries the two days before Day 20 (i.e., Day 18 and Day 19).

Hence, he must have spent ₹50 on groceries on Day 1, Day 3, Day 4, Day 6, Day 7, Day 9, Day 10, Day 12, Day 13, Day 15, Day 16, Day 18 and Day 19.

Since we have determined the days on which he spent on four of the five things, we can find the days on which he spent ₹50 on mobile data. He would have spent on mobile data on Day 1, Day 3, Day 4, Day 6, Day 8, Day 9, Day 11, Day 13, Day 14, Day 16, Day 18 and Day 19.

The following table provides the above information:

	1	2	3	4	5	6	7	8	9	10
Fuel	x	✓	x	x	✓	x	x	✓	x	x
Restaurants	✓	✓	x	x	✓	✓	x	x	✓	✓
Movies	x	x	x	✓	x	x	x	✓	x	x
Groceries	✓	x	✓	✓	x	✓	✓	x	✓	✓
Mobile	✓	x	✓	✓	x	✓	x	✓	✓	x

	11	12	13	14	15	16	17	18	19	20
Fuel	✓	x	x	✓	x	x	✓	x	x	✓
Restaurants	x	x	✓	✓	x	x	✓	✓	x	x
Movies	x	✓	x	x	x	✓	x	x	x	✓
Groceries	x	✓	✓	x	✓	✓	x	✓	✓	x
Mobile	✓	x	✓	✓	x	✓	x	✓	✓	x

Pritam spent on both mobile data and restaurants on 6 days, i.e., days 1, 6, 9, 13, 14 and 18.

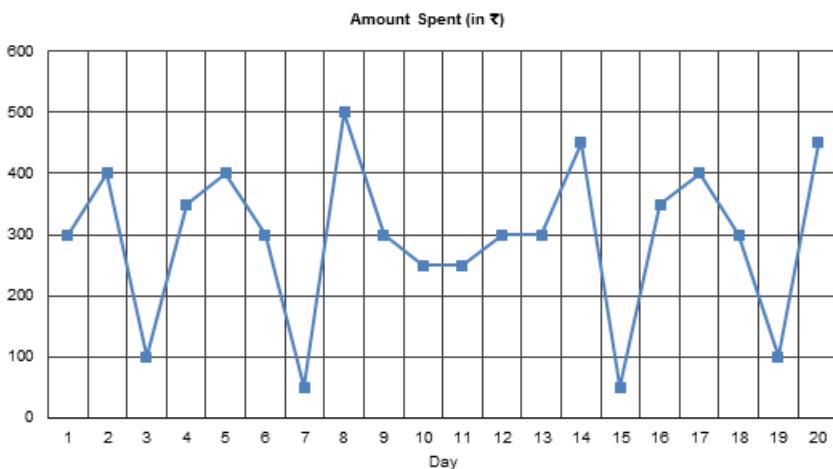
Choice (B)

undefined

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

Pritam usually spends money on restaurants, fuel, groceries, movies and mobile data. During a period of 20 days, from Day 1 through Day 20, Pritam spent exactly Rs.200 per day on restaurants on exactly two days out of every four days (i.e., for any period of four consecutive days, there were exactly two days on which he spent on restaurants). He spent exactly Rs.200 per day on fuel on exactly one day out of every three days. He spent exactly Rs.50 per day on groceries on exactly two days out of every three days. He spent exactly Rs.250 per day on movies on exactly one day out of every four days and he spent exactly Rs.50 per day on mobile data on exactly three days out of every five days. He did not spend any money on any other days or on any other items except those mentioned above.

The graph given below provides the amount spent by Pritam during this period.



Q3. On how many days during the given period did Pritam spend on fuel but not on groceries?

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

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	203
Avg. time spent on this question by all students	137
Difficulty Level	D
Avg. time spent on this question by students who got this question right	129
% of students who attempted this question	9.28
% of students who got the question right of those who attempted	36.59

[Video Solution](#)

[Text Solution](#)

From the graph, we can see that Pritam spent ₹400 on Day 2, Day 5 and Day 17. On these days, he must have spent ₹200 each on restaurants and fuel.

Since he spent ₹200 on fuel on Day 2, he must have spent on Fuel on Day 5, Day 8, Day 11, Day 14, Day 17 and Day 20.

On Day 2, he spent ₹200 on restaurants. Since he spent on restaurants twice every four days, he could have spent on restaurants every alternate day or he could have spent on restaurants for two consecutive days, followed by two consecutive days of not spending in a restaurant.

If he spent on a restaurant every alternate day, he must have spent on restaurants on Day 4, Day 6, Day 8 and so on. However, he must have spent on restaurants on Day 5 as well. Hence, this is not possible.

Hence, he must have spent on restaurants for two consecutive days, followed by two consecutive days of not spending in a restaurant.

On Day 3, he could not have spent on a restaurant. Hence, he must have spent on restaurant on Day 1.

Hence, he must have spent on restaurants on Day 1, Day 2, Day 5, Day 6, Day 9, Day 10, Day 13, Day 14, Day 17 and Day 18.

On Day 8, he spent ₹500. He could have spent ₹200, ₹200, ₹50 and ₹50 OR ₹250, ₹200 and ₹50. The first case is not possible as he did not spend at a restaurant on Day 8. Hence, he must have spent ₹250 on movies, ₹200 on fuel and ₹50 on either groceries or mobile data on Day 8.

Since he spent ₹250 on movies on Day 8, he must have spent on movies on Day 4, Day 8, Day 12, Day 16 and Day 20.

From the data that we have inferred till now, we can see that on Day 20, he spent ₹250 on movies and ₹200 on fuel. The total that he spent on Day 20 is only ₹450. Hence, he did not spend on anything else on this day. Since he spends ₹50 on buying groceries twice every three days, he must have spent on groceries the two days before Day 20 (i.e., Day 18 and Day 19).

Hence, he must have spent ₹50 on groceries on Day 1, Day 3, Day 4, Day 6, Day 7, Day 9, Day 10, Day 12, Day 13, Day 15, Day 16, Day 18 and Day 19.

Since we have determined the days on which he spent on four of the five things, we can find the days on which he spent ₹50 on mobile data. He would have spent on mobile data on Day 1, Day 3, Day 4, Day 6, Day 8, Day 9, Day 11, Day 13, Day 14, Day 16, Day 18 and Day 19.

The following table provides the above information:

	1	2	3	4	5	6	7	8	9	10
Fuel	x	✓	x	x	✓	x	x	✓	x	x
Restaurants	✓	✓	x	x	✓	✓	x	x	✓	✓
Movies	x	x	x	✓	x	x	x	✓	x	x
Groceries	✓	x	✓	✓	x	✓	✓	x	✓	✓
Mobile	✓	x	✓	✓	x	✓	x	✓	✓	x

	11	12	13	14	15	16	17	18	19	20
Fuel	✓	x	x	✓	x	x	✓	x	x	✓
Restaurants	x	x	✓	✓	x	x	✓	✓	x	x
Movies	x	✓	x	x	x	✓	x	x	x	✓
Groceries	x	✓	✓	x	✓	✓	x	✓	✓	x
Mobile	✓	x	✓	✓	x	✓	x	✓	✓	x

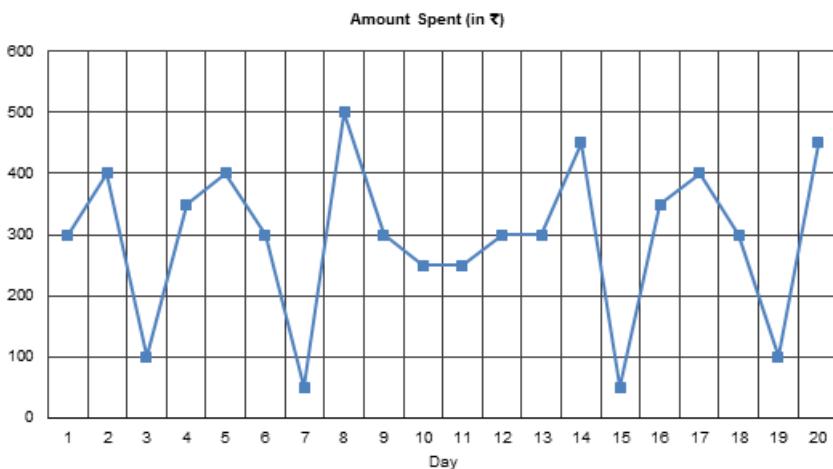
Pritam spent on fuel but not on groceries on 7 days, i.e., day 2, 5, 8, 11, 14, 17 and 20.
Choice (A)

undefined

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

Pritam usually spends money on restaurants, fuel, groceries, movies and mobile data. During a period of 20 days, from Day 1 through Day 20, Pritam spent exactly Rs.200 per day on restaurants on exactly two days out of every four days (i.e., for any period of four consecutive days, there were exactly two days on which he spent on restaurants). He spent exactly Rs.200 per day on fuel on exactly one day out of every three days. He spent exactly Rs.50 per day on groceries on exactly two days out of every three days. He spent exactly Rs.250 per day on movies on exactly one day out of every four days and he spent exactly Rs.50 per day on mobile data on exactly three days out of every five days. He did not spend any money on any other days or on any other items except those mentioned above.

The graph given below provides the amount spent by Pritam during this period.



Q4. On how many days during the given period did Pritam spend on at least three different items?

- a) 7
- b) 8
- c) 9
- d) 10

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	234
Avg. time spent on this question by all students	121
Difficulty Level	D
Avg. time spent on this question by students who got this question right	115
% of students who attempted this question	9.49
% of students who got the question right of those who attempted	41.87

[Video Solution](#)

[Text Solution](#)

From the graph, we can see that Pritam spent ₹400 on Day 2, Day 5 and Day 17. On these days, he must have spent ₹200 each on restaurants and fuel.

Since he spent ₹200 on fuel on Day 2, he must have spent on Fuel on Day 5, Day 8, Day 11, Day 14, Day 17 and Day 20.

On Day 2, he spent ₹200 on restaurants. Since he spent on restaurants twice every four days, he could have spent on restaurants every alternate day or he could have spent on restaurants for two consecutive days, followed by two consecutive days of not spending in a restaurant.

If he spent on a restaurant every alternate day, he must have spent on restaurants on Day 4, Day 6, Day 8 and so on. However, he must have spent on restaurants on Day 5 as well. Hence, this is not possible.

Hence, he must have spent on restaurants for two consecutive days, followed by two consecutive days of not spending in a restaurant.

On Day 3, he could not have spent on a restaurant. Hence, he must have spent on restaurant on Day 1.

Hence, he must have spent on restaurants on Day 1, Day 2, Day 5, Day 6, Day 9, Day 10, Day 13, Day 14, Day 17 and Day 18.

On Day 8, he spent ₹500. He could have spent ₹200, ₹200, ₹50 and ₹50 OR ₹250, ₹200 and ₹50. The first case is not possible as he did not spend at a restaurant on Day 8. Hence, he must have spent ₹250 on movies, ₹200 on fuel and ₹50 on either groceries or mobile data on Day 8.

Since he spent ₹250 on movies on Day 8, he must have spent on movies on Day 4, Day 8, Day 12, Day 16 and Day 20.

From the data that we have inferred till now, we can see that on Day 20, he spent ₹250 on movies and ₹200 on fuel. The total that he spent on Day 20 is only ₹450. Hence, he did not spend on anything else on this day. Since he spends ₹50 on buying groceries twice every three days, he must have spent on groceries the two days before Day 20 (i.e., Day 18 and Day 19).

Hence, he must have spent ₹50 on groceries on Day 1, Day 3, Day 4, Day 6, Day 7, Day 9, Day 10, Day 12, Day 13, Day 15, Day 16, Day 18 and Day 19.

Since we have determined the days on which he spent on four of the five things, we can find the days on which he spent ₹50 on mobile data. He would have spent on mobile data on Day 1, Day 3, Day 4, Day 6, Day 8, Day 9, Day 11, Day 13, Day 14, Day 16, Day 18 and Day 19.

The following table provides the above information:

	1	2	3	4	5	6	7	8	9	10
Fuel	✗	✓	✗	✗	✓	✗	✗	✓	✗	✗
Restaurants	✓	✓	✗	✗	✓	✓	✗	✗	✓	✓
Movies	✗	✗	✗	✓	✗	✗	✗	✓	✗	✗
Groceries	✓	✗	✓	✓	✗	✓	✓	✗	✓	✓
Mobile	✓	✗	✓	✓	✗	✓	✗	✓	✓	✗

	11	12	13	14	15	16	17	18	19	20
Fuel	✓	✗	✗	✓	✗	✗	✓	✗	✗	✓
Restaurants	✗	✗	✓	✓	✗	✗	✓	✓	✗	✗
Movies	✗	✓	✗	✗	✗	✓	✗	✗	✗	✓
Groceries	✗	✓	✓	✗	✓	✓	✗	✓	✓	✗
Mobile	✓	✗	✓	✓	✗	✓	✗	✓	✓	✗

Pritam spent on at least three different items on 9 days, i.e., day 1, 4, 6, 8, 9, 13, 14, 16 and 18.

Choice (C)

undefined

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

During a particular year, each of six persons, Prathik, Guru, Praveen, Manoj, Umesh and Zakir, visited a different city among Delhi, Mumbai, Kolkata, Chennai, Bangalore and Hyderabad. Each person visited on a different month among January, April, May, July, September and November.

It is also known that

i.

- Prathik, who visited Bangalore, did not visit in April.

- ii. Manoj, who visited in July, did not visit Delhi.
- iii. the person who visited Hyderabad visited the city in January, while the person who visited in November did not visit Delhi.
- iv. Umesh, who visited Mumbai, visited the city neither in April nor in May.
- v. Zakir, who visited in November, did not visit Chennai.

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

Who visited Kolkata?

- a) **Guru**
- b) **Praveen**
- c) **Manoj**
- d) **Zakir** Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	360
Avg. time spent on this question by all students	287
Difficulty Level	E
Avg. time spent on this question by students who got this question right	287
% of students who attempted this question	66.3
% of students who got the question right of those who attempted	96.28

[Video Solution](#)

[Text Solution](#)

From (i) and (ii), Prathik visited Bangalore and Manoj visited in July. From (iv) and (v), Umesh visited Mumbai and Zakir visited in November.

Umesh did not visit in April or May. Further, he could not have visited in July or November. From (iii), he could not have visited in January as well (as the person who visited Hyderabad visited in January).

Hence, Umesh must have visited in September.

From (iii), Zakir could not have visited Delhi and from (v), Zakir could not have visited Chennai. From (iii), he could not have visited Hyderabad. Also, he could not have visited Bangalore or Mumbai. Hence, Zakir must have visited Kolkata.

From (i), Prathik did not visit in April. He could not have visited in July, September, November (as other person visited in these months) or January (from (iii)). Hence, he must have visited in May.

From (ii), Manoj did not visit Delhi. Hence, he must have visited Chennai. Further, the person who visited Hyderabad visited in January and the person who visited Delhi must have visited in April.

The following table provides the distribution:

Place	Month	Person
Bangalore	May	Prathik
Chennai	July	Manoj
Hyderabad	January	Guru/Praveen
Delhi	April	Praveen/Guru
Mumbai	September	Umesh
Kolkata	November	Zakir

Zakir visited Kolkata.

Choice (D)

undefined

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

During a particular year, each of six persons, Prathik, Guru, Praveen, Manoj, Umesh and Zakir, visited a different city among Delhi, Mumbai, Kolkata, Chennai, Bangalore and Hyderabad. Each person visited on a different month among January, April, May, July, September and November.

It is also known that

- i. Prathik, who visited Bangalore, did not visit in April.
- ii. Manoj, who visited in July, did not visit Delhi.
- iii. the person who visited Hyderabad visited the city in January, while the person who visited in November did not visit Delhi.
- iv. Umesh, who visited Mumbai, visited the city neither in April nor in May.
- v. Zakir, who visited in November, did not visit Chennai.

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

Who among the following made his visit in September?

- a) **Prathik**
- b) **Umesh** Your answer is correct
- c) **Praveen**
- d) **Guru**

Time spent / Accuracy Analysis

Time taken by you to answer this question	108
Avg. time spent on this question by all students	98
Difficulty Level	E
Avg. time spent on this question by students who got this question right	97
% of students who attempted this question	66.31
% of students who got the question right of those who attempted	97.35

[Video Solution](#)

[Text Solution](#)

From (i) and (ii), Prathik visited Bangalore and Manoj visited in July. From (iv) and (v), Umesh visited Mumbai and Zakir visited in November.

Umesh did not visit in April or May. Further, he could not have visited in July or November. From (iii), he could not have visited in January as well (as the person who visited Hyderabad visited in January).

Hence, Umesh must have visited in September.

From (iii), Zakir could not have visited Delhi and from (v), Zakir could not have visited Chennai. From (iii), he could not have visited Hyderabad. Also, he could not have visited Bangalore or Mumbai. Hence, Zakir must have visited Kolkata.

From (i), Prathik did not visit in April. He could not have visited in July, September, November (as other person visited in these months) or January (from (iii)). Hence, he must have visited in May.

From (ii), Manoj did not visit Delhi. Hence, he must have visited Chennai. Further, the person who visited Hyderabad visited in January and the person who visited Delhi must have visited in April.

The following table provides the distribution:

Place	Month	Person
Bangalore	May	Prathik
Chennai	July	Manoj
Hyderabad	January	Guru/Praveen
Delhi	April	Praveen/Guru
Mumbai	September	Umesh
Kolkata	November	Zakir

Umesh made his visit in September.

Choice (B)

undefined

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

During a particular year, each of six persons, Prathik, Guru, Praveen, Manoj, Umesh and Zakir, visited a different city among Delhi, Mumbai, Kolkata, Chennai, Bangalore and Hyderabad. Each person visited on a different month among January, April, May, July, September and November.

It is also known that

i.

Prathik, who visited Bangalore, did not visit in April.

- ii. Manoj, who visited in July, did not visit Delhi.
- iii. the person who visited Hyderabad visited the city in January, while the person who visited in November did not visit Delhi.
- iv. Umesh, who visited Mumbai, visited the city neither in April nor in May.
- v. Zakir, who visited in November, did not visit Chennai.

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

In which month did the person who visited Delhi make his visit?

- a) April Your answer is correct
- b) May
- c) September
- d) July

Time spent / Accuracy Analysis

Time taken by you to answer this question	125
Avg. time spent on this question by all students	100
Difficulty Level	E
Avg. time spent on this question by students who got this question right	99
% of students who attempted this question	65.73
% of students who got the question right of those who attempted	95

[Video Solution](#)

[Text Solution](#)

From (i) and (ii), Prathik visited Bangalore and Manoj visited in July. From (iv) and (v), Umesh visited Mumbai and Zakir visited in November.

Umesh did not visit in April or May. Further, he could not have visited in July or November. From (iii), he could not have visited in January as well (as the person who visited Hyderabad visited in January).

Hence, Umesh must have visited in September.

From (iii), Zakir could not have visited Delhi and from (v), Zakir could not have visited Chennai. From (iii), he could not have visited Hyderabad. Also, he could not have visited Bangalore or Mumbai. Hence, Zakir must have visited Kolkata.

From (i), Prathik did not visit in April. He could not have visited in July, September, November (as other person visited in these months) or January (from (iii)). Hence, he must have visited in May.

From (ii), Manoj did not visit Delhi. Hence, he must have visited Chennai. Further, the person who visited Hyderabad visited in January and the person who visited Delhi must have visited in April.

The following table provides the distribution:

Place	Month	Person
Bangalore	May	Prathik
Chennai	July	Manoj
Hyderabad	January	Guru/Praveen
Delhi	April	Praveen/Guru
Mumbai	September	Umesh
Kolkata	November	Zakir

The person who visited Delhi made his visit in April.

Choice (A)

undefined

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

During a particular year, each of six persons, Prathik, Guru, Praveen, Manoj, Umesh and Zakir, visited a different city among Delhi, Mumbai, Kolkata, Chennai, Bangalore and Hyderabad. Each person visited on a different month among January, April, May, July, September and November.

It is also known that

i.

Prathik, who visited Bangalore, did not visit in April.

- ii. Manoj, who visited in July, did not visit Delhi.
- iii. the person who visited Hyderabad visited the city in January, while the person who visited in November did not visit Delhi.
- iv. Umesh, who visited Mumbai, visited the city neither in April nor in May.
- v. Zakir, who visited in November, did not visit Chennai.

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

If Praveen visited Delhi, in which month did Guru make his visit?

- a) **April**
- b) **May**
- c) **January** Your answer is correct
- d) **September**

Time spent / Accuracy Analysis

Time taken by you to answer this question	248
Avg. time spent on this question by all students	84
Difficulty Level	E
Avg. time spent on this question by students who got this question right	83
% of students who attempted this question	65.4
% of students who got the question right of those who attempted	95.22

[Video Solution](#)

[Text Solution](#)

From (i) and (ii), Prathik visited Bangalore and Manoj visited in July. From (iv) and (v), Umesh visited Mumbai and Zakir visited in November.

Umesh did not visit in April or May. Further, he could not have visited in July or November. From (iii), he could not have visited in January as well (as the person who visited Hyderabad visited in January).

Hence, Umesh must have visited in September.

From (iii), Zakir could not have visited Delhi and from (v), Zakir could not have visited Chennai. From (iii), he could not have visited Hyderabad. Also, he could not have visited Bangalore or Mumbai. Hence, Zakir must have visited Kolkata.

From (i), Prathik did not visit in April. He could not have visited in July, September, November (as other person visited in these months) or January (from (iii)). Hence, he must have visited in May.

From (ii), Manoj did not visit Delhi. Hence, he must have visited Chennai. Further, the person who visited Hyderabad visited in January and the person who visited Delhi must have visited in April.

The following table provides the distribution:

Place	Month	Person
Bangalore	May	Prathik
Chennai	July	Manoj
Hyderabad	January	Guru/Praveen
Delhi	April	Praveen/Guru
Mumbai	September	Umesh
Kolkata	November	Zakir

If Praveen visited Delhi, Guru visited Hyderabad in January.

Choice (C)

undefined

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

Vijay, the CEO of a company, wanted to take all the employees of his company for a conference. He chartered a plane for this occasion and delegated the task of assigning the seats to his assistant, Ravi. The plane had exactly 30 rows of seats, numbered 1 to 30, from the front of the plane to the back, with four seats in each row. Ravi has to assign the seats to 120 employees from different departments, comprising 45 employees from Marketing, 30 from Finance, 25 from HR and 20 from Operations. He assigned the seats to the employees starting from the first row to the last, from left to right in each row, ensuring that all the employees of each department were assigned seats one after the other, consecutively.

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

If at least one employee from Finance is sitting in row number 1, at least one employee from HR is sitting in row number 30

and at least one employee from Marketing is sitting in row number 24, which of the following rows will be occupied by four employees from Operations?

- a) **8**
 - b) **15**
 - c) **13**
 - d) **11**

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	400
Avg. time spent on this question by all students	263
Difficulty Level	M
Avg. time spent on this question by students who got this question right	268
% of students who attempted this question	29.12
% of students who got the question right of those who attempted	80.9

Video Solution

Text Solution

It is given that all the employees from a department must sit in contiguous rows. Also since there are 120 employees in total and 120 seats in the plane, no seat can be left empty.

Given that at least one employee from Finance is sitting in row 1. This implies that all the employees from Finance must be sitting in the first few rows. Since there are 30 employees from Finance, the employees from Finance will occupy rows 1 to 7 completely and two seats from row 8.

Given that at least one employee from Marketing is sitting in row 24. Since there are 45 employees from Marketing, the employees from Marketing need 11 rows completely and 1 additional seat. The least row number which can be occupied by an employee from Marketing will be 13.

Hence, the employees from Marketing cannot be sitting starting from row 8.

The employees from HR also cannot be sitting in row 8 (as at least one is sitting in row 30).

Hence, the employees from Operations must be sitting starting from row 8.

As there are 20 employees from Operations, the employees from Operations must be occupying two seats in row 8, rows 9 to 12 completely and two seats from row 13.

Hence, in row 11, there will be 4 employees from Operations. Choice (D)

undefined

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

Vijay, the CEO of a company, wanted to take all the employees of his company for a conference. He chartered a plane for this occasion and delegated the task of assigning the seats to his assistant, Ravi. The plane had exactly 30 rows of seats, numbered 1 to 30, from the front of the plane to the back, with four seats in each row. Ravi has to assign the seats to 120 employees from different departments, comprising 45 employees from Marketing, 30 from Finance, 25 from HR and 20 from Operations. He assigned the seats to the employees starting from the first row to the last, from left to right in each row, ensuring that all the employees of each department were assigned seats one after the other, consecutively.

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

If there are exactly two employees from HR and two employees from Operations sitting in the same row and row number x has exactly three employees from HR, how many of the following values can x assume?

- I. 10
- II. 12
- III. 16
- IV. 18

- a) 0
- b) 1
- c) 2
- d) More than 2

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

Time spent / Accuracy Analysis

Time taken by you to answer this question	211
Avg. time spent on this question by all students	195
Difficulty Level	D
Avg. time spent on this question by students who got this question right	222
% of students who attempted this question	15.1
% of students who got the question right of those who attempted	47.35

[Video Solution](#)

Text Solution

It is given that all the employees from a department must sit in contiguous rows. Also since there are 120 employees in total and 120 seats in the plane, no seat can be left empty.

Employees from each department will occupy a certain number of rows completely and some rows partially.

The number of seats that they occupy partially will depend on divisibility of the number of employees by 4.

There are 4 seats in each row. Consider the employees of Marketing. There are 45 employees. If they occupy all four seats in their first row, they will occupy 1 seat in the last row (as there are $4 \times 11 + 1$ employees). If they occupy only three seats in their first row, they will occupy 2 seats in the last row. Similarly, we can find the number of seats that they will occupy based on the number of seats that they occupy in their first row.

For Operations employees to occupy 2 seats in the last row, they must occupy 2 seats in their first row. Hence, they cannot be at the front of the plane. Also they cannot be in the last seats because they cannot occupy only two seats in the last row. Hence, they have to be second or third.

If they are second, for two seats to be remaining in their first row, Finance employees must be at the front. In this case, they will occupy 2 seats in their last row.

Hence, Finance employees can be sitting first followed by Operations employees and followed by HR employees and Marketing employees.

If Operations employees are third, then in their last row, they will occupy two seats. HR employees cannot be last because they cannot fill all the following seats after occupying these two seats.

Hence, Finance employees must be last. In this case, Marketing employees must be first, HR employees must be second, followed by Operations employees and Finance employees.

In the first case, there will be three employees from HR in row number 19.

In the second case, there will be three employees from HR in row number 12.

From the given options, the value of x can only be 12. Hence, x can assume only one value.

Choice (B)

undefined

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

Vijay, the CEO of a company, wanted to take all the employees of his company for a conference. He chartered a plane for this occasion and delegated the task of assigning the seats to his assistant, Ravi. The plane had exactly 30 rows of seats, numbered 1 to 30, from the front of the plane to the back, with four seats in each row. Ravi has to assign the seats to 120 employees from different departments, comprising 45 employees from Marketing, 30 from Finance, 25 from HR and 20 from Operations. He assigned the seats to the employees starting from the first row to the last, from left to right in each row, ensuring that all the employees of each department were assigned seats one after the other, consecutively.

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

If exactly one employee from Marketing is sitting in row number x, how many possibilities exist for x?

- a) 2
- b) 3
- c) 4
- d) 6

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	247
Avg. time spent on this question by all students	139
Difficulty Level	VD
Avg. time spent on this question by students who got this question right	150
% of students who attempted this question	18.63
% of students who got the question right of those who attempted	31.17

[Video Solution](#)

[Text Solution](#)

It is given that all the employees from a department must sit in contiguous rows. Also since there are 120 employees in total and 120 seats in the plane, no seat can be left empty.

If only one employee from Marketing is sitting in a row

- the Marketing employees can be sitting at the first place - from rows 1 to 12.
- in the second place, after Operations employees - from rows 6 to 17
- in the third place just before Operations employees – from rows 14 to 25.
- in the last place, from rows 19 to 30.

Hence, there are four possible rows in which one employee from Marketing can be sitting – 12, 17, 14 and 19.

Choice (C)

undefined

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

Vijay, the CEO of a company, wanted to take all the employees of his company for a conference. He chartered a plane for this occasion and delegated the task of assigning the seats to his assistant, Ravi. The plane had exactly 30 rows of seats, numbered 1 to 30, from the front of the plane to the back, with four seats in each row. Ravi has to assign the seats to 120 employees from different departments, comprising 45 employees from Marketing, 30 from Finance, 25 from HR and 20 from Operations. He assigned the seats to the employees starting from the first row to the last, from left to right in each row, ensuring that all the employees of each department were assigned seats one after the other, consecutively.

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

If an employee from Operations is sitting in the same row as an employee from Finance and another employee from Operations is sitting in the row immediately ahead of a row in which an employee from Marketing is sitting, in which of the following rows will there be definitely more than two employees from Finance sitting?

- a) 6
- b) 7
- c) 8
- d) 9

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	151
Difficulty Level	D
Avg. time spent on this question by students who got this question right	161
% of students who attempted this question	11.18
% of students who got the question right of those who attempted	53.17

[Video Solution](#)

[Text Solution](#)

It is given that all the employees from a department must sit in contiguous rows. Also since there are 120 employees in total and 120 seats in the plane, no seat can be left empty.

From the given conditions, we can see that the employees from Operations are immediately ahead of employees from Marketing. Also, the employees from Finance must be immediately ahead of employees from Operations (for them to be sharing a seat).

Hence, two cases are possible, which are presented below:

HR	F
F	O
O	M
M	HR

In the first case, the employees from Finance occupy 3 seats in row 7, rows 8 to 13 completely and 3 seats in row 14.

In the second case, the employees from Finance occupy rows 1 to 7 completely and 2 seats from row 8.

In row 7, there will definitely be more than two employees from Finance.

Choice (B)

undefined

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

Two persons, Anand and Magnus, were playing a certain number of games of chess. Each game of chess can end as a draw or a win. In the first three games that they played, the first ended as a draw, the second was won by Anand, while the third was won by Magnus. They decided to stop playing as soon as any of the following conditions was satisfied:

- i. The number of games won by one player is more than twice the number of games won by the other player.

- ii. The number of games drawn is more than thrice the minimum number of games won by any player.

Q13. DIRECTIONS for questions 13 to 16: Type in your answer in the input box provided below the question.

If they stopped playing after exactly 30 games, what is the maximum possible number of games that could have ended as a draw?

Your Answer: 14 Your answer is incorrect

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	332
Avg. time spent on this question by all students	210
Difficulty Level	M
Avg. time spent on this question by students who got this question right	252
% of students who attempted this question	32.68
% of students who got the question right of those who attempted	16.85

[Video Solution](#)

[Text Solution](#)

Let a and b be the number of games that Anand won and the number of games that Magnus won. Let d be the number of draws.

The number of games that ended as a draw can be thrice the number of games won by any player.

We know that $a + b + d = 30$

Also, d can be at most thrice the minimum value among a and b . Further, d will be of the form $3k+1$.

For d to be maximum, a and b should be as close to each other as possible.

If a and b are both equal to 5, number of draws will be 16 (after which they will stop). In this case, the total number of games will be 26.

For d to be 19, minimum value of a and b must be 6. Taking a and b to be 6 and 6, there must be a minimum of 31 games played. This is not possible.

Hence, d must be 16 and one of a or b must be 5 and the other must be 9. In this case, the total number of games will be 30.

Therefore, the maximum number of draws = 16

Ans: (16)

undefined

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

Two persons, Anand and Magnus, were playing a certain number of games of chess. Each game of chess can end as a draw or a win. In the first three games that they played, the first ended as a draw, the second was won by Anand, while the third was won by Magnus. They decided to stop playing as soon as any of the following conditions was satisfied:

- i. The number of games won by one player is more than twice the number of games won by the other player.
- ii. The number of games drawn is more than thrice the minimum number of games won by any player.

Q14. DIRECTIONS for questions 13 to 16: Type in your answer in the input box provided below the question.

If, after they stopped playing, it was observed that Anand had won exactly 18 games, what is the maximum number of games that they could have played?

Your Answer:91 □ Your answer is incorrect

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	329
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	130
% of students who attempted this question	30.02
% of students who got the question right of those who attempted	17.67

[Video Solution](#)

[Text Solution](#)

Let a and b be the number of games that Anand won and the number of games that Magnus won. Let d be the number of draws.

Given that Anand won exactly 18 games.

Since they can stop playing in two ways – Magnus winning more than twice the number of games as Anand and number of draws being more than thrice the number of games that Anand won – we can try to reach the upper limit on both these fronts.

Magnus can win 36 games and if he wins one more game they will stop playing.

The number of draws can be $18 \times 3 = 54$ and if one more game ends as a draw they will stop playing.

Hence, after $18 + 36 + 54 = 108$ games they can play one more game which can either end as a draw or as a win for Magnus. In both the cases, they will stop playing. Hence, they can play a maximum of 109 games.

Ans: (109)

undefined

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

Two persons, Anand and Magnus, were playing a certain number of games of chess. Each game of chess can end as a draw or a win. In the first three games that they played, the first ended as a draw, the second was won by Anand, while the third was won by Magnus. They decided to stop playing as soon as any of the following conditions was satisfied:

- i. The number of games won by one player is more than twice the number of games won by the other player.
- ii. The number of games drawn is more than thrice the minimum number of games won by any player.

Q15. DIRECTIONS for questions 13 to 16: Type in your answer in the input box provided below the question.

If, after they stopped playing, it was observed that the last 28 consecutive games that they played had all ended as draws, what is the minimum number of games that they could have played?

Your Answer:47 □ Your answer is incorrect

Show Correct Answer

Time spent / Accuracy Analysis

Time spent / Accuracy Analysis

Time taken by you to answer this question	149
Avg. time spent on this question by all students	100
Difficulty Level	D
Avg. time spent on this question by students who got this question right	137
% of students who attempted this question	25.13
% of students who got the question right of those who attempted	5.55

[Video Solution](#)

[Text Solution](#)

Let a and b be the number of games that Anand won and the number of games that Magnus won. Let d be the number of draws.

Since they stopped playing after 28 consecutive draws, they would have stopped playing after condition (ii) was satisfied. Number of wins of any player will remain unchanged in the last 28 games and hence, condition (i) cannot be satisfied.

Since there are 28 consecutive draws, there must be at least 29 draws in total (including the first match that ended as a draw).

Hence, the minimum number of games that any player won must be 10 (closest integer to $29/3$). Since one player won 10 games, the number of draws must be at least 30 and they will stop playing immediately after the 31st draw.

To minimize the total number of games, we can assume that both the players won 10 games each.

Total number of games = $10 + 10 + 31 = 51$

Ans: (51)

undefined

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

Two persons, Anand and Magnus, were playing a certain number of games of chess. Each game of chess can end as a draw or a win. In the first three games that they played, the first ended as a draw, the second was won by Anand, while the third was won by Magnus. They decided to stop playing as soon as any of the following conditions was satisfied:

- i. The number of games won by one player is more than twice the number of games won by the other player.
- ii. The number of games drawn is more than thrice the minimum number of games won by any player.

Q16. DIRECTIONS for questions 13 to 16: Type in your answer in the input box provided below the question.

If, after they stopped playing, it was observed that the last 16 consecutive games were all won by Magnus, what is the minimum number of games that they could have played?

Your Answer:26 □ Your answer is incorrect

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	19
Avg. time spent on this question by all students	96
Difficulty Level	VD
Avg. time spent on this question by students who got this question right	128
% of students who attempted this question	22.28
% of students who got the question right of those who attempted	3.51

[Video Solution](#)

[Text Solution](#)

Since they stopped playing after Magnus won 16 games consecutively, they would have stopped playing because condition (i) was satisfied. Number of draws will remain unchanged in the last 16 games and hence, condition (ii) cannot be satisfied by Magnus winning 16 games consecutively (if it was satisfied, it would have also been satisfied before Magnus started winning and hence, they would have stopped 16 games earlier).

Hence, Magnus must have won more than twice the number of games that Anand won.

Let a be the number of games that Anand won.

Before Magnus started winning the 16 consecutive games, he must have won a minimum of $a/2$ games (he cannot win any lower. If he did, Anand would have won more than twice as Magnus).

After winning 16 games, Magnus must have won $a/2 + 16$.

Since they stopped playing after this, $\frac{a}{2} + 16 = 2a + 1 \Rightarrow a = 10$

Hence, before Magnus started winning 16 consecutive games, Anand would have won 10 games and Magnus would have won 5 games. Magnus can win the next 16 games and win a total of $16 + 5 = 21$ games. They will stop playing after Magnus wins the 21st game.

The total number of games played = $10 + 21 + 1$ (draw) = 32

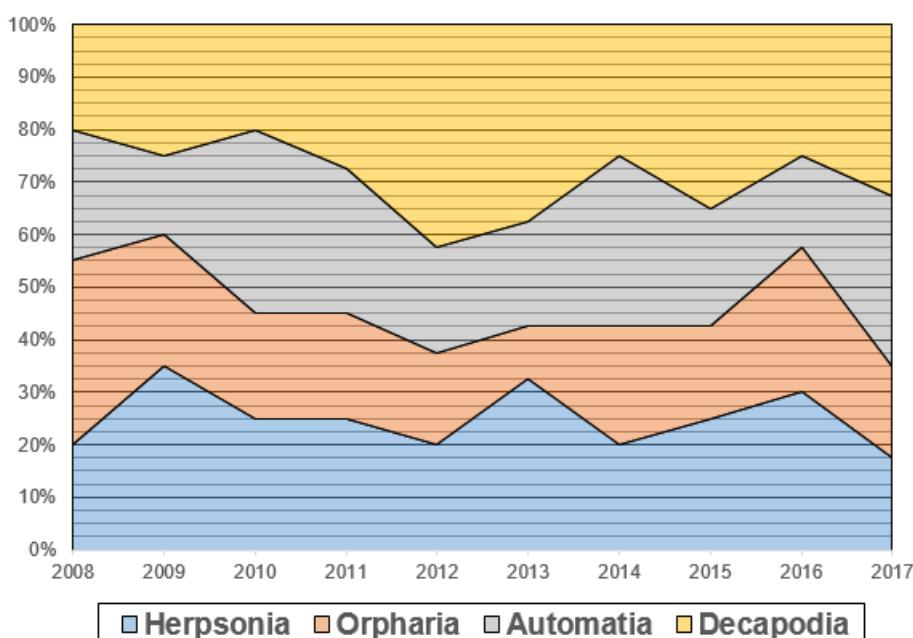
Ans: (32)

undefined

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

Four kings, Philip, Turanga, Bender and Zoidberg, established four kingdoms, Herpsonia, Orpharia, Automatia and Decapodia respectively, covering the entirety of an island the area of which was exactly 150,000 sq. km. Since the four kingdoms had always been at war, in order to bring some peace and stability, the four kings came to an agreement in the year 2007 that, in every year starting from 2008, in the first week of January, they will war against each other for that entire week. The area that any kingdom gains by the end of the week will be a part of that kingdom for the rest of that year.

The following area chart provides the area of each kingdom as a percentage of the total area of the island, in each year from 2008 to 2017, after the war in that year:



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

What is the maximum area lost by any kingdom in any year from 2009 to 2017?

- a) **11250 sq. km**
- b) **15000 sq. km**
- c) **18750 sq. km**
- d) **22500 sq. km**

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	352
Difficulty Level	E
Avg. time spent on this question by students who got this question right	415
% of students who attempted this question	23.06
% of students who got the question right of those who attempted	43.53

[Video Solution](#)

[Text Solution](#)

By observation, the maximum area was lost by Herpsonia in 2014 and 2017 (and by Decapodia in 2014).

$$\text{Area lost} = 12.5\% \times 150000 = 18750 \text{ sq. km}$$

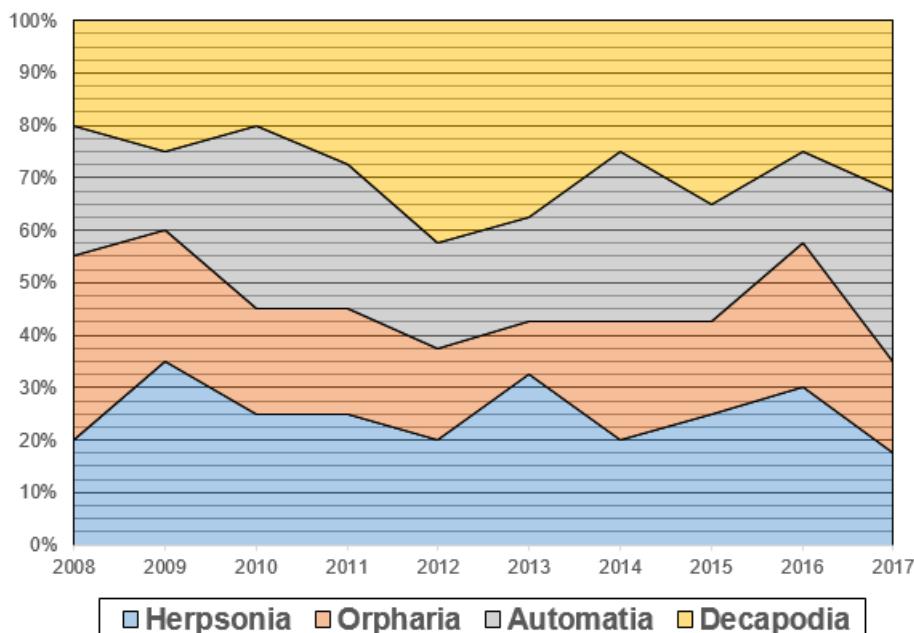
Choice (C)

undefined

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

Four kings, Philip, Turanga, Bender and Zoidberg, established four kingdoms, Herpsonia, Orpharia, Automatia and Decapodia respectively, covering the entirety of an island the area of which was exactly 150,000 sq. km. Since the four kingdoms had always been at war, in order to bring some peace and stability, the four kings came to an agreement in the year 2007 that, in every year starting from 2008, in the first week of January, they will war against each other for that entire week. The area that any kingdom gains by the end of the week will be a part of that kingdom for the rest of that year.

The following area chart provides the area of each kingdom as a percentage of the total area of the island, in each year from 2008 to 2017, after the war in that year:



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

In how many years, from 2009 to 2017, did the area of exactly two kingdoms decrease and that of exactly two kingdoms not decrease as compared to the previous year?

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

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	157
Difficulty Level	E
Avg. time spent on this question by students who got this question right	163
% of students who attempted this question	17.49
% of students who got the question right of those who attempted	36.15

[Video Solution](#)

[Text Solution](#)

In six years, 2009, 2013, 2014, 2015, 2016 and 2017, the area of two kingdoms decreased and the area of two kingdoms did not decrease. Choice (D)

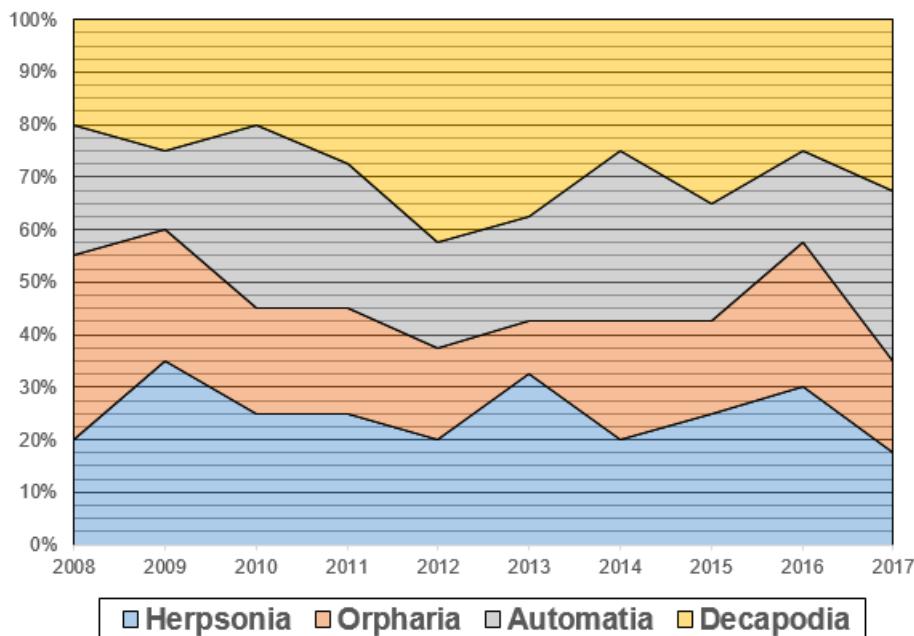
undefined

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

Four kings, Philip, Turanga, Bender and Zoidberg, established four kingdoms, Herpsonia, Orpharia, Automatia and Decapodia respectively, covering the entirety of an island the area of which was exactly 150,000 sq. km. Since the four kings had always been at war, in order to bring some peace and stability, the four kings came to an agreement in the

year 2007 that, in every year starting from 2008, in the first week of January, they will war against each other for that entire week. The area that any kingdom gains by the end of the week will be a part of that kingdom for the rest of that year.

The following area chart provides the area of each kingdom as a percentage of the total area of the island, in each year from 2008 to 2017, after the war in that year:



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

From 2009 to 2017, considering only the years in which the area of Herpsenia decreased as compared to the previous year, in how many years is the area lost by Herpsenia more than 50% of the area gained by any of the other three kingdoms in that year as compared to the previous year?

- 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	0
Avg. time spent on this question by all students	142
Difficulty Level	E
Avg. time spent on this question by students who got this question right	154
% of students who attempted this question	11.36
% of students who got the question right of those who attempted	61.47

[Video Solution](#)

[Text Solution](#)

Herpsonia lost area in four years – 2010, 2012, 2014 and 2017.

In 2010, only Automatia gained area. The area gained by Automatia was 20% of the total area of the island.

The area lost by Herpsonia was 10% of the total area of the island. Hence, this year does not satisfy as 10% is not more than half of 20%.

In 2012, Herpsonia lost 5% of the total area of the island.

Only Decapodia gained area and it gained 15% of the total area of the island. Hence, this year also does not satisfy.

In 2014, Herpsonia lost 12.5% of the total area of the island.

Orpharia gained 12.5% of the total area of the island. Hence, this year satisfies.

In 2017, 12.5% of the total area of the island.

Decapodia gained 7.5% of the total area of the island. Hence, this year also satisfies.

Therefore, a total of two years, 2014 and 2017 satisfy the given condition.

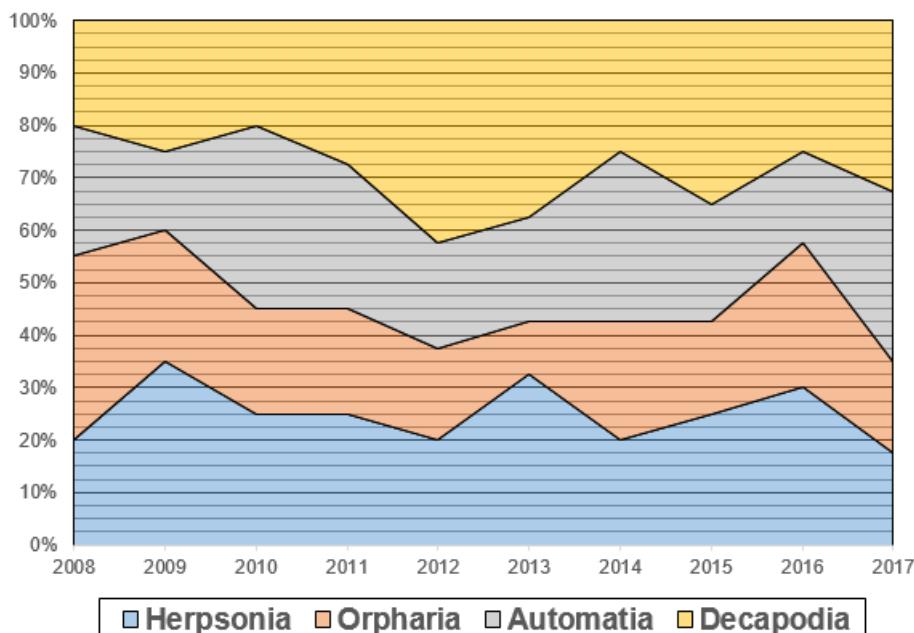
Choice (A)

undefined

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

Four kings, Philip, Turanga, Bender and Zoidberg, established four kingdoms, Herpsonia, Orpharia, Automatia and Decapodia respectively, covering the entirety of an island the area of which was exactly 150,000 sq. km. Since the four kingdoms had always been at war, in order to bring some peace and stability, the four kings came to an agreement in the year 2007 that, in every year starting from 2008, in the first week of January, they will war against each other for that entire week. The area that any kingdom gains by the end of the week will be a part of that kingdom for the rest of that year.

The following area chart provides the area of each kingdom as a percentage of the total area of the island, in each year from 2008 to 2017, after the war in that year:



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

From 2009 to 2017, considering only the kingdoms whose area increased or decreased as compared to the previous year, in how many years can it be said that the area lost by one of the kingdoms in that year is equal to the area gained by one of the other kingdoms in that year?

a) 3

b) 4

c) 5

d) 2

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	130
Difficulty Level	E
Avg. time spent on this question by students who got this question right	138
% of students who attempted this question	9.17
% of students who got the question right of those who attempted	40.1

[Video Solution](#)

[Text Solution](#)

The given condition is satisfied in four years:

In 2011, Automatia and Decapodia lost and gained 7.5% of the total area of the island respectively.

In 2014, both Herpsonia and Decapodia lost 12.5%, while both Orpharia and Automatia gained 5%.

In 2015, Herpsonia and Orpharia gained and lost 5% respectively, Automatia and Decapodia lost and gained 5% respectively.

In 2016, Herpsonia and Automatia gained and lost 5% respectively, Orpharia and Decapodia gained and lost 10% respectively.

Choice (B)

undefined

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

Eight persons, A through H, were sitting in eight equally spaced chairs around a circular table facing it. The weights of the eight persons are distinct. It is known that the sum of the weights of any two persons sitting opposite each other was the same.

It is also known that

- i. A weighs 70 kg, while G was sitting opposite the person who weighs 40 kg.
- ii. B was two places to the left of C, while F was sitting to the right of the person who weighs 50 kg.
- iii. both the persons who were sitting adjacent to F were lighter than him, while both the persons sitting adjacent to H were heavier than him.
- iv. C was sitting opposite a person who weighs 10 kg less than G, while the person sitting opposite B weighs 20 kg more than C.

- v.
D was 60 kg heavier than E, while H was not sitting adjacent to A.
- vi.
the difference in weight between F and the person sitting two places to the left of him is 10 kg.

Q21. DIRECTIONS for questions 21 and 22: Type in your answer in the input box provided below the question.

What is the weight (in kg) of the heaviest person among the eight persons?

You did not answer this question Show Correct Answer

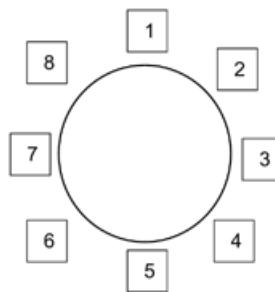
Time spent / Accuracy Analysis

Time taken by you to answer this question	2
Avg. time spent on this question by all students	405
Difficulty Level	D
Avg. time spent on this question by students who got this question right	530
% of students who attempted this question	20.21
% of students who got the question right of those who attempted	16.47

[Video Solution](#)

[Text Solution](#)

Let the following diagram represent the chairs around the circular table:



From (i), G is sitting opposite a person who weighs 40 kg. Let the weight of G be g . Since sum of the weights of any pair of persons sitting opposite each other is the same, the sum of the weights of any pair of persons must be $g + 40$.

From (iv), C was sitting opposite a person who weighs 10 kg less than G. Since the sum of the weights of these two persons must be $g + 40$, the weight of C must be 50 kg. Let C be at 5. The person whose weight is $g - 10$ must be at 1.

From (iii), B must be at 7. From (iv), the person sitting opposite B (i.e., the person sitting at 3) must weigh 70 kg. From (i), this person must be A. Hence, B must weigh $g - 30$.

From (ii), F must be at 4. From (iii), F must be heavier than both A and C. Hence, F must weigh more than 70 kg. The person sitting opposite F (at 8) must weigh less than $g - 30$. Also, F must weigh 10 kg more/less than the person sitting at 6.

Therefore, G cannot be at 8. G can only be at 2/6. If G is at 2, the person at 6 must weigh 40 kg. This implies that F must weigh 30/50 kg. Both these cases will violate condition (iii).

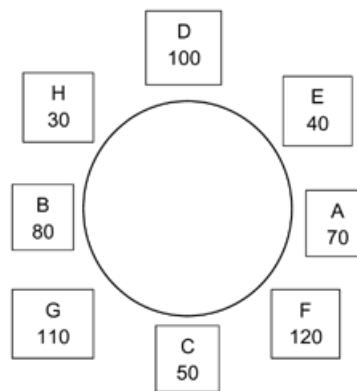
Hence, G must be at 6. The person at 2 must weigh 40 kg.

From (v), H is not adjacent to A. Hence, H is not at 2. From (iii), both the persons adjacent to H were heavier than him. If H is at 1, the person at 8 will be lighter than him (since this person weighs less than $g - 30$ while the person at 1 weighs $g - 10$). Hence, H cannot be at 1.

H must, therefore, be at 8. D and E must be at 1 and 2 in any order.

From (v), D is 60 kg heavier than E. Hence, D cannot weigh 40 kg as E's weight will become negative. Hence, D must be at 1 and E must be at 2. E's weight is 40 kg and D must weight 100 kg. Since D's weight is 10 kg less than G's, G's weight must be 110 kg.

B's weight must be 80 kg. F's weight can be 100 kg or 120 kg. Since the weight of the eight persons are distinct, F's weight must be 120 kg. The weight of H must be 30 kg. The following diagram presents the positions of the eight persons along with their weights:



The weight of the heaviest person (i.e., F) is 120 kg.

Ans: (120)

undefined

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

Eight persons, A through H, were sitting in eight equally spaced chairs around a circular table facing it. The weights of the eight persons are distinct. It is known that the sum of the weights of any two persons sitting opposite each other was the same.

It is also known that

- i. A weighs 70 kg, while G was sitting opposite the person who weighs 40 kg.

- ii. B was two places to the left of C, while F was sitting to the right of the person who weighs 50 kg.
- iii. both the persons who were sitting adjacent to F were lighter than him, while both the persons sitting adjacent to H were heavier than him.
- iv. C was sitting opposite a person who weighs 10 kg less than G, while the person sitting opposite B weighs 20 kg more than C.
- v. D was 60 kg heavier than E, while H was not sitting adjacent to A.
- vi. the difference in weight between F and the person sitting two places to the left of him is 10 kg.

Q22. DIRECTIONS for questions 21 and 22: Type in your answer in the input box provided below the question.

How many persons heavier than A are sitting between B and C in the clockwise direction, from B to C?

You did not answer this question

Show Correct Answer

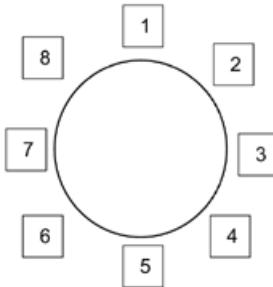
Time spent / Accuracy Analysis

Time taken by you to answer this question	149
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	76
% of students who attempted this question	17.22
% of students who got the question right of those who attempted	42.98

[Video Solution](#)

[Text Solution](#)

Let the following diagram represent the chairs around the circular table:



From (i), G is sitting opposite a person who weighs 40 kg. Let the weight of G be g . Since sum of the weights of any pair of persons sitting opposite each other is the same, the sum of the weights of any pair of persons must be $g + 40$.

From (iv), C was sitting opposite a person who weighs 10 kg less than G. Since the sum of the weights of these two persons must be $g + 40$, the weight of C must be 50 kg. Let C be at 5. The person whose weight is $g - 10$ must be at 1.

From (iii), B must be at 7. From (iv), the person sitting opposite B (i.e., the person sitting at 3) must weigh 70 kg. From (i), this person must be A. Hence, B must weigh $g - 30$.

From (ii), F must be at 4. From (iii), F must be heavier than both A and C. Hence, F must weigh more than 70 kg. The person sitting opposite F (at 8) must weigh less than $g - 30$. Also, F must weigh 10 kg more/less than the person sitting at 6.

Therefore, G cannot be at 8. G can only be at 2/6. If G is at 2, the person at 6 must weigh 40 kg. This implies that F must weigh 30/50 kg. Both these cases will violate condition (iii).

Hence, G must be at 6. The person at 2 must weigh 40 kg.

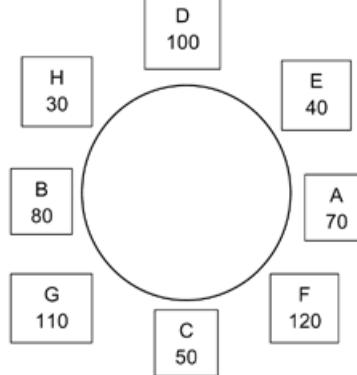
From (v), H is not adjacent to A. Hence, H is not at 2. From (iii), both the persons adjacent to H were heavier than him. If H is at 1, the person at 8 will be lighter than him (since this person weighs less than $g - 30$ while the person at 1 weighs $g - 10$). Hence, H cannot be at 1.

H must, therefore, be at 8. D and E must be at 1 and 2 in any order.

From (v), D is 60 kg heavier than E. Hence, D cannot weigh 40 kg as E's weight will become negative. Hence, D must be at 1 and E must be at 2. E's weight is 40 kg and D must weight 100 kg. Since D's weight is 10 kg less than G's, G's weight must be 110 kg.

B's weight must be 80 kg. F's weight can be 100 kg or 120 kg. Since the weight of the eight persons are distinct, F's weight must be 120 kg. The weight of H must be 30 kg.

The following diagram presents the positions of the eight persons along with their weights:



Two persons (D and F) heavier than A are sitting from B to C in the clockwise direction.
Ans: (2)

undefined

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

Eight persons, A through H, were sitting in eight equally spaced chairs around a circular table facing it. The weights of the eight persons are distinct. It is known that the sum of the weights of any two persons sitting opposite each other was the same.

It is also known that

- i. A weighs 70 kg, while G was sitting opposite the person who weighs 40 kg.

- ii. B was two places to the left of C, while F was sitting to the right of the person who weighs 50 kg.
- iii. both the persons who were sitting adjacent to F were lighter than him, while both the persons sitting adjacent to H were heavier than him.
- iv. C was sitting opposite a person who weighs 10 kg less than G, while the person sitting opposite B weighs 20 kg more than C.
- v. D was 60 kg heavier than E, while H was not sitting adjacent to A.
- vi. the difference in weight between F and the person sitting two places to the left of him is 10 kg.

Q23. DIRECTIONS for question 23: Select the correct alternative from the given choices.

Who among the following is sitting adjacent to the lightest person?

- a) **C**
- b) **A**
- c) **B**
- d) **G**

You did not answer this question

[Show Correct Answer](#)

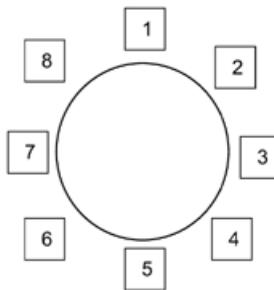
Time spent / Accuracy Analysis

Time taken by you to answer this question	1
Avg. time spent on this question by all students	63
Difficulty Level	D
Avg. time spent on this question by students who got this question right	59
% of students who attempted this question	9.52
% of students who got the question right of those who attempted	49.12

[Video Solution](#)

[Text Solution](#)

Let the following diagram represent the chairs around the circular table:



From (i), G is sitting opposite a person who weighs 40 kg. Let the weight of G be g . Since sum of the weights of any pair of persons sitting opposite each other is the same, the sum of the weights of any pair of persons must be $g + 40$.

From (iv), C was sitting opposite a person who weighs 10 kg less than G. Since the sum of the weights of these two persons must be $g + 40$, the weight of C must be 50 kg. Let C be at 5. The person whose weight is $g - 10$ must be at 1.

From (iii), B must be at 7. From (iv), the person sitting opposite B (i.e., the person sitting at 3) must weigh 70 kg. From (i), this person must be A. Hence, B must weigh $g - 30$.

From (ii), F must be at 4. From (iii), F must be heavier than both A and C. Hence, F must weigh more than 70 kg. The person sitting opposite F (at 8) must weigh less than $g - 30$. Also, F must weigh 10 kg more/less than the person sitting at 6.

Therefore, G cannot be at 8. G can only be at 2/6. If G is at 2, the person at 6 must weigh 40 kg. This implies that F must weigh 30/50 kg. Both these cases will violate condition (iii).

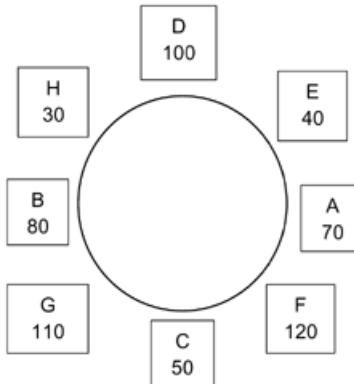
Hence, G must be at 6. The person at 2 must weigh 40 kg.

From (v), H is not adjacent to A. Hence, H is not at 2. From (iii), both the persons adjacent to H were heavier than him. If H is at 1, the person at 8 will be lighter than him (since this person weighs less than $g - 30$ while the person at 1 weighs $g - 10$). Hence, H cannot be at 1.

H must, therefore, be at 8. D and E must be at 1 and 2 in any order.

From (v), D is 60 kg heavier than E. Hence, D cannot weigh 40 kg as E's weight will become negative. Hence, D must be at 1 and E must be at 2. E's weight is 40 kg and D must weight 100 kg. Since D's weight is 10 kg less than G's, G's weight must be 110 kg.

B's weight must be 80 kg. F's weight can be 100 kg or 120 kg. Since the weight of the eight persons are distinct, F's weight must be 120 kg. The weight of H must be 30 kg. The following diagram presents the positions of the eight persons along with their weights:



B is sitting adjacent to the lightest person.

Choice (C)

undefined

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

Eight persons, A through H, were sitting in eight equally spaced chairs around a circular table facing it. The weights of the eight persons are distinct. It is known that the sum of the weights of any two persons sitting opposite each other was the same.

It is also known that

- i. A weighs 70 kg, while G was sitting opposite the person who weighs 40 kg.
- ii. B was two places to the left of C, while F was sitting to the right of the person who weighs 50 kg.
- iii. both the persons who were sitting adjacent to F were lighter than him, while both the persons sitting adjacent to H were heavier than him.
- iv. C was sitting opposite a person who weighs 10 kg less than G, while the person sitting opposite B weighs 20 kg more than C.
- v. D was 60 kg heavier than E, while H was not sitting adjacent to A.
- vi. the difference in weight between F and the person sitting two places to the left of him is 10 kg.

Q24. DIRECTIONS for question 24: Type in your answer in the input box provided below the question.

What is the sum of the weights (in kg) of F and the person sitting opposite him?

You did not answer this question

Show Correct Answer

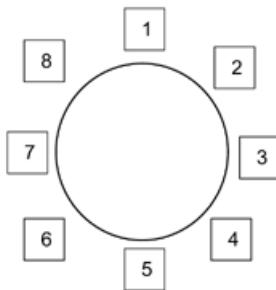
Time spent / Accuracy Analysis

Time taken by you to answer this question	1
Avg. time spent on this question by all students	59
Difficulty Level	D
Avg. time spent on this question by students who got this question right	55
% of students who attempted this question	14.08
% of students who got the question right of those who attempted	26.63

[Video Solution](#)

[Text Solution](#)

Let the following diagram represent the chairs around the circular table:



From (i), G is sitting opposite a person who weighs 40 kg. Let the weight of G be g . Since sum of the weights of any pair of persons sitting opposite each other is the same, the sum of the weights of any pair of persons must be $g + 40$.

From (iv), C was sitting opposite a person who weighs 10 kg less than G. Since the sum of the weights of these two persons must be $g + 40$, the weight of C must be 50 kg. Let C be at 5. The person whose weight is $g - 10$ must be at 1.

From (iii), B must be at 7. From (iv), the person sitting opposite B (i.e., the person sitting at 3) must weigh 70 kg. From (i), this person must be A. Hence, B must weigh $g - 30$.

From (ii), F must be at 4. From (iii), F must be heavier than both A and C. Hence, F must weigh more than 70 kg. The person sitting opposite F (at 8) must weigh less than $g - 30$. Also, F must weigh 10 kg more/less than the person sitting at 6.

Therefore, G cannot be at 8. G can only be at 2/6. If G is at 2, the person at 6 must weigh 40 kg. This implies that F must weigh 30/50 kg. Both these cases will violate condition (iii).

Hence, G must be at 6. The person at 2 must weigh 40 kg.

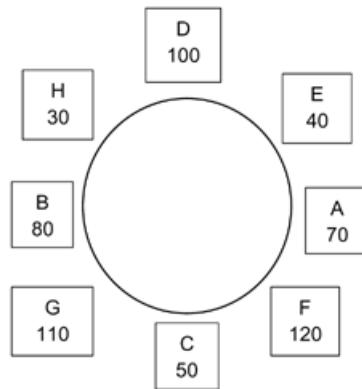
From (v), H is not adjacent to A. Hence, H is not at 2. From (iii), both the persons adjacent to H were heavier than him. If H is at 1, the person at 8 will be lighter than him (since this person weighs less than $g - 30$ while the person at 1 weighs $g - 10$). Hence, H cannot be at 1.

H must, therefore, be at 8. D and E must be at 1 and 2 in any order.

From (v), D is 60 kg heavier than E. Hence, D cannot weigh 40 kg as E's weight will become negative. Hence, D must be at 1 and E must be at 2. E's weight is 40 kg and D must weight 100 kg. Since D's weight is 10 kg less than G's, G's weight must be 110 kg.

B's weight must be 80 kg. F's weight can be 100 kg or 120 kg. Since the weight of the eight persons are distinct, F's weight must be 120 kg. The weight of H must be 30 kg.

The following diagram presents the positions of the eight persons along with their weights:



The sum of the weights of any pair of persons sitting opposite each other is 150 kg.

Ans: (150)

undefined

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

In a class of 100 students, there are five class representatives (CRs) - A, B, C, D and E. Each of these five CRs has 19 different friends such that every student in the class (who is not a CR) is a friend of exactly one of these five CRs. A teacher of that class gave them three assignments - Assignment 1, 2 and 3. After the last day for the submission of the assignments, the teacher asked all the five CRs to count the number of students in the class who had finished each assignment. Each of the five CRs included themselves and their friends in the count of those who had finished each assignment, irrespective of whether they finished it or not. Among those who were not the friends of a particular CR, the CR counted only the students who had finished the respective assignments.

Each CR along with his friends is referred to as Group A, Group B, Group C, Group D and Group E respectively. Partial information about the number of students who finished each assignment according to each CR is presented in the table below.

	A	B	C	D	E
Assignment 1	85	74	76	80	81
Assignment 2	65	59	71	79	
Assignment 3		75	72	68	69

Q25. DIRECTIONS for questions 25 to 28: Select the correct alternative from the given choices.

What is the total number of students in the class who finished Assignment 1?

- a) 76
- b) 74
- c) 80
- 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	2
Avg. time spent on this question by all students	187
Difficulty Level	M
Avg. time spent on this question by students who got this question right	204
% of students who attempted this question	15.31
% of students who got the question right of those who attempted	53.2

[Video Solution](#)

Text Solution

Let a , b , c , d and e represent the number of friends of A, B, C, D and E (including themselves) who finished an assignment.

From the table, we can say that for Assignment 1, excluding the friends of A, 65 (85 - 20) members finished their assignments.

Therefore, $b + c + d + e = 65$

Similarly, $a + c + d + e = 54$

$a + b + d + e = 56$

$a + b + c + e = 60$

$a + b + c + d = 61$

Adding all the five equations, $a + b + c + d + e = \frac{296}{4} = 74$

Choice (B)

undefined

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

In a class of 100 students, there are five class representatives (CRs) - A, B, C, D and E. Each of these five CRs has 19 different friends such that every student in the class (who is not a CR) is a friend of exactly one of these five CRs. A teacher of that class gave them three assignments - Assignment 1, 2 and 3. After the last day for the submission of the assignments, the teacher asked all the five CRs to count the number of students in the class who had finished each assignment. Each of the five CRs included themselves and their friends in the count of those who had finished each assignment, irrespective of whether they finished it or not. Among those who were not the friends of a particular CR, the CR counted only the students who had finished the respective assignments.

Each CR along with his friends is referred to as Group A, Group B, Group C, Group D and Group E respectively. Partial information about the number of students who finished each assignment according to each CR is presented in the table below.

	A	B	C	D	E
Assignment 1	85	74	76	80	81
Assignment 2	65	59	71	79	
Assignment 3		75	72	68	69

Q26. DIRECTIONS for questions 25 to 28: Select the correct alternative from the given choices.

How many students in Group C finished Assignment 2?

- a) 8
- b) 12
- c) 17
- 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	94
Difficulty Level	D
Avg. time spent on this question by students who got this question right	111
% of students who attempted this question	9.07
% of students who got the question right of those who attempted	9.27

[Video Solution](#)

[Text Solution](#)

Let a , b , c , d and e represent the number of friends of A, B, C, D and E (including themselves) who finished an assignment.

For Assignment 2, according to A, there are $65 - 20 = 45$ students in the other four groups who definitely finished the assignment.

Similarly, according to B, there are $59 - 20 = 39$ students in the other four groups who definitely finished the assignment.

According to C and D, there are 51 and 59 students in the other four groups who finished the assignment.

Hence, there are at least 59 students in the class who finished assignment 2.

Also, B reported that there are 39 students in the other four groups who definitely finished the assignment. Even if all the students in Group B finished the assignment, the number of students in the class who could have finished this assignment cannot exceed 59. Hence, the maximum number of students who would have finished the assignment is 59.

Therefore, the number of students who finished the assignment has to be 59 (as the minimum and maximum are both same).

Since the total number of students who finished Assignment 2 were 59 and number of students who finished their assignment excluding C and his friends would be 51, the number of friends of C who would have finished Assignment 2 would be 8.

Choice (A)

undefined

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

In a class of 100 students, there are five class representatives (CRs) - A, B, C, D and E. Each of these five CRs has 19 different friends such that every student in the class (who is not a CR) is a friend of exactly one of these five CRs. A teacher of that class gave them three assignments - Assignment 1, 2 and 3. After the last day for the submission of the assignments, the teacher asked all the five CRs to count the number of students in the class who had finished each assignment. Each of the five CRs included themselves and their friends in the count of those who had finished each assignment, irrespective of whether they finished it or not. Among those who were not the friends of a particular CR, the CR counted only the students who had finished the respective assignments.

Each CR along with his friends is referred to as Group A, Group B, Group C, Group D and Group E respectively. Partial information about the number of students who finished each assignment according to each CR is presented in the table below.

	A	B	C	D	E
Assignment 1	85	74	76	80	81
Assignment 2	65	59	71	79	
Assignment 3		75	72	68	69

Q27. DIRECTIONS for questions 25 to 28: Select the correct alternative from the given choices.

What is the minimum number of students in Group E that must have finished Assignment 3?

- a) 6
- b) 8
- c) 11
- d) 13

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	111
Difficulty Level	D
Avg. time spent on this question by students who got this question right	123

Time spent / Accuracy Analysis

% of students who attempted this question	4.91
% of students who got the question right of those who attempted	24.87

[Video Solution](#)**Text Solution**

Let a, b, c, d and e represent the number of friends of A, B, C, D and E (including themselves) who finished an assignment.

For Assignment 3, the minimum number of students who would have finished will be the maximum of (75-20), (72-20), (68-20), (69-20) which is 55.

The maximum number of students who would have finished the assignment would be the minimum of 75, 72, 68, 69 which is 68.

Hence, the number of students who finished the assignment can be in the range of 55 to 68.

However, if there were 55 students who finished assignment 3, there will be 0 students in Group B who would have finished Assignment 3. (since B reported that there were 75 students who finished assignment 3, there must be $75 - 20 = 55$ students in the other four groups who finished the assignment and none from Group B).

Similarly, there will be 3 students in Group C, 7 students in Group D and 6 students in Group E who finished the assignment.

Hence, in Groups B, C, D and E, there will be $0+3+7+6 = 16$ students who finished the assignment. This implies that there must be $55 - 16 = 39$ students in Group A, who finished the assignment. This is not possible.

Hence, there cannot be 55 students who finished assignment 3.

For the number of students who finished this assignment in Group A to be less than or equal to 20, the number of students who finished the assignment must be at least 62 students who finished this assignment.

In this case, there will be 7, 10, 14 and 13 students in Groups B, C, D and E who finished the assignment and there will be 18 students in Group A who finished the assignment.

Hence, the minimum number of students who finished the assignment in Group E must be at least 13.

Choice (D)

undefined

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

In a class of 100 students, there are five class representatives (CRs) - A, B, C, D and E. Each of these five CRs has 19 different friends such that every student in the class (who is not a CR) is a friend of exactly one of these five CRs. A teacher of that class gave them three assignments - Assignment 1, 2 and 3. After the last day for the submission of the assignments, the teacher asked all the five CRs to count the number of students in the class who had finished each assignment. Each of the five CRs included themselves and their friends in the count of those who had finished each assignment, irrespective of whether they finished it or not. Among those who were not the friends of a particular CR, the CR counted only the students who had finished the respective assignments.

Each CR along with his friends is referred to as Group A, Group B, Group C, Group D and Group E respectively. Partial information about the number of students who finished each assignment according to each CR is presented in the table below.

	A	B	C	D	E
Assignment 1	85	74	76	80	81
Assignment 2	65	59	71	79	
Assignment 3		75	72	68	69

Q28. DIRECTIONS for questions 25 to 28: Select the correct alternative from the given choices.

If, in Group A, the number of students who finished Assignment 3 is 15, how many students in Group C finished Assignment 3?

a) 9

b) 15

c) 11

d) 18

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	116
Difficulty Level	D
Avg. time spent on this question by students who got this question right	130
% of students who attempted this question	4.56
% of students who got the question right of those who attempted	58.41

[Video Solution](#)

Text Solution

Let a, b, c, d and e represent the number of friends of A, B, C, D and E (including themselves) who finished an assignment.

Given a = 15.

From the above solution, we can see that the number of students in Groups B, C, D and E who finished the assignment must be 8, 11, 15 and 14 respectively.

Hence, there are 11 students in Group C who finished the assignment.

Choice (C)

undefined

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

Six children, P through U, are standing in a line, from left to right, all facing the same direction. The ages (in years) of the six children are 5, 8, 9, 10, 12 and 13, not necessarily in any order.

It is also known that

i. T, who is two years older than Q, is standing at the extreme right, but he is not standing adjacent to Q.

ii. R is standing two places to the left of the second youngest child, while S is standing to the immediate right of the oldest child.

iii. P, who is standing to the immediate left of the third youngest child, is standing two places to the left of R.

Q29. DIRECTIONS for questions 29 to 32: Select the correct alternative from the given choices.

Who is the youngest child?

a) P

b) S

c) R Your answer is correct

d) U

Time spent / Accuracy Analysis

Time taken by you to answer this question	18
Avg. time spent on this question by all students	317
Difficulty Level	E
Avg. time spent on this question by students who got this question right	315
% of students who attempted this question	54.31
% of students who got the question right of those who attempted	81.75

[Video Solution](#)

[Text Solution](#)

Let 1 to 6 represent the positions in which they are standing from left to right.

Given that T is at the extreme right. Hence, T is at 6.

T is two years older than Q. Hence, T can be 10 or 12 and Q can be 8 or 10.

From (ii), R is two places to the left of the second youngest child. Hence, R cannot be at 5. Also, since T cannot be the second youngest child, R cannot be at 4. R can only be at 1 or 2 or 3.

From (iii), P is two places to the left of R. Hence, R must be at 3 and P must be at 1.

From (ii), the child at 5 must be 8 years old. From (i), this cannot be Q. Hence, Q cannot be 8 years old.

Therefore, Q must be 10 years old and T must be 12 years old.

From (iii), the person at 2 must be 9 years old.

The only place where Q (who is 10 years old) can be 4.

From (ii), S must be at 2 and P must be the oldest. Hence, R must be the youngest and U must be at 5.

The following table provides the arrangement:

Position	1	2	3	4	5	6
Person	P	S	R	Q	U	T
Age	13	9	5	10	8	12

R is the youngest child.

Choice (C)

undefined

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

Six children, P through U, are standing in a line, from left to right, all facing the same direction. The ages (in years) of the six children are 5, 8, 9, 10, 12 and 13, not necessarily in any order.

It is also known that

i. T, who is two years older than Q, is standing at the extreme right, but he is not standing adjacent to Q.

ii. R is standing two places to the left of the second youngest child, while S is standing to the immediate right of the oldest child.

iii. P, who is standing to the immediate left of the third youngest child, is standing two places to the left of R.

Q30. DIRECTIONS for questions 29 to 32: Select the correct alternative from the given choices.

How many children are standing to the right of the third youngest child?

- a) 1
- b) 2
- c) 3
- d) 4 Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	1
Avg. time spent on this question by all students	44
Difficulty Level	E
Avg. time spent on this question by students who got this question right	42
% of students who attempted this question	55.03
% of students who got the question right of those who attempted	86.17

[Video Solution](#)

[Text Solution](#)

Let 1 to 6 represent the positions in which they are standing from left to right.

Given that T is at the extreme right. Hence, T is at 6.

T is two years older than Q. Hence, T can be 10 or 12 and Q can be 8 or 10.

From (ii), R is two places to the left of the second youngest child. Hence, R cannot be at 5. Also, since T cannot be the second youngest child, R cannot be at 4. R can only be at 1 or 2 or 3.

From (iii), P is two places to the left of R. Hence, R must be at 3 and P must be at 1.

From (ii), the child at 5 must be 8 years old. From (i), this cannot be Q. Hence, Q cannot be 8 years old.

Therefore, Q must be 10 years old and T must be 12 years old.

From (iii), the person at 2 must be 9 years old.

The only place where Q (who is 10 years old) can be 4.

From (ii), S must be at 2 and P must be the oldest. Hence, R must be the youngest and U must be at 5.

The following table provides the arrangement:

Position	1	2	3	4	5	6
Person	P	S	R	Q	U	T
Age	13	9	5	10	8	12

The third youngest child is S. There are four children standing to the right of him.

Choice (D)

undefined

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

Six children, P through U, are standing in a line, from left to right, all facing the same direction. The ages (in years) of the six children are 5, 8, 9, 10, 12 and 13, not necessarily in any order.

It is also known that

- i. T, who is two years older than Q, is standing at the extreme right, but he is not standing adjacent to Q.
- ii. R is standing two places to the left of the second youngest child, while S is standing to the immediate right of the oldest child.
- iii. P, who is standing to the immediate left of the third youngest child, is standing two places to the left of R.

Q31. DIRECTIONS for questions 29 to 32: Select the correct alternative from the given choices.

What is the age (in years) of U?

- a) 12
- b) 8 Your answer is correct
- c) 9
- d) 13

Time spent / Accuracy Analysis

Time taken by you to answer this question	14
Avg. time spent on this question by all students	37
Difficulty Level	E
Avg. time spent on this question by students who got this question right	35
% of students who attempted this question	53.28
% of students who got the question right of those who attempted	88.79

[Video Solution](#)

[Text Solution](#)

Let 1 to 6 represent the positions in which they are standing from left to right.

Given that T is at the extreme right. Hence, T is at 6.

T is two years older than Q. Hence, T can be 10 or 12 and Q can be 8 or 10.

From (ii), R is two places to the left of the second youngest child. Hence, R cannot be at 5. Also, since T cannot be the second youngest child, R cannot be at 4. R can only be at 1 or 2 or 3.

From (iii), P is two places to the left of R. Hence, R must be at 3 and P must be at 1.

From (ii), the child at 5 must be 8 years old. From (i), this cannot be Q. Hence, Q cannot be 8 years old.

Therefore, Q must be 10 years old and T must be 12 years old.

From (iii), the person at 2 must be 9 years old.

The only place where Q (who is 10 years old) can be 4.

From (ii), S must be at 2 and P must be the oldest. Hence, R must be the youngest and U must be at 5.

The following table provides the arrangement:

Position	1	2	3	4	5	6
Person	P	S	R	Q	U	T
Age	13	9	5	10	8	12

U is 8 years old.

Choice (B)

undefined

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

Six children, P through U, are standing in a line, from left to right, all facing the same direction. The ages (in years) of the six children are 5, 8, 9, 10, 12 and 13, not necessarily in any order.

It is also known that

- i. T, who is two years older than Q, is standing at the extreme right, but he is not standing adjacent to Q.
- ii. R is standing two places to the left of the second youngest child, while S is standing to the immediate right of the oldest child.
- iii. P, who is standing to the immediate left of the third youngest child, is standing two places to the left of R.

Q32. DIRECTIONS for questions 29 to 32: Select the correct alternative from the given choices.

For how many children can it be said that none of the children standing adjacent to them older than them?

- a) 1
- b) 2
- c) 3 Your answer is correct
- d) 4

Time spent / Accuracy Analysis

Time taken by you to answer this question	56
Avg. time spent on this question by all students	74
Difficulty Level	E
Avg. time spent on this question by students who got this question right	63
% of students who attempted this question	50.75
% of students who got the question right of those who attempted	74.69

[Video Solution](#)

[Text Solution](#)

Let 1 to 6 represent the positions in which they are standing from left to right.
Given that T is at the extreme right. Hence, T is at 6.
T is two years older than Q. Hence, T can be 10 or 12 and Q can be 8 or 10.
From (ii), R is two places to the left of the second youngest child. Hence, R cannot be 5. Also, since T cannot be the second youngest child, R cannot be at 4. R can only be at 1 or 2 or 3.
From (iii), P is two places to the left of R. Hence, R must be at 3 and P must be at 1.
From (ii), the child at 5 must be 8 years old. From (i), this cannot be Q. Hence, Q cannot be 8 years old.
Therefore, Q must be 10 years old and T must be 12 years old.
From (iii), the person at 2 must be 9 years old.
The only place where Q (who is 10 years old) can be 4.
From (ii), S must be at 2 and P must be the oldest. Hence, R must be the youngest and U must be at 5.

The following table provides the arrangement:

Position	1	2	3	4	5	6
Person	P	S	R	Q	U	T
Age	13	9	5	10	8	12

For three children (P, Q and T), none of the children standing adjacent to them older than them.
Choice (C)

undefined

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

A trader marked a book 36% above its cost price and then gave a discount of 10% on it. If the trader made a net profit of Rs.238 after paying a tax of 15% on the gross profit, find the cost price (in Rs.) of the watch.

Rs.

Your Answer:1250 Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	4
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	145
% of students who attempted this question	45.16
% of students who got the question right of those who attempted	62.35

[Video Solution](#)

[Text Solution](#)

Let the cost price and selling price be C and S respectively.

$$S = C(1.36)(0.9)$$

$$\therefore \text{Gross Profit (P)} = C(1.36 \times 0.9 - 1) = 0.224C$$

$$\text{Net Profit} = P(0.85) = 238$$

$$\Rightarrow P = 280$$

$$C(0.224) = 280$$

$$C = 1250$$

Ans: (1250)

undefined

Q2. DIRECTIONS for questions 2 to 4: Select the correct alternative from the given choices.

Seven positive numbers are such that $a : b = b : c = c : d = d : e = e : f = f : g = 1 : 2$. What is the ratio of $(a + b)$ and $(f + g)$?

- a) 1 : 1
- b) 1 : 48
- c) 1 : 32 Your answer is correct
- d) 1 : 2

Time spent / Accuracy Analysis

Time taken by you to answer this question	9
Avg. time spent on this question by all students	91
Difficulty Level	VE
Avg. time spent on this question by students who got this question right	90
% of students who attempted this question	51.2
% of students who got the question right of those who attempted	65.71

[Video Solution](#)

[Text Solution](#)

Let $a = k$ where $k > 0$.

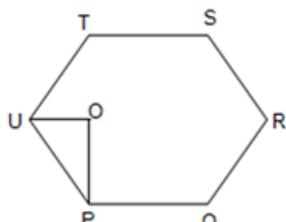
$\Rightarrow b = 2k, c = 4k, d = 8k, e = 16k, f = 32k$ and $g = 64k$

$$\therefore \frac{a+b}{f+g} = \frac{k+2k}{32k+64k} = \frac{1}{32}$$

Choice (C)

undefined

Q3. DIRECTIONS for questions 2 to 4: Select the correct alternative from the given choices.



In the figure above, PQRSTU is a regular hexagon. If O is a point inside the hexagon such that $\angle POU = 90^\circ$ and OU is parallel to ST, find the ratio of the areas of triangle POU and the hexagon.

- a) $\frac{1}{4}$
- b) $\frac{1}{8}$
- c) $\frac{1}{12}$ **Your answer is correct**
- d) $\frac{1}{36}$

Time spent / Accuracy Analysis

Time taken by you to answer this question	23
Avg. time spent on this question by all students	176
Difficulty Level	E
Avg. time spent on this question by students who got this question right	173
% of students who attempted this question	36.76
% of students who got the question right of those who attempted	76.2

[Video Solution](#)

[Text Solution](#)

If C is the centre of the hexagon,
area of PCU = $1/6$ (Area of the hexagon).
Triangles POU and POC are congruent.
 \therefore Area of $\triangle POU = 1/12$ (Area of the hexagon)

Choice (C)

undefined

Q4. DIRECTIONS for questions 2 to 4: Select the correct alternative from the given choices.

If the harmonic mean of $2a$ and b is a , find the harmonic mean of a and b (in terms of a).

- a) $\frac{3a}{2}$
- b) $\frac{2a}{3}$
- c) $\frac{4a}{5}$ **Your answer is correct**
- d) $\frac{5a}{4}$

Time spent / Accuracy Analysis

Time taken by you to answer this question	3
Avg. time spent on this question by all students	117
Difficulty Level	M
Avg. time spent on this question by students who got this question right	122
% of students who attempted this question	30.6
% of students who got the question right of those who attempted	68.99

[Video Solution](#)

Text Solution

To find the harmonic mean of a and b we need to find the value of $\frac{1}{a} + \frac{1}{b} = \frac{2}{k}$, say.

Then, k would be the required value.

Given,

$$\frac{1}{2a} + \frac{1}{b} = \frac{2}{a}, \text{ i.e., } \left(\frac{1}{a} - \frac{1}{2a} \right) + \frac{1}{b} = \frac{2}{a}$$

$$\Rightarrow \frac{1}{a} + \frac{1}{b} = \frac{2}{a} + \frac{1}{2a} = \frac{5}{2a}$$

$$\text{Now, if } \frac{5}{2a} = \frac{2}{k}, \text{ then } k = \frac{4a}{5}$$

Choice (C)

undefined

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

The number of males in village A is 4372 less than that in village B. In village B, the number of males is less than the number of females by 4634. In village A, the number of females is double the number of males. Find the number of males in village A, if village B has 1632 females more than that in village A.

Your Answer:7374 Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	166
Difficulty Level	E
Avg. time spent on this question by students who got this question right	161
% of students who attempted this question	45.75
% of students who got the question right of those who attempted	62.6

Video Solution

Text Solution

Let the number of males in village A be M .

Then, the number of males in village B is $M + 4372$.

The number of females in village B

$$= M + 4372 + 4634$$

$$= M + 9006$$

No. of females in village A = $2M$

Males	Females
A	M
B	$M + 4372$

$$B \quad M + 9006$$

$$\text{Given that } 2M + 1632 = M + 9006$$

$$M = (9006 - 1632) = 7374$$

Ans: (7374)

undefined

Q6. DIRECTIONS for questions 6 and 7: Select the correct alternative from the given choices.

Find the remainder when $21^{31} + 37^{31}$ is divided by 29.

b) 1

c) 0 Your answer is correct

d) 14

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	94
Difficulty Level	E
Avg. time spent on this question by students who got this question right	86
% of students who attempted this question	29.58
% of students who got the question right of those who attempted	78.57

[Video Solution](#)

[Text Solution](#)

Remainder of $a^n + b^n$ divided by $a + b$ is always 0 when n is odd.
As 31 is odd, the remainder of $21^{31} + 37^{31}$ divided by 58 (or 29) will be 0.

Choice (C)

undefined

Q7. DIRECTIONS for questions 6 and 7: Select the correct alternative from the given choices.

If three positive numbers, a , b and c , are such that $a < 40$, $b > 60$ and $c < 20$, then which of the following is definitely false?

a) $(a - b + c) < -10$

b) $(b - 3c) > 20$

c) $(2c - b) < -20$

d) **None of the above** Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	375
Avg. time spent on this question by all students	171
Difficulty Level	M
Avg. time spent on this question by students who got this question right	176
% of students who attempted this question	48.77
% of students who got the question right of those who attempted	52.02

[Video Solution](#)

[Text Solution](#)

$a < 40$, $b > 60$ and $c < 20$
 Since $b > 60$, $-b < -60$
 $\therefore a - b + c < 40 - 60 + 20$ or, $a - b + c < 0$
 Choice (A) gives $a - b + c < -10$, which is not false.
 $c < 20$
 $\Rightarrow 3c < 60$
 $-3c > -60$
 $\therefore b - 3c > 60 - 60$
 or $b - 3c > 0$, thus, choice (B) is not false.
 $2c < 40$
 $b > 60$,
 $\therefore -b < -60$
 $\therefore 2c - b < 40 - 60$ or, $2c - b < -20$, thus choice (C) is not false.
 Therefore none of the choices is definitely false. Thus choice (D) follows.

Choice (D)

undefined

DIRECTIONS for questions 8 and 9: Answer the questions on the basis of the information given below.

Consider the following operators defined below.

$x @ y$: gives the positive difference of x and y .

$x \$ y$: gives the sum of the squares of x and y .

$x \mathcal{L} y$: gives the positive difference of the squares of x and y .

$x \& y$: gives the product of x and y .

Also $x, y \in \mathbb{R}$, and $x \neq y$. The other standard algebraic operations are unchanged.

Q8. DIRECTIONS for questions 8 and 9: Select the correct alternative from the given choices.

Given that $x @ y = x - y$, find $(x \$ y) + (x \mathcal{L} y)$.

a) $2x^2$ Your answer is incorrect

b) $2y^2$

c) $2(x^2 + y^2)$

d) Cannot be determined

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	87
Difficulty Level	M
Avg. time spent on this question by students who got this question right	97
% of students who attempted this question	48.08
% of students who got the question right of those who attempted	16.46

[Video Solution](#)

[Text Solution](#)

Given $x @ y = x - y$
 \Rightarrow the positive difference of x and y is $x - y \Rightarrow x > y$
 but still we cannot conclude anything about the positive difference of the squares of x and y , since say $x = 1$ and $y = -3$.
 $\Rightarrow x @ y = x - y$ and $x \mathcal{L} y = y^2 - x^2$ but if $x = 3$ and $y = 1$
 then $x \mathcal{L} y = x^2 - y^2$.
 \therefore we cannot find the value of the given expression.

Choice (D)

undefined

DIRECTIONS for questions 8 and 9: Answer the questions on the basis of the information given below.

Consider the following operators defined below.

$x @ y$: gives the positive difference of x and y .

$x \$ y$: gives the sum of the squares of x and y .

$x \mathcal{L} y$: gives the positive difference of the squares of x and y .

$x \& y$: gives the product of x and y .

Also $x, y \in \mathbb{R}$, and $x \neq y$. The other standard algebraic operations are unchanged.

Q9. DIRECTIONS for questions 8 and 9: Select the correct alternative from the given choices.

The expression $[(x \mathcal{L} y) \div (x @ y)]^2 - 2(x \& y)$ will be equal to

- a) $x \mathcal{L} y$
- b) $x \$ y$ **Your answer is correct**
- c) $(x \mathcal{L} y)(x @ y)$
- d) **Cannot be determined**

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	79
Difficulty Level	E
Avg. time spent on this question by students who got this question right	75
% of students who attempted this question	38.22
% of students who got the question right of those who attempted	83.21

[Video Solution](#)

[Text Solution](#)

Given $\left[\frac{(x^2 - y^2)}{(x - y)} \right]^2 - 2xy$

Where $a \sim b \Rightarrow$ positive difference of a and b

$$\Rightarrow \left[\frac{\pm(x^2 - y^2)}{(x - y)} \right]^2 - 2xy = (x + y)^2 - 2xy = x^2 + y^2 = x \$ y$$

Choice (B)

undefined

Q10. DIRECTIONS for questions 10 to 14: Select the correct alternative from the given choices.

If the area of the base of a right circular cone, of volume 1232 cu.cm., is 154 sq.cm., find the curved surface area of the cone.

a) 550 sq.cm. Your answer is correct

b) 575 sq.cm.

c) 600 sq.cm.

d) 625 sq.cm.

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	139
Difficulty Level	E
Avg. time spent on this question by students who got this question right	136
% of students who attempted this question	37.08
% of students who got the question right of those who attempted	92.39

[Video Solution](#)

[Text Solution](#)

The volume of the right circular cone

$$\left(\frac{1}{3}\pi r^2 h\right) = 1232 \text{ cm}^3 \dots\dots\dots(1)$$

The area of the base of right circular cone

$$(\pi r^2) = 154 \text{ cm}^2 \dots\dots\dots(2)$$

Solving (1) and (2), we get $r = 7 \text{ cm}$ and $h = 24 \text{ cm}$.

$$\begin{aligned} \text{The slant height of the cone (l)} &= \sqrt{r^2 + h^2} \\ &= \sqrt{7^2 + 24^2} = 25 \text{ cm.} \end{aligned}$$

\therefore The lateral surface area = $\pi r l$

$$= \left(\frac{22}{7}\right)(7)(25) = 550 \text{ sq.cm.}$$

Choice (A)

undefined

Q11. DIRECTIONS for questions 10 to 14: Select the correct alternative from the given choices.

If $\left(\alpha, \frac{1}{\alpha}\right)$ are the roots of the equation $ax^2 + bx + c = 0$, then the roots of the equation $4cx^2 - 2bx + a = 0$ are

a) $\left(\frac{-a}{2}, \frac{-1}{2a}\right)$.

- b) $\left(\frac{\alpha}{2}, \frac{1}{2\alpha}\right)$.
- c) $\left(2\alpha, \frac{1}{2\alpha}\right)$.
- d) $\left(\frac{-\alpha}{4}, \frac{-1}{4\alpha}\right)$.

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	46
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	141
% of students who attempted this question	29.02
% of students who got the question right of those who attempted	67.43

[Video Solution](#)

Text Solution

Given, $\alpha, \frac{1}{\alpha}$ are the roots of the equation $ax^2 + bx + c = 0$

$$\Rightarrow b = -a\left(\alpha + \frac{1}{\alpha}\right) \text{ and } c = a$$

The roots of the equation $4cx^2 - 2bx + a = 0$ are

$$\frac{-(-2b) \pm \sqrt{(-2b)^2 - 4(4c)(a)}}{2(4c)}$$

$$= \frac{2b \pm \sqrt{4b^2 - 416a^2}}{8a}$$

$$= \frac{-2a\left(\alpha + \frac{1}{\alpha}\right) \pm \sqrt{4a^2\left(\alpha + \frac{1}{\alpha}\right)^2 - 16a^2}}{8a}$$

$$= \frac{-\left(\alpha + \frac{1}{\alpha}\right) \pm \sqrt{\alpha^2 + \frac{1}{\alpha^2} + 2 - 4}}{4}$$

$$= \frac{-\left(\alpha + \frac{1}{\alpha}\right) \pm \left(\alpha - \frac{1}{\alpha}\right)}{4}$$

$$= \frac{-\alpha, -\frac{1}{2\alpha}}{2}$$

Alternative solution 1:

1, 1 can be taken as the roots of the equation $ax^2 + bx + c = 0$, i.e., $a = 1, b = 2, c = 1$.
Hence, we need roots of the equation $4x^2 - 4bx + 1 = 0$.
Now, we can check with each of the answer choices.

Alternative Solution 2:

By observation, since the coefficients are reversed, the roots become reciprocals.
Further, going from $cx^2 + bx + a$ to $c(2x)^2 + b(2x) + a = 0$ halves the roots. And finally,
making the coefficient of x negative makes the roots negative. Hence, $\left(\frac{-1}{2\alpha}, \frac{-\alpha}{2}\right)$.
Choice (A)

undefined

Q12. DIRECTIONS for questions 10 to 14: Select the correct alternative from the given choices.

The mean of the sequence 1, 3, 6, 10, 15, , 630 is

- a) 216.
- b) 222.
- c) 254.
- d) 274.

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	153
Difficulty Level	E
Avg. time spent on this question by students who got this question right	171
% of students who attempted this question	8.89
% of students who got the question right of those who attempted	58.6

[Video Solution](#)

[Text Solution](#)

The n^{th} term of the sequence is $\frac{n(n+1)}{2}$, and if there are a total of m terms in the given sequence, the last term (i.e., m^{th} term) is 630.

$$\Rightarrow \frac{m(m+1)}{2} = 630$$

$$\Rightarrow m = 35.$$

∴ The average of the first 35 terms

$$= \frac{(\text{sum of the first 35 terms})}{35}$$

$$= \frac{\left(\sum_{n=1}^{35} \frac{n(n+1)}{2} \right)}{35}$$

$$= \frac{\left(\left(\sum_{n=1}^{35} \frac{n^2}{2} \right) + \left(\sum_{n=1}^{35} \frac{n}{2} \right) \right)}{35}$$

$$= \frac{1}{2} \left[\frac{(35)(36)(71)}{(35)(6)} + \frac{(35)(36)}{(35)(2)} \right]$$

$$= \frac{1}{2} [426 + 18] = 222$$

Choice (B)

undefined

Q13. DIRECTIONS for questions 10 to 14: Select the correct alternative from the given choices.

A total of 15 teams participated in a tournament. Each team plays with every other team exactly once. A team gets 3 points for a win, 2 points for a draw and 1 point for a loss. The team which scored the least got 21 points. The scores of all the teams were distinct and at least one match played by the winning team was drawn. Which of the following is always true for the winning team?

- a) It had at least two draws.

b) It had a maximum of 4 losses.

c) It had a maximum of 9 wins.

d) It had at most 3 losses.

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	130
Difficulty Level	E
Avg. time spent on this question by students who got this question right	144
% of students who attempted this question	6.51
% of students who got the question right of those who attempted	37.57

[Video Solution](#)

[Text Solution](#)

Number of points scored by any team when it plays with another = 4. Total number of matches played = $15C_2 = 105$. Total number of points of all matches played = 420. As the losing team scored 21 points and the number of points scored by the teams are distinct integers, only if their scores are consecutive, the total number of points of all matches played would be 420. Hence winning team must have scored 35 points. Let the number of matches won, drawn and lost by the winning team be W, D and L respectively. $3W + 2D + L = 35$

$$W + D + L = 14.$$

$$\text{Subtracting the second equation from the first } 2W + D = 21$$

$$\text{Also, } W+D \leq 14.$$

$\therefore (W, D)$ can be (10, 1) or (9, 3) or (8, 5) or (7, 7)

The respective value of L is 3, or 2 or 1 or 0.

\therefore Only Choice (D) is true.

Choice (D)

undefined

Q14. DIRECTIONS for questions 10 to 14: Select the correct alternative from the given choices.

If x, y, z are three positive numbers in geometric progression and $x^{15} = y^{25} = z^n$, find the value of n .

a) 30

b) 50

c) 60

d) 75

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	110
Difficulty Level	E
Avg. time spent on this question by students who got this question right	110
% of students who attempted this question	23.45
% of students who got the question right of those who attempted	74

[Video Solution](#)

[Text Solution](#)

Given $x^{15} = y^{25} = z^n$
As x, y, z are in G.P.

$$\begin{aligned}y &= \sqrt{xz} \\ \Rightarrow x^{15} &= (\sqrt{xz})^{25} \\ \Rightarrow x^{15} &= x^{\frac{25}{2}} z^{\frac{25}{2}} \\ \Rightarrow x^{\frac{15}{2}} &= z^{\frac{25}{2}} \\ \Rightarrow x^{5/2} &= z^{25/2} \\ \Rightarrow x^5 &= z^{25} \\ \Rightarrow x^{15} &= z^{75} \\ \therefore n &= 75\end{aligned}$$

Choice (D)

undefined

Q15. DIRECTIONS for question 15: Type in your answer in the input box provided below the question.

If the selling price of three pens is equal to the cost price of five pens, while the marked price of three pens is equal to the selling price of five pens, the cost price of a pen is what percentage of its marked price?

Your Answer:36 Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	35
Avg. time spent on this question by all students	118
Difficulty Level	E
Avg. time spent on this question by students who got this question right	113
% of students who attempted this question	45.52
% of students who got the question right of those who attempted	73.83

[Video Solution](#)

[Text Solution](#)

Let the marked price, selling price and cost price be M, S and C respectively.

$$\begin{aligned}\therefore 3S &= 5C \\ \Rightarrow S : C &= 5 : 3 \rightarrow (1) \\ \text{Similarly } M : S &= 5 : 3 \rightarrow (2) \\ \text{From (1) and (2)} \\ M : S : C &= 25 : 15 : 9\end{aligned}$$

$$\therefore \text{Required percentage} = \frac{9}{25} \times 100 = 36\% \quad \text{Ans: (36)}$$

undefined

Q16. DIRECTIONS for questions 16 to 20: Select the correct alternative from the given choices.

Three cakes of weights 780 gm, 840 gm and 960 gm are cut into small pieces, all of which are of equal weight. Further, each small piece must be as heavy as possible. If one such piece is shared by exactly two children, then to how many

children can the pieces of cake be given?

- a) **86** Your answer is correct
- b) **70**
- c) **43**
- d) **35**

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	125
Difficulty Level	E
Avg. time spent on this question by students who got this question right	126
% of students who attempted this question	31.68
% of students who got the question right of those who attempted	82.9

[Video Solution](#)

[Text Solution](#)

Weight of each piece of cake so that they all have equal weight and have the maximum possible weight.

$$= \text{HCF} [780, 840, 960] \text{ gm} = 60 \text{ gm}$$

$$\text{The number of resulting pieces} = \frac{780}{60} + \frac{840}{60} + \frac{960}{60}$$
$$= 13 + 14 + 16 = 43.$$

$$\therefore \text{The number of children, to whom these pieces can be given} = 43 \times 2 = 86.$$

Choice (A)

undefined

Q17. DIRECTIONS for questions 16 to 20: Select the correct alternative from the given choices.

P and Q are two solid spheres. If the volume of P is $a\%$ less than that of Q, while the surface area of Q exceeds the surface area of P by 300%, find a .

- a) **75**
- b) **87.5**
- c) **60**
- d) **62.5**

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	119
Difficulty Level	E
Avg. time spent on this question by students who got this question right	120
% of students who attempted this question	23.66
% of students who got the question right of those who attempted	86.6

[Video Solution](#)

[Text Solution](#)

Let the radii of P and Q be x units and y units respectively.

$$4\pi y^2 = 4(4\pi x^2)$$

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

$$\text{P's volume} = \frac{4}{3}\pi\left(\frac{1}{2}y\right)^3 = \frac{1}{8}\left[\frac{4}{3}\pi y^3\right]$$

∴ P's volume is less than Q's volume by $\frac{7(100)}{8}\% = 87.5\%$

$$a = 87.5$$

Alternative Solution:

If P has an area of 1, Q has area of 4(300% more) implying that the ratio of the radii is 1 : 2.

Hence, ratio of volumes = 1 : 8, i.e., P's volume is $\frac{1}{8}$ th of Q, or 87.5% lesser than that of Q. Choice (B)

undefined

Q18. DIRECTIONS for questions 16 to 20: Select the correct alternative from the given choices.

On a certain day, Ajay works at $\frac{11}{7}$ th of his usual rate of doing work and completes a work 28 minutes earlier than the usual time required. Had Ajay worked at $\frac{7}{11}$ th of his usual rate of doing work, then the time taken by him to complete the work would have been how much more than the usual time required?

- a) 44 minutes
- b) 32 minutes
- c) 28 minutes
- d) 16 minutes

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	125
Difficulty Level	M
Avg. time spent on this question by students who got this question right	129
% of students who attempted this question	22.54
% of students who got the question right of those who attempted	65.67

[Video Solution](#)

[Text Solution](#)

Let the normal time taken by Ajay to complete the work be t .
As Ajay works at $11/7^{\text{th}}$ of the normal rate, the time required will be $7/11^{\text{th}}$ of the normal time i.e., $\frac{7}{11}t$
 $t - \frac{7}{11}t = 28 \text{ minutes} \Rightarrow t = 77 \text{ minutes}$
when Ajay works at $7/11^{\text{th}}$ of the normal rate, the time required would be $\frac{11}{7}$ th of the normal time i.e., $\frac{11}{7} \times 77 \text{ minutes} = 121 \text{ minutes}$.

Thus Ajay requires $121 - 77 = 44$ more minutes to complete the work.

Choice (A)

undefined

Q19. DIRECTIONS for questions 16 to 20: Select the correct alternative from the given choices.

If $(625)_n = 5 \times (137)_n$, for $n > 2$, then in which of the following ranges does n lie?

- a) $3 \leq n \leq 7$
- b) $13 \leq n \leq 17$
- c) $8 \leq n \leq 12$
- d) $18 \leq n \leq 22$

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	39
Avg. time spent on this question by all students	119
Difficulty Level	E
Avg. time spent on this question by students who got this question right	119
% of students who attempted this question	12.95
% of students who got the question right of those who attempted	60.28

[Video Solution](#)

[Text Solution](#)

$$\begin{aligned}
(625)_n &= 6 \times n^2 + 2 \times n^1 + 5 \times n^0 \\
&= 6n^2 + 2n + 5 \\
(137)_n &= n^2 + 3n + 7 \\
5(137)_n &= 5n^2 + 15n + 35 \\
\text{Given that } 6n^2 + 2n + 5 &= 5n^2 + 15n + 35 \\
\Rightarrow n^2 - 13n - 30 &= 0 \\
\Rightarrow (n - 15)(n + 2) &= 0 \\
\Rightarrow n &= 15 \text{ or } -2. \\
\text{As } n \text{ cannot be negative, } n &= 15.
\end{aligned}$$

Choice (B)

undefined

Q20. DIRECTIONS for questions 16 to 20: Select the correct alternative from the given choices.

The average runs scored by a batsman in a certain number of innings is 54. After he plays one more innings, in which he scored 145 runs, his average runs in all the innings played becomes a prime number less than 72. Find the total number of innings he played.

- a) 7
 - b) 12
 - c) 13
 - d) Cannot be determined
- Your answer is correct**

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	133
Difficulty Level	M
Avg. time spent on this question by students who got this question right	129
% of students who attempted this question	37.26
% of students who got the question right of those who attempted	48.9

[Video Solution](#)

[Text Solution](#)

Let us say a batsman played n innings before the last inning. His total score after the $n + 1$ innings is $54n + 145$.

$\frac{54n + 145}{n + 1} = 54 + \frac{91}{n + 1}$. As the average is an integer, $n + 1$ must be a factor of 91. It can be 7 or 13 and correspondingly the average would be 67 or 61, both of which are primes less than 71.
Choice (D)

undefined

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

If in an arithmetic progression, the 12^{th} term is $23\frac{7}{29}$ and the 64^{th} term is $136\frac{22}{29}$, find the sum of the first 75 terms of the progression.

Your Answer:6000 Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	143
Difficulty Level	E
Avg. time spent on this question by students who got this question right	129
% of students who attempted this question	21.43
% of students who got the question right of those who attempted	57.2

[Video Solution](#)

[Text Solution](#)

Sum of the first 75 terms of the AP = $75 \times$ middle term = $75 \times T_{38}$. Now

$$T_{38} = \frac{T_{12} + T_{64}}{2} \text{ . Hence, required answer} = 75 \times \frac{\left(23\frac{7}{29} + 136\frac{22}{29}\right)}{2} = 75 \times 80 = 6000$$

Ans: (6000)

undefined

Q22. DIRECTIONS for question 22: Select the correct alternative from the given choices.

Fresh dates contain 80% water by weight, whereas dry dates contain 10% water by weight. A trader purchases fresh dates at Rs.100 per kg and makes a profit of 10% by selling them after drying. Find the selling price per kg at which the trader sells the dry dates.

- a) **Rs.590**
- b) **Rs.550**
- c) **Rs.495**
- d) **Rs.367**

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	143
Difficulty Level	M
Avg. time spent on this question by students who got this question right	150
% of students who attempted this question	17.08
% of students who got the question right of those who attempted	60.95

[Video Solution](#)

[Text Solution](#)

1 kg of fresh dates contain $100\% - 80\% = 20\%$ of pulp

$$= \frac{20}{100} \times 1000 = 200 \text{ gms of pulp.}$$

1 kg of dry dates contain $(100 - 10) = 90\%$ of pulp

$$= \frac{90}{100} \times 1000 = 900 \text{ gms of pulp}$$

Thus to have 1 kg of dry dates $\frac{900}{200} = 4.5$ kgs of fresh dates are required.

.. Cost price of 4.5 kg of fresh dates = $4.5 \times 100 = ₹450$

Selling price of dry dates = cost price + profit = $450 + 10\% \text{ of } 450 = ₹495$.

Choice (C)

undefined

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

In a 5 km race, Rajesh beats Thomas by 30 seconds and Thomas beats Prasad by 70 seconds. If the speed of Rajesh is 30 kmph, by what distance (in m) did Thomas beat Prasad?

Your Answer:500 Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	903
Avg. time spent on this question by all students	194
Difficulty Level	E
Avg. time spent on this question by students who got this question right	195
% of students who attempted this question	18.16
% of students who got the question right of those who attempted	41.55

[Video Solution](#)

[Text Solution](#)

Given speed of Rajesh = 30 kmph.
Time taken by Rajesh to complete the 5 km race
 $= \frac{5}{30}$ hours
 $= \frac{5}{30} \times 60 \times 60$ seconds = 600 seconds.
 \Rightarrow Time taken by Thomas = 630 seconds
 \Rightarrow Time taken by Prasad = $630 + 70 = 700$ seconds
In 630 seconds, Prasad traveled $\frac{630}{700} \times 5$ km
 $= \frac{9}{10} \times 5000$ m = 4500 m.
 \therefore Thomas beat Prasad by $5000 - 4500 = 500$.

Ans: (500)

undefined

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

A test has 100 questions. Candidates score 2 marks for each correct answer, lose 1 mark for each wrong answer and lose half a mark for leaving a question unattempted. A student scores a total of 160 marks. On analyzing his performance, he concludes that he could not have got more than 8 questions wrong. How many questions did he leave unattempted, if the student got at least one answer wrong?

- a) 8
- b) 4
- c) 10
- d) **None of the above**

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	239
Avg. time spent on this question by all students	158
Difficulty Level	M
Avg. time spent on this question by students who got this question right	158
% of students who attempted this question	16.43
% of students who got the question right of those who attempted	43.07

[Video Solution](#)

[Text Solution](#)

Method 1:

A student who answers all the questions and gets them all correct scores 200.
 Each question which is wrongly answered would have fetched 3 marks less than it would have fetched if it was correctly answered. Each question which is unanswered would have fetched $\frac{5}{2}$ marks less than it would have fetched if it was correctly answered.

$$\text{If } x \text{ questions are wrong and } y \text{ questions are unattempted, } 3x + \frac{5}{2}y = 200 - 160$$

$$x + y = 16 - \frac{x}{5}$$

To satisfy the equation above, x must be divisible by 5. Also $x \leq 8$. $\therefore x = 5$
 $\therefore y = 10$

Method 2:

Let us assume that the number of questions that the candidate did not attempt is U and the number of wrongly answered questions is W .

The number of correctly answered questions = $100 - U - W$

$$\begin{aligned}\text{Total score} &= \{(2 \times \text{No. of correct answers}) - (\text{No. of wrongly answered questions}) \\ &\quad - \frac{1}{2}(\text{No. of unattempted questions})\}\end{aligned}$$

$$160 = 2 \times (100 - U - W) - W - \frac{1}{2}U$$

$$\Rightarrow 6W + 5U = 80 \quad \text{---(1)}$$

Given that W cannot be more than 8. The only possible value of W less than 8 which gives an integral value of U in equation (1) is 5.

So putting $w = 5$ in equation (1) we get $U = 10$.

Choice (C)

undefined

Q25. DIRECTIONS for question 25: Type in your answer in the input box provided below the question.

Naina purchased two Dairymilks, three Perks and five Eclairs and paid Rs.40. Had Naina purchased three Dairymilks, five Perks and nine Eclairs, she would have paid Rs.64. Googly demanded only one Dairymilk, one Perk and one Eclair. If Naina purchased only what was demanded by Googly, then how much (in Rs.) would she have paid?

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

Time spent / Accuracy Analysis

Time taken by you to answer this question	263
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	123
% of students who attempted this question	28.57
% of students who got the question right of those who attempted	83.36

[Video Solution](#)

[Text Solution](#)

Let the cost of each dairymilk, perk and eclair be ₹d, ₹p and ₹e respectively.

$$\text{Given, } 2d + 3p + 5e = 40 \quad \dots\dots (1)$$

$$3d + 5p + 9e = 64 \quad \dots\dots (2)$$

From 2(1) – (2), we get

$$d + p + e = 16.$$

Ans: (16)

undefined

Q26. DIRECTIONS for questions 26 to 29: Select the correct alternative from the given choices.

If $x = \frac{10^{20} - 9^{17}}{10^{14} - 9^{11}}$, which of the following is true?

- a) $10^2 < x < 10^4$
- b) $10^4 < x < 8^6$
- c) $10^5 < x < 10^6$
- d) $x > 10^6$

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	273
Avg. time spent on this question by all students	109
Difficulty Level	M
Avg. time spent on this question by students who got this question right	120
% of students who attempted this question	6.71
% of students who got the question right of those who attempted	40.83

[Video Solution](#)

[Text Solution](#)

If we multiply the denominator with 10^8 we get

$$10^8 (10^{14} - 9^{11}) = 10^{20} - 10^8 \cdot 9^{11}$$

Since, $10^8 \cdot 9^{11} > 9^{17}$, i.e., 10^8 times the denominator is less than the numerator, the value of x is greater than 10^6 . Choice (D)

undefined

Q27. DIRECTIONS for questions 26 to 29: Select the correct alternative from the given choices.

Let a, b and c be three distinct positive integers. If the product ac is even and $c(a + b)$ is odd, which of the following is/are always true?

- a) $(a - b)(a^2 + b^2)$ is even
- b) $a(a + b)$ is odd
- c) $(c - a)b$ is odd
- d) Both (A) and (B)

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	516
Avg. time spent on this question by all students	137
Difficulty Level	VE
Avg. time spent on this question by students who got this question right	140
% of students who attempted this question	29.92
% of students who got the question right of those who attempted	75.15

[Video Solution](#)

[Text Solution](#)

Given that

ac is even and c (a + b) odd.

⇒ c and b are odd and a is an even integer.

So, (a - b) (a² + b²) and (c - a) b are odd while a(b + c) is an even integer.

Hence only Choice (C) is true.

Choice (C)

undefined

Q28. DIRECTIONS for questions 26 to 29: Select the correct alternative from the given choices.

In a class, one-fourth of the students passed in Maths. If one-sixth of the students, including one-third of those who passed in Maths, passed in Chemistry, what percent of the students passed in neither of the two subjects?

a) $66\frac{2}{3}\%$ Your answer is correct

b) $33\frac{1}{3}\%$

c) 60%

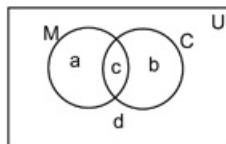
d) 55%

Time spent / Accuracy Analysis

Time taken by you to answer this question	7
Avg. time spent on this question by all students	136
Difficulty Level	E
Avg. time spent on this question by students who got this question right	136
% of students who attempted this question	27.28
% of students who got the question right of those who attempted	80.34

[Video Solution](#)

[Text Solution](#)



Let the number of students in the class be 36 (multiple of 4, 6, 3)
 Let U be the set of students of the entire class and M, C be the sets of students who passed in maths and in chemistry respectively
 $\Rightarrow n(U) = 36$
 $\Rightarrow a + b + c + d = 36 \dots\dots\dots (1)$

From the given data,

$$n(M) = a + c = \frac{1}{4} (36) = 9$$

$$n(M \cap C) = c = \frac{1}{3} n(M) = \frac{1}{3} (9) = 3$$

$$\text{Also, } n(C) = b + c = \frac{1}{6} (36) = 6$$

Now, $a = 9 - 3 = 6$ and $b = 6 - 3 = 3$

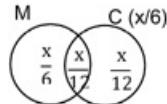
From (1)

$$6 + 3 + 3 + d = 36 \Rightarrow d = 36 - 12 = 24$$

$$\text{Required percentage of students} = \frac{24}{36} \times 100\%$$

$$= \frac{200}{3} \% = 66 \frac{2}{3} \%$$

Alternative Solution:



Let the no. of students in the class be x .

$$\text{No. of students who passed Maths} = \frac{x}{4}$$

$$\text{No. of students who passed Chemistry} = \frac{x}{6}$$

$$\text{No. of students who passed both Maths and Chemistry} = \frac{1}{3} \times \frac{x}{4} = \frac{x}{12}$$

Students who passed in neither = n

Total no. of students = x

$$x = \frac{x}{4} + \frac{x}{12} + n$$

$$n = \frac{\frac{2x}{3}}{3}$$

$$= 66.67\%$$

Choice (A)

undefined

Q29. DIRECTIONS for questions 26 to 29: Select the correct alternative from the given choices.

A rectangular sheet of paper was folded along the line joining the midpoints of its longer sides. The rectangle which resulted had the same ratio of its longer and shorter sides as that of the original rectangle. If the breadth of the original rectangle is $\sqrt{2}$ cm, find the area (in sq.cm) of the smaller rectangle.

C a) $\frac{3\sqrt{2}}{4}$

C b) $\sqrt{2}$

- c) $\frac{3\sqrt{2}}{2}$
- d) $4\sqrt{2}$

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	61
Avg. time spent on this question by all students	133
Difficulty Level	E
Avg. time spent on this question by students who got this question right	132
% of students who attempted this question	13.38
% of students who got the question right of those who attempted	82.54

[Video Solution](#)

[Text Solution](#)

Let the length and the breadth of the original rectangle be l and b respectively.

$$\frac{l}{b} = \frac{b}{l/2}$$

$$2b^2 = l^2$$

$$\sqrt{2}b = l$$

$$\text{As } b = \sqrt{2}, l = 2$$

$$\text{Area of the smaller rectangle} = \frac{lb}{2} = \sqrt{2} \text{ sq.cm}$$

Choice (B)

undefined

Q30. DIRECTIONS for questions 30 and 31: Type in your answer in the input box provided below the question.

In how many ways can a committee of five persons be formed from six men and five women, such that the committee has more men than women?

Your Answer:281 Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	29
Avg. time spent on this question by all students	132
Difficulty Level	E
Avg. time spent on this question by students who got this question right	131
% of students who attempted this question	32.48
% of students who got the question right of those who attempted	45.29

[Video Solution](#)

[Text Solution](#)

For the committee to have more men than women, it must have 3 men and 2 women or 4 men and 1 woman or 5 men and no woman.

$$\therefore \text{Number of ways} = {}^6C_3 \times {}^5C_2 + {}^6C_4 \times {}^5C_1 + {}^6C_5 \times {}^5C_0$$

$$= 20 (10) + 15 (5) + 6 (1) = 281$$

Ans: (281)

undefined

Q31. DIRECTIONS for questions 30 and 31: Type in your answer in the input box provided below the question.

A tap can fill an empty drum in 60 minutes. 20 minutes after the tap is opened, a hole is made at the bottom of the drum to drain the water away. The drum is filled after a further period of 120 minutes. In how many minutes can the hole alone empty the entire drum of water?

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	700
Avg. time spent on this question by all students	170
Difficulty Level	E
Avg. time spent on this question by students who got this question right	158
% of students who attempted this question	24.18
% of students who got the question right of those who attempted	51.87

[Video Solution](#)

[Text Solution](#)

The tap fills 1/3 the tank in 20 minutes.

Normally, it would take 40 minutes to fill the remaining 2/3 of the tank. Instead it takes 120 minutes; i.e. the effective flow rate reduces to 1/3 the tap's flow rate, i.e. the hole is draining away 2/3 of what the tap is filling in. If the tap takes 60 minutes to fill the tank, the hole takes $(3/2) (60)$ minutes = 90 minutes to empty the full tank.

Ans: (90)

undefined

Q32. DIRECTIONS for question 32: Select the correct alternative from the given choices.

How many children does Karan have, if Ajay is his son and Bindu is his daughter?

Consider the following two statements and choose the correct option from among the choices given.

I. Ajay has two sisters for every brother that he has.

II. Bindu has at least one brother for every sister that she has.

- a) The number of Karan's children can be determined using one of the statements alone, but not using the other statement alone.
- b) The number of Karan's children can be determined using either statement alone.
- c) The number of Karan's children can be determined using both the statements together but not using either statement alone
- d) The number of Karan's children cannot be determined even by using both the statements together.

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question

31

Time spent / Accuracy Analysis

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	119
% of students who attempted this question	16.68
% of students who got the question right of those who attempted	50.3

[Video Solution](#)

Text Solution

Let the number of sons and daughters of Karan be s and d respectively.

From I, $d = 2(s - 1)$.

From II, $s \geq (d - 1)$

From I and II, $s \geq 2(s - 1) - 1$

$\Rightarrow s \leq 3$.

As $s = 3$, $d = 4$ and $s = 2$, $d = 2$ are the possibilities, even when I and II are combined,
we cannot answer the question.

Choice (D)

undefined

Q33. DIRECTIONS for questions 33 and 34: Type in your answer in the input box provided below the question.

A student took five papers in an examination, where the maximum marks were the same for each paper. His marks in these papers were in the ratio 5 : 6 : 7 : 8 : 9. In all the papers put together, he got 70% of the maximum marks. The number of papers in which he got more than 60% is

Your Answer:0 □ Your answer is incorrect

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	E
Avg. time spent on this question by students who got this question right	125
% of students who attempted this question	24.89
% of students who got the question right of those who attempted	79.41

[Video Solution](#)

Text Solution

The marks obtained by the student and the maximum marks in the 5 subjects and the total are tabulated below.

Subject	1	2	3	4	5	Total
Marks Obtained	5x	6x	7x	8x	9x	35x
Maximum Marks	M	M	M	M	M	5M

$$\text{Given } \frac{35x}{5M} = \frac{70}{100} \Rightarrow \frac{x}{M} = \frac{1}{10}$$

∴ The percentage marks in the 5 subjects are 50%, 60%, 70%, 80% and 90%. The number of subjects in which the student got more than 60% is 3. Ans: (3)

undefined

Q34. DIRECTIONS for questions 33 and 34: Type in your answer in the input box provided below the question.

A number when successively divided by 5, 6, 7 leaves remainders of 2, 5, 1 respectively. What is the remainder when the same number is divided by 210?

Your Answer:57 Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	50
Avg. time spent on this question by all students	156
Difficulty Level	E
Avg. time spent on this question by students who got this question right	155
% of students who attempted this question	19.74
% of students who got the question right of those who attempted	55.68

[Video Solution](#)

[Text Solution](#)

The number will be of the form

$$(\text{LCM}) \text{ of } (5, 6, 7) + \{5[(6(1) + 5] + 2\} = 210k + 57$$

\therefore The number when divided by 210, gives a remainder of 57.

Ans: (57)