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CAT 2017 (SLOT 1)

Questions and Answers

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READING COMPREHENSION

Question No. : 1 - 6

Understanding where you are in the world is a basic survival skill, which is why we, like most species come hard-wired with specialized brain areas to create congnitive maps of our surroundings. Where humans are unique, though, with the possible exception of honeybees, is that we try to communicate this understanding the world with others. We have along history of doing this by drawing maps – the earliest version yet discovered were scrawled on cave walls 14,000 years ago. Human cultures have been drawing them on stone tablets, papyrus, paper and now computer screens ever since.

Given such a long history of human map-making, it perhaps surprising that is only within the last few hundred years that north has been consistently considered to be at the top. In fact, for much of human history, north almost never appeared at the top, according to Jerry Brotton, a map historian… "North was rarely put at the top for the simple fact that north is where darkness comes from," he says. "West is also very unlikely o be put at the top because west is where the sun disappears."

Confusingly, early Chinese maps seem to buck this trend. But, Brotton, says, even though they did have compasses at the time, that isn't the reason that they placed north at the top. Early Chinese compasses were actually oriented to point south, which was considered to be more desirable than deepest darkest north. But in Chinese maps, the emperor, who lived in the north of the country was always put at the top of the map, with everyone else, his loyal subjects, looking up towards him. "In Chinese culture the Emperor looks south because it's where the winds come from, it's a good direction. North is not very good but you are in a position of the subjection to the emperor, so you look up to him," says Brotton.

Given that each culture has a very different idea of who, or what, they should look upto it's perhaps not surprising that there is very little consistency in which way early maps pointed. In ancient Egyptian times the top of the world was east, the position of sunrise. Early Islamic maps favoured south at the top because most of the early Muslim cultures were north of Mecca, so they imagined looking up (south) towards it Christian maps from the same era (called Mappa Mundi) put east at the top, towards the Garden of Eden and with Jerusalem in the centre.

So when did everyone get together and decide that north was the top? It's tempting to put it down to European explorers like Christopher Columbus and Ferdinand Megellan who were navigating by the North Star. But Brotton argues that these early explorers didn't think of the world like that at all. "When Columbus describes the world it is in accordance with east being at the top," he says "Columbus says he is going towards paradise, so his mentality is from a medieval mappa mundi." We've got to remember, adds Brotton, that at the time, "no one knows what they are doing and where they are going."

Q1) Which one of the following best describes what the passage is trying to do?

A) It questions on explanation about how maps are designed.
B) It corrects a misconception about the way maps are designed.
C) It critiques a methodology used to create maps
D) It explores some myths about maps

Answer: Option (B)

Detailed Solution: https://www.handakafunda.com/cat-2017/reading-comprehension-understanding-where-you-are-in-the-world/

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Early maps did NOT put north at the top for all the following reasons EXCEPT
A) North was the source of darkness
B) South was favoured by some emperors.
C) East and south were more important for religious reasons for some civilisations
D) East was considered by some civilisations to be a more positive direction

Answer: Option (B)

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Q3) Understanding where you are in the world is a basic survival skill, which is why we, like most species come hard-wired with specialized brain areas to create congnitive maps of our surroundings. Where humans are unique, though, with the possible exception of honeybees, is that we try to communicate this understanding the world with others. We have along history of doing this by drawing maps – the earliest version yet discovered were scrawled on cave walls 14,000 years ago. Human cultures have been drawing them on stone tablets, papyrus, paper and now computer screens ever since.

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Q3) According to the passage, early Chinese maps placed north at the top because Options:

A) the Chinese invented the compass and were aware of magnetic north
B) they wanted to show respect to the emperor.
C) the Chinese emperor appreciated the winds from the south.
D) north was considered the most desirable direction.
Option (B)

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Q4) It can be inferred from the passage that European explorers like Columbus and Megellan Options:
A) set the precedent for north-up maps.
B) navigated by the compass.
C) used an eastward orientation for religious reasons.
D) navigated with the help of early maps

Option (C)

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Q5) Which one of the following about the northern orientation of modern maps is asserted in the passage?
A) The biggest contributory factor was the understanding of magnetic north
B) The biggest contributory factor was the role of European explorers
C) The biggest contributory factor was the influence of Christian maps
D) The biggest contributory factor is not stated in the passage
Option (D)

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Q6) The role of natural phenomena in influencing map-making conventions is seen most clearly in
A) early Egyptian maps
B) early Islamic maps
C) early Chinese maps
D) early Christian maps
Option (A)

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Question 7 – 12 (Reading Comprehension)

I used a smartphone GPS to find my way through the cobblestoned maze of Geneva's Old Town, in search of a handmade machine that changed the world more than any other invention. Near a 13th-century cathedral in this Swiss city on the shores of a lovely lake, I found what I was looking for: a Gutenberg printing press. "This was the Internet of its day — at least as influential as the iPhone," said Gabriel de Montmollin, the director of the Museum of the Reformation, toying with the replica of Johann Gutenberg's great invention. [Before the invention of the printing press] it used to take four monks...up to a year to produce a single book. With the advance in movable type in 15th-century Europe, one press could crank out 3,000 pages a day. Before long, average people could travel to places that used to be unknown to them — with maps! Medical information passed more freely and quickly, diminishing the sway of quacks...The printing press offered the prospect that tyrants would never be able to kill a book or suppress an idea. Gutenberg's brainchild broke the monopoly that clerics had on scripture. And later, stirred by pamphlets from a version of that same press, the American colonies rose up against a king and gave birth to a nation.

So, a question in the summer of this 10th anniversary of the iPhone: has the device that is perhaps the most revolutionary of all time given us a single magnificent idea? Nearly every advancement of the written word through new technology has also advanced humankind. Sure, you can say the iPhone changed everything. By putting the world's recorded knowledge in the palm of a hand, it revolutionized work, dining, travel and socializing. It made us more narcissistic — here's more of me doing cool stuff! — and it unleashed an army of awful trolls. We no longer have the patience to sit through a baseball game without

that reach to the pocket. And one more casualty of Apple selling more than a billion phones in a decade's time: daydreaming has become a lost art.

For all of that, I'm still waiting to see if the iPhone can do what the printing press did for religion and democracy...the Geneva museum makes a strong case that the printing press opened more minds than anything else...it's hard to imagine the French or American revolutions without those enlightened voices in print...

Not long after Steve Jobs introduced his iPhone, he said the bound book was probably headed for history's attic. Not so fast. After a period of rapid growth in e-books, something closer to the medium for Chaucer's volumes has made a great comeback.

The hope of the iPhone, and the Internet in general, was that it would free people in closed societies. But the failure of the Arab Spring, and the continued suppression of ideas in North Korea, China and Iran, has not borne that out... The iPhone is still young. It has certainly been "one of the most important, world-changing and successful products in history, “ as Apple CEO. Tim Cook said. But I'm not sure if the world changed for the better with the iPhone — as it did with the printing press — or merely, changed.

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Q7) The printing press has been likened to the Internet for which one of the following reasons?
A) It enabled rapid access to new information and the sharing of new ideas
B) It represented new and revolutionary technology compared to the past
C) It encouraged reading among people by giving them access to thousands of books
D) It gave people access to pamphlets and literature in several languages
Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/reading-comprehension-passage-i-used-a-smartphone-gps-to-find-my-way-through-the-cobblestoned-maze-of-genevas-old-town/

Q8) I used a smartphone GPS to find my way through the cobblestoned maze of Geneva's Old Town, in search of a handmade machine that changed the world more than any other invention. Near a 13th-century cathedral in this Swiss city on the shores of a lovely lake, I found what I was looking for: a Gutenberg printing press. "This was the Internet of its day — at least as influential as the iPhone," said Gabriel de Montmollin, the director of the Museum of the Reformation, toying with the replica of Johann Gutenberg's great invention. [Before the invention of the printing press] it used to take four monks...up to a year to produce a single book. With the advance in movable type in 15th-century Europe, one press could crank out 3,000 pages a day. Before long, average people could travel to places that used to be unknown to them — with maps! Medical information passed more freely and quickly, diminishing the sway of quacks...The printing press offered the prospect that tyrants would never be able to kill a book or suppress an idea. Gutenberg's brainchild broke the monopoly that clerics had on scripture. And later, stirred by pamphlets from a version of that same press, the American colonies rose up against a king and gave birth to a nation.

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According to the passage, the invention of the printing press did all of the following EXCEPT
A) Promoted the spread of enlightened political views across countries
B) Gave people direct access to authentic medical information and religious texts
C) shortened the time taken to produce books and pamphlets.
D) enabled people to perform various tasks simultaneously.
Option (D)

Detailed Solution: https://www.handakafunda.com/cat-2017/reading-comprehension-passage-i-used-a-smartphone-gps-to-find-my-way-through-the-cobblestoned-maze-of-genevas-old-town/

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Steve Jobs predicted which one'of the following with the introduction of the iPhone?
A) People would switch from reading on the Internet to reading on their iPhones.
B) People would lose interest in historical and traditional classics.
C) Reading printed books would become a thing of the past.
D) The production of e-books would eventually fall.
Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/reading-comprehension-passage-i-used-a-smartphone-gps-to-find-my-way-through-the-cobblestoned-maze-of-genevas-old-town/

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Q10) "I'm still waiting to see if the iPhone can do what the printing press did for religion and democracy." The author uses which one of the following to indicate his uncertainty?
A) The rise of religious groups in many parts of the world.
B) The expansion in trolling and narcissism among users of the Internet
C) The continued suppression of free speech in closed societies
D) The decline in reading habits among those who use the device
Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/reading-comprehension-passage-i-used-a-smartphone-gps-to-find-my-way-through-the-cobblestoned-maze-of-genevas-old-town/

Q11) I used a smartphone GPS to find my way through the cobblestoned maze of Geneva's Old Town, in search of a handmade machine that changed the world more than any other invention. Near a 13th-century cathedral in this Swiss city on the shores of a lovely lake, I found what I was looking for: a Gutenberg printing press. "This was the Internet of its day — at least as influential as the iPhone," said Gabriel de Montmollin, the director of the Museum of the Reformation, toying with the replica of Johann Gutenberg's great invention. [Before the invention of the printing press] it used to take four monks...up to a year to produce a single book. With the advance in movable type in 15th-century Europe, one press could crank out 3,000 pages a day. Before long, average people could travel to places that used to be unknown to them — with maps! Medical information passed more freely and quickly, diminishing the sway of quacks...The printing press offered the prospect that tyrants would never be able to kill a book or suppress an idea. Gutenberg's brainchild broke the monopoly that clerics had on scripture. And later, stirred by pamphlets from a version of that same press, the American colonies rose up against a king and gave birth to a nation.

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So, a question in the summer of this 10th anniversary of the iPhone: has the device that is perhaps the most revolutionary of all time given us a single magnificent idea? Nearly every advancement of the written word through new technology has also advanced humankind. Sure, you can say the iPhone changed everything. By putting the world's recorded knowledge in the palm of a hand, it revolutionized work, dining, travel and socializing. It made us more narcissistic — here's more of me doing cool stuff! — and it unleashed an army of awful trolls. We no longer have the patience to sit through a baseball game without that reach to the pocket. And one more casualty of Apple selling more than a billion phones in a decade's time: daydreaming has become a lost art.

For all of that, I'm still waiting to see if the iPhone can do what the printing press did for religion and democracy...the Geneva museum makes a strong case that the printing press opened more minds than anything else...it's hard to imagine the French or American revolutions without those enlightened voices in print...

Not long after Steve Jobs introduced his iPhone, he said the bound book was probably headed for history's attic. Not so fast. After a period of rapid growth in e-books, something closer to the medium for Chaucer's volumes has made a great comeback.

The hope of the iPhone, and the Internet in general, was that it would free people in closed societies. But the failure of the Arab Spring, and the continued suppression of ideas in North Korea, China and Iran, has not borne that out... The iPhone is still young. It has certainly been "one of the most important, world-changing and successful products in history, “ as Apple CEO. Tim Cook said. But I'm not sure if the world changed for the better with the iPhone — as it did with the printing press — or merely, changed.

Q11) The author attributes the French and American revolutions to the invention of the printing press because

A) maps enabled large numbers of Europeans to travel and settle in the American continent.

B) the rapid spread of information exposed people to new ideas on freedom and democracy

C) it encouraged religious freedom among the people by destroying the monopoly of religious leaders on the scriptures.

D) it made available revolutionary strategies and opinions to the people.

Option (B)

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Q12) The main conclusion of the passage is that the new technology has
A) some advantages, but these are outweighed by its disadvantages.
B) so far not proved as successful as the printing press in opening people's minds
C) been disappointing because it has changed society too rapidly
D) been more wasteful than the printing press because people spend more time daydreaming or surfing.
Option (B)

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Question 13 – 18 (Reading Comprehension)

This year alone, more than 8,600 stores could close, according to industry estimates, many of them the brand -name anchor outlets that real estate developers once stumbled over themselves to court. Already there have been 5,300 retail closings this year... Sears Holdings—which owns Kmart—said in March that there's "substantial doubt" it can stay in business altogether, and will close 300 stores this year. So far this year, nine national retail chains have filed for bankruptcy.

Local jobs are a major casualty of what analysts are calling, with only a hint of hyperbole, the retail apocalypse. Since 2002, department stores have lost 448,000 jobs, a 25% decline, while the number of store closures this year is on pace to surpass the worst depths of the Great Recession. The growth of online retailers, meanwhile, has failed to offset those losses, with the ecommerce sector adding just 178,000 jobs over the past 15 years. Some of those jobs can be found in the massive distribution centers Amazon has opened across the country, often not too far from malls the company helped shutter.

But those are workplaces, not gathering places. The mall is both. And in the 61 years since the first enclosed one opened in suburban Minneapolis, the shopping mall has been where a huge swath of middle-class America went for far more than shopping. It was the home of first jobs and blind dates, the place for family photos and ear piercings, where goths and grandmothers could somehow walk through the same doors and find something they all liked. Sure, the food was lousy for you and the oceans of parking lots encouraged car-heavy development, something now scorned by contemporary planners. But for better or worse, the mall has been America's public square for the last 60 years.

So what happens when it disappears?

Think of your mall. Or think of the one you went to as a kid. Think of the perfume clouds in the department stores. The fountains splashing below the skylights. The cinnamon wafting from the food court. As far back as ancient Greece, societies have congregated around a central marketplace. In medieval Europe, they were outside cathedrals. For half of the 20th century and almost 20 years into the new one, much of America has found their agora on the terrazzo between Orange Julius and Sbarro, Waldenbooks and the Gap, Sunglass Hut and Hot Topic.

That mall was an ecosystem unto itself, a combination of community and commercialism peddling everything you needed and everything you didn't: Magic Eye posters, wind catchers. Air Jordans. ...

A growing number of Americans, however, don't see the need to go to any Macy's at all. Our digital lives are frictionless and ruthlessly efficient, with retail and romance available at a

click. Malls were designed for leisure, abundance, ambling. You parked and planned to spend some time. Today, much of that time has been given over to busier lives and second jobs and apps that let you swipe right instead of haunt the food court. ' Malls, says Harvard business professor Leonard Schlesinger, "were built for patterns of social interaction that increasingly don't exist."

Q13) The central idea of this passage is that:
A) the closure of mails has affected the economic and social life of middle-class America
B) the advantages of malls outweigh their disadvantages.
C) malls used to perform a social function that has been lost
D) malls are closing down because people have found alternate ways to shop.
Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/reading-comprehension-passage-this-year-alone-more-than-8600-stores/

Q14) This year alone, more than 8,600 stores could close, according to industry estimates, many of them the brand -name anchor outlets that real estate developers once stumbled over themselves to court. Already there have been 5,300 retail closings this year... Sears Holdings—which owns Kmart—said in March that there's "substantial doubt" it can stay in business altogether, and will close 300 stores this year. So far this year, nine national retail chains have filed for bankruptcy.

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Q14) Why does the author say in paragraph 2, 'the massive distribution centers Amazon has opened across the country, often not too far from malls the company helped shutter'?
A) To highlight the irony of the situation
B) To indicate that mails and distribution centres are located in the same area
C) To show that Amazon is helping certain brands go online
D) To indicate that the shopping habits of the American middle class have changed.

Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/reading-comprehension-passage-this-year-alone-more-than-8600-stores/

Q15) This year alone, more than 8,600 stores could close, according to industry estimates, many of them the brand -name anchor outlets that real estate developers once stumbled over themselves to court. Already there have been 5,300 retail closings this year... Sears Holdings—which owns Kmart—said in March that there's "substantial doubt" it can stay in business altogether, and will close 300 stores this year. So far this year, nine national retail chains have filed for bankruptcy.

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Q15) In paragraph 1, the phrase "real estate developers once stumbled over themselves to court" suggests that they
A) took brand-name anchor outlets to court
B) no longer pursue brand-name anchor outlets
C) collaborated with one another to get brand-name anchor outlets
D) were eager to get brand-name anchor outlets to set up shop m their mall

Option (B)

Detailed Solution: https://www.handakafunda.com/cat-2017/reading-comprehension-passage-this-year-alone-more-than-8600-stores/

Q16) This year alone, more than 8,600 stores could close, according to industry estimates, many of them the brand -name anchor outlets that real estate developers once stumbled over themselves to court. Already there have been 5,300 retail closings this year... Sears Holdings—which owns Kmart—said in March that there's "substantial doubt" it can stay in business altogether, and will close 300 stores this year. So far this year, nine national retail chains have filed for bankruptcy.

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Q16) The author calls the mall an ecosystem unto itself because
A) people of all ages and from all walks of life went there
B) people could shop as well as eat in one place
C) it was a commercial space as well as a gathering place.
D) it sold things that were needed as well as those that were not.
Option (C)

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Q17) Why does the author say that the mall has been America's public square?
A) Malls did not bar anybody from entering the space
B) Malls were a great place to shop for a huge section of the middle class
C) Malls were a hangout place where families grew close to each other
D) Malls were a great place for everyone to gather and interact.
Option (D)

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Q18) The author describes 'Perfume clouds in the department stores' in order to
A) evoke memories by painting a. picture of mails
B) describe the smells and sights of mails
C) emphasise that all brands were available under one roof.
D) show that malls smelt good because of the various stores and food court.
Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/reading-comprehension-passage-this-year-alone-more-than-8600-stores/

Question 19 – 21 (Reading Comprehension)
Scientists have long recognized the incredible diversity within a species. But they thought it reflected evolutionary changes that unfolded imperceptibly, over millions of years. That divergence between populations within a species was enforced, according to Ernst Mayr, the great evolutionary biologist of the 1940s, when a population was separated from the rest of the species by a mountain range or a desert, preventing breeding across the divide over geologic scales of time. Without the separation, gene flow was relentless. But as the separation persisted, the isolated population grew apart and speciation occurred.

In the mid-1960s, the biologist Paul Ehrlich - author of The Population Bomb (1968) - and his Stanford University colleague Peter Raven challenged Mayr's ideas about speciation. They had studied checkerspot butterflies living in the Jasper Ridge Biological Preserve in California, and it soon became clear that they were not examining a single population. Through years of capturing, marking and then recapturing the butterflies, they were able to prove that within the population, spread over just 50 acres of suitable checkerspot habitat, there were three groups that rarely interacted despite their very close proximity.

Among other ideas, Ehrlich and Raven argued in a now classic paper from 1969 that gene flow was not as predictable and ubiquitous as Mayr and his cohort maintained, and thus evolutionary divergence between neighbouring groups in a population was probably common. They also asserted that isolation and gene flow were less important to evolutionary

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divergence than natural selection (when factors such as mate choice, weather, disease or predation cause better-adapted individuals to survive and pass on their successful genetic traits). For example, Ehrlich and Raven suggested that, without the force of natural selection, an isolated population would remain unchanged and that, in other scenarios, natural selection could be strong enough to overpower gene flow…

Q19) Which of the following best sums up Ehrlich and Raven's argument in their classic 1969 paper?
A) Ernst Mayr was wrong in identifying physical separation as the cause of species diversity
B) Checkerspot butterflies in the 50-acre Jasper Ridge Preserve formed three groups that rarely interacted with each other
C) While a factor, isolation was not as important to speciation as natural selection
D) Gene flow is less common and more erratic than Mayr and his colleagues claimed.

Option (C)

Detailed Solutions: https://www.handakafunda.com/cat-2017/reading-comprehension-passage-4-scientists-have-long-recognized/

Option (C) is the correct answer.

Q20) Scientists have long recognised the incredible diversity within a species. But they thought it reflected evolutionary changes that unfolded imperceptibly, over millions of years. That divergence between populations within a species was enforced, according to Ernst Mayr, the great evolutionary biologist of the 1940s, when a population was separated from the rest of the species by a mountain range or a desert, preventing breeding across the divide over geologic scales of time. Without the separation, gene flow was relentless. But as the separation persisted, the isolated population grew apart and speciation occurred.

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Among other ideas, Ehrlich and Raven argued in a now classic paper from 1969 that gene flow was not as predictable and ubiquitous as Mayr and his cohort maintained, and thus evolutionary divergence between neighbouring groups in a population was probably common. They also asserted that isolation and gene flow were less important to evolutionary divergence than natural selection (when factors such as mate choice, weather, disease or predation cause better-adapted individuals to survive and pass on their successful genetic traits). For example, Ehrlich and Raven suggested that, without the force of natural selection, an isolated population would remain unchanged and that, in other scenarios, natural selection could be strong enough to overpower gene flow…

Q20) All of the following statements are true according to the passage EXCEPT
A) Gene flow contributes to evolutionary divergence.

B) The Population Bomb questioned dominant ideas about species diversity

C) Evolutionary changes unfold imperceptibly over time.
D) Checkerspot butterflies are known to exhibit speciation while living in close proximity

Option (B)

Detailed Solutions: https://www.handakafunda.com/cat-2017/reading-comprehension-passage-4-scientists-have-long-recognized/

Q21) Scientists have long recognised the incredible diversity within a species. But they thought it reflected evolutionary changes that unfolded imperceptibly, over millions of years. That divergence between populations within a species was enforced, according to Ernst Mayr, the great evolutionary biologist of the 1940s, when a population was separated from the rest of the species by a mountain range or a desert, preventing breeding across the divide over geologic scales of time. Without the separation, gene flow was relentless. But as the separation persisted, the isolated population grew apart and speciation occurred.

In the mid-1960s, the biologist Paul Ehrlich - author of The Population Bomb (1968) - and his Stanford University colleague Peter Raven challenged Mayr's ideas about speciation. They had studied checkerspot butterflies living in the Jasper Ridge Biological Preserve in California, and it soon became clear that they were not examining a single population. Through years of capturing, marking and then recapturing the butterflies, they were able to prove that within the population, spread over just 50 acres of suitable checkerspot habitat, there were three groups that rarely interacted despite their very close proximity.

Among other ideas, Ehrlich and Raven argued in a now classic paper from 1969 that gene flow was not as predictable and ubiquitous as Mayr and his cohort maintained, and thus evolutionary divergence between neighbouring groups in a population was probably common. They also asserted that isolation and gene flow were less important to evolutionary divergence than natural selection (when factors such as mate choice, weather, disease or predation cause better-adapted individuals to survive and pass on their successful genetic traits). For example, Ehrlich and Raven suggested that, without the force of natural selection, an isolated population would remain unchanged and that, in other scenarios, natural selection could be strong enough to overpower gene flow…

Q21) The author discusses Mayr, Ehrlich and Raven to demonstrate that
A) evolution is a sensitive and controversial topic
B) Ehrlich and Raven's ideas about evolutionary divergence are widely accepted by scientists.
C) the causes of speciation are debated by scientists
D) checkerspot butterflies offer the best example of Ehrlich and Raven's ideas about speciation
Option (C)

Detailed Solutions: https://www.handakafunda.com/cat-2017/reading-comprehension-passage-4-scientists-have-long-recognized/

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Questions 22 – 24 (Reading Comprehension)

Do sports mega events like the summer Olympic Games benefit the host city economically? It depends, but the prospects are less than rosy. The trick is converting...several billion dollars in operating costs during the 17-day fiesta of the Games into a basis for long-term economic returns. These days, the summer Olympic Games themselves generate total revenue of $4 billion to $5 billion, but the lion's share of this goes to the International Olympics Committee, the National Olympics Committees and the International Sports Federations. Any economic benefit would have to flow from the value of the Games as an advertisement for the city, the new transportation and communications infrastructure that was created for the Games, or the ongoing use of the new facilities.

Evidence suggests that the advertising effect is far from certain. The infrastructure benefit depends on the initial condition of the city and the effectiveness of the planning. The facilities benefit is dubious at best for buildings such as velodromes or natatoriums and problematic for 100,000-seat Olympic stadiums. The latter require a conversion plan for future use, the former are usually doomed to near vacancy. Hosting the summer Games generally requires 30-plus sports venues and dozens of training centers. Today, the Bird's Nest in Beijing sits virtually empty, while the Olympic Stadium in Sydney costs some $30 million a year to operate.

Part of the problem is that Olympics planning takes place in a frenzied and time-pressured atmosphere of intense competition with the other prospective host cities — not optimal conditions for contemplating the future shape of an urban landscape. Another part of the problem is that urban land is generally scarce and growing scarcer. The new facilities often stand for decades or longer. Even if they have future use, are they the best use of precious urban real estate?

Further, cities must consider the human cost. Residential areas often are razed and citizens relocated (without adequate preparation or compensation). Life is made more hectic and congested. There are, after all, other productive uses that can be made of vanishing fiscal resources.

Q22) The central point in the first paragraph is that the economic benefits of the Olympic Games

A) are shared equally among the three organising committees
B) accrue mostly through revenue from advertisements and ticket sales
C) accrue to host cities, if at all, only in the long term
D) are usually eroded by expenditure incurred by the host city

Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/reading-comprehension-passage-do-sports-mega-events/

Q23) Do sports mega events like the summer Olympic Games benefit the host city economically? It depends, but the prospects are less than rosy. The trick is converting...several billion dollars in operating costs during the 17-day fiesta of the Games into a basis for long-term economic returns. These days, the summer Olympic Games themselves generate total revenue of $4 billion to $5 billion, but the lion's share of this goes

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to the International Olympics Committee, the National Olympics Committees and the International Sports Federations. Any economic benefit would have to flow from the value of the Games as an advertisement for the city, the new transportation and communications infrastructure that was created for the Games, or the ongoing use of the new facilities.

Evidence suggests that the advertising effect is far from certain. The infrastructure benefit depends on the initial condition of the city and the effectiveness of the planning. The facilities benefit is dubious at best for buildings such as velodromes or natatoriums and problematic for 100,000-seat Olympic stadiums. The latter require a conversion plan for future use, the former are usually doomed to near vacancy. Hosting the summer Games generally requires 30-plus sports venues and dozens of training centers. Today, the Bird's Nest in Beijing sits virtually empty, while the Olympic Stadium in Sydney costs some $30 million a year to operate.

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Further, cities must consider the human cost. Residential areas often are razed and citizens relocated (without adequate preparation or compensation). Life is made more hectic and congested. There are, after all, other productive uses that can be made of vanishing fiscal resources.

Q23) Sports facilities built for the Olympics are not fully utilised after the Games are over because
A) their scale and the costs of operating them are large
B) their location away from the city centre usually limits easy access.
C) the authorities do not adapt them to local conditions.
D) they become outdated having being built with little planning and under time pressure
Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/reading-comprehension-passage-do-sports-mega-events/

Q24) Do sports mega events like the summer Olympic Games benefit the host city economically? It depends, but the prospects are less than rosy. The trick is converting...several billion dollars in operating costs during the 17-day fiesta of the Games into a basis for long-term economic returns. These days, the summer Olympic Games themselves generate total revenue of $4 billion to $5 billion, but the lion's share of this goes to the International Olympics Committee, the National Olympics Committees and the International Sports Federations. Any economic benefit would have to flow from the value of the Games as an advertisement for the city, the new transportation and communications infrastructure that was created for the Games, or the ongoing use of the new facilities.

Evidence suggests that the advertising effect is far from certain. The infrastructure benefit depends on the initial condition of the city and the effectiveness of the planning. The facilities

benefit is dubious at best for buildings such as velodromes or natatoriums and problematic for 100,000-seat Olympic stadiums. The latter require a conversion plan for future use, the former are usually doomed to near vacancy. Hosting the summer Games generally requires 30-plus sports venues and dozens of training centers. Today, the Bird's Nest in Beijing sits virtually empty, while the Olympic Stadium in Sydney costs some $30 million a year to operate.

Part of the problem is that Olympics planning takes place in a frenzied and time-pressured atmosphere of intense competition with the other prospective host cities — not optimal conditions for contemplating the future shape of an urban landscape. Another part of the problem is that urban land is generally scarce and growing scarcer. The new facilities often stand for decades or longer. Even if they have future use, are they the best use of precious urban real estate?

Further, cities must consider the human cost. Residential areas often are razed and citizens relocated (without adequate preparation or compensation). Life is made more hectic and congested. There are, after all, other productive uses that can be made of vanishing fiscal resources.

Q24) The author feels that the Games place a burden on the host city for all of the following reasons EXCEPT that
A) they divert scarce urban land from more productive uses
B) they involve the demolition of residential structures to accommodate sports facilities and infrastructure
C) the finances used to fund the Games could be better used for other purposes.
D) the influx of visitors during the Games places a huge strain on the urban infrastructure.
Option (D)

Detailed Solution: https://www.handakafunda.com/cat-2017/reading-comprehension-passage-do-sports-mega-events/

VERBAL ABILITY

SUMMARY
Question No. : 25 (Summary)
To me, a "classic" means precisely the opposite of what my predecessors understood: a work is classical by reason of its resistance to contemporaneity and supposed universality, by reason of its capacity to indicate human particularity and difference in that past epoch. The classic is not what tells me about shared humanity—or, more truthfully put, what lets me recognize myself as already present in the past, what nourishes in me the illusion that everything has been like me and has existed only to prepare the way for me. Instead, the classic is what gives access to radically different forms of human consciousness for any given generation of readers, and thereby expands for them the range of possibilities of what it means to be a human being.

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A) A classic is able to focus on the contemporary human condition and a unified experience of human consciousness.
B) A classical work seeks to resist particularity and temporal difference even as it focuses on a common humanity
C) A classic is a work exploring the new, going beyond the universal, the contemporary, and the notion of a unified human consciousness
D) A classic is a work that provides access to a universal experience of the human race as opposed to radically different forms of human consciousness

Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/verbal-ability-summary-to-me-a-classic-means/

Question No. : 26 (Summary)

A translator of literary works needs a secure hold upon the two languages involved, supported by a good measure of familiarity with the two cultures. For an Indian translating works in an Indian language into English, finding satisfactory equivalents in a generalized western culture of practices and symbols in the original would be less difficult than gaining fluent control of contemporary English. When a westerner works on texts in Indian languages the interpretation of cultural elements will be the major challenge, rather than control over the grammar and essential vocabulary of the language concerned. It is much easier to remedy lapses in language in a text translated into English, than flaws of content. Since it is easier for an Indian to learn the English language than it is for a Briton or American to comprehend Indian culture, translations of Indian texts is better left to Indians.
A) While translating, the Indian and the westerner face the same challenges but they have different skill profiles and the former has the advantage.
B) As preserving cultural meanings is the essence of literary translation Indians' knowledge of the local culture outweighs the initial disadvantage of lower fluency in English.
C) Indian translators should translate Indian texts into English as their work is less likely to pose cultural problems which are harder to address than the quality of language.
D) Westerners might be good at gaining reasonable fluency in new languages, but as understanding the culture reflected in literature is crucial, Indians remain better placed.

Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/verbal-ability-summary-a-translator-of-literary-works/

Question No. : 27 (Summary)

For each of the past three years, temperatures have hit peaks not seen since the birth of meteorology, and probably not for more than 110,000 years. The amount of carbon dioxide in the air is at its highest level in 4 million years. This does not cause storms like Harvey - there have always been storms and hurricanes along the Gulf of Mexico - but it makes them

wetter and more powerful. As the seas warm, they evaporate more easily and provide

energy to storm fronts. As the air above them warms, it holds more water vapor. For every half a degree Celsius in warming, there is about a 3% increase in atmospheric moisture content. Scientists call this the Clausius-Clapeyron equation. This means the skies fill more quickly and have more to dump. The storm surge was greater because sea levels have risen 20 cm as a result of more than 100 years of human -related global warming which has melted glaciers and thermally expanded the volume of sea water.

A) The storm Harvey is one of the regular, annual ones from the Gulf of Mexico; global warming and Harvey are unrelated phenomena.
B) Global warming does not breed storms but makes them more destructive; the Clausius-Clapeyron equation, though it predicts potential increase in atmospheric moisture content, cannot predict the scale of damage storms might wreck.
C) Global warming melts glaciers, resulting in sea water volume expansion; this enables more water vapor to fill the air above faster. Thus, modern storms contain more destructive energy.
D) It is naive to think that rising sea levels and the force of tropical storms are unrelated; Harvey was destructive as global warming has armed it with more moisture content, but this may not be true of all storms.
Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/verbal-ability-summary-for-each-of-the-past-three-years/

PARAJUMBLES
Question No. : 28 (Parajumbles)
1. The process of handing down implies not a passive transfer, but some contestation in defining what exactly is to be handed down.
2. Wherever Western scholars have worked on the Indian past, the selection is even more apparent and the inventing of a tradition much more recognizable.
3. Every generation selects what it requires from the past and makes its innovations, some more than others.
4. It is now a truism to say that traditions are not handed down unchanged, but are invented.
5. Just as life has death as its opposite, so is tradition by default the opposite of innovation.

A) 54132
B) 12345
C) 23415
D) 34215
Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/verbal-ability-parajumble-the-process-of-handing-down/

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Question No. : 29 (Parajumbles)

1. Scientists have for the first time managed to edit genes in a human embryo to repair a genetic mutation, fuelling hopes that such procedures may one day be available outside laboratory conditions.
2. The cardiac disease causes sudden death in otherwise healthy young athletes and affects about one in 500 people overall.
3. Correcting the mutation in the gene would not only ensure that the child is healthy but also prevents transmission of the mutation to future generations.
4. It is caused by a mutation in a particular gene and a child will suffer from the condition even if it inherits only one copy of the mutated gene.
5. In results announced in Nature this week, scientists fixed a mutation that thickens the heart muscle, a condition called hypertrophic cardiomyopathy.

A) 21453
B) 15243
C) 54321
D) 34215
Option (B)

Detailed Answer: https://www.handakafunda.com/cat-2017/verbal-ability-parajumble-scientists-have-for-the-first-time/

Question No. : 30 (Parajumbles)
1. The study suggests that the disease did not spread with such intensity, but that it may have driven human migrations across Europe and Asia.
2. The oldest sample came from an individual who lived in southeast Russia about 5,000 years ago.
3. The ages of the skeletons correspond to a time of mass exodus from today's Russia and Ukraine into Western Europe and central Asia, suggesting that a pandemic could have driven these migrations.
4. In the analysis of fragments of DNA from 101 Bronze Age skeletons for sequences from Yersinia pestis, the bacterium that causes the disease, seven tested positive.
5. DNA from Bronze Age human skeletons indicate that the black plague could have emerged as early as 3,000 BCE, long before the epidemic that swept through Europe in the mid-1300s.

A) 51432
B) 12543
C) 54123
D) 32415
Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/verbal-ability-parajumble-the-study-suggests-that-the-disease/

Question No. : 31 (Parajumbles)

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1. This visual turn in social media has merely accentuated this announcing instinct of ours, enabling us with easy-to-create, easy-to-share, easy-to-store and easy-to-consume platforms, gadgets and apps.
2. There is absolutely nothing new about us framing the vision of who we are or what we want, visually or otherwise, in our Facebook page, for example.
3. Turning the pages of most family albums, which belong to a period well before the digital dissemination of self-created and self-curated moments and images, would reconfirm the basic instinct of documenting our presence in a particular space, on a significant occasion, with others who matter.
4. We are empowered to book our faces and act as celebrities within the confinement of our respective friend lists, and communicate our activities, companionship and locations with minimal clicks and touches.
5. What is unprecedented is not the desire to put out news feeds related to the self, but the ease with which this broadcast operation can now be executed, often provoking (un)anticipated responses from beyond one's immediate location.

A) 32145
B) 54213
C) 32415
D) 32541
Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/verbal-ability-parajumble-this-visual-turn-in-social-media/

ODD ONE OUT
Question No. : 32 (Odd One Out)
1. People who study children's language spend a lot of time watching how babies react to the speech they hear around them.
2. They make films of adults and babies interacting, and examine them very carefully to see whether the babies show any signs of understanding what the adults say.
3. They believe that babies begin to react to language from the very moment they are born.
4. Sometimes the signs are very subtle - slight movements of the baby's eyes or the head or the hands.
5. You'd never notice them if you were just sitting with the child, but by watching a recording over and over, you can spot them.

A) 2
B) 3
C) 4
D) 1
Option (B)

Detailed Solution: https://www.handakafunda.com/cat-2017/verbal-ability-odd-one-out-people-who-study-childrens-language/

Question No. : 33 (Odd One Out)

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1. Neuroscientists have just begun studying exercise's impact within brain cells — on the genes themselves.
2. Even there, in the roots of our biology, they've found signs of the body's influence on the mind.
3. It turns out that moving our muscles produces proteins that travel through the bloodstream and into the brain, where they play pivotal roles in the mechanisms of our highest thought processes.
4. In today's technology-driven, plasma-screened-in world, it's easy to forget that we are born movers — animals, in fact — because we've engineered movement right out of our lives.
5. It's only in the past few years that neuroscientists have begun to describe these factors and how they work, and each new discovery adds awe-inspiring depth to the picture

A) 4
B) 3
C) 2
D) 5
Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/verbal-ability-odd-one-out-neuroscientists-have-just-begun/

Question No. : 34 (Odd One Out)
1. The water that made up ancient lakes and perhaps an ocean was lost.
2. Particles from the Sun collided with molecules in the atmosphere, knocking them into space or giving them an electric charge that caused them to be swept away by the solar wind.
3. Most of the planet's remaining water is now frozen or buried, but clues over the past decade suggested that some liquid water, a presumed necessity for life, might survive in underground aquifers.
4. Data from NASA's MAVEN orbiter show that solar storms stripped away most of Mars's once-thick atmosphere.
5. A recent study reveals how Mars lost much of its early water, while another indicates that some liquid water remains

A) 3
B) 4
C) 5
D) 1
Option (D)

Detailed Solution: https://www.handakafunda.com/cat-2017/verbal-ability-odd-one-out-the-water-that-made-up-ancient-lakes/

Handa Ka Funda

DILR (Data Interpretation and Logical Reasoning)

Logical Reasoning (Set 1 – Q35 to Q38)

Healthy Bites is a fast food joint serving three items: burgers, fries and ice cream. It has two employees Anish and Bani who prepare the items ordered by the clients. Preparation time is 10 minutes for a burger and 2 minutes for an order of ice cream. An employee can prepare only one of these items at a time. The fries are prepared in an automatic fryer which can prepare up to 3 portions of fires at a time, and takes 5 minutes irrespective of the number of portions. The fryer does not need an employee to constantly attend to it, and we can ignore the time taken by an employee to start and stop the fryer; thus, an employee can be engaged in preparing other items while the frying is on. However fries cannot be prepared in anticipation of future orders.

Healthy Bites wishes to serve the orders as early as possible. The individual items in any order are served as and when ready; however, the order is considered to be completely served only when all the items of that order are served.

The table below gives the orders of three clients and the times at which they placed their orders;

Client No.	Time	Order
1	10:00	1 burger, 3 portions of fries, 1 order of icecream
2	10:05	2 portions of fries, 1 order of ice cream
3	10:07	1 burger, 1 portion of fries

Q35)

Assume that only one client's order can be processed at any given point of time. So, Anish or Bani cannot start preparing a new order while a previous order is being prepared.

At what time is the order placed by Client 1 completely served?

A) 10:17

B) 10:10

C) 10:15

D) 10:20

Option (B)

Detailed Solution: https://www.handakafunda.com/cat-2017/logical-reasoning-set-healthy-bites-is-a-fast-food-joint/

Q36)

Healthy Bites is a fast food joint serving three items: burgers, fries and ice cream. It has two employees Anish and Bani who prepare the items ordered by the clients. Preparation time is 10 minutes for a burger and 2 minutes for an order of ice cream. An employee can prepare only one of these items at a time. The fries are prepared in an automatic fryer which can prepare up to 3 portions of fires at a time, and takes 5 minutes irrespective of the number of portions. The fryer does not need an employee to constantly attend to it, and we can ignore the time taken by an employee to start and stop the fryer; thus, an employee can be engaged in preparing other items while the frying is on. However fries cannot be prepared in anticipation of future orders.

Healthy Bites wishes to serve the orders as early as possible. The individual items in any order are served as and when ready; however, the order is considered to be completely served only when all the items of that order are served.

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The table below gives the orders of three clients and the times at which they placed their orders;

Client No.	**Time**	**Order**
1	10:00	1 burger, 3 portions of fries, 1 order of icecream
2	10:05	2 portions of fries, 1 order of ice cream
3	10:07	1 burger, 1 portion of fries

Q36)
Assume that only one client's order can be processed at any given point of time. So, Anish or Bani cannot start preparing a new order while a previous order is being prepared.
At what time is the order placed by Client 3 completely served?
A) 10:35
B) 10:22
C) 10:25
D) 10:17

Option (C)
Detailed Solution: https://www.handakafunda.com/cat-2017/logical-reasoning-set-healthy-bites-is-a-fast-food-joint/

Option (C)

Q37)
Healthy Bites is a fast food joint serving three items: burgers, fries and ice cream. It has two employees Anish and Bani who prepare the items ordered by the clients. Preparation time is 10 minutes for a burger and 2 minutes for an order of ice cream. An employee can prepare only one of these items at a time. The fries are prepared in an automatic fryer which can prepare up to 3 portions of fires at a time, and takes 5 minutes irrespective of the number of portions. The fryer does not need an employee to constantly attend to it, and we can ignore the time taken by an employee to start and stop the fryer; thus, an employee can be engaged in preparing other items while the frying is on. However fries cannot be prepared in anticipation of future orders.
Healthy Bites wishes to serve the orders as early as possible. The individual items in any order are served as and when ready; however, the order is considered to be completely served only when all the items of that order are served.
The table below gives the orders of three clients and the times at which they placed their orders;

Client No.	Time	Order
1	10:00	1 burger, 3 portions of fries, 1 order of icecream
2	10:05	2 portions of fries, 1 order of ice cream
3	10:07	1 burger, 1 portion of fries

Q37)
Suppose the employees are allowed to process multiple orders at a time, but the preference would be to finish orders of clients who placed their orders earlier.

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At what time is the order placed by Client 2 completely served?
A) 10:10
B) 10:12
C) 10:15
D) 10:17
Option (A)
Detailed Solution: https://www.handakafunda.com/cat-2017/logical-reasoning-set-healthy-bites-is-a-fast-food-joint/

Q38)
Healthy Bites is a fast food joint serving three items: burgers, fries and ice cream. It has two employees Anish and Bani who prepare the items ordered by the clients. Preparation time is 10 minutes for a burger and 2 minutes for an order of ice cream. An employee can prepare only one of these items at a time. The fries are prepared in an automatic fryer which can prepare up to 3 portions of fires at a time, and takes 5 minutes irrespective of the number of portions. The fryer does not need an employee to constantly attend to it, and we can ignore the time taken by an employee to start and stop the fryer; thus, an employee can be engaged in preparing other items while the frying is on. However fries cannot be prepared in anticipation of future orders.
Healthy Bites wishes to serve the orders as early as possible. The individual items in any order are served as and when ready; however, the order is considered to be completely served only when all the items of that order are served.
The table below gives the orders of three clients and the times at which they placed their orders;

Client No.	Time	Order
1	10:00	1 burger, 3 portions of fries, 1 order of icecream
2	10:05	2 portions of fries, 1 order of ice cream
3	10:07	1 burger, 1 portion of fries

Q38)
Suppose the employees are allowed to process multiple orders at a time, but the preference would be to finish orders of clients who placed their orders earlier.
Also assume that the fourth client came in only at 10:35. Between 10:00 and 10:30, for how many minutes is exactly one of the employees idle?
A) 7
B) 10
C) 15
D) 23
Option (B)

Detailed Solution: https://www.handakafunda.com/cat-2017/logical-reasoning-set-healthy-bites-is-a-fast-food-joint/

Handa Ka Funda

Data Interpretation (Set 2 – Q39 to Q42)

A study to look at the early teaming of rural kids was carried out in a number of villages spanning three states, chosen from the North East (NE), the West (W) and the South (S). 50 four-year old kids each were sampled from each of the 150 villages from NE, 250 villages from W arid 200 villages from S. It was found that of the 30000 surveyed feds 55% studied in primary schools run by government (G), 37% in private schools (P) white the remaining 8% did not go to school (O).

The kids surveyed were further divided into two groups based on whether their mothers dropped out of school before completing primary education or not. The table below gives the number of kids in different types of schools for mothers who dropped out- of school before completing primary education:

	G	P	O	Total
NE	4200	500	300	5000
W	4200	1900	1200	7300
S	5100	300	300	5700
Total	13500	2700	1800	18000

It is also known that:

1. In S, 60% of the surveyed kids were m G. Moreover, in S, all surveyed kids whose mothers had completed primary education were in school.
2. In NE, among the O kids, 50% had mothers who had dropped out before completing primary education.
3. The number of kids in G in NE was the same as the number of kids in G in W.

Q39) What percentage of kids from S were studying in P?

A) 37%

B) 6%

C) 79%

D) 56%

Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/data-interpretation-set-a-study-to-look-at-the-early/

Q40)

A study to look at the early teaming of rural kids was carried out in a number of villages spanning three states, chosen from the North East (NE), the West (W) and the South (S). 50 four-year old kids each were sampled from each of the 150 villages from NE, 250 villages from W arid 200 villages from S. It was found that of the 30000 surveyed feds 55% studied in primary schools run by government (G), 37% in private schools (P) white the remaining 8% did not go to school (O).

The kids surveyed were further divided into two groups based on whether their mothers dropped out of school before completing primary education or not. The table below gives the number of kids in different types of schools for mothers who dropped out- of school before completing primary education:

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W	4200	1900	1200	7300

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S	5100	300	300	5700
Total	13500	2700	1800	18000

It is also known that:

1. In S, 60% of the surveyed kids were m G. Moreover, in S, all surveyed kids whose mothers had completed primary education were in school.
2. In NE, among the O kids, 50% had mothers who had dropped out before completing primary education.
3. The number of kids in G in NE was the same as the number of kids in G in W.

Q40)

Among the kids in W whose mothers had completed primary education, how many were not in school?

A) 300
B) 1200
C) 1050
D) 1500

Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/data-interpretation-set-a-study-to-look-at-the-early/

Q41)

A study to look at the early teaming of rural kids was carried out in a number of villages spanning three states, chosen from the North East (NE), the West (W) and the South (S). 50 four-year old kids each were sampled from each of the 150 villages from NE, 250 villages from W arid 200 villages from S. It was found that of the 30000 surveyed feds 55% studied in primary schools run by government (G), 37% in private schools (P) white the remaining 8% did not go to school (O).

The kids surveyed were further divided into two groups based on whether their mothers dropped out of school before completing primary education or not. The table below gives the number of kids in different types of schools for mothers who dropped out- of school before completing primary education:

	G	P	O	Total
NE	4200	500	300	5000
W	4200	1900	1200	7300
S	5100	300	300	5700
Total	13500	2700	1800	18000

It is also known that:

1. In S, 60% of the surveyed kids were m G. Moreover, in S, all surveyed kids whose mothers had completed primary education were in school.
2. In NE, among the O kids, 50% had mothers who had dropped out before completing primary education.
3. The number of kids in G in NE was the same as the number of kids in G in W.

Q41)

In a follow up survey of the same kids two years later, it was found that all the kids were now in school. Of the kids who were not in school earlier, in one region, 25% were in G now, whereas the rest were enrolled in P; in the second region, all such kids were in G now; while in the third region, 50% of such kids had now joined G while the rest had joined P. As a result, in all three regions put together, 50% of the kids who were earlier out of school had joined G. It was also seen that no surveyed kid had changed schools.

What number of the surveyed kids now were in G in W?

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A) 6000
B) 5250
C) 6750
D) 6300
Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/data-interpretation-set-a-study-to-look-at-the-early/

Q42)
A study to look at the early teaming of rural kids was carried out in a number of villages spanning three states, chosen from the North East (NE), the West (W) and the South (S). 50 four-year old kids each were sampled from each of the 150 villages from NE, 250 villages from W arid 200 villages from S. It was found that of the 30000 surveyed feds 55% studied in primary schools run by government (G), 37% in private schools (P) white the remaining 8% did not go to school (O).
The kids surveyed were further divided into two groups based on whether their mothers dropped out of school before completing primary education or not. The table below gives the number of kids in different types of schools for mothers who dropped out- of school before completing primary education:

	G	P	O	Total
NE	4200	500	300	5000
W	4200	1900	1200	7300
S	5100	300	300	5700
Total	13500	2700	1800	18000

It is also known that:
1. In S, 60% of the surveyed kids were m G. Moreover, in S, all surveyed kids whose mothers had completed primary education were in school.
2. In NE, among the O kids, 50% had mothers who had dropped out before completing primary education.
3. The number of kids in G in NE was the same as the number of kids in G in W.

Q42)
In a follow up survey of the same kids two years later, it was found that all the kids were now in school. Of the kids who were not in school earlier, in one region, 25% were in G now, whereas the rest were enrolled in P; in the second region, all such kids were in G now; while in the third region, 50% of such kids had now joined G while the rest had joined P. As a result, in all three regions put together, 50% of the kids who were earlier out of school had joined G. It was also seen that no surveyed kid had changed schools.
What percentage of the surveyed kids in S, whose mothers had dropped out before completing primary education, were in G now?
A) 94.7%
B) 89.5%
C) 93.4%
D) Cannot be determined from the given information
Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/data-interpretation-set-a-study-to-look-at-the-early/

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Data Interpretation (Set 3 – Q43 to Q46)

Applicants for the doctoral programmes of Ambi Institute of Engineering (AIE) and Bambi Institute of Engineering (BIE) have to appear for a Common Entrance Test (CET). The test has three sections: Physics (P), Chemistry (C), and Maths (M). Among those appearing for CET, those at or above the 80th percentile in at least two sections, and at or above the 90th percentile overall, are selected for Advanced Entrance Test (AET) conducted by AIE. AET is used by AIE for final selection.

For the 200 candidates who are at or above the 90th percentile overall based on CET, the following are known about their performance in CET:

1. No one is below the 80th percentile in all 3 sections.
2. 150 are at or above the 80th percentile in exactly two sections.
3. The number of candidates at or above the 80th percentile only in P is the same as the number of candidates at or above the 80th percentile only in C. The same is the number of candidates at or above the 80th percentile only in M.
4. Number of candidates below 80th percentile in P: Number of candidates below 80th percentile in C: Number of candidates below 80th percentile in M = 4:2:1.

BIE uses a different process for selection. If any candidate is appearing in the AET by AIE, BIE considers their AET score for final selection provided the candidate is at or above the 80th percentile in P. Any other candidate at or above the 80th percentile in P in CET, but who is not eligible for the AET, is required to appear in a separate test to be conducted by BIE for being considered for final selection. Altogether, there are 400 candidates this year who are at or above the 80th percentile in P.

Q43)

What best can be concluded about the number of candidates sitting for the separate test for BIE who were at or above the 90th percentile overall in CET?

A) 3 or 10
B) 10
C) 5
D) 7 or 10

Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/data-interpretation-set-applicants-for-the-doctoral-programmes/

Q44)

Applicants for the doctoral programmes of Ambi Institute of Engineering (AIE) and Bambi Institute of Engineering (BIE) have to appear for a Common Entrance Test (CET). The test has three sections: Physics (P), Chemistry (C), and Maths (M). Among those appearing for CET, those at or above the 80th percentile in at least two sections, and at or above the 90th percentile overall, are selected for Advanced Entrance Test (AET) conducted by AIE. AET is used by AIE for final selection.

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For the 200 candidates who are at or above the 90th percentile overall based on CET, the following are known about their performance in CET:

1. No one is below the 80th percentile in all 3 sections.
2. 150 are at or above the 80th percentile in exactly two sections.
3. The number of candidates at or above the 80th percentile only in P is the same as the number of candidates at or above the 80th percentile only in C. The same is the number of candidates at or above the 80th percentile only in M.
4. Number of candidates below 80th percentile in P: Number of candidates below 80th percentile in C: Number of candidates below 80th percentile in M = 4:2:1.

BIE uses a different process for selection. If any candidate is appearing in the AET by AIE, BIE considers their AET score for final selection provided the candidate is at or above the 80th percentile in P. Any other candidate at or above the 80th percentile in P in CET, but who is not eligible for the AET, is required to appear in a separate test to be conducted by BIE for being considered for final selection. Altogether, there are 400 candidates this year who are at or above the 80th percentile in P.

Q44)
If the number of candidates who are at or above the 90th percentile overall and also at or above the 80th percentile in all three sections in CET is actually a multiple of 5, what is the number of candidates who are at or above the 90th percentile overall and at or above the 80th percentile in both P and M in CET?

A) 59
B) 60
C) 61
D) 58

Option (B)

Detailed Solution: https://www.handakafunda.com/cat-2017/data-interpretation-set-applicants-for-the-doctoral-programmes/

Q45)
Applicants for the doctoral programmes of Ambi Institute of Engineering (AIE) and Bambi Institute of Engineering (BIE) have to appear for a Common Entrance Test (CET). The test has three sections: Physics (P), Chemistry (C), and Maths (M). Among those appearing for CET, those at or above the 80th percentile in at least two sections, and at or above the 90th percentile overall, are selected for Advanced Entrance Test (AET) conducted by AIE. AET is used by AIE for final selection.

For the 200 candidates who are at or above the 90th percentile overall based on CET, the following are known about their performance in CET:

1. No one is below the 80th percentile in all 3 sections.
2. 150 are at or above the 80th percentile in exactly two sections.
3. The number of candidates at or above the 80th percentile only in P is the same as the number of candidates at or above the 80th percentile only in C. The same is the number of candidates at or above the 80th percentile only in M.

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4. Number of candidates below 80th percentile in P: Number of candidates below 80th percentile in C: Number of candidates below 80th percentile in M = 4:2:1.
BIE uses a different process for selection. If any candidate is appearing in the AET by AIE, BIE considers their AET score for final selection provided the candidate is at or above the 80th percentile in P. Any other candidate at or above the 80th percentile in P in CET, but who is not eligible for the AET, is required to appear in a separate test to be conducted by BIE for being considered for final selection. Altogether, there are 400 candidates this year who are at or above the 80th percentile in P.

Q45)
If the number of candidates who are at or above the 90th percentile overall and also at or above the 80 th percentile in all three sections in CET is actually a multiple of 5, then how many candidates were shortlisted for the AET for AIE?

A) 170
B) 169
C) 159
D) 160

Option(A)

Detailed Solution: https://www.handakafunda.com/cat-2017/data-interpretation-set-applicants-for-the-doctoral-programmes/

Q46)
Applicants for the doctoral programmes of Ambi Institute of Engineering (AIE) and Bambi Institute of Engineering (BIE) have to appear for a Common Entrance Test (CET). The test has three sections: Physics (P), Chemistry (C), and Maths (M). Among those appearing for CET, those at or above the 80th percentile in at least two sections, and at or above the 90th percentile overall, are selected for Advanced Entrance Test (AET) conducted by AIE. AET is used by AIE for final selection.

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For the 200 candidates who are at or above the 90th percentile overall based on CET, the following are known about their performance in CET:
1. No one is below the 80th percentile in all 3 sections.
2. 150 are at or above the 80th percentile in exactly two sections.
3. The number of candidates at or above the 80th percentile only in P is the same as the number of candidates at or above the 80th percentile only in C. The same is the number of candidates at or above the 80th percentile only in M.
4. Number of candidates below 80th percentile in P: Number of candidates below 80th percentile in C: Number of candidates below 80th percentile in M = 4:2:1.
BIE uses a different process for selection. If any candidate is appearing in the AET by AIE, BIE considers their AET score for final selection provided the candidate is at or above the 80th percentile in P. Any other candidate at or above the 80th percentile in P in CET, but

who is not eligible for the AET, is required to appear in a separate test to be conducted by BIE for being considered for final selection. Altogether, there are 400 candidates this year who are at or above the 80th percentile in P.

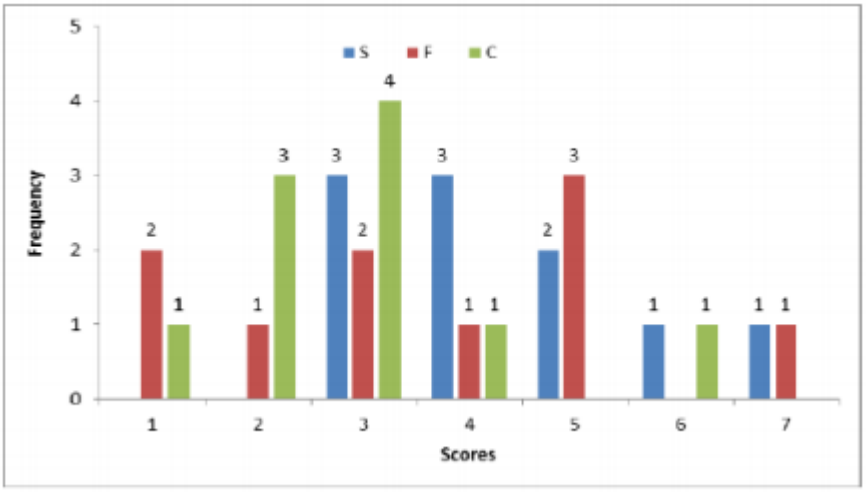
Q46)
If the number of candidates who are at or above the 90th percentile overall and also are at or above the 80th percentile in P in CET, is more than 100, how many candidates had to sit for the separate test for BIE?
A) 299
B) 310
C) 321
D) 330
Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/data-interpretation-set-applicants-for-the-doctoral-programmes/

Data Interpretation (Set 4 – Q47 to Q50)
Simple Happiness index (SHI) of a country is computed on the basis of three parameters: social support (S), freedom to life choices (F) and corruption perception (C). Each of these three parameters is measured on a scale of 0 to 8 (integers only). A country is then categorized based on the total score obtained by summing the scores of ail the three parameters, as shown in the following table:

Total Score	0-4	5-8	9-13	14-19	20-24
Category	Very Unhappy	Unhappy	Neutral	Happy	VeryHappy

Following diagram depicts the frequency distribution of the scores in S, F and C of 10 countries - Amda, Benga, Calla, Delma, Eppa, Varsa, Wanna, Xanda, Yanga and Zooma;



Further, the following are known:
1. Amda and Calls jointly have the lowest total score, 7, with identical scores in all the three parameters.
2. Zooma has a total score of 17.

3. All the 3 countries, which are categorised as happy, have the highest score in exactly one parameter.

Q47)
What is Amda's score in F?

A) 3
B) 4
C) 1
D) 2

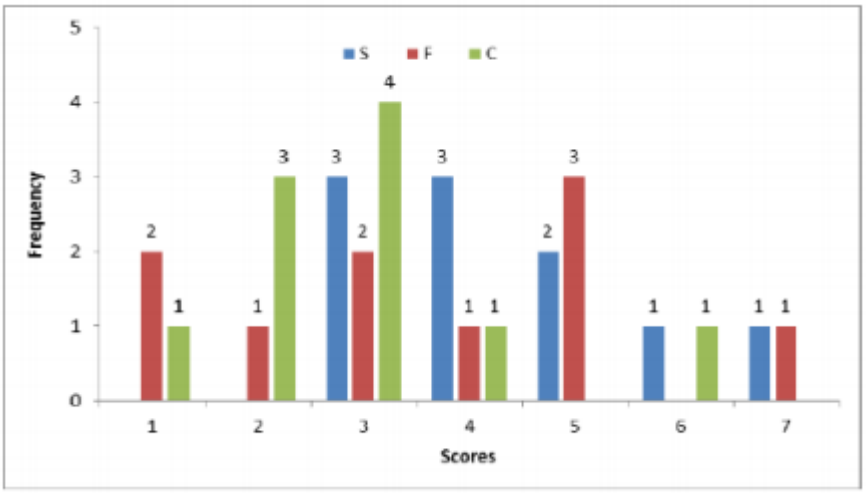
Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/data-interpretation-set-simple-happiness-index-shi-of-a-country/

Q48)
Simple Happiness index (SHI) of a country is computed on the basis of three parameters: social support (S), freedom to life choices (F) and corruption perception (C). Each of these three parameters is measured on a scale of 0 to 8 (integers only). A country is then categorized based on the total score obtained by summing the scores of ail the three parameters, as shown in the following table:

Total Score	0-4	5-8	9-13	14-19	20-24
Category	Very Unhappy	Unhappy	Neutral	Happy	VeryHappy

Following diagram depicts the frequency distribution of the scores in S, F and C of 10 countries - Amda, Benga, Calla, Delma, Eppa, Varsa, Wanna, Xanda, Yanga and Zooma;



Further, the following are known:
1. Amda and Calls jointly have the lowest total score, 7, with identical scores in all the three parameters.
2. Zooma has a total score of 17.
3. All the 3 countries, which are categorised as happy, have the highest score in exactly one parameter.
Q48)

What is Zooma's score in S?

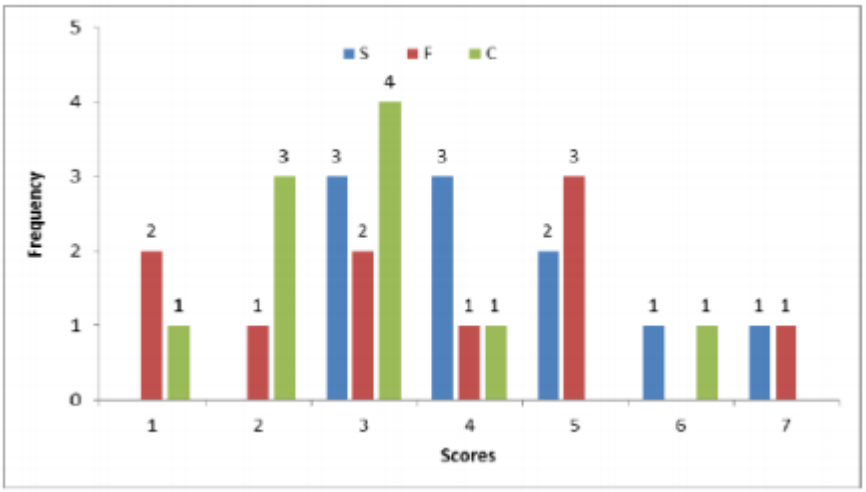
A) 6
B) 5
C) 1
D) 2

Option (A)
Detailed Solution: https://www.handakafunda.com/cat-2017/data-interpretation-set-simple-happiness-index-shi-of-a-country/

Q49)
Simple Happiness index (SHI) of a country is computed on the basis of three parameters: social support (S), freedom to life choices (F) and corruption perception (C). Each of these three parameters is measured on a scale of 0 to 8 (integers only). A country is then categorized based on the total score obtained by summing the scores of ail the three parameters, as shown in the following table:

Total Score	0-4	5-8	9-13	14-19	20-24
Category	Very Unhappy	Unhappy	Neutral	Happy	Very Happy

Following diagram depicts the frequency distribution of the scores in S, F and C of 10 countries - Amda, Benga, Calla, Delma, Eppa, Varsa, Wanna, Xanda, Yanga and Zooma;



Further, the following are known:
1. Amda and Calls jointly have the lowest total score, 7, with identical scores in all the three parameters.
2. Zooma has a total score of 17.
3. All the 3 countries, which are categorised as happy, have the highest score in exactly one parameter.

Q49)
Benga and Delma, two countries categorized as happy, are tied with the same total score. What is the maximum score they can have?

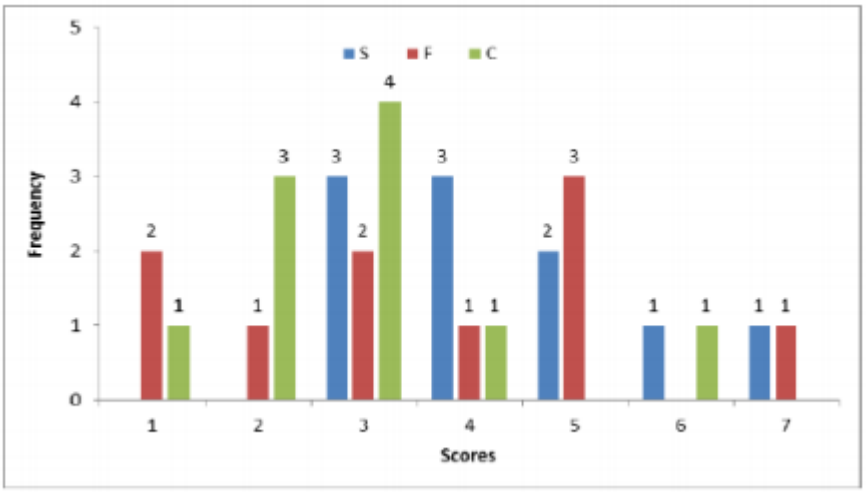
A) 14
B) 15
C) 16

D) 17
Detailed Solution: https://www.handakafunda.com/cat-2017/data-interpretation-set-simple-happiness-index-shi-of-a-country/

Q50)
Simple Happiness index (SHI) of a country is computed on the basis of three parameters: social support (S), freedom to life choices (F) and corruption perception (C). Each of these three parameters is measured on a scale of 0 to 8 (integers only). A country is then categorized based on the total score obtained by summing the scores of ail the three parameters, as shown in the following table:

Total Score	0-4	5-8	9-13	14-19	20-24
Category	Very Unhappy	Unhappy	Neutral	Happy	Very Happy

Following diagram depicts the frequency distribution of the scores in S, F and C of 10 countries - Amda, Benga, Calla, Delma, Eppa, Varsa, Wanna, Xanda, Yanga and Zooma;



Further, the following are known:
1. Amda and Calls jointly have the lowest total score, 7, with identical scores in all the three parameters.
2. Zooma has a total score of 17.
3. All the 3 countries, which are categorised as happy, have the highest score in exactly one parameter.

Q50)
If Benga scores 16 and Delma scores 15, then what is the maximum number of countries with a score of 13?
A) 0
B) 1
C) 2
D) 3
Option (B)

Detailed Solution: https://www.handakafunda.com/cat-2017/data-interpretation-set-simple-happiness-index-shi-of-a-country/

Logical Reasoning (Set 5 – Q51 to Q54)

There are 21 employees working in a division, out of whom 10 are special-skilled employees (SE) and the remaining are regular skilled employees (RE). During the next five months, the division has to complete five projects every month. Out of the 25 projects, 5 projects are "challenging", while the remaining ones are "standard". Each of the challenging projects has to be completed in different months. Every month, five teams - T1, T2, T3, T4 and T5, work on one project each. T1, T2, T3, T4 and T5 are allotted the challenging project in the first, second, third, fourth and fifth month, respectively. The team assigned the challenging project has one more employee than the rest.

In the first month, T1 has one more SE than T2, T2 has one more SE than T3, T3 has one more SE than T4, and T4 has one more SE than T5. Between two successive months, the composition of the teams changes as follows:

a. The team allotted the challenging project, gets two SE from the team which was allotted the challenging project in the previous month. In exchange, one RE is shifted from the former team to the latter team.

b. After the above exchange, if T1 has any SE and T5 has any RE, then one SE is shifted from T1 to T5, and one RE is shifted from T 5 to T1. Also, if T2 has any SE and T4 has any RE, then one SE is shifted from T2 to T4, and one RE is shifted from T 4 to T2.

Each standard project has a total of 100 credit points, while each challenging project has 200 credit points. The credit points are equally shared between the employees included in that team.

Q51)

The number of times in which the composition of team T 2 and the number of times in which composition of team T 4 remained unchanged in two successive months are:

A) (2, 1)
B) (1, 0)
C) (0, 0)
D) (1, 1)

Option (B)

Detailed Solution: https://www.handakafunda.com/cat-2017/logical-reasoning-set-there-are-21-employees-working-in-a-division/

Q52)

There are 21 employees working in a division, out of whom 10 are special-skilled employees (SE) and the remaining are regular skilled employees (RE). During the next five months, the division has to complete five projects every month. Out of the 25 projects, 5 projects are "challenging", while the remaining ones are "standard". Each of the challenging projects has to be completed in different months. Every month, five teams - T1, T2, T3, T4 and T5, work on one project each. T1, T2, T3, T4 and T5 are allotted the challenging project in the first, second, third, fourth and fifth month, respectively. The team assigned the challenging project has one more employee than the rest.

In the first month, T1 has one more SE than T2, T2 has one more SE than T3, T3 has one more SE than T4, and T4 has one more SE than T5. Between two successive months, the composition of the teams changes as follows:

a. The team allotted the challenging project, gets two SE from the team which was allotted the challenging project in the previous month. In exchange, one RE is shifted from the former team to the latter team.
b. After the above exchange, if T1 has any SE and T5 has any RE, then one SE is shifted from T1 to T5, and one RE is shifted from T 5 to T1. Also, if T2 has any SE and T4 has any RE, then one SE is shifted from T2 to T4, and one RE is shifted from T 4 to T2.
Each standard project has a total of 100 credit points, while each challenging project has 200 credit points. The credit points are equally shared between the employees included in that team.

Q52)
The number of SE in T1 and T5 for the projects in the third month are, respectively:
A) (0, 2)
B) (0, 3)
C) (1, 2)
D) (1, 3)
Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/logical-reasoning-set-there-are-21-employees-working-in-a-division/

Q53)
There are 21 employees working in a division, out of whom 10 are special-skilled employees (SE) and the remaining are regular skilled employees (RE). During the next five months, the division has to complete five projects every month. Out of the 25 projects, 5 projects are "challenging", while the remaining ones are "standard". Each of the challenging projects has to be completed in different months. Every month, five teams - T1, T2, T3, T4 and T5, work on one project each. T1, T2, T3, T4 and T5 are allotted the challenging project in the first, second, third, fourth and fifth month, respectively. The team assigned the challenging project has one more employee than the rest.
In the first month, T1 has one more SE than T2, T2 has one more SE than T3, T3 has one more SE than T4, and T4 has one more SE than T5. Between two successive months, the composition of the teams changes as follows:
a. The team allotted the challenging project, gets two SE from the team which was allotted the challenging project in the previous month. In exchange, one RE is shifted from the former team to the latter team.
b. After the above exchange, if T1 has any SE and T5 has any RE, then one SE is shifted from T1 to T5, and one RE is shifted from T 5 to T1. Also, if T2 has any SE and T4 has any RE, then one SE is shifted from T2 to T4, and one RE is shifted from T 4 to T2.
Each standard project has a total of 100 credit points, while each challenging project has 200 credit points. The credit points are equally shared between the employees included in that team.
Q53)
Which of the following CANNOT be the total credit points earned by any employee from the projects?
A) 140
B) 150
C) 170
D) 200
Option (B)

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Detailed Solution: https://www.handakafunda.com/cat-2017/logical-reasoning-set-there-are-21-employees-working-in-a-division/

Q54)
There are 21 employees working in a division, out of whom 10 are special-skilled employees (SE) and the remaining are regular skilled employees (RE). During the next five months, the division has to complete five projects every month. Out of the 25 projects, 5 projects are "challenging", while the remaining ones are "standard". Each of the challenging projects has to be completed in different months. Every month, five teams - T1, T2, T3, T4 and T5, work on one project each. T1, T2, T3, T4 and T5 are allotted the challenging project in the first, second, third, fourth and fifth month, respectively. The team assigned the challenging project has one more employee than the rest.
In the first month, T1 has one more SE than T2, T2 has one more SE than T3, T3 has one more SE than T4, and T4 has one more SE than T5. Between two successive months, the composition of the teams changes as follows:
a. The team allotted the challenging project, gets two SE from the team which was allotted the challenging project in the previous month. In exchange, one RE is shifted from the former team to the latter team.
b. After the above exchange, if T1 has any SE and T5 has any RE, then one SE is shifted from T1 to T5, and one RE is shifted from T 5 to T1. Also, if T2 has any SE and T4 has any RE, then one SE is shifted from T2 to T4, and one RE is shifted from T 4 to T2.
Each standard project has a total of 100 credit points, while each challenging project has 200 credit points. The credit points are equally shared between the employees included in that team.

Q55)
One of the employees named Aneek scored 185 points. Which of the following CANNOT be true?
A) Aneek worked only in teams T1, T2, T3, and T4
B) Aneek worked only in teams T1, T2, T4, and T5
C) Aneek worked only in teams T2, T3, T4, and T5
D) Aneek worked only in teams T1, T3, T4, and T5
Option (D)

Detailed Solution: https://www.handakafunda.com/cat-2017/logical-reasoning-set-there-are-21-employees-working-in-a-division/

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Logical Reasoning (Set 6 – Q55 to Q58)

In a square layout of size 5m × 5m, 25 equal sized square platforms of different heights are built. The heights (in metres) of individual platforms are as shown below:

6	1	2	4	3
9	5	3	2	8
7	8	4	6	5
3	9	5	1	2
1	7	6	3	9

Individuals (all of same height) are seated on these platforms. We say an individual A can reach art individual B if all the three following conditions are met:

(i) A and B are In the same row or column

(ii) A is at a lower height than B

(iii) If there is/are any individuals (s) between A and B, such individual(s) must be at a height tower than that of A.

Thus in the table given above, consider the Individual seated at height 8 on 3rd row and 2nd column. He can be reached by four individuals. He can be reached by the individual on his left at height 7, by the two individuals on his right at heights of 4 and 6 and by the individual above at height 5.

Rows in the layout are numbered from top to bottom and columns are numbered from left to right.

Q55)

How many individuals in this layout can be reached by just one individual?

A) 3

B) 5

C) 7

D) 8

Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/cat-2017-logical-reasoning-set-in-a-square-layout/

Q56)

In a square layout of size 5m × 5m, 25 equal sized square platforms of different heights are built. The heights (in metres) of individual platforms are as shown below:

6	1	2	4	3
9	5	3	2	8
7	8	4	6	5

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3	9	5	1	2
1	7	6	3	9

Individuals (all of same height) are seated on these platforms. We say an individual A can reach art individual B if all the three following conditions are met:
(i) A and B are In the same row or column
(ii) A is at a lower height than B
(iii) If there is/are any individuals (s) between A and B, such individual(s) must be at a height tower than that of A.
Thus in the table given above, consider the Individual seated at height 8 on 3rd row and 2nd column. He can be reached by four individuals. He can be reached by the individual on his left at height 7, by the two individuals on his right at heights of 4 and 6 and by the individual above at height 5.
Rows in the layout are numbered from top to bottom and columns are numbered from left to right.
Q56)
Which of the following is true for any individual at a platform of height 1 m in this layout?
A) They can be reached by all the individuals in their own row and column
B) They can be reached by at least 4 individuals
C) They can be reached by at least one individual
D) They cannot be reached by anyone
Option (D)

Detailed Solution: https://www.handakafunda.com/cat-2017/cat-2017-logical-reasoning-set-in-a-square-layout/

Q57)
In a square layout of size 5m × 5m, 25 equal sized square platforms of different heights are built. The heights (in metres) of individual platforms are as shown below:

6	1	2	4	3
9	5	3	2	8
7	8	4	6	5
3	9	5	1	2
1	7	6	3	9

Individuals (all of same height) are seated on these platforms. We say an individual A can reach art individual B if all the three following conditions are met:
(i) A and B are In the same row or column
(ii) A is at a lower height than B
(iii) If there is/are any individuals (s) between A and B, such individual(s) must be at a height tower than that of A.
Thus in the table given above, consider the Individual seated at height 8 on 3rd row and 2nd column. He can be reached by four individuals. He can be reached by the individual on his left at height 7, by the two individuals on his right at heights of 4 and 6 and by the individual above at height 5.
Rows in the layout are numbered from top to bottom and columns are numbered from left to right.

Q57)
We can find two individuals who cannot be reached by anyone in
A) the last row
B) the fourth row

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C) the fourth column
D) the middle column
Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/cat-2017-logical-reasoning-set-in-a-square-layout/

Q58)
In a square layout of size 5m × 5m, 25 equal sized square platforms of different heights are built. The heights (in metres) of individual platforms are as shown below:

6	1	2	4	3
9	5	3	2	8
7	8	4	6	5
3	9	5	1	2
1	7	6	3	9

Individuals (all of same height) are seated on these platforms. We say an individual A can reach art individual B if all the three following conditions are met:
(i) A and B are In the same row or column
(ii) A is at a lower height than B
(iii) If there is/are any individuals (s) between A and B, such individual(s) must be at a height tower than that of A.
Thus in the table given above, consider the Individual seated at height 8 on 3rd row and 2nd column. He can be reached by four individuals. He can be reached by the individual on his left at height 7, by the two individuals on his right at heights of 4 and 6 and by the individual above at height 5.
Rows in the layout are numbered from top to bottom and columns are numbered from left to right.

Q58)
Which of the following statements is true about this layout?
A) Each row has an individual who can be reached by 5 or more individuals
B) Each row has an individual who cannot be reached by anyone
C) Each row has at least two individuals who can be reached by an equal number of individuals
D) All individuals at the height of 9 m can be reached by at least 5 individuals
Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/cat-2017-logical-reasoning-set-in-a-square-layout/

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Logical Reasoning (Set 7 – Q59 to Q62)

A new airlines company is planning to start operations in a country. The company has identified ten different cities which they plan to connect through their network to start with. The flight duration between any pair of cities will be less than one hour. To start operations, the company has to decide on a daily schedule.

The underlying principle that they are working on is the following:

Any person staying in any of these 10 cities should be able to make a trip to any other city in the morning and should be able to return by the evening of the same day.

Q59)

If the underlying principle is to be satisfied in such a way that the journey between any two cities can be performed using only direct (non-stop) flights, then the minimum number of direct flights to be scheduled is:

A) 45

B) 90

C) 180

D) 135

Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/logical-reasoning-set-a-new-airlines-company-is-planning/

Q60)

A new airlines company is planning to start operations in a country. The company has identified ten different cities which they plan to connect through their network to start with. The flight duration between any pair of cities will be less than one hour. To start operations, the company has to decide on a daily schedule.

The underlying principle that they are working on is the following:

Any person staying in any of these 10 cities should be able to make a trip to any other city in the morning and should be able to return by the evening of the same day.

Q60)

Suppose three of the ten cities are to be developed as hubs. A hub is a city which is connected with every other city by direct flights each way, both in the morning as well as in the evening. The only direct flights which will be scheduled are originating and/or terminating in one of the hubs. Then the minimum number of direct flights that need to be scheduled so that the underlying principle of the airline to serve all the ten cities is met without visiting more than one hub during one trip is:

A) 54

B) 120

C) 96

D) 60

Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/logical-reasoning-set-a-new-airlines-company-is-planning/

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Q61)
A new airlines company is planning to start operations in a country. The company has identified ten different cities which they plan to connect through their network to start with. The flight duration between any pair of cities will be less than one hour. To start operations, the company has to decide on a daily schedule.
The underlying principle that they are working on is the following:
Any person staying in any of these 10 cities should be able to make a trip to any other city in the morning and should be able to return by the evening of the same day.
Q61)
Suppose the 10 cities are divided into 4 distinct groups 01,02,03,04 having 3, 3, 2 and 2 cities respectively and that G1 consists of cities named A, B and C. Further, suppose that direct flights are allowed only between two cities satisfying one of the following:
1. Both cities are in G1
2. Between A and any city in G2
3. Between B and any city in G3
4. Between C and any city in G4
Then the minimum number of direct flights that satisfies the underlying principle of the airline is:
Answer: 40
Detailed Solution: https://www.handakafunda.com/cat-2017/logical-reasoning-set-a-new-airlines-company-is-planning/

Q62)
A new airlines company is planning to start operations in a country. The company has identified ten different cities which they plan to connect through their network to start with. The flight duration between any pair of cities will be less than one hour. To start operations, the company has to decide on a daily schedule.
The underlying principle that they are working on is the following:
Any person staying in any of these 10 cities should be able to make a trip to any other city in the morning and should be able to return by the evening of the same day.
Q62)
Suppose the 10 cities are divided into 4 distinct groups G1, G2, G3, G4 having 3, 3, 2 and 2 cities respectively and that G1 consists of cities named A, B and C. Further, suppose that direct flights are allowed only between two cities satisfying one of the following:
1. Both cities are in G1
2. Between A and any city in G2
3. Between B and any city in G3
4. Between C and any city in G4
However, due to operational difficulties at A, it was later decided that the only flights that would operate at A would be those to and from B. Cities in G2 would have to be assigned to G3 or to G4.
What would be the maximum reduction in the number of direct flights as compared to the situation before the operational difficulties arose?

A) None of these
B) 3
C) 0
D) 1

Option (A)
Detailed Solution: https://www.handakafunda.com/cat-2017/logical-reasoning-set-a-new-airlines-company-is-planning/

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Logical Reasoning (Set 8 – Q63 to Q66)

Four cars need to travel from Akala (A) to Bakala (B). Two routes are available, one via Mamur (M) and the other via Nanur (N). The roads from A to M, and from N to B, are both short and narrow. In each case, one car takes 6 minutes to cover the distance, and each additional car increases the travel time per car by 3 minutes because of congestion. (For example, if only two cars drive from A to M, each car takes 9 minutes.) On the road from A to N, one car takes 20 minutes, and each additional car increases the travel time per car by 1 minute. On the road from M to B, one car takes 20 minutes, and each additional car increases the travel time per car by 0.9 minute.

The police department orders each car to take a particular route in such a manner that it is not possible for any car to reduce its travel time by not following the order, while the other cars are following the order.

Q63)

How many cars would be asked to take the route A-N-B, that is Akala-Nanur-Bakala route, by the police department?

A) 3
B) 2
C) 1
D) 0

Option (B)

Detailed Solution: https://www.handakafunda.com/cat-2017/logical-reasoning-set-four-cars-need-to-travel/

Q64)

Four cars need to travel from Akala (A) to Bakala (B). Two routes are available, one via Mamur (M) and the other via Nanur (N). The roads from A to M, and from N to B, are both short and narrow. In each case, one car takes 6 minutes to cover the distance, and each additional car increases the travel time per car by 3 minutes because of congestion. (For example, if only two cars drive from A to M, each car takes 9 minutes.) On the road from A to N, one car takes 20 minutes, and each additional car increases the travel time per car by 1 minute. On the road from M to B, one car takes 20 minutes, and each additional car increases the travel time per car by 0.9 minute.

The police department orders each car to take a particular route in such a manner that it is not possible for any car to reduce its travel time by not following the order, while the other cars are following the order.

Q64)

If all the cars follow the police order, what is the difference in travel time (in minutes) between a car which takes the route A-NB and a car that takes the route A-M-B?

A) 1
B) 0.1
C) 0.2
D) 0.9

Option (B)

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Detailed Solution: https://www.handakafunda.com/cat-2017/logical-reasoning-set-four-cars-need-to-travel/

Q65)
Four cars need to travel from Akala (A) to Bakala (B). Two routes are available, one via Mamur (M) and the other via Nanur (N). The roads from A to M, and from N to B, are both short and narrow. In each case, one car takes 6 minutes to cover the distance, and each additional car increases the travel time per car by 3 minutes because of congestion. (For example, if only two cars drive from A to M, each car takes 9 minutes.) On the road from A to N, one car takes 20 minutes, and each additional car increases the travel time per car by 1 minute. On the road from M to B, one car takes 20 minutes, and each additional car increases the travel time per car by 0.9 minute.
The police department orders each car to take a particular route in such a manner that it is not possible for any car to reduce its travel time by not following the order, while the other cars are following the order.

Q65)
A new one-way road is built from M to N. Each car now has three possible routes to travel from A to B: A-M-B, A-N-B and A-MN-B. On the road from M to N, one car takes 7 minutes and each additional car increases the travel time per car by 1 minute. Assume that any car taking the A-M-N-B route travels the A-M portion at the same time as other cars taking the A-M-B route, and the N-B portion at the same time as other cars taking the A-N-B route.
How many cars would the police department order to take the A-M-N-B route so that it is not possible for any car to reduce its travel time by not following the order while the other cars follow the order? (Assume that the police department would never order all the cars to take the same route.)

A) 4
B) 0
C) 1
D) 2

Option (D)

Detailed Solution: https://www.handakafunda.com/cat-2017/logical-reasoning-set-four-cars-need-to-travel/

Q66)
Four cars need to travel from Akala (A) to Bakala (B). Two routes are available, one via Mamur (M) and the other via Nanur (N). The roads from A to M, and from N to B, are both short and narrow. In each case, one car takes 6 minutes to cover the distance, and each additional car increases the travel time per car by 3 minutes because of congestion. (For example, if only two cars drive from A to M, each car takes 9 minutes.) On the road from A to N, one car takes 20 minutes, and each additional car increases the travel time per car by 1 minute. On the road from M to B, one car takes 20 minutes, and each additional car increases the travel time per car by 0.9 minute.
The police department orders each car to take a particular route in such a manner that it is not possible for any car to reduce its travel time by not following the order, while the other cars are following the order.
Q66)
A new one-way road is built from M to N. Each car now has three possible routes to travel from A to B: A-M-B, A-N-B and A-MN-B. On the road from M to N, one car takes 7 minutes and each additional car increases the travel time per car by 1 minute. Assume that any car taking the A-M-N-B route travels the A-M portion at the same time as other cars taking the A-M-B route, and the N-B portion at the same time as other cars taking the - A-N-B route.
If all the cars follow the police order, what is the minimum travel time (in minutes) from A to B? (Assume that the police department would never order all the cars to take the same route.)
A) 26
B) 32
C) 29.9
D) 30
Option (B)

Detailed Solution: https://www.handakafunda.com/cat-2017/logical-reasoning-set-four-cars-need-to-travel/

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Quantitative Aptitude

Q67) Arun's present age in years is 40% of Barun's. In another few years, Arun's age will be half of Barun's. By what percentage will Barun's age increase during this period? (Algebra)

A) 15
B) None of these
C) 25
D) 30

Option (B)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-aruns-present-age-in-years/

Q68) A person can complete a job in 120 days. He works alone on Day 1. On Day 2, he is joined by another person who also can complete the job in exactly 120 days. On Day 3, they are joined by another person of equal efficiency. Like this, everyday a new person with the same efficiency joins the work. How many days are required to complete the job? (Arithmetic)

A) 15
B) 35
C) 23
D) 40

Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-arithmetic-time-and-work-a-person-can-complete/

Q69) An elevator has a weight limit of 630 kg. It is carrying a group of people of whom the heaviest weighs 57 kg and the lightest weighs 53 kg. What is the maximum possible number of people in the group? (Algebra)

A) 12
B) 13
C) 11
D) 14

Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-algebra-maxima-minima-an-elevator-has-a-weight/

Q70) A man leaves his home and walks at a speed of 12 km per hour, reaching the railway station 10 minutes after the train had departed. If instead he had walked at a speed of 15 km per hour, he would have reached the station 10 minutes before the train's departure. The distance (in km) from his home to the railway station is (Arithmetic)

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A) 15
B) 16
C) 17
D) None of these

Option (D)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-arithmetic-tsd-a-man-leaves-his-home/

Q71) Ravi invests 50% of his monthly savings in fixed deposits. Thirty percent of the rest of hi√√s savings is invested in stocks and the rest goes into Ravi's savings bank account. If the total amount deposited by him in the bank (for savings account and fixed deposits) is Rs 59500, then Ravi's total monthly savings (in Rs) is (Arithmetic)

A) 71000
B) 63000
C) 50000
D) 70000

Option (D)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-arithmetic-percentages-ravi-invests-50-of-his/

Q72) If a seller gives a discount of 15% on retail price, she still makes a profit of 2%. Which of the following ensures that she makes a profit of 20%? (Arithmetic)

A) Give a discount of 5% on retail price
B) Give a discount of 2% on retail price
C) Increase the retail price by 2%
D) Sell at retail price

Option (D)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-arithmetic-profit-and-loss-if-a-seller-gives-a-discount-of-15/

Q73) A man travels by a motor boat down a river to his office and back. With the speed of the river unchanged, if he doubles the speed of his motor boat, then his total travel time gets reduced by 75%. The ratio of the original speed of the motor boat to the speed of the river is (Arithmetic)

A) √6 / √2
B) √7 / 2
C) 2√5 / 3
D) 3: 2

Option (B)

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Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-arithmetic-tsd-a-man-travels-by-a-motor-boat/

Q74) Suppose, C1, C2, C3, C4, and C5 are five companies. The profits made by C1, C2, and C3 are in the ratio 9 : 10 : 8 while the profits made by C2, C4, and C5 are in the ratio 18 : 19 : 20. If C5 has made a profit of Rs 19 crore more than C1, then the total profit (in Rs) made by all five companies is (Arithmetic)
A) 438 crore
B) 435 crore
C) 348 crore
D) 345 crore

Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-arithmetic-ratios-suppose-c1-c2-c3-c4-and-c5/

Q75) The number of girls appearing for an admission test is twice the number of boys. If 30% of the girls and 45% of the boys get admission, the percentage of candidates who do not get admission is (Arithmetic)

A) 35
B) 50
C) 60
D) 65

Option (D)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-arithmetic-percentages-the-number-of-girls-appearing/

Q76) A stall sells popcorn and chips in packets of three sizes: large, super, and jumbo. The numbers of large, super, and jumbo packets in its stock are in the ratio 7 : 17 : 16 for popcorn and 6 : 15 : 14 for chips. If the total number of popcorn packets in its stock is the same as that of chips packets, then the numbers of jumbo popcorn packets and jumbo chips packets are in the ratio (Arithmetic)

A) 1: 1
B) 8: 7
C) 4: 3
D) 6: 5

Option (A)

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Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-arithmetic-ratios-a-stall-sells-popcorn-and-chips/

Q77) In a market, the price of medium quality mangoes is half that of good mangoes. A shopkeeper buys 80 kg good mangoes and 40 kg medium quality mangoes from the market and then sells all these at a common price which is 10% less than the price at which he bought the good ones. His overall profit is (Arithmetic)

A) 6%
B) 8%
C) 10%
D) 12%

Option (B)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-arithmetic-profit-and-loss-in-a-market-the-price-of-medium-quality/

Q78) If Fatima sells 60 identical toys at a 40% discount on the printed price, then she makes 20% profit. Ten of these toys are destroyed in fire. While selling the rest, how much discount should be given on the printed price so that she can make the same amount of profit? (Arithmetic)

A) 30%
B) 25%
C) 24%
D) 28%

Option (D)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-arithmetic-profit-and-loss-if-fatima-sells-60-identical-toys/

Q79) If a and b are integers of opposite signs such that $(a + 3)^2 : b^2 = 9 : 1$ and $(a - 1)^2 : (b - 1)2 = 4 : 1$, then the ratio $a^2 : b^2$ is (Algebra)

A) 9:4 ‘
B) 81:4
C) 1: 4
D) 25: 4

Option (D)

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Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-algebra-simple-equations-if-a-and-b-are-integers/

Q80) A class consists of 20 boys and 30 girls. In the mid-semester examination, the average score of the girls was 5 higher than that of the boys. In the final exam, however, the average score of the girls dropped by 3 while the average score of the entire class increased by 2. The increase in the average score of the boys is (Arithmetic)

A) 9.5
B) 10
C) 4.5
D) 6

Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-arithmetic-averages-a-class-consists-of-20-boys/

Q81) The area of the closed region bounded by the equation | x | + | y | = 2 in the two-dimensional plane is (Algebra)

A) 4π
B) 4
C) 8
D) 2π

Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-algebra-functions-the-area-of-the-closed-region/

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Q82) From a triangle ABC with sides of lengths 40 ft, 25 ft and 35 ft, a triangular portion GBC is cut off where G is the centroid of ABC. The area, in sq ft, of the remaining portion of triangle ABC is (Geometry)

A) 225√3

B) 500 / √3

C) 275 / √3

D) 250 / √3

Option (B)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-geometry-triangles-from-a-triangle-abc-with-sides/

Q83) Let ABC be a right-angled isosceles triangle with hypotenuse BC. Let BQC be a semi-circle, away from A, with diameter BC. Let BPC be an arc of a circle centered at A and lying between BC and BQC. If AB has length 6 cm then the area, in sq cm, of the region enclosed by BPC and BQC is ((Geometry)

A) 9π - 18
B) 18
C) 9π
D) 9

Option (B)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-geometry-circles-let-abc-be-a-right-angled-isosceles/

Q84) A solid metallic cube is melted to form five solid cubes whose volumes are in the ratio 1 : 1 : 8: 27: 27. The percentage by which the sum of the surface areas of these five cubes exceeds the surface area of the original cube is nearest to (Geometry)

A) 10
B) 50
C) 60
D) 20

Option (B)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-geometry-mensuration-a-solid-metallic-cube/

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Q85) A ball of diameter 4 cm is kept on top of a hollow cylinder standing vertically. The height of the cylinder is 3 cm, while its volume is 9 π cm^3 . Then the vertical distance, in cm, of the topmost point of the ball from the base of the cylinder is (Geometry)

A) 5
B) 4
C) 3
D) 6

Option (D)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-geometry-mensuration-a-ball-of-diameter-4-cm/

Q86) Let ABC be a right-angled triangle with BC as the hypotenuse. Lengths of AB and AC are 15 km and 20 krn, respectively. The minimum possible time, in minutes, required to reach the hypotenuse from A at a speed of 30 km per hour is(Geometry)

A) 23
B) 22
C) None of these
D) 25

Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-geometry-triangles-let-abc-be-a-right-angled-triangle/

Q87) Suppose, $\log_3 x = \log_{12} y = a$, where x, y are positive numbers. If G is the geometric mean of x and y, and $\log_6 G$ is equal to (Algebra)

A) √a
B) 2a
C) a/2
D) a

Option (D)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-algebra-logarithms-if-g-is-the-geometric-mean/

Q88) If $x + 1 = x^2$ and $x > 0$, then $2x^4$ is (Algebra)

A) 6 + 4*√5
B) 3 + 5*√5
C) 5 + 3*√5
D) 7 + 3*√5

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Option (D)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-algebra-quadratic-equation-if-x-1-x2/

Q89) The value of $\log_{0.008}\sqrt{5} + \log_{\sqrt{3}}81 - 7$ is equal to (Algebra)

A) 1/3
B) 2/3
C) 5/6
D) 7/6

Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-algebra/

Q90) If $9^{2x-1} - 81^{x-1} = 1944$, then x is (Algebra)

A) 3
B) 9/4
C) 4/9
D) 1/3

Option (B)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-algebra-polynomials-if-92x-1-81x-1-1944/

Q91) The number of solutions (x, y, z) to the equation $x - y - z = 25$, where x, y, and z are positive integers such that $x \leq 40$, $y \leq 12$, and $z \leq 12$ is (Algebra)

A) 101
B) 99
C) 87
D) 105

Option (B)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-algebra-inequalities-the-number-of-solutions-x-y-z/

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Q92) For how many integers n, will the inequality $(n - 5)(n - 10) - 3(n - 2) \leq 0$ be satisfied? (Algebra)

A) 10
B) 11
C) 12
D) 9

Option (B)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-algebra-inequalities-for-how-many-integers-n/

Q93) If $f_1(x) = x^2 + 11x + n$ and $f_2(x) = x$, then the largest positive integer n for which the equation $f_1(x) = f_2(x)$ has two distinct real roots, is (Algebra)

A) 24
B) 23
C) 19
D) 10

Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-algebra-functions-if-f1x-x2-11x-n-and-f2x-x/

Q94) If a, b, c, and d are integers such that $a + b + c + d = 30$, then the minimum possible value of $(a - b)^2 + (a - c)^2 + (a - d)^2$ is (Algebra)

A) 1
B) 2
C) 5
D) 6

Option (B)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-algebra-maxima-minima-if-a-b-c-and-d-are-integers/

Q95) Let AB, CD, EF, GH, and JK be five diameters of a circle with center at O. In how many ways can three points be chosen out of A, B, C, D, E, F, G, H, J, K, and O so as to form a triangle? (Modern Maths)

A) 160
B) 159
C) 169
D) 150

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Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-modern-maths-permutation-and-combination/

Q96) The shortest distance of the point (½, 1) from the curve y = |x -1| + |x + 1| is (Geometry)

A) 1
B) 0
C) √2
D) √3/2

Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-geometry-coordinate-the-shortest-distance/

Q97) If the square of the 7^{th} term of an arithmetic progression with positive common difference equals the product of the 3^{rd} and 17^{th} terms, then the ratio of the first term to the common difference is (Modern Maths)

A) 2: 3
B) 3 : 2
C) 3: 4
D) 4: 3

Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-modern-maths-progressions-if-the-square-of-the-7th-term/

Q98) In how many ways can 7 identical erasers be distributed among 4 kids in such a way that each kid gets at least one eraser but nobody gets more than 3 erasers? (Modern Maths)

A) 16
B) 20
C) 14
D) 15

Option (A)

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Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-modern-maths-permutation-and-combination-2/

Q99) If f(x) = (5x+2)/(3x-5) and g(x) = x^2 - 2x - 1, then the value of g(f(f(3))) is (Algebra)

A) 2
B) 1/3
C) 6
D) 2/3

Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-algebra-functions-if-fx-5x2-3x-5/

Q100) Let a_1, a_2,……..a_{3n} be an arithmetic progression with a_1 = 3 and a_2 = 7. If a_1 + a_2 + ….+a_{3n} = 1830, then what is the smallest positive integer m such that m (a_1 + a_2 + …. + a_n) > 1830? (Modern Maths)

A) 8
B) 9
C) 10
D) 11

Option (B)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-modern-maths-progressions-let-a1-a2-a3n-be-an-arithmetic-progression/

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CAT 2017 (SLOT 2)

Questions and Answers

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Reading-Comprehension

Question 1 - 6

Creativity is at once our most precious resource and our most inexhaustible one. As anyone who has ever spent any time with children knows, every single human being is born creative; every human being is innately endowed with the ability to combine and recombine data, perceptions, materials and ideas, and devise new ways of thinking and doing. What fosters creativity? More than anything else: the presence of other creative people. The big myth is that creativity is the province of great individual geniuses. In fact creativity is a social process. Our biggest creative breakthroughs come when people learn from, compete with, and collaborate with other people.

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The education expert Sir Ken Robinson points to a 1968 study reporting on a group of 1,600 children who were tested over time for their ability to think in out-of-the-box ways. When the children were between 3 and 5 years old, 98 percent achieved positive scores. When they were 8 to 10, only 32 percent passed the same test, and only 10 percent at 13 to 15. When 280,000 25-year-olds took the test, just 2 percent passed. By the time we are adults, our creativity has been wrung out of us.

I once asked the great urbanist Jane Jacobs what makes some places more creative than others. She said, essentially, that the question was an easy one. All cities, she said, were filled with creative people; that's our default state as people. But some cities had more than their shares of leaders, people and institutions that blocked out that creativity. She called them "squelchers."

Creativity (or the lack of it) follows the same general contours of the great socio-economic divide - our rising inequality - that plagues us. According to my own estimates, roughly a third of us across the United States, and perhaps as much as half of us in our most creative cities - are able to do work which engages our creative faculties to some extent, whether as artists, musicians, writers, techies, innovators, entrepreneurs, doctors, lawyers, journalists or educators - those of us who work with our minds. That leaves a group that I term "the other 66 percent," who toil in low-wage rote and rotten jobs — if they have jobs at all — in which their creativity is subjugated, ignored or wasted.

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to build a truly creative society that supports and rewards the creativity of each and every one of us.

Q1) In the author's view, cities promote human creativity for all the following reasons EXCEPT that they
A) contain spaces that enable people to meet and share new ideas.
B) expose people to different and novel ideas, because they are home to varied groups of people.
C) provide the financial and institutional networks that enable ideas to become reality.
D) provide access to cultural activities that promote new and creative ways of thinking.
Option (D)

Detailed Solution: https://www.handakafunda.com/cat-2017/reading-comprehension-passage-creativity-is-at-once-our-most-precious/

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Q2) The author uses 'ironic' in the third paragraph to point out that
A) people need social contact rather than isolation to nurture their creativity
B) institutions created to promote creativity eventually stifle it
C) the larger the creative population in a city, the more likely it is to be stifled
D) large bureaucracies and institutions are the inevitable outcome of successful cities
Option (B)

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Q3) The central idea of this passage is that
A) social interaction is necessary to nurture creativity
B) creativity and ideas are gradually declining in all societies
C) the creativity divide is widening in societies in line with socio-economic trends
D) more people should work in jobs that engage their creative faculties
Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/reading-comprehension-passage-creativity-is-at-once-our-most-precious/

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Q4) Jane Jacobs believed that cities that are more creative
A) have to struggle to retain their creativity
B) have to 'squelch' unproductive people and promote creative ones
C) have leaders and institutions that do not block creativity
D) typically do not start off as creative hubs
Option (C)

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Q5) The 1968 study is used here to show that
A) as they get older, children usually learn to be more creative
B) schooling today does not encourage creative thinking in children
C) the more children learn, the less creative they become
D) technology today prevents children from being creative.
Option (B)

Detailed Solution: https://www.handakafunda.com/cat-2017/reading-comprehension-passage-creativity-is-at-once-our-most-precious/

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Q6) The author's conclusions about the most 'creative cities' in the US (paragraph 6) are based on his assumption that
A) people who work with their hands are not doing creative work.
B) more than half the population works in non-creative jobs.
C) only artists, musicians., writers., and so on should be valued in a society.
D) most cities ignore or waste the creativity of low-wage workers

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Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/reading-comprehension-passage-creativity-is-at-once-our-most-precious/

Questions 7 - 12

During the frigid season...it's often necessary to nestle under a blanket to try to stay warm. The temperature difference between the blanket and the air outside is so palpable that we often have trouble leaving our warm refuge. Many plants and animals similarly hunker down, relying on snow cover for safety from winter's harsh conditions. The small area between the snowpack and the ground, called the subnivium...might be the most important ecosystem that you have never heard of.

The subnivium is so well-insulated and stable that its temperature holds steady at around 32 degree Fahrenheit (0 degree Celsius). Although that might still sound cold, a constant temperature of 32 degree Fahrenheit can often be 30 to 40 degrees warmer than the air temperature during the peak of winter. Because of this large temperature difference, a wide variety of species...depend on the subnivium for winter protection.

For many organisms living in temperate and Arctic regions, the difference between being under the snow or outside it is a matter of life and death. Consequently, disruptions to the subnivium brought about by climate change will affect everything from population dynamics to nutrient cycling through the ecosystem.

The formation and stability of the subnivium requires more than a few flurries. Winter ecologists have suggested that eight inches of snow is necessary to develop a stable layer of insulation. Depth is not the only factor, however. More accurately, the stability of the subnivium depends on the interaction between snow depth and snow density. Imagine being under a stack of blankets that are all flattened and pressed together. When compressed, the blankets essentially form one compacted layer. In contrast, when they are lightly placed on

top of one another, their insulative capacity increases because the air pockets between them trap heat. Greater depths of low-density snow are therefore better at insulating the ground.

Both depth and density of snow are sensitive to temperature. Scientists are now beginning to explore how climate change will affect the subnivium, as well as the species that depend on it. At first glance, warmer winters seem beneficial for species that have difficulty surviving subzero temperatures; however, as with most ecological phenomena, the consequences are not so straightforward. Research has shown that the snow season (the period when snow is more likely than rain) has become shorter since 1970. When rain falls on snow, it increases the density of the snow and reduces its insulative capacity. Therefore, even though winters are expected to become warmer overall from future climate change, the subnivium will tend to become colder and more variable with less protection from the above-ground temperatures.

The effects of a colder subnivium are complex...For example, shrubs such as crowberry and alpine azalea that grow along the forest floor tend to block the wind and so retain higher depths of snow around them. This captured snow helps to keep soils insulated and in turn increases plant decomposition and nutrient release. In field experiments, researchers

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removed a portion of the snow cover to investigate the importance of the subnivium's insulation. They found that soil frost in the snow-free area resulted in damage to plant roots and sometimes even the death of the plant.

Q7) The purpose of this passage is to
A) introduce readers to a relatively unknown ecosystem: the subnivium
B) explain how the subnivium works to provide shelter and food to several species.
C) outline the effects of climate change on the subnivium.
D) draw an analogy between the effect of blankets on humans and of snow cover on species living in the subnivium.
Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/reading-comprehension-passage-during-the-frigid-season/

Q8) During the frigid season...it's often necessary to nestle under a blanket to try to stay warm. The temperature difference between the blanket and the air outside is so palpable that we often have trouble leaving our warm refuge. Many plants and animals similarly hunker down, relying on snow cover for safety from winter's harsh conditions. The small area between the snowpack and the ground, called the subnivium...might be the most important ecosystem that you have never heard of.

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Q8) All of the following statements are true EXCEPT
A) Snow depth and snow density both influence the stability of the subnivium.
B) Climate change has some positive effects on the subnivium.
C) The subnivium maintains a steady temperature that can be 30 to 40 degrees warmer than the winter air temperature.
D) Researchers have established the adverse effects of dwindling snow cover on the subnivium.
Option (B)

Detailed Solution: https://www.handakafunda.com/cat-2017/reading-comprehension-passage-during-the-frigid-season/

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Q9) Based on this extract, the author would support which one of the following actions?
A) The use of snow machines in winter to ensure snow cover of at least eight inches.
B) Government action to curb climate change.
C) Adding nutrients to the soil in winter.
D) Planting more shrubs in areas of short snow season
Option (B)

Detailed Solution: https://www.handakafunda.com/cat-2017/reading-comprehension-passage-during-the-frigid-season/

Q10)
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The formation and stability of the subnivium requires more than a few flurries. Winter ecologists have suggested that eight inches of snow is necessary to develop a stable layer of insulation. Depth is not the only factor, however. More accurately, the stability of the subnivium depends on the interaction between snow depth and snow density. Imagine being under a stack of blankets that are all flattened and pressed together. When compressed, the blankets essentially form one compacted layer. In contrast, when they are lightly placed on top of one another, their insulative capacity increases because the air pockets between them trap heat. Greater depths of low-density snow are therefore better at insulating the ground.

Both depth and density of snow are sensitive to temperature. Scientists are now beginning to explore how climate change will affect the subnivium, as well as the species that depend on it. At first glance, warmer winters seem beneficial for species that have difficulty surviving subzero temperatures; however, as with most ecological phenomena, the consequences are not so straightforward. Research has shown that the snow season (the period when snow is more likely than rain) has become shorter since 1970. When rain falls on snow, it increases the density of the snow and reduces its insulative capacity. Therefore, even though winters are expected to become warmer overall from future climate change, the subnivium will tend

to become colder and more variable with less protection from the above-ground temperatures.

The effects of a colder subnivium are complex...For example, shrubs such as crowberry and alpine azalea that grow along the forest floor tend to block the wind and so retain higher depths of snow around them. This captured snow helps to keep soils insulated and in turn increases plant decomposition and nutrient release. In field experiments, researchers removed a portion of the snow cover to investigate the importance of the subnivium's insulation. They found that soil frost in the snow-free area resulted in damage to plant roots and sometimes even the death of the plant.

Q10) In paragraph 6, the author provides the examples of crowberry and alpine azalea to demonstrate that
A) Despite frigid temperatures, several species survive in temperate and Arctic regions.
B) Due to frigid temperatures in the temperate and Arctic regions., plant species that survive tend to be shrubs rather than trees.
C) The crowberry and alpine azalea are abundant in temperate and Arctic regions.
D) The stability of the subnivium depends on several interrelated factors, including shrubs on the forest floor.
Option (D)

Detailed Solution: https://www.handakafunda.com/cat-2017/reading-comprehension-passage-during-the-frigid-season/

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Q11)
During the frigid season...it's often necessary to nestle under a blanket to try to stay warm. The temperature difference between the blanket and the air outside is so palpable that we often have trouble leaving our warm refuge. Many plants and animals similarly hunker down, relying on snow cover for safety from winter's harsh conditions. The small area between the snowpack and the ground, called the subnivium...might be the most important ecosystem that you have never heard of.

The subnivium is so well-insulated and stable that its temperature holds steady at around 32 degree Fahrenheit (0 degree Celsius). Although that might still sound cold, a constant temperature of 32 degree Fahrenheit can often be 30 to 40 degrees warmer than the air temperature during the peak of winter. Because of this large temperature difference, a wide variety of species...depend on the subnivium for winter protection.

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Q11) Which one of the following statements can be inferred from the passage?
A) In an ecosystem, altering any one element has a ripple effect on all others.
B) Climate change affects temperate and Artie regions more than equatorial or arid ones.

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C) A compact layer of wool is warmer than a similarly compact layer of goose down.
D) The loss of the subnivium, while tragic, will affect only temperate and Artie regions.
Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/reading-comprehension-passage-during-the-frigid-season/

Q12) During the frigid season...it's often necessary to nestle under a blanket to try to stay warm. The temperature difference between the blanket and the air outside is so palpable that we often have trouble leaving our warm refuge. Many plants and animals similarly hunker down, relying on snow cover for safety from winter's harsh conditions. The small area between the snowpack and the ground, called the subnivium...might be the most important ecosystem that you have never heard of.

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insulation. They found that soil frost in the snow-free area resulted in damage to plant roots and sometimes even the death of the plant.

Q12) In paragraph 1, the author uses blankets as a device to
A) evoke the bitter cold of winter in the minds of readers.
B) explain how blankets work to keep us warm.
C) draw an analogy between blankets and the snowpack.
D) alert readers to the fatal effects of excessive exposure to the cold.
Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/reading-comprehension-passage-during-the-frigid-season/

Questions 13 - 18

The end of the age of the internal combustion engine is in sight. There are small signs everywhere: the shift to hybrid vehicles is already under way among manufacturers. Volvo has announced it will make no purely petrol-engined cars after 2019...and Tesla has just started selling its first electric car aimed squarely at the middle classes: the Tesla 3 sells for $35,000 in the US, and 400,000 people have put down a small, refundable deposit towards one. Several thousand have already taken delivery, and the company hopes to sell half a million more next year. This is a remarkable figure for a machine with a fairly short range and a very limited number of specialised charging stations.

Some of it reflects the remarkable abilities of Elon Musk, the company's founder, as a salesman, engineer, and a man able to get the most out his factory workers and the governments he deals with...Mr Musk is selling a dream that the world wants to believe in.

This last may be the most important factor in the story. The private car is...a device of immense practical help and economic significance, but at the same time a theatre for myths of unattainable self-fulfilment. The one thing you will never see in a car advertisement is traffic, even though that is the element in which drivers spend their lives. Every single driver in a traffic jam is trying to escape from it, yet it is the inevitable consequence of mass car ownership.

The sleek and swift electric car is at one level merely the most contemporary fantasy of autonomy and power. But it might also disrupt our exterior landscapes nearly as much as the fossil fuel-engined car did in the last century. Electrical cars would of course pollute far less than fossil fuel-driven ones; instead of oil reserves, the rarest materials for batteries would make undeserving despots and their dynasties fantastically rich. Petrol stations would disappear. The air in cities would once more be breathable and their streets as quiet as those of Venice. This isn't an unmixed good. Cars that were as silent as bicycles would still be as dangerous as they are now to anyone they hit without audible warning.

The dream goes further than that. The electric cars of the future will be so thoroughly equipped with sensors and reaction mechanisms that they will never hit anyone. Just as brakes don't let you skid today, the steering wheel of tomorrow will swerve you away from danger before you have even noticed it...

This is where the fantasy of autonomy comes full circle. The logical outcome of cars which need no driver is that they will become cars which need no owner either. Instead, they will work as taxis do, summoned at will but only for the journeys we actually need. This the future towards which Uber...is working. The ultimate development of the private car will be to reinvent public transport. Traffic jams will be abolished only when the private car becomes a public utility. What then will happen to our fantasies of independence? We'll all have to take to electrically powered bicycles.

Q13) Which of the following statements best reflects the author's argument?
A) Hybrid and electric vehicles signal the end of the age of internal combustion engines.
B) Elon Musk is a remarkably gifted salesman.
C) The private car represents an unattainable myth of independence.
D) The future Uber car will be environmentally friendlier than even the Tesla.
Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/reading-comprehension-passage-the-end-of-the-age/

Q14) The end of the age of the internal combustion engine is in sight. There are small signs everywhere: the shift to hybrid vehicles is already under way among manufacturers. Volvo has announced it will make no purely petrol-engined cars after 2019...and Tesla has just started selling its first electric car aimed squarely at the middle classes: the Tesla 3 sells for $35,000 in the US, and 400,000 people have put down a small, refundable deposit towards one. Several thousand have already taken delivery, and the company hopes to sell half a million more next year. This is a remarkable figure for a machine with a fairly short range and a very limited number of specialised charging stations.

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Q14) The author points out all of the following about electric cars EXCEPT
A) Their reliance on rare materials for batteries will support despotic rule.
B) They will reduce air and noise pollution.
C) They will not decrease the number of traffic jams.
D) They will ultimately undermine rather than further driver autonomy.
Option (D)

Detailed Solution: https://www.handakafunda.com/cat-2017/reading-comprehension-passage-the-end-of-the-age/

Q15) The end of the age of the internal combustion engine is in sight. There are small signs everywhere: the shift to hybrid vehicles is already under way among manufacturers. Volvo has announced it will make no purely petrol-engined cars after 2019...and Tesla has just started selling its first electric car aimed squarely at the middle classes: the Tesla 3 sells for $35,000 in the US, and 400,000 people have put down a small, refundable deposit towards one. Several thousand have already taken delivery, and the company hopes to sell half a million more next year. This is a remarkable figure for a machine with a fairly short range and a very limited number of specialised charging stations.

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Q15) According to the author, the main reason for Tesla's remarkable sales is that
A) in the long run, the Tesla is more cost effective than fossil fuel-driven cars.
B) the US government has announced a tax subsidy for Tesla buyers.
C) the company is rapidly upscaling the number of specialised charging stations for customer convenience.
D) people believe in the autonomy represented by private cars.
Option (D)

Detailed Solution: https://www.handakafunda.com/cat-2017/reading-comprehension-passage-the-end-of-the-age/

Q16)
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Q16) The author comes to the conclusion that
A) car drivers will no longer own cars but will have to use public transport.
B) cars will be controlled by technology that is more efficient than car drivers.
C) car drivers dream of autonomy but the future may be public transport.
D) electrically powered bicycles are the only way to achieve autonomy in transportation
Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/reading-comprehension-passage-the-end-of-the-age/

Q17) The end of the age of the internal combustion engine is in sight. There are small signs everywhere: the shift to hybrid vehicles is already under way among manufacturers. Volvo has announced it will make no purely petrol-engined cars after 2019...and Tesla has just started selling its first electric car aimed squarely at the middle classes: the Tesla 3 sells for $35,000 in the US, and 400,000 people have put down a small, refundable deposit towards one. Several thousand have already taken delivery, and the company hopes to sell half a million more next year. This is a remarkable figure for a machine with a fairly short range and a very limited number of specialised charging stations.

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Q17) In paragraphs 5 and 6, the author provides the example of Uber to argue that
A) in the future, electric cars will be equipped with mechanisms that prevent collisions.
B) in the future, traffic jams will not exist.
C) in the future, the private car will be transformed into a form of public transport.
D) in the future, Uber rides will outstrip Tesla sales.
Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/reading-comprehension-passage-the-end-of-the-age/

Q18) The end of the age of the internal combustion engine is in sight. There are small signs everywhere: the shift to hybrid vehicles is already under way among manufacturers. Volvo has announced it will make no purely petrol-engined cars after 2019...and Tesla has just started selling its first electric car aimed squarely at the middle classes: the Tesla 3 sells for $35,000 in the US, and 400,000 people have put down a small, refundable deposit towards one. Several thousand have already taken delivery, and the company hopes to sell half a million more next year. This is a remarkable figure for a machine with a fairly short range and a very limited number of specialised charging stations.

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Q18) In paragraph 6, the author mentions electrically powered bicycles to argue that
A) if Elon Musk were a true visionary, he would invest funds in developing electric bicycles.
B) our fantasies of autonomy might unexpectedly require us to consider electric bicycles.
C) in terms of environmental friendliness and safety, electric bicycles rather than electric cars are the future.
D) electric buses are the best form of public transport.
Option (B)

Detailed Solution: https://www.handakafunda.com/cat-2017/reading-comprehension-passage-the-end-of-the-age/

Question 19 - 21

Handa Ka Funda

Typewriters are the epitome of a technology that has been comprehensively rendered obsolete by the digital age. The ink comes off the ribbon, they weigh a ton, and second thoughts are a disaster. But they are also personal, portable and, above all, private. Type a

document and lock it away and more or less the only way anyone else can get it is if you give it to them. That is why the Russians have decided to go back to typewriters in some government offices, and why in the US, some departments have never abandoned them. Yet it is not just their resistance to algorithms and secret surveillance that keeps typewriter production lines - well one, at least - in business (the last British one closed a year ago). Nor is it only the nostalgic appeal of the metal body and the stout well-defined keys that make them popular on eBay. A typewriter demands something particular: attentiveness. By the time the paper is loaded, the ribbon tightened, the carriage returned, the spacing and the margins set, there's a big premium on hitting the right key. That means sorting out ideas, pulling together a kind of order and organising details before actually striking off. There can be no thinking on screen with a typewriter. Nor are there any easy distractions. No online shopping. No urgent emails. No Twitter. No need even for electricity - perfect for writing in a remote hideaway. The thinking process is accompanied by the encouraging clack of keys, and the ratchet of the carriage return. Ping!

Q19) Which one of the following best describes what the passage is trying to do?
A) It describes why people continue to use typewriters even in the digital age.
B) It argues that typewriters will continue to be used even though they are an obsolete technology.
C) It highlights the personal benefits of using typewriters.uture.
D) It shows that computers offer fewer options than typewriters.
Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/reading-comprehension-typewriters-are-the-epitome-of-a-technology/

Q20) Typewriters are the epitome of a technology that has been comprehensively rendered obsolete by the digital age. The ink comes off the ribbon, they weigh a ton, and second thoughts are a disaster. But they are also personal, portable and, above all, private. Type a document and lock it away and more or less the only way anyone else can get it is if you give it to them. That is why the Russians have decided to go back to typewriters in some government offices, and why in the US, some departments have never abandoned them. Yet it is not just their resistance to algorithms and secret surveillance that keeps typewriter production lines - well one, at least - in business (the last British one closed a year ago). Nor is it only the nostalgic appeal of the metal body and the stout well-defined keys that make them popular on eBay. A typewriter demands something particular: attentiveness. By the time the paper is loaded, the ribbon tightened, the carriage returned, the spacing and the margins set, there's a big premium on hitting the right key. That means sorting out ideas, pulling together a kind of order and organising details before actually striking off. There can be no thinking on screen with a typewriter. Nor are there any easy distractions. No online shopping. No urgent emails. No Twitter. No need even for electricity - perfect for writing in a remote hideaway. The thinking process is accompanied by the encouraging clack of keys, and the ratchet of the carriage return. Ping!

Q20) According to the passage, some governments still use typewriters because:
A) they do not want to abandon old technologies that may be useful in the future.
B) they want to ensure that typewriter production lines remain in business.
C) they like the nostalgic appeal of typewriter.
D) they can control who reads the document.
Option (D)

Detailed Solution: https://www.handakafunda.com/cat-2017/reading-comprehension-typewriters-are-the-epitome-of-a-technology/

Q21) Typewriters are the epitome of a technology that has been comprehensively rendered obsolete by the digital age. The ink comes off the ribbon, they weigh a ton, and second thoughts are a disaster. But they are also personal, portable and, above all, private. Type a document and lock it away and more or less the only way anyone else can get it is if you give it to them. That is why the Russians have decided to go back to typewriters in some government offices, and why in the US, some departments have never abandoned them. Yet it is not just their resistance to algorithms and secret surveillance that keeps typewriter production lines - well one, at least - in business (the last British one closed a year ago). Nor is it only the nostalgic appeal of the metal body and the stout well-defined keys that make them popular on eBay. A typewriter demands something particular: attentiveness. By the time the paper is loaded, the ribbon tightened, the carriage returned, the spacing and the margins set, there's a big premium on hitting the right key. That means sorting out ideas, pulling together a kind of order and organising details before actually striking off. There can be no thinking on screen with a typewriter. Nor are there any easy distractions. No online shopping. No urgent emails. No Twitter. No need even for electricity - perfect for writing in a remote hideaway. The thinking process is accompanied by the encouraging clack of keys, and the ratchet of the carriage return. Ping!

Q21) The writer praises typewriters for all the following reasons EXCEPT
A) Unlike computers, they can only be used for typing.
B) You cannot revise what you have typed on a typewriter.
C) Typewriters are noisier than computers.
D) Typewriters are messier to use than computers.
Option (D)

Detailed Solution: https://www.handakafunda.com/cat-2017/reading-comprehension-typewriters-are-the-epitome-of-a-technology/

Question 22 - 24
Despite their fierce reputation. Vikings may not have always been the plunderers and pillagers popular culture imagines them to be. In fact, they got their start trading in northern European markets, researchers suggest.

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Combs carved from animal antlers, as well as comb manufacturing waste and raw antler material has turned up at three archaeological sites in Denmark, including a medieval marketplace in the city of Ribe. A team of researchers from Denmark and the U.K. hoped to identify the species of animal to which the antlers once belonged by analyzing collagen proteins in the samples and comparing them across the animal kingdom, Laura Geggel reports for LiveScience. Somewhat surprisingly, molecular analysis of the artifacts revealed that some combs and other material had been carved from reindeer antlers.... Given that reindeer (Rangifer tarandus) don't live in Denmark, the researchers posit that it arrived on Viking ships from Norway. Antler craftsmanship, in the form of decorative combs, was part of Viking culture. Such combs served as symbols of good health, Geggel writes. The fact that the animals shed their antlers also made them easy to collect from the large herds that inhabited Norway.

Since the artifacts were found in marketplace areas at each site it's more likely that the Norsemen came to trade rather than pillage. Most of the artifacts also date to the 780s, but some are as old as 725. That predates the beginning of Viking raids on Great Britain by about 70 years. (Traditionally, the so-called "Viking Age" began with these raids in 793 and ended with the Norman conquest of Great Britain in 1066.) Archaeologists had suspected that the Vikings had experience with long maritime voyages [that] might have preceded their raiding days. Beyond Norway, these combs would have been a popular industry in Scandinavia as well. It's possible that the antler combs represent a larger trade network, where the Norsemen supplied raw material to craftsmen in Denmark and elsewhere.

Q22) The primary purpose of the passage is:
A) to explain the presence of reindeer antler combs in Denmark.
B) to contradict the widely-accepted beginning date for the Viking Age in Britain, and propose an alternate one.
C) to challenge the popular perception of Vikings as raiders by using evidence that suggests their early trade relations with Europe.
D) to argue that besides being violent pillagers, Vikings were also skilled craftsmen and efficient traders.
Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/reading-comprehension-despite-their-fierce-reputation-vikings/

Q23) Despite their fierce reputation. Vikings may not have always been the plunderers and pillagers popular culture imagines them to be. In fact, they got their start trading in northern European markets, researchers suggest.

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Q23) The evidence - "Most of the artifacts also date to the 780s, but some are as old as 725" - has been used in the passage to argue that:
A) the beginning date of the Viking Age should be changed from 793 to 725.
B) the Viking raids started as early as 725.
C) some of the antler artifacts found in Denmark and Great Britain could have come from Scandinavia.
D) the Vikings' trade relations with Europe pre-dates the Viking raids.
Option (D)

Detailed Solution: https://www.handakafunda.com/cat-2017/reading-comprehension-despite-their-fierce-reputation-vikings/

Q24) Despite their fierce reputation. Vikings may not have always been the plunderers and pillagers popular culture imagines them to be. In fact, they got their start trading in northern European markets, researchers suggest.

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ended with the Norman conquest of Great Britain in 1066.) Archaeologists had suspected that the Vikings had experience with long maritime voyages [that] might have preceded their raiding days. Beyond Norway, these combs would have been a popular industry in Scandinavia as well. It's possible that the antler combs represent a larger trade network, where the Norsemen supplied raw material to craftsmen in Denmark and elsewhere.

Q24) All of the following hold true for Vikings EXCEPT
A) Vikings brought reindeer from Norway to Denmark for trade purposes.
B) Before becoming the raiders of northern Europe, Vikings had trade relations with European nations.
C) Antler combs, regarded by the Vikings as a symbol of good health, were part of the Viking culture.
D) Vikings, once upon a. time, had trade relations with Denmark and Scandinavia.
Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/reading-comprehension-despite-their-fierce-reputation-vikings/

VERBAL

SUMMARY
Question No. : 25
North American walnut sphinx moth caterpillars (Amorpha juglandis) look like easy meals for birds, but they have a trick up their sleeves—they produce whistles that sound like bird alarm calls, scaring potential predators away. At first, scientists suspected birds were simply startled by the loud noise. But a new study suggests a more sophisticated mechanism: the caterpillar's whistle appears to mimic a bird alarm call, sending avian predators scrambling for cover. When pecked by a bird, the caterpillars whistle by compressing their bodies like an accordion and forcing air out through specialized holes in their sides. The whistles are impressively loud - they have been measured at over 80 dB from 5 cm away from the caterpillar - considering they are made by a two-inch long insect.
A) North American walnut sphinx moth caterpillars will whistle periodically to ward off predator birds - they have a specialized vocal tract that helps them whistle.
B) North American walnut sphinx moth caterpillars can whistle very1 loudly; the loudness of their whistles is shocking as they are very small insects.
C) North American walnut sphinx moth caterpillars, in a case of acoustic deception, produce whistles that mimic bird alarm calls to defend themselves.
D) North American walnut sphinx moth caterpillars, in a case of deception and camouflage, produce whistles that mimic bird alarm calls to defend themselves.
Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/verbal-ability-summary-north-american-walnut-sphinx/

Question No. : 26

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Both Socrates and Bacon were very good at asking useful questions. In fact, Socrates is largely credited with corning up with a way of asking questions, 'the Socratic method/ which itself is at the core of the 'scientific method, 'popularised by Bacon. The Socratic method disproves arguments by finding exceptions to them, and can therefore lead your opponent to a point where they admit something that contradicts their original position. In common with Socrates, Bacon stressed it was as important to disprove a theory as it was to prove one - and real-world observation and experimentation were key to achieving both aims. Bacon also saw science as a collaborative affair, with scientists working together, challenging each other.

A) Both Socrates and Bacon advocated clever questioning of the opponents to disprove their arguments and theories.

B) Both Socrates and Bacon advocated challenging arguments and theories by observation and experimentation.

C) Both Socrates and Bacon advocated confirming arguments and theories by finding exceptions.

D) Both Socrates and Bacon advocated examining arguments and theories from both sides to prove them.

Option (D)

Detailed Solution: https://www.handakafunda.com/cat-2017/verbal-ability-summary-both-socrates-and-bacon-were/

Question No. : 27

A fundamental property of language is that it is slippery and messy and more liquid than solid, a gelatinous mass that changes shape to fit. As Wittgenstein would remind us, "usage has no sharp boundary." Oftentimes, the only way to determine the meaning of a word is to examine how it is used. This insight is often described as the "meaning is use" doctrine. There are differences between the "meaning is use" doctrine and a dictionary-first theory of meaning. "The dictionary's careful fixing of words to definitions, like butterflies pinned under glass, can suggest that this is how language works. The definitions can seem to ensure and fix the meaning of words, just as the gold standard can back a country's currency." What Wittgenstein found in the circulation of ordinary language, however, was a free-floating currency of meaning. The value of each word arises out of the exchange. The lexicographer abstracts a meaning from that exchange, which is then set within the conventions of the dictionary definition.

A) Dictionary definitions are like 'gold standards' - artificial, theoretical and dogmatic. Actual meaning of words is their free exchange value.

B) Language is already slippery; given this, accounting for 'meaning in use' will only exasperate the problem. That is why lexicographers 'fix' meanings

C) Meaning is dynamic; definitions are static. The 'meaning in use' theory helps us understand that definitions of words are culled from their meaning in exchange and use and not vice versa.

D) The meaning of words in dictionaries is clear, fixed and less dangerous and ambiguous than the meaning that arises when words are exchanged between people

Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/verbal-ability-summary-a-fundamental-property-of-language/

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PARAJUMBLES

Question No. : 28

1. The implications of retelling of Indian stories, hence, takes on new meaning in a modern India.
2. The stories we tell reflect the world around us.
3. We cannot help but retell the stories that we value - after all, they are never quite right for us - in our time.
4. And even if we manage to get them quite right, they are only right for us - other people living around us will have different reasons for telling similar stories.
5. As soon as we capture a story, the world we were trying to capture has changed.

A) 25341
B) 12435
C) 23145
D) 31425
Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/verbal-ability-parajumble-the-implications-of-retelling/

Question No. : 29

1. Before plants can take life from atmosphere, nitrogen must undergo transformations similar to ones that food undergoes in our digestive machinery.
2. In its aerial form nitrogen is insoluble, unusable and is in need of transformation.
3. Lightning starts the series of chemical reactions that need to happen to nitrogen, ultimately helping it nourish our earth.
4. Nitrogen - an essential food for plants - is an abundant resource, with about 22 million tons of it floating over each square mile of earth.
5. One of the most dramatic examples in nature of ill wind that blows goodness is lightning.

A) 34215
B) 53421
C) 32415
D) 23154
Option (B)
Detailed Solution: https://www.handakafunda.com/cat-2017/verbal-ability-parajumble-before-plants-can-take-life-from-atmosphere/

Question No. : 30

1.This has huge implications for the health care system as it operates today, where depleted resources and time lead to patients rotating in and out of doctor's offices, oftentimes receiving minimal care or concern (what is commonly referred to as "bed side manner") from doctors.
2. The placebo effect is when an individual's medical condition or pain shows signs of improvement based on a fake intervention that has been presented to them as a real one and used to be regularly dismissed by researchers as a psychological effect.
3. The placebo effect is not solely based on believing in treatment, however, as the clinical setting in which treatments are administered is also paramount.

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4. That the mind has the power to trigger biochemical changes because the individual believes that a given drug or intervention will be effective could empower chronic patients through the notion of our bodies' capacity for self-healing.
5. Placebo effects are now studied not just as foils for "real" interventions but as a potential portal into the self-healing powers of the body.

A) 25431
B) 32415
C) 42351
D) 54231
Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/verbal-ability-parajumble-this-has-huge-implications/

Question No. : 31
1. Johnson treated English very practically, as a living language, with many different shades of meaning and adopted his definitions on the principle of English common law - according to precedent.
2. Masking a profound inner torment, Johnson found solace in compiling the words of a language that was, in its coarse complexity and comprehensive genius, the precise analogue of his character.
3. Samuel Johnson was a pioneer who raised common sense to heights of genius, and a man of robust popular instincts whose watchwords were clarity, precision and simplicity.
4. The 18th century English reader, in the new world of global trade and global warfare, needed a dictionary with authoritative acts of definition of words of a language that was becoming seeded throughout the first British empire by a vigorous and practical champion.
5. The Johnson who challenged Bishop Berkeley's solipsist theory of the nonexistence of matter by kicking a large stone ("I refute it thus") is the same Johnson for whom language must have a daily practical use.

A) 43512
B) 32145
C) 23145
D) 54231
Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/verbal-ability-parajumble-johnson-treated-english-very-practically/

ODD ONE OUT
Question No. : 32
1. Although we are born with the gift of language, research shows that we are surprisingly unskilled when it comes to communicating with others.
2. We must carefully orchestrate our speech if we want to achieve our goals and bring our dreams to fruition.
3. We often choose our words without thought, oblivious of the emotional effects they can have on others.
4. We talk more than we need to, ignoring the effect we are having on those listening to us.

5. We listen poorly, without realizing it, and we often fail to pay attention to the subtle meanings conveyed by facial expressions, body gestures, and the tone and cadence of our voice.

A) 2
B) 1
C) 3
D) 5
Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/verbal-ability-odd-one-out-although-we-are-born-with-the-gift-of-language/

Question No. : 33
1. Over the past fortnight, one of its finest champions managed to pull off a similar impression.
2. Wimbledon's greatest illusion is the sense of timelessness it evokes.
3. At 35 years and 342 days, Roger Federer became the oldest man to win the singles title in the Open Era - a full 14 years after he first claimed the title as a scruffy, pony-tailed upstart.
4. Once he had survived the opening week, the second week witnessed the range of a rested Federer's genius.
5. Given that his method isn't reliant on explosive athleticism or muscular ball-striking, both vulnerable to decay, there is cause to believe that Federer will continue to enchant for a while longer.

A) 3
B) 4
C) 5
D) 1
Option (B)

Detailed Solution: https://www.handakafunda.com/cat-2017/verbal-ability-odd-one-out-over-the-past-fortnight/

Question No. : 34
1. Those geometric symbols and aerodynamic swooshes are more than just skin deep.
2. The Commonwealth Bank logo - a yellow diamond, with a black chunk sliced out in one corner - is so recognisable that the bank doesn't even use its full name in its advertising.
3. It's not just logos with hidden shapes; sometimes brands will have meanings or stories within them that are deliberately vague or lost in time, urging you to delve deeper to solve the riddle.
4. Graphic designers embed cryptic references because it adds a story to the brand; they want people to spend more time with a brand and have that idea that they are an insider if they can understand the hidden message.
5. But the CommBank logo has more to it than meets the eye, as squirrelled away in that diamond is the Southern Cross constellation.

A) 2
B) 3
C) 1
D) 4
Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/verbal-ability-odd-one-out-those-geometric-symbols-and-aerodynamic/

DATA INTERPRETATION AND LOGICAL REASONING

Set 1 – Q35 to Q38

Funky Pizzaria was required to supply pizzas to three different parties. The total number of pizzas it had to deliver was 800, 70% of which were to be delivered to Party 3 and the rest equally divided between Party 1 and Party 2.

Pizzas could be of Thin Crust (T) or Deep Dish (D) variety and come in either Normal Cheese (NC) or Extra Cheese (EC) versions. Hence, there are four types of pizzas: T-NC, T-EC, D-NC and D-EC. Partial information about proportions of T and NC pizzas ordered by the three parties is given below:

	Thin Crust	(T) Normal Cheese (NC)
Party 1	0.6	-
Party 2	0.55	0.3
Party 3	-	0.65
Total	0.375	0.52

Q35)
How many Thin Crust pizzas were to be delivered to Party 3?
A) 398
B) 162
C) 196
D) 364
Option (B)
Detailed Solution: https://www.handakafunda.com/cat-2017/data-interpretation-set-funky-pizzaria-was-required-to-supply-pizzas/

Q36)
Funky Pizzaria was required to supply pizzas to three different parties. The total number of pizzas it had to deliver was 800, 70% of which were to be delivered to Party 3 and the rest equally divided between Party 1 and Party 2.

Pizzas could be of Thin Crust (T) or Deep Dish (D) variety and come in either Normal Cheese (NC) or Extra Cheese (EC) versions. Hence, there are four types of pizzas: T-NC, T-EC, D-NC and D-EC. Partial information about proportions of T and NC pizzas ordered by the three parties is given below:

	Thin Crust	(T) Normal Cheese (NC)
Party 1	0.6	-
Party 2	0.55	0.3

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Party 3	-	0.65
Total	0.375	0.52

Q36)
How many Normal Cheese pizzas were required to be delivered to Party 1?
A) 104
B) 84
C) 16
D) 196
Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/data-interpretation-set-funky-pizzaria-was-required-to-supply-pizzas/

Q37) Funky Pizzaria was required to supply pizzas to three different parties. The total number of pizzas it had to deliver was 800, 70% of which were to be delivered to Party 3 and the rest equally divided between Party 1 and Party 2.
Pizzas could be of Thin Crust (T) or Deep Dish (D) variety and come in either Normal Cheese (NC) or Extra Cheese (EC) versions. Hence, there are four types of pizzas: T-NC, T-EC, D-NC and D-EC. Partial information about proportions of T and NC pizzas ordered by the three parties is given below:

	Thin Crust	(T) Normal Cheese (NC)
Party 1	0.6	-
Party 2	0.55	0.3
Party 3	-	0.65
Total	0.375	0.52

Q37)
For Party 2, if 50% of the Normal Cheese pizzas were of Thin Crust variety, what was the difference between the numbers of TEC and D-EC pizzas to be delivered to Party 2?
A) 18
B) 12
C) 30
D) 24
Option (B)
Solution:
Detailed Solution: https://www.handakafunda.com/cat-2017/data-interpretation-set-funky-pizzaria-was-required-to-supply-pizzas/

Q38) Funky Pizzaria was required to supply pizzas to three different parties. The total number of pizzas it had to deliver was 800, 70% of which were to be delivered to Party 3 and the rest equally divided between Party 1 and Party 2.
Pizzas could be of Thin Crust (T) or Deep Dish (D) variety and come in either Normal Cheese (NC) or Extra Cheese (EC) versions. Hence, there are four types of pizzas: T-NC, T-EC, D-NC and D-EC. Partial information about proportions of T and NC pizzas ordered by the three parties is given below:

	Thin Crust	(T) Normal Cheese (NC)

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Party 1	0.6	-
Party 2	0.55	0.3
Party 3	-	0.65
Total	0.375	0.52

Q38)
Suppose that a T-NC pizza cost as much as a D-NC pizza, but 3/5th of the price of a D-EC pizza. A D-EC pizza costs Rs. 50 more than a T-EC pizza, and the latter costs Rs. 500.
If 25% of the Normal Cheese pizzas delivered to Party 1 were of Deep Dish variety, what was the total bill for Party 1?
A) Rs. 59480
B) Rs. 59840
C) Rs. 42520
D) Rs. 45240
Option (A)
Detailed Solution: https://www.handakafunda.com/cat-2017/data-interpretation-set-funky-pizzaria-was-required-to-supply-pizzas/

Set 2 – Q39 to Q42
There were seven elective courses - El to E7 - running in a specific term in a college. Each of the 300 students enrolled had chosen just one elective from among these seven. However, before the start of the term, E7 was withdrawn as the instructor concerned had left the college. The students who had opted for E7 were allowed to join any of the remaining electives. Also, the students who had chosen other electives were given one chance to change their choice. The table below captures the movement of the students from one

elective to another during this process. Movement from one elective to the same elective simply means no movement. Some numbers in the table got accidentally erased; however, it is known that these were either 0 or 1.

		To Elective					
		E1	**E2**	**E3**	**E4**	**E5**	**E6**
From Elective	**E1**	9	5	10	1	4	2
	E2		34	8		2	2
	E3	2	6	25			2
	E4		3	2	14		4
	E5		5			30	
	E6		7	3		2	9
	E7	4	16	30	5	5	41

Further, the following are known:
1. Before the change process there were 6 more students in E1 than in E4, but after the reshuffle, the number of students in E4 was 3 more than that in E1.
2. The number of students in E2 increased by 30 after the change process.
3. Before the change process, E4 had 2 more students than E6, while E2 had 10 more students than E3.
Q39)

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How many elective courses among E1 to E6 had a decrease in their enrollments after the change process?
A) 4
B) 1
C) 2
D) 3
Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/data-interpretation-set-there-were-seven-elective-courses/

Q40) There were seven elective courses - El to E7 - running in a specific term in a college. Each of the 300 students enrolled had chosen just one elective from among these seven. However, before the start of the term, E7 was withdrawn as the instructor concerned had left the college. The students who had opted for E7 were allowed to join any of the remaining electives. Also, the students who had chosen other electives were given one chance to change their choice. The table below captures the movement of the students from one elective to another during this process. Movement from one elective to the same elective simply means no movement. Some numbers in the table got accidentally erased; however, it is known that these were either 0 or 1.

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	E3	2	6	25			2
	E4		3	2	14		4
	E5		5			30	
	E6		7	3		2	9
	E7	4	16	30	5	5	41

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1. Before the change process there were 6 more students in E1 than in E4, but after the reshuffle, the number of students in E4 was 3 more than that in E1.
2. The number of students in E2 increased by 30 after the change process.
3. Before the change process, E4 had 2 more students than E6, while E2 had 10 more students than E3.

Q40)
After the change process, which of the following is the correct sequence of number of students in the six electives El to E6?
A) 19, 76, 79, 21, 45, 60
B) 19, 76, 78, 22, 45, 60
C) 18, 76, 79, 23, 43, 61
D) 18, 76, 79, 21, 45, 61
Option (D)

Detailed Solution: https://www.handakafunda.com/cat-2017/data-interpretation-set-there-were-seven-elective-courses/

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Q41) There were seven elective courses - El to E7 - running in a specific term in a college. Each of the 300 students enrolled had chosen just one elective from among these seven. However, before the start of the term, E7 was withdrawn as the instructor concerned had left the college. The students who had opted for E7 were allowed to join any of the remaining electives. Also, the students who had chosen other electives were given one chance to change their choice. The table below captures the movement of the students from one elective to another during this process. Movement from one elective to the same elective simply means no movement. Some numbers in the table got accidentally erased; however, it is known that these were either 0 or 1.

		To Elective					
		E1	**E2**	**E3**	**E4**	**E5**	**E6**
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	E2		34	8		2	2
	E3	2	6	25			2
	E4		3	2	14		4
	E5		5			30	
	E6		7	3		2	9
	E7	4	16	30	5	5	41

Further, the following are known:
1. Before the change process there were 6 more students in E1 than in E4, but after the reshuffle, the number of students in E4 was 3 more than that in E1.
2. The number of students in E2 increased by 30 after the change process.
3. Before the change process, E4 had 2 more students than E6, while E2 had 10 more students than E3.

Q41)
After the change process, which course among El to E6 had the largest change in its enrollment as a percentage of its original enrollment?
A) E1
B) E2
C) E3
D) E6
Option (D)

Detailed Solution: https://www.handakafunda.com/cat-2017/data-interpretation-set-there-were-seven-elective-courses/

Q42) There were seven elective courses - El to E7 - running in a specific term in a college. Each of the 300 students enrolled had chosen just one elective from among these seven. However, before the start of the term, E7 was withdrawn as the instructor concerned had left the college. The students who had opted for E7 were allowed to join any of the remaining electives. Also, the students who had chosen other electives were given one chance to change their choice. The table below captures the movement of the students from one

elective to another during this process. Movement from one elective to the same elective simply means no movement. Some numbers in the table got accidentally erased; however, it is known that these were either 0 or 1.

		To Elective					
		E1	**E2**	**E3**	**E4**	**E5**	**E6**
From Elective	**E1**	9	5	10	1	4	2
	E2		34	8		2	2
	E3	2	6	25			2
	E4		3	2	14		4
	E5		5			30	
	E6		7	3		2	9
	E7	4	16	30	5	5	41

Further, the following are known:
1. Before the change process there were 6 more students in E1 than in E4, but after the reshuffle, the number of students in E4 was 3 more than that in E1.
2. The number of students in E2 increased by 30 after the change process.
3. Before the change process, E4 had 2 more students than E6, while E2 had 10 more students than E3.

Q42)
Later, the college imposed a condition that if after the change of electives, the enrollment in any elective (other than E7) dropped to less than 20 students, all the students who had left that course will be required to re-enroll for that elective.
Which of the following is a correct sequence of electives in decreasing order of their final enrollments?
A) E2, E3, E6, E5, El, E4
B) E3, E2, E6, E5, E4, El
C) E2, E5, E3, El, E4, E6
D) E2, E3, E5, E6, El, E3
Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/data-interpretation-set-there-were-seven-elective-courses/

Set 3 – Q43 to Q46
An old woman had the following assets:
(a) Rs. 70 lakh in bank deposits
(b) 1 house worth Rs. 50 lakh
(c) 3 flats, each worth Rs. 30 lakh
(d) Certain number of gold coins, each worth Rs. 1 lakh
She wanted to distribute her assets among her three children; Neeta, Seeta and Geeta. The house, any of the flats or any of the coins were not to be split. That is, the house went entirely to one child; a flat went to one child and similarly, a gold coin went to one child.
Q43)
Among the three, Neeta received the least amount in bank deposits, while Geeta received the highest. The value of the assets was distributed equally among the children, as were the gold coins.
How much did Seeta receive in bank deposits (in lakhs of rupees)?
A) 30
B) 40

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C) 20
D) 10
Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/data-interpretation-set-an-old-woman-had-the-following-assets/

Q44) An old woman had the following assets:
(a) Rs. 70 lakh in bank deposits
(b) 1 house worth Rs. 50 lakh
(c) 3 flats, each worth Rs. 30 lakh
(d) Certain number of gold coins, each worth Rs. 1 lakh
She wanted to distribute her assets among her three children; Neeta, Seeta and Geeta. The house, any of the flats or any of the coins were not to be split. That is, the house went entirely to one child; a flat went to one child and similarly, a gold coin went to one child.
Q44)
Among the three, Neeta received the least amount in bank deposits, while Geeta received the highest. The value of the assets was distributed equally among the children, as were the gold coins.
How many flats did Neeta receive?

A) 1
B) 2
C) 3
D) 4

Option (B)
Detailed Solution: https://www.handakafunda.com/cat-2017/data-interpretation-set-an-old-woman-had-the-following-assets/

Q45) An old woman had the following assets:
(a) Rs. 70 lakh in bank deposits
(b) 1 house worth Rs. 50 lakh
(c) 3 flats, each worth Rs. 30 lakh
(d) Certain number of gold coins, each worth Rs. 1 lakh
She wanted to distribute her assets among her three children; Neeta, Seeta and Geeta. The house, any of the flats or any of the coins were not to be split. That is, the house went entirely to one child; a flat went to one child and similarly, a gold coin went to one child.

Q45)
The value of the assets distributed among Neeta, Seeta and Geeta was in the ratio of 1:2:3, while the gold coins were distributed among them in the ratio of 2:3:4. One child got all three flats and she did not get the house. One child, other than Geeta, got Rs. 30 lakh in bank deposits.
How many gold coins did the old woman have?
A) 72
B) 90
C) 180
D) 216
Option (B)

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Detailed Solution: https://www.handakafunda.com/cat-2017/data-interpretation-set-an-old-woman-had-the-following-assets/

Q46) An old woman had the following assets:
(a) Rs. 70 lakh in bank deposits
(b) 1 house worth Rs. 50 lakh
(c) 3 flats, each worth Rs. 30 lakh
(d) Certain number of gold coins, each worth Rs. 1 lakh
She wanted to distribute her assets among her three children; Neeta, Seeta and Geeta. The house, any of the flats or any of the coins were not to be split. That is, the house went entirely to one child; a flat went to one child and similarly, a gold coin went to one child.

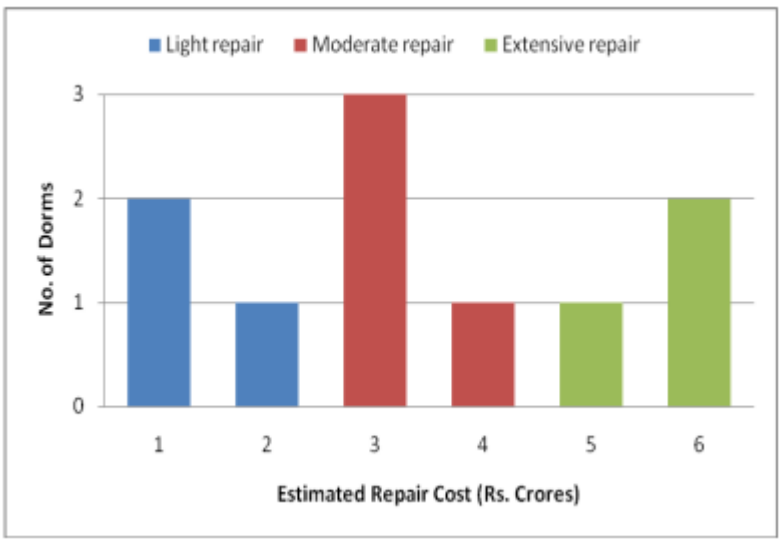
Q46)
The value of the assets distributed among Neeta, Seeta and Geeta was in the ratio of 1:2:3, while the gold coins were distributed among them in the ratio of 2:3:4. One child got all three flats and she did not get the house. One child, other than Geeta, got Rs. 30 lakh in bank deposits.
How much did Geeta get in bank deposits (in lakhs of rupees)?

A) 20
B) 19
C) 17
D) 15

Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/data-interpretation-set-an-old-woman-had-the-following-assets/

Set 4 – Q47 to Q50
At a management school, the oldest 10 dorms, numbered 1 to 10, need to be repaired urgently, The following diagram represents the estimated repair costs (in Rs. Crores) for the 10 dorms. For any dorm, the estimated repair cost (in Rs. Crores) is an integer. Repairs with estimated cost Rs. 1 or 2 Crores are considered light repairs, repairs with estimated cost Rs. 3 or 4 are considered moderate repairs and repairs with estimated cost Rs. 5 or 6 Crores are considered extensive repairs.



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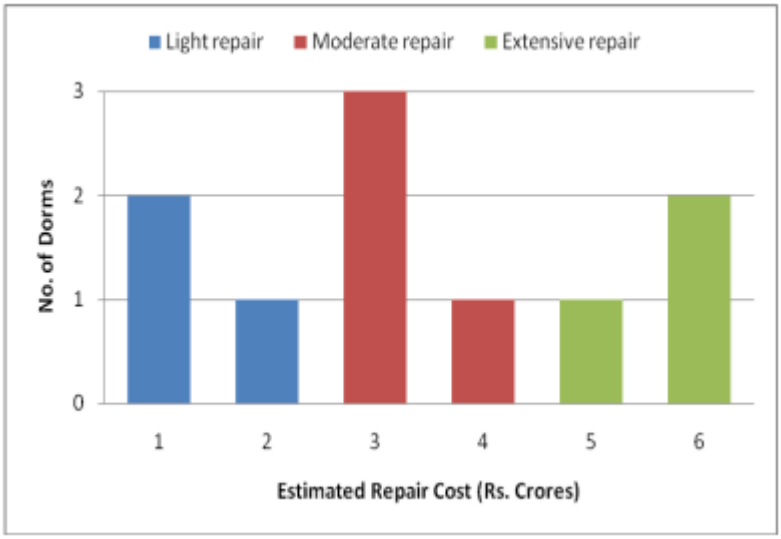
Further, the following are known:
1. Odd-numbered dorms do not need light repair; even-numbered dorms do not need moderate repair and dorms, whose numbers are divisible by 3, do not need extensive repair.
2. Dorms 4 to 9 all need different repair costs, with Dorm 7 needing the maximum and Dorm 8 needing the minimum

Q47)
Which of the following is NOT necessarily true?
A) Dorm 1 needs a moderate repair
B) Dorm 5 repair will cost no more than Rs. 4 Crores
C) Dorm 7 needs an extensive repair
D) Dorm 10 repair will cost no more than Rs. 4 Crores
Option (D)

Detailed Solution: https://www.handakafunda.com/cat-2017/data-interpretation-set-at-a-management-school/

Q48) At a management school, the oldest 10 dorms, numbered 1 to 10, need to be repaired urgently, The following diagram represents the estimated repair costs (in Rs. Crores) for the 10 dorms. For any dorm, the estimated repair cost (in Rs. Crores) is an integer. Repairs with estimated cost Rs. 1 or 2 Crores are considered light repairs, repairs with estimated cost Rs. 3 or 4 are considered moderate repairs and repairs with estimated cost Rs. 5 or 6 Crores are considered extensive repairs.



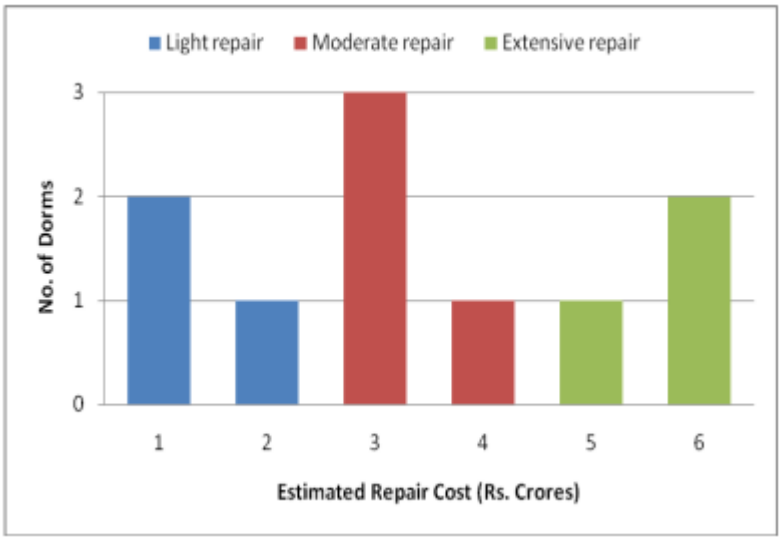
Further, the following are known:
1. Odd-numbered dorms do not need light repair; even-numbered dorms do not need moderate repair and dorms, whose numbers are divisible by 3, do not need extensive repair.
2. Dorms 4 to 9 all need different repair costs, with Dorm 7 needing the maximum and Dorm 8 needing the minimum

Q48)
What is the total cost of repairing the odd-numbered dorms (in Rs. Crores)?

A) 19
B) 18
C) 20
D) 21

Option (A)
Detailed Solution: https://www.handakafunda.com/cat-2017/data-interpretation-set-at-a-management-school/

Q49) At a management school, the oldest 10 dorms, numbered 1 to 10, need to be repaired urgently, The following diagram represents the estimated repair costs (in Rs. Crores) for the 10 dorms. For any dorm, the estimated repair cost (in Rs. Crores) is an integer. Repairs with estimated cost Rs. 1 or 2 Crores are considered light repairs, repairs with estimated cost Rs. 3 or 4 are considered moderate repairs and repairs with estimated cost Rs. 5 or 6 Crores are considered extensive repairs.



Further, the following are known:
1. Odd-numbered dorms do not need light repair; even-numbered dorms do not need moderate repair and dorms, whose numbers are divisible by 3, do not need extensive repair.
2. Dorms 4 to 9 all need different repair costs, with Dorm 7 needing the maximum and Dorm 8 needing the minimum

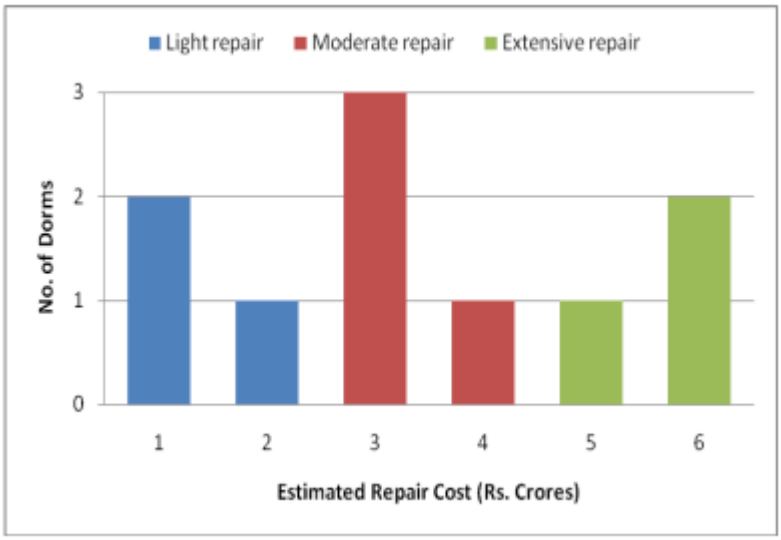
Q49)
Suppose further that: 1. 4 of the 10 dorms needing repair are women's dorms and need a total of Rs. 20 Crores for repair. 2. Only one of Dorms 1 to 5 is a women's dorm.
What is the cost for repairing Dorm 9 (in Rs. Crores)?

A) 2
B) 12
C) 3
D) 4

Option (C)
Detailed Solution: https://www.handakafunda.com/cat-2017/data-interpretation-set-at-a-management-school/

Q50) At a management school, the oldest 10 dorms, numbered 1 to 10, need to be repaired

urgently, The following diagram represents the estimated repair costs (in Rs. Crores) for the 10 dorms. For any dorm, the estimated repair cost (in Rs. Crores) is an integer. Repairs with estimated cost Rs. 1 or 2 Crores are considered light repairs, repairs with estimated cost Rs. 3 or 4 are considered moderate repairs and repairs with estimated cost Rs. 5 or 6 Crores are considered extensive repairs.



Further, the following are known:
1. Odd-numbered dorms do not need light repair; even-numbered dorms do not need moderate repair and dorms, whose numbers are divisible by 3, do not need extensive repair.
2. Dorms 4 to 9 all need different repair costs, with Dorm 7 needing the maximum and Dorm 8 needing the minimum

Q50)
Suppose further that: 1. 4 of the 10 dorms needing repair are women's dorms and need a total of Rs. 20 Crores for repair. 2. Only one of Dorms 1 to 5 is a women's dorm.
Which of the following is a women's dorm?
A) Dorm 2
B) Dorm 5
C) Dorm 8
D) Dorm 10
Option (D)

Detailed Solution: https://www.handakafunda.com/cat-2017/data-interpretation-set-at-a-management-school/

Set 5 – Q51 to Q54

A tea taster was assigned to rate teas from six different locations - Munnar, Wayanad, Ooty, Darjeeling, Assam and Himachal. These teas were placed in six cups, numbered 1 to 6, not necessarily in the same order. The tea taster was asked to rate these teas on the strength of their flavour on a scale of 1 to 10. He gave a unique integer rating to each tea. Some other information is given below:
1. Cup 6 contained tea from Himachal.

2. Tea from Ooty got the highest rating, but it was not in Cup 3.
3. The rating of tea in Cup 3 was double the rating of the tea in Cup 5.
4. Only two cups got ratings in even numbers.
5. Cup 2 got the minimum rating and this rating was an even number.
6. Tea in Cup 3 got a higher rating than that in Cup 1. 7. The rating of tea from Wayanad was more than the rating of tea from Munnar, but less than that from Assam.

Q51)

What was the second highest rating given?

A) 7
B) 6
C) 3
D) 1

Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/logical-reasoning-a-tea-taster-was-assigned/

Q52) A tea taster was assigned to rate teas from six different locations - Munnar, Wayanad, Ooty, Darjeeling, Assam and Himachal. These teas were placed in six cups, numbered 1 to 6, not necessarily in the same order. The tea taster was asked to rate these teas on the strength of their flavour on a scale of 1 to 10. He gave a unique integer rating to each tea. Some other information is given below:

1. Cup 6 contained tea from Himachal.
2. Tea from Ooty got the highest rating, but it was not in Cup 3.
3. The rating of tea in Cup 3 was double the rating of the tea in Cup 5.
4. Only two cups got ratings in even numbers.
5. Cup 2 got the minimum rating and this rating was an even number.
6. Tea in Cup 3 got a higher rating than that in Cup 1. 7. The rating of tea from Wayanad was more than the rating of tea from Munnar, but less than that from Assam.

Q52)

What was the number of the cup that contained tea from Ooty?

A) 4
B) 2
C) 0
D) 1

Option (A)

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Detailed Solution: https://www.handakafunda.com/cat-2017/logical-reasoning-a-tea-taster-was-assigned/

Q53) A tea taster was assigned to rate teas from six different locations - Munnar, Wayanad, Ooty, Darjeeling, Assam and Himachal. These teas were placed in six cups, numbered 1 to 6, not necessarily in the same order. The tea taster was asked to rate these teas on the

strength of their flavour on a scale of 1 to 10. He gave a unique integer rating to each tea. Some other information is given below:
1. Cup 6 contained tea from Himachal.
2. Tea from Ooty got the highest rating, but it was not in Cup 3.
3. The rating of tea in Cup 3 was double the rating of the tea in Cup 5.
4. Only two cups got ratings in even numbers.
5. Cup 2 got the minimum rating and this rating was an even number.
6. Tea in Cup 3 got a higher rating than that in Cup 1. 7. The rating of tea from Wayanad was more than the rating of tea from Munnar, but less than that from Assam.

Q53)
If the tea from Munnar did not get the minimum rating, what was the rating of the tea from Wayanad?
A) 3
B) 5
C) 1
D) 6
Option (B)

Detailed Solution: https://www.handakafunda.com/cat-2017/logical-reasoning-a-tea-taster-was-assigned/

Q54) A tea taster was assigned to rate teas from six different locations - Munnar, Wayanad, Ooty, Darjeeling, Assam and Himachal. These teas were placed in six cups, numbered 1 to 6, not necessarily in the same order. The tea taster was asked to rate these teas on the strength of their flavour on a scale of 1 to 10. He gave a unique integer rating to each tea.

Some other information is given below:
1. Cup 6 contained tea from Himachal.
2. Tea from Ooty got the highest rating, but it was not in Cup 3.
3. The rating of tea in Cup 3 was double the rating of the tea in Cup 5.
4. Only two cups got ratings in even numbers.
5. Cup 2 got the minimum rating and this rating was an even number.
6. Tea in Cup 3 got a higher rating than that in Cup 1. 7. The rating of tea from Wayanad was more than the rating of tea from Munnar, but less than that from Assam.
Q54)
If cups containing teas from Wayanad and Ooty had consecutive numbers, which of the following statements may be true?
A) Cup 5 contains tea from Assam
B) Cup 1 contains tea from Darjeeling
C) Tea from Wayanad has got a rating of 6
D) Tea from Darjeeling got the minimum rating
Option (B)

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Detailed Solution: https://www.handakafunda.com/cat-2017/logical-reasoning-a-tea-taster-was-assigned/

Set 6 – Q55 to Q57

In an 8 X 8 chessboard a queen placed anywhere can attack another piece if the piece is present in the same row, or in the same column or in any diagonal position in any possible 4 directions, provided there is no other piece in between in the path from the queen to that piece. The columns are labelled a to h (left to right) and the rows are numbered 1 to 8 (bottom to top). The position of a piece is given by the combination of column and row labels. For example, position c5 means that the piece is in c^{th} column and 5th row.

Q55)

If the queen is at c5, and the other pieces at positions c2, gl, g3, g5 and a3, how many are under attack by the queen? There are no other pieces on the board.

A) 2 ‘

B) 3

C) 4

D) 5

Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/logical-reasoning-in-an-8-x-8-chessboard-a-queen/

Q56) In an 8 X 8 chessboard a queen placed anywhere can attack another piece if the piece is present in the same row, or in the same column or in any diagonal position in any possible 4 directions, provided there is no other piece in between in the path from the queen to that piece. The columns are labelled a to h (left to right) and the rows are numbered 1 to 8 (bottom to top). The position of a piece is given by the combination of column and row labels. For example, position c5 means that the piece is in c^{th} column and 5th row.

Q56)

If the other pieces are only at positions al, a3, b4, d7, h7 and h8, then which of the following positions of the queen results in the maximum number of pieces being under attack?

A) f8

B) a7

C) c1

D) d3

Option (D)

Detailed Solution: https://www.handakafunda.com/cat-2017/logical-reasoning-in-an-8-x-8-chessboard-a-queen/

Q57) In an 8 X 8 chessboard a queen placed anywhere can attack another piece if the piece is present in the same row, or in the same column or in any diagonal position in any possible 4 directions, provided there is no other piece in between in the path from the queen to that piece. The columns are labelled a to h (left to right) and the rows are numbered 1 to 8 (bottom to top). The position of a piece is given by the combination of column and row labels. For example, position c5 means that the piece is in c^{th} column and 5th row.

Q57)

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If the other pieces are only at positions al, a3, b4, d7, h7 and h8, then from how many positions the queen cannot attack any of the pieces?
A) 0
B) 3
C) 4
D) 6
Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/logical-reasoning-in-an-8-x-8-chessboard-a-queen/

Q58)
Suppose the queen is the only piece on the board and it is at position d5.
In how many positions can another piece be placed on the board such that it is safe from attack from the queen?
A) 32
B) 35
C) 36
D) 37
Option (C)
Detailed Solution: https://www.handakafunda.com/cat-2017/logical-reasoning-in-an-8-x-8-chessboard-a-queen/

Set 7 – Q59 to Q62
Eight friends: Ajit, Byomkesh, Gargi, Jayanta, Kikira, Manik, Prodosh and Tapesh are going to Delhi from Kolkata by a flight operated by Cheap Air. In the flight, sitting is arranged in 30 rows, numbered 1 to 30, each consisting of 6 seats, marked by letters A to F from left to right, respectively. Seats A to C are to the left of the aisle (the passage running from the front of the aircraft to the back), and seats D to F are to the right of the aisle. Seats A and F are by the windows and referred to as Window seats, C and D are by the aisle and are referred to as Aisle seats while B and E are referred to as Middle seats. Seats marked by consecutive letters are called consecutive seats (or seats next to each other). A seat number is a combination of the row number, followed by the letter indicating the position in the row; e.g., 1A is the left window seat in the first row, while 12E is the right middle seat in the 12th row.
Cheap Air charges Rs. 1000 extra for any seats in Rows 1, 12 and 13 as those have extra legroom. For Rows 2-10, it charges Rs. 300 extra for Window seats and Rs. 500 extra for Aisle seats. For Rows 11 and 14 to 20, it charges Rs. 200 extra for Window seats and Rs. 400 extra for Aisle seats. All other seats are available at no extra charge.
The following are known:
1. The eight friends were seated in six different rows.
2. They occupied 3 Window seats, 4 Aisle seats and 1 Middle seat.
3. Seven of them had to pay extra amounts, totaling to Rs. 4600, for their choices of seat. One of them did not pay any additional amount for his/her choice of seat.
4. Jayanta, Ajit and Byomkesh were sitting in seats marked by the same letter, in consecutive rows in increasing order of row numbers; but all of them paid different amounts for their choices of seat. One of these amounts may be zero.
5. Gargi was sitting next to Kikira, and Manik was sitting next to Jayanta.

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6. Prodosh and Tapesh were sitting in seats marked by the same letter, in consecutive rows in increasing order of row numbers; but they paid different amounts for their choices of seat. One of these amounts may be zero.
Q59)
In which row was Manik sitting?
A) 10
B) 11
C) 12
D) 13
Option (A)
Detailed Solution: https://www.handakafunda.com/cat-2017/logical-reasoning-eight-friends-ajit-byomkesh-gargi-jayanta/

Q60) Eight friends: Ajit, Byomkesh, Gargi, Jayanta, Kikira, Manik, Prodosh and Tapesh are going to Delhi from Kolkata by a flight operated by Cheap Air. In the flight, sitting is arranged in 30 rows, numbered 1 to 30, each consisting of 6 seats, marked by letters A to F from left to right, respectively. Seats A to C are to the left of the aisle (the passage running from the front of the aircraft to the back), and seats D to F are to the right of the aisle. Seats A and F are by the windows and referred to as Window seats, C and D are by the aisle and are referred to as Aisle seats while B and E are referred to as Middle seats. Seats marked by consecutive letters are called consecutive seats (or seats next to each other). A seat number is a combination of the row number, followed by the letter indicating the position in the row; e.g., 1A is the left window seat in the first row, while 12E is the right middle seat in the 12th row.
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The following are known:
1. The eight friends were seated in six different rows.
2. They occupied 3 Window seats, 4 Aisle seats and 1 Middle seat.
3. Seven of them had to pay extra amounts, totaling to Rs. 4600, for their choices of seat. One of them did not pay any additional amount for his/her choice of seat.
4. Jayanta, Ajit and Byomkesh were sitting in seats marked by the same letter, in consecutive rows in increasing order of row numbers; but all of them paid different amounts for their choices of seat. One of these amounts may be zero.
5. Gargi was sitting next to Kikira, and Manik was sitting next to Jayanta.
6. Prodosh and Tapesh were sitting in seats marked by the same letter, in consecutive rows in increasing order of row numbers; but they paid different amounts for their choices of seat. One of these amounts may be zero.
Q60)
How much extra did Jayanta pay for his choice of seat?
A) Rs. 300
B) Rs. 400
C) Rs. 500
D) Rs. 1000
Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/logical-reasoning-eight-friends-ajit-byomkesh-gargi-jayanta/

Q61) Eight friends: Ajit, Byomkesh, Gargi, Jayanta, Kikira, Manik, Prodosh and Tapesh are going to Delhi from Kolkata by a flight operated by Cheap Air. In the flight, sitting is arranged in 30 rows, numbered 1 to 30, each consisting of 6 seats, marked by letters A to F from left to right, respectively. Seats A to C are to the left of the aisle (the passage running from the front of the aircraft to the back), and seats D to F are to the right of the aisle. Seats A and F are by the windows and referred to as Window seats, C and D are by the aisle and are

referred to as Aisle seats while B and E are referred to as Middle seats. Seats marked by consecutive letters are called consecutive seats (or seats next to each other). A seat number is a combination of the row number, followed by the letter indicating the position in the row; e.g., 1A is the left window seat in the first row, while 12E is the right middle seat in the 12th row.
Cheap Air charges Rs. 1000 extra for any seats in Rows 1, 12 and 13 as those have extra legroom. For Rows 2-10, it charges Rs. 300 extra for Window seats and Rs. 500 extra for Aisle seats. For Rows 11 and 14 to 20, it charges Rs. 200 extra for Window seats and Rs. 400 extra for Aisle seats. All other seats are available at no extra charge.
The following are known:
1. The eight friends were seated in six different rows.
2. They occupied 3 Window seats, 4 Aisle seats and 1 Middle seat.
3. Seven of them had to pay extra amounts, totaling to Rs. 4600, for their choices of seat. One of them did not pay any additional amount for his/her choice of seat.
4. Jayanta, Ajit and Byomkesh were sitting in seats marked by the same letter, in consecutive rows in increasing order of row numbers; but all of them paid different amounts for their choices of seat. One of these amounts may be zero.
5. Gargi was sitting next to Kikira, and Manik was sitting next to Jayanta.
6. Prodosh and Tapesh were sitting in seats marked by the same letter, in consecutive rows in increasing order of row numbers; but they paid different amounts for their choices of seat. One of these amounts may be zero.
Q61)
How much extra did Gargi pay for her choice of seat?
A) 0
B) Rs. 300
C) Rs. 500
D) Rs. 1000
Option (D)
Detailed Solution: https://www.handakafunda.com/cat-2017/logical-reasoning-eight-friends-ajit-byomkesh-gargi-jayanta/

Q62) Eight friends: Ajit, Byomkesh, Gargi, Jayanta, Kikira, Manik, Prodosh and Tapesh are going to Delhi from Kolkata by a flight operated by Cheap Air. In the flight, sitting is arranged in 30 rows, numbered 1 to 30, each consisting of 6 seats, marked by letters A to F from left to right, respectively. Seats A to C are to the left of the aisle (the passage running from the front of the aircraft to the back), and seats D to F are to the right of the aisle. Seats A and F are by the windows and referred to as Window seats, C and D are by the aisle and are referred to as Aisle seats while B and E are referred to as Middle seats. Seats marked by consecutive letters are called consecutive seats (or seats next to each other). A seat number is a combination of the row number, followed by the letter indicating the position in the row;

e.g., 1A is the left window seat in the first row, while 12E is the right middle seat in the 12th row.
Cheap Air charges Rs. 1000 extra for any seats in Rows 1, 12 and 13 as those have extra legroom. For Rows 2-10, it charges Rs. 300 extra for Window seats and Rs. 500 extra for Aisle seats. For Rows 11 and 14 to 20, it charges Rs. 200 extra for Window seats and Rs. 400 extra for Aisle seats. All other seats are available at no extra charge.
The following are known:
1. The eight friends were seated in six different rows.
2. They occupied 3 Window seats, 4 Aisle seats and 1 Middle seat.
3. Seven of them had to pay extra amounts, totaling to Rs. 4600, for their choices of seat. One of them did not pay any additional amount for his/her choice of seat.
4. Jayanta, Ajit and Byomkesh were sitting in seats marked by the same letter, in consecutive rows in increasing order of row numbers; but all of them paid different amounts for their choices of seat. One of these amounts may be zero.
5. Gargi was sitting next to Kikira, and Manik was sitting next to Jayanta.
6. Prodosh and Tapesh were sitting in seats marked by the same letter, in consecutive rows in increasing order of row numbers; but they paid different amounts for their choices of seat. One of these amounts may be zero.
Q62)
Who among the following did not pay any extra amount for his/her choice of seat?
A) Kikira
B) Manik
C) Gargi
D) Tapesh
Option (D)

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Detailed Solution: https://www.handakafunda.com/cat-2017/logical-reasoning-eight-friends-ajit-byomkesh-gargi-jayanta/

Set 8 – Q63 to Q66
A high security research lab requires the researchers to set a pass key sequence based on the scan of the five fingers of their left hands. When an employee first joins the lab, her fingers are scanned in an order of her choice, and then when she wants to re-enter the facility, she has to scan the five fingers in the same sequence.
The lab authorities are considering some relaxations of the scan order requirements, since it is observed that some employees often get locked-out because they forget the sequence.
Q63)
The lab has decided to allow a variation in the sequence of scans of the five fingers so that at most two scans (out of five) are out of place. For example, if the original sequence is

Thumb (T), index finger (I), middle finger (M), ring finger (R) and little finger (L) then TLMRI is also allowed, but TMRLI is not.
How many different sequences of scans are allowed for any given person's original scan?

A) 10
B) 11
C) 13
D) 14

Option (B)
Detailed Solution: https://www.handakafunda.com/cat-2017/logical-reasoning-a-high-security-research-lab-requires/

Q64) A high security research lab requires the researchers to set a pass key sequence based on the scan of the five fingers of their left hands. When an employee first joins the lab, her fingers are scanned in an order of her choice, and then when she wants to re-enter the facility, she has to scan the five fingers in the same sequence.
The lab authorities are considering some relaxations of the scan order requirements, since it is observed that some employees often get locked-out because they forget the sequence.
Q64)
The lab has decided to allow variations of the original sequence so that input of the scanned sequence of five fingers is allowed to vary from the original sequence by one place for any of the fingers. Thus, for example, if TIMRL is the original sequence, then ITRML is also allowed, but LIMRT is not.
How many different sequences are allowed for any given person's original scan?
A) 7
B) 5
C) 8
D) 13
Option (C)
Detailed Solution: https://www.handakafunda.com/cat-2017/logical-reasoning-a-high-security-research-lab-requires/
Q65) A high security research lab requires the researchers to set a pass key sequence based on the scan of the five fingers of their left hands. When an employee first joins the lab, her fingers are scanned in an order of her choice, and then when she wants to re-enter the facility, she has to scan the five fingers in the same sequence.
The lab authorities are considering some relaxations of the scan order requirements, since it is observed that some employees often get locked-out because they forget the sequence.
Q65)
The lab has now decided to require six scans in the pass key sequence, where exactly one finger is scanned twice, and the other fingers are scanned exactly once, which can be done in any order. For example, a possible sequence is TIMTRL.
Suppose the lab allows a variation of the original sequence (of six inputs) where at most two scans (out of six) are out of place, as long as the finger originally scanned twice is scanned twice and other fingers are scanned once.

How many different sequences of scans are allowed for any given person's original scan?

A) 15
B) 13
C) 14

D) 12

Option (A)
Detailed Solution: https://www.handakafunda.com/cat-2017/logical-reasoning-a-high-security-research-lab-requires/

Q66) A high security research lab requires the researchers to set a pass key sequence based on the scan of the five fingers of their left hands. When an employee first joins the lab, her fingers are scanned in an order of her choice, and then when she wants to re-enter the facility, she has to scan the five fingers in the same sequence.
The lab authorities are considering some relaxations of the scan order requirements, since it is observed that some employees often get locked-out because they forget the sequence.
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The lab has now decided to require six scans in the pass key sequence, where exactly one finger is scanned twice, and the other fingers are scanned exactly once, which can be done in any order. For example, a possible sequence is TIMTRL.
Suppose the lab allows a variation of the original sequence (of six inputs) so that input in the form of scanned sequence of six fingers is allowed to vary from the original sequence by one place for any of the fingers, as long as the finger originally scanned twice is scanned twice and other fingers are scanned once.
How many different sequences of scans are allowed if the original scan sequence is LRLTIM?
A) 8
B) 11
C) 13
D) 14
Option (C)
Detailed Solution: https://www.handakafunda.com/cat-2017/logical-reasoning-a-high-security-research-lab-requires/

QUANTITATIVE APTITUDE

Q67) The numbers 1, 2,...,9 are arranged in a 3 X 3 square grid in such a way that each number occurs once and the entries along each column, each row, and each of the two diagonals add up to the same value. If the top left and the top right entries of the grid are 6 and 2, respectively, then the bottom middle entry is

A) None of the above
B) 1
C) 2
D) 4

Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-number-systems-the-numbers-1-2-9-are-arranged/

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Q68) In a 10 km race. A, B,and C, each running at uniform speed, get the gold, silver, and bronze medals, respectively. If A beats B by 1 km and B beats C by 1 km, then by how many metres does A beat C?

A) 1800
B) 1900
C) 1500
D) 1600

Option (B)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-arithmetic-tsd-in-a-10-km-race-a-b-and-c/

Q69) Bottle 1 contains a mixture of milk and water in 7 : 2 ratio and Bottle 2 contains a mixture of milk and water in 9 : 4 ratio. In what ratio of volumes should the liquids in Bottle 1 and Bottle 2 be combined to obtain a mixture of milk and water in 3 : 1 ratio?

A) 27 : 14
B) 27 : 13
C) 27 : 16
D) 27 : 18

Option (B)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-arithmetic-mixtures-bottle-1-contains-a-mixture-of-milk/

Q70) Arun drove from home to his hostel at 60 miles per hour. While returning home he drove halfway along the same route at a speed of 25 miles per hour and then took a bypass road which increased his driving distance by 5 miles, but allowed him to drive at 50 miles per hour along this bypass road. If his return journey took 30 minutes more than his onward journey, then the total distance traveled by him is

A) 55 miles
B) 60 miles
C) 65 miles
D) 70 miles

Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-arithmetic-tsd-arun-drove-from-home-to-his-hostel/

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Q71) Out of the shirts produced in a factory, 15% are defective, while 20% of the rest are sold in the domestic market. If the remaining 8840 shirts are left for export, then the number of shirts produced in the factory is

A) 13600
B) 13000
C) 13400
D) 14000

Option (B)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-arithmetic-percentages-out-of-the-shirts-produced/

Q72) The average height of 22 toddlers increases by 2 inches when two of them leave this group. If the average height of these two toddlers is one-third the average height of the original 22, then the average height, in inches, of the remaining 20 toddlers is

A) 30
B) 28
C) 32
D) 26

Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-arithmetic-averages-the-average-height-of-22-toddlers/

Q73) The manufacturer of a table sells it to a wholesale dealer at a profit of 10%. The wholesale dealer sells the table to a retailer at a profit of 30%. Finally, the retailer sells it to a customer at a profit of 50%. If the customer pays Rs 4290 for the table, then its manufacturing cost (in Rs) is

A) 1500
B) 2000
C) 2500
D) 3000

Option (B)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-arithmetic-profit-and-loss-the-manufacturer-of-a-table/

Q74) A tank has an inlet pipe and an outlet pipe. If the outlet pipe is closed then the inlet pipe fills the empty tank in 8 hours. If the outlet pipe is open then the inlet pipe fills the empty

tank in 10 hours. If only the outlet pipe is open then in how many hours the full tank becomes half-full?

A) 20
B) 30
C) 40
D) 45

Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-arithmetic-pipes-and-cisterns-a-tank-has-an-inlet-pipe/

Q75) Mayank buys some candies for Rs 15 a dozen and an equal number of different candies for Rs 12 a dozen. He sells all for Rs 16.50 a dozen and makes a profit of Rs 150. How many dozens of candies did he buy altogether?

A) 50
B) 30
C) 25
D) 45

Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-arithmetic-profit-and-loss-mayank-buys-some-candies/

Q76) In a village, the production of food grains increased by 40% and the per capita production of food grains increased by 27% during a certain period. The percentage by which the population of the village increased during the same period is nearest to

A) 16
B) 13
C) 10
D) 7

Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-arithmetic-percenatges-in-a-village-the-production-of-food-grains/

Q77) If a, b, c are three positive integers such that a and b are in the ratio 3 : 4 while b and c are in the ratio 2:1, then which one of the following is a possible value of (a + b + c)?

A) 201
B) 205
C) 207
D) 210

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Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-number-systems-if-a-b-c-are-three-positive-integers/

Q78) A motorbike leaves point A at 1 pm and moves towards point B at a uniform speed. A car leaves point B at 2 pm and moves towards point A at a uniform speed which is double that of the motorbike. They meet at 3:40 pm at a point which is 168 km away from A. What is the distance, in km, between A and B?

A) 364
B) 378
C) 380
D) 388

Option (B)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-arithmetic-tsd-a-motorbike-leaves-point-a/

Q79) Amal can complete a job in 10 days and Bimal can complete it in 8 days. Amal, Bimal and Kamal together complete the job in 4 days and are paid a total amount of Rs 1000 as remuneration. If this amount is shared by them in proportion to their work, then Kamal's share, in rupees, is

A) 100
B) 200
C) 300
D) 400

Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-arithmetic-time-and-work-amal-can-complete-a-job-in-10/

Q80) Consider three mixtures - the first having water and liquid A in the ratio 1 : 2, the second having water and liquid B in the ratio 1 : 3, and the third having water and liquid C in the ratio 1 : 4. These three mixtures of A, B, and C, respectively, are further mixed in the proportion 4:3:2. Then the resulting mixture has

A) The same amount of water and liquid B
B) The same amount of liquids B and C
C) More water than liquid B
D) More water than liquid A

Option (C)

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Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-arithmetic-mixtures/

Q81) Let ABCDEF be a regular hexagon with each side of length 1 cm. The area (in sq cm) of a square with AC as one side is

A) $3\sqrt{2}$
B) 3
C) 4
D) $\sqrt{3}$

Option (B)
Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-geometry-poygons-let-abcdef-be-a-regular-hexagon/

Q82) The base of a vertical pillar with uniform cross section is a trapezium whose parallel sides are of lengths 10 cm and 20 cm while the other two sides are of equal length. The perpendicular distance between the parallel sides of the trapezium is 12 cm. If the height of the pillar is 20 cm, then the total area, in sq cm, of all six surfaces of the pillar is

A) 1300
B) 1340
C) 1480
D) 1520

Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-geometry-mensuration-the-base-of-a-vertical-pillar/

Q83) The points (2, 5) and (6, 3) are two end points of a diagonal of a rectangle. If the other diagonal has the equation $y = 3x + c$, then c is

A) -5
B) -6
C) -7
D) -8

Option (D)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-geometry-coordinate-the-points-2-5-and-6-3/

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Q84) ABCD is a quadrilateral inscribed in a circle with centre O. If ∠COD = 120 degrees and ∠BAC = 30 degrees, then the value of ∠BCD (in degrees) is

A) 89
B) 87
C) 86
D) 90

Option (D)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-geometry-circles-abcd-is-a-quadrilateral-inscribed/

Q85) If three sides of a rectangular park have a total length 400 ft, then the area of the park is maximum when the length (in ft) of its longer side is

A) 299
B) 200
C) 201
D) 399

Option (B)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-algebra-maxima-minima-if-three-sides-of-a-rectangular/

Q86) Let P be an interior point of a right-angled isosceles triangle ABC with hypotenuse AB. If the perpendicular distance of P from each of AB, BC, and CA is 4 (√2 - l) cm, then the area, in sq cm, of the triangle ABC is

A) 16
B) 15
C) 14
D) 12

Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-geometry-triangles-let-p-be-an-interior-point/

Q87) If the product of three consecutive positive integers is 15600 then the sum of the squares of these integers is

A) 1777
B) 1785
C) 1875
D) 1877

Option (D)

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Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-number-systems/

Q88) If x is a real number such that $\log_3 5 = \log_5(2 + x)$, then which of the following is true?

A) $0 < x < 3$
B) $23 < x < 30$
C) $x > 30$
D) $3 < x < 23$

Option (D)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-algebra-logarithms-if-x-is-a-real-number/

Q89) Let $f(x) = x^2$ and $g(x) = 2^X$, for all real x. Then the value of $f(f(g(x)) + g(f(x)))$ at $x = 1$ is

A) 16
B) 18
C) 36
D) 40

Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-algebra-functions-let-fx-x2-and-gx-2x/

Q90) The minimum possible value of the sum of the squares of the roots of the equation $x^2 + (a + 3)x - (a + 5) = 0$ is

A) 1
B) 2
C) 3
D) 4

Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-algebra-quadratic-equations-the-minimum-possible-value/

Q91) If $9^{(x-1/2)} – 2^{(2x-2)} = 4^x – 3^{(2x-3)}$, then x is

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A) 3/2
B) 2/5
C) 3/4
D) 4/9

Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-algebra-if-9x-1-2-22x-2-4x/

Q92) If log ($2^a \times 3^b \times 5^C$) is the arithmetic mean of log ($2^2 \times 3^3 \times 5$), log ($2^6 \times 3 \times 5^7$), and log ($2 \times 3^2 \times 5^4$), then a equals

A) 2
B) None of these
C) 6
D) 7

Option (B)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-algebra-logarithms-if-log-2a-x-3b-x-5c/

Q93) Let a_1, a_2, a_3, a_4, a_5 be a sequence of five consecutive odd numbers. Consider a new sequence of five consecutive even numbers ending with $2a_3$. If the sum of the numbers in the new sequence is 450, then a_5 is

A) 50
B) 51
C) 52
D) 49

Option (B)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-modern-maths-progressions-let-a1-a2-a3-a4-a5/

Q94) How many different pairs (a, b) of positive integers are there such that $a \leq b$ and $1/a + 1/b = 1/9$

A) None of these
B) 2
C) 0
D) 1

Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-algebra-number-of-integer-solutions-1-a-1-b-1-9/

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Q95) In how many ways can 8 identical pens be distributed among Amal, Bimal, and Kamal so that Amal gets at least 1 pen, Bimal gets at least 2 pens, and Kamal gets at least 3 pens?

A) 5
B) 6
C) 7
D) 8

Option (B)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-modern-maths-pc-in-how-many-ways-can-8-identical/

Q96) How many four digit numbers, which are divisible by 6, can be formed using the digits 0, 2, 3, 4, 6, such that no digit is used more than once and 0 does not occur in the left-most position?

A) 49
B) 48
C) 50
D) 52

Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-modern-maths-pc/

Q97) If f(ab) = f(a)f(b) for all positive integers a and b, then the largest possible value of f(l) is

A) 1
B) 2
C) 0
D) 3

Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-algebra-functions-if-fab-fafb-for-all-positive/

Q98) Let f(x) = 2x-5and g(x) = 7-2x. Then |f(x) + g(x)| = |f(x)| + |g(x)| if and only if

A) $5/2 < x < 7/2$
B) $x \leq 5/2$ or $x \geq 7/2$
C) $x < 5/2$ or $x \geq 7/2$
D) $5/2 \leq x \leq 7/2$

Answer (D)

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Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-algebra-functions/

Q99) An infinite geometric progression a_1, a_2, a_3,... has the property that an = $3(a_{n+1} + a_{n+2} +\ldots.)$ for every n ≥ 1. If the sum $a_1 + a_2 + a_3 +\ldots.... = 32$, then a_5 is

A) 1/32
B) 2/32
C) 3/32
D) 4/32

Option (C)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-modern-maths-progressions-an-infinite-gp-a1-a2-a3/

Q100) If a1 = 1/(2*5), a2 = 1/(5*8), a3 = 1/(8*11),……, then a1 + a2 +……..+ a100 is

A) 25/151
B) 1/2
C) 1/4
D) 111/55

Option (A)

Detailed Solution: https://www.handakafunda.com/cat-2017/quantitative-aptitude-modern-maths-progressions-if-a1-1-25-a2-1-58/

Happy-Learning!

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