

Mock CAT – 06 2018

Scorecard (procreview.jsp?sid=aaa5BycB_LJvH-TdBuPHwSun Jan 20 05:56:40 UTC
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Qs Analysis (QsAnalysis.jsp?sid=aaa5BycB_LJvH-TdBuPHwSun Jan 20 05:56:40 UTC
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Video Attempt (VideoAnalysis.jsp?sid=aaa5BycB_LJvH-TdBuPHwSun Jan 20 05:56:40 UTC
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Bookmarks (Bookmarks.jsp?sid=aaa5BycB_LJvH-TdBuPHwSun Jan 20 05:56:40 UTC
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Sec 1

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

For a start, heresy relies on the existence of an orthodoxy of generally accepted ideas. If everyone is a heretic, no one can be. The orthodoxy must also be vulnerable to doubt. The heretic's beliefs must seem to threaten the orthodox even where no direct harm can be demonstrated. So for heresy to arise, morality must be understood as a collective property and not just something that individuals practice. This understanding makes perfect sense in the light of evolutionary theory, which shows that cooperative or collective behaviour requires coercive action against cheats; and cheating is a morally loaded term. To put it another way, collective action requires collective morality. The great problem of cooperative behaviour, according to evolutionary theory, is the danger of cheats, or free riders, who get the benefits of collective action but pay none of the costs, since cheating behaviour will spread through successive generations until cooperation collapses completely and no one benefits. Therefore the detection and punishment of nonconformists, as potential cheats, is something that comes naturally to social animals.

This is why blind loyalty and unconditional commitment can be more desirable and valuable than rational calculations of relative advantage. Covenants (which can't be broken) are worth more than contracts because they are more expensive. It is also one reason why so many societies have painful and dangerous initiation rites, or, in more elaborate forms of religion, inconvenient taboos against harmless foods. These are costly signals of a willingness to serve the community. Heresy threatens this collective trust. But it is more than merely nonconformism. It has an inescapable intellectual component. The heretic is someone whose moral badness, lack of trustworthiness and deficient loyalty to the collective is revealed not so much by their behaviour as by their ideas. That's what makes the phenomenon remarkable.

In heresy, moral values come to be identified with particular ideas, quite often ideas so subtle that it's possible to become a heretic by accident. But even if the ideas are valued in themselves, they become merely a means to make the conflict a decisive one, from which one side must emerge clearly victorious. This is something that very rarely happens in purely intellectual disputes. But if heresy is understood only as a conflict of ideas, it makes no sense at all, and there are many intellectual disagreements, no matter how deep, which do not lead to heresy hunts. That is because they have answers, which can emerge from inquiry. By contrast, the intellectual questions around which heresies coalesce aren't soluble. And when the questions at issue have no final answers they can only be decided by contests of political force if they are to be decided at all.

Q.1

What does the author imply by the line "If everyone is a heretic, no one can be."?

- 1 ☐ Heresy may not cause a direct harm to the beliefs of the orthodox individual.
- 2 ☐ If everyone becomes a heretic, heresy turns into orthodoxy.
- 3 ☐ Heresy is something that individuals, and not all the members of a society, indulge in.
- 4 ☐ If everyone becomes a heretic, it would challenge the generally accepted ideas, which would endanger the existence of heresy itself.



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Q.2

As per the passage, which of the following could be an example of a free rider?

- 1 ☐ A family, which is boycotting the residential block's dinner, does not contribute to the latter.
- 2 ☐ A family raising its voice against the accepted practice of dowry in the family's caste.
- 3 ☐ A family not paying for the watchman who is appointed for the protection of their residential lane.

4 ☐ A family using Uber pool and always applying promotional coupons to their rides.



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Q.3

As per the passage, all of the following, in some way, demonstrate blind loyalty or unconditional commitment EXCEPT:

1 ☐ Taboos regarding certain foods

2 ☐ Difficult initiation ceremonies

3 ☐ Covenants which cannot be broken

4 ☐ Dangerous coming-of-age rites



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Q.4

According to the passage, why is blind loyalty more desirable than rational calculations of relative advantage?

- 1 ☐ It ensures that people do not get to know that they are being cheated.
-
- 2 ☐ It ensures the smooth continuation of cooperative behaviour.
-
- 3 ☐ It ensures that cooperation does not collapse when cheating behaviour spreads through it.
-
- 4 ☐ It ensures that cooperation, despite accommodating free riders, continues unhindered.
-



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 **Answer key/Solution**

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Q.5

According to the passage, how is heresy different from intellectual disputes?

- 1 ☐ Unlike intellectual disagreements, heresy demands clear losers and winners to insoluble matters.
- 2 ☐ Unlike intellectual disagreements, heresy resorts to only political force to decide clear winners and losers.
- 3 ☐ While intellectual disagreements find answers through inquiry, heresy finds them in political force.
- 4 ☐ One can become a heretic by accident, but one cannot enter an intellectual dispute by accident.

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Q.6

What is the primary purpose of the passage?

- 1 ☐ To discuss how heresy arises and condemn it as an extreme form of non-intellectual disagreement
- 2 ☐ To present heresy as a disruptive phenomenon that challenges orthodoxy
- 3 ☐ To discuss how heresy arises, its threat to collective trust, and its differences from intellectual disputes

4 ☐ To trace the origins of heresy, its threat to collective trust, and its proximity to matters of intellect



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Light pollution was even worse than that, according to the German-led team, because the sensor used cannot detect some of the LED lighting that is becoming more widespread, specifically blue light. The observations indicate stable levels of night light in the US, the Netherlands, Spain and Italy. But light pollution is almost certainly on the rise in those countries given this elusive blue light, according to Christopher Kyba of the GFZ German research centre for geosciences and the lead author of the study published in Science Advances. Also on the rise is the spread of light into the hinterlands and overall increased use. The findings shatter the long-held notion that more energy-efficient lighting would decrease usage on the global – or at least a national – scale.

"Honestly, I had thought and assumed and hoped that with LEDs we were turning the corner. There's also a lot more awareness of light pollution," Kyba told reporters by phone from Potsdam. "It is quite disappointing."

The biological impact from surging artificial light is also significant, according to the researchers. People's sleep can be marred, which in turn can affect their health. The migration and reproduction of birds, fish, amphibians, insects and bats can be disrupted. Plants can have abnormally extended growing periods. And forget about seeing stars or the Milky Way if the trend continues.

About the only places with dramatic declines in night light were in areas of conflict such as Syria and Yemen, the researchers found. Australia also reported a noticeable drop, but that was because wildfires were raging early in the study. Researchers were unable to filter out the bright burning light. Asia, Africa and South America, for the most part, saw a surge in artificial night lighting.

More and more places are installing outdoor lighting, given its low cost and the overall growth in communities' wealth, the scientists noted. Urban sprawl is also moving towns farther out. The outskirts of major cities in developing nations were brightening quite rapidly, Kyba said.

Other especially bright hot spots included sprawling greenhouses in the Netherlands and areas of intensive agriculture. One of the co-authors, Franz Holker of the Leibniz institute of freshwater ecology and inland fisheries in Berlin, said things were at the critical point. "Many people are using light at night without really thinking about the cost," Holker said. Not just the economic cost, "but also the cost that you have to pay from an ecological, environmental perspective".

Kyba and his colleagues recommend avoiding glaring lamps whenever possible – choosing amber over so-called white LEDs – and using more efficient ways to illuminate places such as parking lots or city streets. For example, dim, closely spaced lights tend to provide better visibility than bright lights that are more spread out.

Q.7

Why was Kyba disappointed with the observation?

-
- 1 ☐ Because the LEDs increased the awareness of the masses towards light pollution.
-

2 ☐ Because the LEDs didn't stand up to his expectation on light pollution.

3 ☐ Because the LEDs didn't turn out to be energy efficient.

4 ☐ Because the LEDs shattered his assumption regarding the potential of energy usage.



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Q.8

According to the passage, all of the following contributed to Australia's reporting of a noticeable drop in light pollution EXCEPT:

-
- 1 ☐ The raging wildfires in Australia affected the study.
-

-
- 2 ☐ The researchers could not filter out the bright burning light of the wildfire.
-
- 3 ☐ The researchers faced difficulty in interpreting the light caused by the wildfire.
-
- 4 ☐ The raging wildfires affected not only the study but also the ability of the researchers.
-



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Q.9

Which of the following is true according to the passage?

1 ☐ Light pollution does not have only biological side effects.

2 ☐ Greenhouses and areas of intensive agriculture always contribute to light pollution.

3 ☐ LED's lighting cannot be detected by the sensors.

4 ☐ Spain and Italy witnessed a drop in their light pollution levels.



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Q.10

The thematic highlight of the passage is to:

1 ☐ highlight the role of light pollution in increasing the usage of global consumption of light.

2 ☐ **showcase the multi-faceted side effects of environmental degradation.**

3 ☐ **highlight the abject failure of LEDs in curbing light pollution.**

4 ☐ **showcase the side effects of light pollution and suggest some remedies.**



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Light pollution was even worse than that, according to the German-led team, because the sensor used cannot detect some of the LED lighting that is becoming more widespread, specifically blue light. The observations indicate stable levels of night light in the US, the Netherlands, Spain and Italy. But light pollution is almost certainly on the rise in those countries given this elusive blue light, according to Christopher Kyba of the GFZ German research centre for geosciences and the lead author of the study published in Science Advances. Also on the rise is the spread of light into the hinterlands and overall increased use. The findings shatter the long-held notion that more energy-efficient lighting would decrease usage on the global – or at least a national – scale.

"Honestly, I had thought and assumed and hoped that with LEDs we were turning the corner. There's also a lot more awareness of light pollution," Kyba told reporters by phone from Potsdam. "It is quite disappointing."

The biological impact from surging artificial light is also significant, according to the researchers. People's sleep can be marred, which in turn can affect their health. The migration and reproduction of birds, fish, amphibians, insects and bats can be disrupted. Plants can have abnormally extended growing periods. And forget about seeing stars or the Milky Way if the trend continues.

About the only places with dramatic declines in night light were in areas of conflict such as Syria and Yemen, the researchers found. Australia also reported a noticeable drop, but that was because wildfires were raging early in the study. Researchers were unable to filter out the bright burning light. Asia, Africa and South America, for the most part, saw a surge in artificial night lighting.

More and more places are installing outdoor lighting, given its low cost and the overall growth in communities' wealth, the scientists noted. Urban sprawl is also moving towns farther out. The outskirts of major cities in developing nations were brightening quite rapidly, Kyba said.

Other especially bright hot spots included sprawling greenhouses in the Netherlands and areas of intensive agriculture. One of the co-authors, Franz Holker of the Leibniz institute of freshwater ecology and inland fisheries in Berlin, said things were at the critical point. "Many people are using light at night without really thinking about the cost," Holker said. Not just the economic cost, "but also the cost that you have to pay from an ecological, environmental perspective".

Kyba and his colleagues recommend avoiding glaring lamps whenever possible – choosing amber over so-called white LEDs – and using more efficient ways to illuminate places such as parking lots or city streets. For example, dim, closely spaced lights tend to provide better visibility than bright lights that are more spread out.

Q.11

Which of the following has not been mentioned as a biological side effect of light pollution?

-
- 1 ☐ Alteration of people's sleep pattern damaging their health
-

2 ☐ **Disruptions of the migration and reproduction of different species**

3 ☐ **The disappearance of stars and the Milky Way**

4 ☐ **Abnormal growing periods of plants**



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🔍 **Answer key/Solution**

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Q.12

Which of the following cannot be inferred from the passage?

-
- 1 ☐ More conflict prone regions across the globe would help curb the menace of light pollution.
-

2 ☐ The increased usage of night lights costs more than what is obvious.

3 ☐ Alternatives to bright night lights are available

4 ☐ The efficacy of energy-efficient lighting in curbing the usage on a global scale is underwhelming.



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🔍 Answer key/Solution

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But researchers who have examined evidence from previous studies say that while probiotics appear to reduce anxiety in rodents with various problems, there is little to show that they offer similar benefits to humans, whether healthy or not.

“If people are suffering from anxiety ... probiotics should not be the solution they look for. They should definitely seek professional treatment,” said Daniel Reis, first author of the research from the University of Kansas, noting that both therapy and medication are available.

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Q.13

According to the passage, probiotics are:

- 1 ☐ used for achieving benefits for the body.
- 2 ☐ used for achieving superior brain power.
- 3 ☐ used to make the human body more active.
- 4 ☐ used to compare the anxiety levels in different human bodies.

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Q.14

According to the passage, which of the following gives an explanation for the difference in probiotics' effect on rodents and humans?

1 ☐ The level of stress and anxiety in human beings is much more than that of rodents.

2 ☐ Human beings fail to meet the stress level needed for probiotics to work, whereas rodents possess that naturally.

3 ☐ Rodents get a stronger dose of probiotics as compared to human beings.

4 ☐ There is a huge disparity between the doses given to rodents and human beings.



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Q.15

Which of the following is factually true?

- 1 ☐ Probiotics is not the only best way to fight mood related issues.
- 2 ☐ Not all probiotics are vain when it comes to treating human anxiety.
- 3 ☐ Probiotics are less useful in easing problems of rodents than of human beings.
- 4 ☐ There is no proof that probiotics can cause anxiety.



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Q.16

Which of the following identifies the main idea of the passage?

-
- 1 ☐ To have a systematic view of the effects of probiotics on stress and anxiety level
-
- 2 ☐ To show how taking probiotics could make you comparatively less stressed
-
- 3 ☐ To show the researchers’ struggle to establish probiotics as a useful agent to lessen human anxiety
-
- 4 ☐ To show the researches’ contradiction on the effects of probiotics on human mind
-

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Q.17

According to the passage, psychobiotics is:

- 1 ☐ destroying the bacteria in the gut to create a positive effect on the brain.
- 2 ☐ killing bacteria that causes the ill functioning of the brain.
- 3 ☐ using bacteria to tinker with the gut to affect brain health.
- 4 ☐ attaining a proper functioning of the body by inducing artificial bacteria.

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Q.18

All of the following are true, EXCEPT:

-
- 1 ☐ Professional treatment should be the first action to treat anxiety, for there are some therapies that can help with various anxiety disorders.
-
- 2 ☐ There are medications available for curing anxiety disorders.
-
- 3 ☐ Human anxiety cannot really be trusted.
-
- 4 ☐ If probiotics starts reacting on the body, it cures all the strains of the body.
-

Directions for questions (19 to21): The passage below is accompanied by a set of three questions. Choose the best answer to each question.

The English language is part of the Germanic branch of the Indo-European Family of languages. These Indo-European languages originate from Old Norse and Saxon. English originated from a fusion of languages and dialects, now called Old English.

It all started when the Germanic tribes arrived in Britain and invaded the country during the 5th century AD. Before the Germanic invasions in Britain, Britain was populated by various Celtic tribes. These Celtic tribes were united by customs, religion and common speech. But the celtic tribes lacked political unity and that made them vulnerable. During the first century, Britain was conquered by Rome. When Britain finally gained independence from Rome in the year 410 AD, the Roman legions had withdrawn from Britain and this left the country vulnerable to invaders. Inhabitants from the north began attacking the inhabitants of Britain. A lot of different Germanic tribes started to migrate to Britain, but a few stood out amongst the rest, such as the Saxons, the Angles, the Jutes, the Franks and the Frisians. They came from different parts of what is nowadays northwest Germany, Denmark and the Netherlands.

The original inhabitants of Britain spoke a Celtic language. But most of the original inhabitants were driven to the west and north by the invaders. They mainly migrated to what is now Wales, Scotland and Cornwall. The Saxons called the native Britons, 'wealas' and wealas meant foreigner or slave; this is where the modern word Welsh came from.

The Germanic tribes were constantly fighting over power. But as time passed the different Germanic cultures gradually became similar to each other until they eventually stopped seeing themselves as their individual origin but collectively as either Anglo-Saxon or English. The Germanic tribes already spoke similar languages that now developed into what we now call Old English. The words England and English are derived from Engla-land ("land of the Angles") and englisc (the language the Angles spoke).

Q.19

All of the following cannot be inferred except:

- 1 ☐ English language has evolved over time because of its colonial influences.
- 2 ☐ Old English or Anglo Saxon denotes the origin of the modern English language.
- 3 ☐ The common language link stopped the Germanic tribes from fighting among one another.
- 4 ☐ English language owes its origin to the Germanic invasion in the 5th century AD.

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Q.20

What after-effect did the Roman rule have on the Celtic tribes?

- 1 ☐ It made way for the Germanic tribes to impose their language and culture on Britain.
- 2 ☐ The Celtic tribes were exposed to the Germanic invaders who migrated from the North.
- 3 ☐ Many Germanic and Danish tribes started to invade the Celtic regions and settle there once and for all.
- 4 ☐ The Celtic tribes were outnumbered and had to accept the migration of the foreign invaders.

Directions for questions (19 to21): The passage below is accompanied by a set of three questions. Choose the best answer to each question.

The English language is part of the Germanic branch of the Indo-European Family of languages. These Indo-European languages originate from Old Norse and Saxon. English originated from a fusion of languages and dialects, now called Old English.

It all started when the Germanic tribes arrived in Britain and invaded the country during the 5th century AD. Before the Germanic invasions in Britain, Britain was populated by various Celtic tribes. These Celtic tribes were united by customs, religion and common speech. But the celtic tribes lacked political unity and that made them vulnerable. During the first century, Britain was conquered by Rome. When Britain finally gained independence from Rome in the year 410 AD, the Roman legions had withdrawn from Britain and this left the country vulnerable to invaders. Inhabitants from the north began attacking the inhabitants of Britain. A lot of different Germanic tribes started to migrate to Britain, but a few stood out amongst the rest, such as the Saxons, the Angles, the Jutes, the Franks and the Frisians. They came from different parts of what is nowadays northwest Germany, Denmark and the Netherlands.

The original inhabitants of Britain spoke a Celtic language. But most of the original inhabitants were driven to the west and north by the invaders. They mainly migrated to what is now Wales, Scotland and Cornwall. The Saxons called the native Britons, 'wealas' and wealas meant foreigner or slave; this is where the modern word Welsh came from.

The Germanic tribes were constantly fighting over power. But as time passed the different Germanic cultures gradually became similar to each other until they eventually stopped seeing themselves as their individual origin but collectively as either Anglo-Saxon or English. The Germanic tribes already spoke similar languages that now developed into what we now call Old English. The words England and English are derived from Engla-land ("land of the Angles") and englisc (the language the Angles spoke).

Q.21

What could have made the Germanic tribes stop fighting among each other?

- 1 ☐ They realized that they were culturally more superior to other European races and decided to unite.
- 2 ☐ They all spoke the same language which was the major reason behind their unity.
- 3 ☐ The integration of cultures of the different Germanic tribes united them.
- 4 ☐ The urge for creating a common language stopped them from fighting.



Directions for questions (22 to24): The passage below is accompanied by a set of three questions. Choose the best answer to each question.

One lakh rupees invested in bitcoin in 2010 would be worth a few hundred crore rupees today. That is the kind of extraordinary return the digital currency has given investors as its price has witnessed a meteoric rise, from just a few cents in 2010 to hit a lifetime high of over \$11,000 last week. In 2017 alone, bitcoin price has increased by over 1000%. In fact, all it took for the currency to reach \$11,000 after breaching the \$10,000 mark was a single day. True to its nature, however, soon after hitting \$11,000, bitcoin witnessed a sharp drop of 20% before recovering some of its losses to close the day almost flat. Other cryptocurrencies like Ethereum too have shown equally impressive gains and falls, particularly over the last year. Enthusiasts argue that cryptocurrencies like bitcoin are rapidly transforming into mainstream money that will offer serious competition to national currencies issued by central banks. Therefore they see bitcoin's current price rise as merely a reflection of its bright future as a stateless currency. Its limited supply and the blockchain technology on which it functions, they say, have also added to its exotic appeal. Sceptics, however, have pointed to the Tulip Bubble of the 17th century and Internet stocks of the late 1990s as cautionary examples. The most notable among the critics has been J.P.Morgan chief executive officer Jamie Dimon who called bitcoin a "fraud" that will make its investors poor.

Whether bitcoin holds huge fundamental value as a medium of exchange, as many of its supporters claim, is yet to be seen. The blockchain technology may well have some merits, as shown by increasing interest in it even among central banks and other financial institutions. Many have even started offering financial products and services centred around bitcoin. Yet the fundamental value of any currency is based not on its underlying technology but on its general acceptability as money for the purpose of commerce. Bitcoin, or any other cryptocurrency, is nowhere close to widespread use as a medium that helps in the exchange of goods and services. Earlier this year, a Morgan Stanley research note concluded that bitcoin's acceptance "is virtually zero". In fact, it found that the acceptance of bitcoin among the top 500 online retailers actually dropped in the last year. What then explains bitcoin's huge price rise? The fear of missing out on extraordinary gains, achievable within extremely short periods of time in the case of bitcoin, has likely pulled people from all walks of life into the digital currency. This is typical of bubbles that are driven by emotion rather than value. It is also a telling sign of the times where easy monetary policy has pushed investors starved of yield in traditional assets into highly risky assets like bitcoin.

Q.22

Why does the author give the example of Ethereum?

- 1 ☐ To highlight the failure of cryptocurrency
- 2 ☐ To predict the ultimate outcome of the cryptocurrency bubble
- 3 ☐ To highlight the performance of cryptocurrency
- 4 ☐ To predict the future success of alternative cryptocurrency

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Directions for questions (22 to24): The passage below is accompanied by a set of three questions. Choose the best answer to each question.

One lakh rupees invested in bitcoin in 2010 would be worth a few hundred crore rupees today. That is the kind of extraordinary return the digital currency has given investors as its price has witnessed a meteoric rise, from just a few cents in 2010 to hit a lifetime high of over \$11,000 last week. In 2017 alone, bitcoin price has increased by over 1000%. In fact, all it took for the currency to reach \$11,000 after breaching the \$10,000 mark was a single day. True to its nature, however, soon after hitting \$11,000, bitcoin witnessed a sharp drop of 20% before recovering some of its losses to close the day almost flat. Other cryptocurrencies like Ethereum too have shown equally impressive gains and falls, particularly over the last year. Enthusiasts argue that cryptocurrencies like bitcoin are rapidly transforming into mainstream money that will offer serious competition to national currencies issued by central banks. Therefore they see bitcoin's current price rise as merely a reflection of its bright future as a stateless currency. Its limited supply and the blockchain technology on which it functions, they say, have also added to its exotic appeal. Sceptics, however, have pointed to the Tulip Bubble of the 17th century and Internet stocks of the late 1990s as cautionary examples. The most notable among the critics has been J.P.Morgan chief executive officer Jamie Dimon who called bitcoin a "fraud" that will make its investors poor.

Whether bitcoin holds huge fundamental value as a medium of exchange, as many of its supporters claim, is yet to be seen. The blockchain technology may well have some merits, as shown by increasing interest in it even among central banks and other financial institutions. Many have even started offering financial products and services centred around bitcoin. Yet the fundamental value of any currency is based not on its underlying technology but on its general acceptability as money for the purpose of commerce. Bitcoin, or any other cryptocurrency, is nowhere close to widespread use as a medium that helps in the exchange of goods and services. Earlier this year, a Morgan Stanley research note concluded that bitcoin's acceptance "is virtually zero". In fact, it found that the acceptance of bitcoin among the top 500 online retailers actually dropped in the last year. What then explains bitcoin's huge price rise? The fear of missing out on extraordinary gains, achievable within extremely short periods of time in the case of bitcoin, has likely pulled people from all walks of life into the digital currency. This is typical of bubbles that are driven by emotion rather than value. It is also a telling sign of the times where easy monetary policy has pushed investors starved of yield in traditional assets into highly risky assets like bitcoin.

Q.23

All of the following are true according to the passage except:

- 1 ☐ Blockchain technology added to Bitcoin's exotic appeal.
- 2 ☐ Cryptocurrency is widely used for exchange of goods and services.
- 3 ☐ Bitcoin might hold huge fundamental value as a medium of exchange.

4 ☐ Despite warning signs, cryptocurrency has attracted a myriad investors.

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Directions for questions (22 to 24): The passage below is accompanied by a set of three questions. Choose the best answer to each question.

One lakh rupees invested in bitcoin in 2010 would be worth a few hundred crore rupees today. That is the kind of extraordinary return the digital currency has given investors as its price has witnessed a meteoric rise, from just a few cents in 2010 to hit a lifetime high of over \$11,000 last week. In 2017 alone, bitcoin price has increased by over 1000%. In fact, all it took for the currency to reach \$11,000 after breaching the \$10,000 mark was a single day. True to its nature, however, soon after hitting \$11,000, bitcoin witnessed a sharp drop of 20% before recovering some of its losses to close the day almost flat. Other cryptocurrencies like Ethereum too have shown equally impressive gains and falls, particularly over the last year. Enthusiasts argue that cryptocurrencies like bitcoin are rapidly transforming into mainstream money that will offer serious competition to national currencies issued by central banks. Therefore they see bitcoin's current price rise as merely a reflection of its bright future as a stateless currency. Its limited supply and the blockchain technology on which it functions, they say, have also added to its exotic appeal. Sceptics, however, have pointed to the Tulip Bubble of the 17th century and Internet stocks of the late 1990s as cautionary examples. The most notable among the critics has been J.P.Morgan chief executive officer Jamie Dimon who called bitcoin a "fraud" that will make its investors poor.

Whether bitcoin holds huge fundamental value as a medium of exchange, as many of its supporters claim, is yet to be seen. The blockchain technology may well have some merits, as shown by increasing interest in it even among central banks and other financial institutions. Many have even started offering financial products and services centred around bitcoin. Yet the fundamental value of any currency is based not on its underlying technology but on its general acceptability as money for the purpose of commerce. Bitcoin, or any other cryptocurrency, is nowhere close to widespread use as a medium that helps in the exchange of goods and services. Earlier this year, a Morgan Stanley research note concluded that bitcoin's acceptance "is virtually zero". In fact, it found that the acceptance of bitcoin among the top 500 online retailers actually dropped in the last year. What then explains bitcoin's huge price rise? The fear of missing out on extraordinary gains, achievable within extremely short periods of time in the case of bitcoin, has likely pulled people from all walks of life into the digital currency. This is typical of bubbles that are driven by emotion rather than value. It is also a telling sign of the times where easy monetary policy has pushed investors starved of yield in traditional assets into highly risky assets like bitcoin.

Q.24

What is the primary purpose of the author?

1 ☐ To condemn the use of Bitcoin

2 ☐ To warn against the use of cryptocurrency

3 ☐ To encourage the reader to use cryptocurrency

4 ☐ To evaluate the future prospects of cryptocurrency



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Q.25

Directions for question 25: The passage given below is followed by four summaries. Choose the option that best captures the author's position.

Sometimes the narrator's unreliability is made immediately evident. For instance, a story may open with the narrator making a plainly false or delusional claim or admitting to being severely mentally ill, or the story itself may have a frame in which the narrator appears as a character, with clues to the character's unreliability. A more dramatic use of the device delays the revelation until near the story's end. In some cases, the reader discovers that in the foregoing narrative, the narrator had concealed or greatly misrepresented vital pieces of information. Such a twist ending forces readers to reconsider their point of view and experience of the story.

1. The unreliability of the narrator of a story is used by the author of the story to shock the readers.
 2. The authors, who practice the use of unreliable narrators in their stories, use it in order to force readers not to take anything for granted.
 3. The different times of revelation of the unreliability of the narrator of a story can evoke different feelings in the reader.
 4. Dramatic narration is often unreliable in nature.
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🔑 Answer key/Solution

Q.26

Directions for question 26: The passage given below is followed by four summaries. Choose the option that best captures the author's position.

Spivak developed and applied Foucault's term epistemic violence to describe the destruction of non-Western ways of perceiving the world and the resultant dominance of the Western ways of perceiving the world. Conceptually, epistemic violence specifically relates to women, whereby the "Subaltern [woman] must always be caught in translation, never [allowed to be] truly expressing herself", because the colonial power's destruction of her culture pushed to the social margins her non-Western ways of perceiving, understanding, and knowing the world.

1. Spivak applied the term epistemic violence to showcase the marginalization and destruction of a woman's ability to express her non-Western perception.
2. Spivak improved Foucault's theory of epistemic violence by applying it to the non-Western ways of perceiving the world.
3. Spivak developed and applied Foucault's term epistemic violence which describes the dominance of the non-Western viewpoint.
4. Spivak used the term epistemic violence to highlight the atrocities committed by the colonial forces on the subaltern woman of the non-Western world.

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Answer key/Solution

Q.27

Directions for question 27: The passage given below is followed by four summaries. Choose the option that best captures the author's position.

In 1968, ecologist Garrett Hardin explored this social dilemma in his article "The Tragedy of the Commons", published in the journal Science. Hardin discussed problems that cannot be solved by technical means, as distinct from those with solutions that require "a change only in the techniques of the natural sciences, demanding little or nothing in the way of change in human values or ideas of morality". Hardin focused on human population growth, the use of the Earth's natural resources, and the welfare state. Hardin argued that if individuals relied on themselves alone, and not on the relationship of society and man, then the number of children had by each family would not be of public concern. Hardin said that if the children of improvident parents starved to death, if overbreeding was its own punishment, then there would be no public interest in controlling the breeding of families.

1. According to Hardin, some problems can only be solved when human beings realise their relationship with nature.
 2. According to Hardin, some societal problems cannot be solved through technology but by reshaping human values.
 3. According to Hardin, some problems depend on the way we perceive our roles in a society and not on the way science has developed a society.
 4. According to Hardin, some problems can only be tackled if poverty was a crime in itself.
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Q.28

Directions for question 28: The five sentences (labelled 1, 2, 3, 4, 5) given in this question, when properly sequenced, form a coherent paragraph. Each sentence is labelled with a number. Decide on the proper order for the sentences and key in this sequence of five numbers as your answer.

1. The best way, thus, to celebrate the day would be by implementing his teachings.
2. The ideal way to celebrate the birthday of the twenty-fourth and last Tirthankara would be by offering a helping hand to all.
3. Mahavir Jayanti is also known as Mahavir Janm Kalyanak, which means his birth blessed everyone.
4. Offer a helping hand to a family member who may be going through a rough patch.
5. Whatever you have, share it; if you work in an office, or own a shop or a factory, ensure that you do something to make your co-workers happy.

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Q.29

Directions for question 29: The five sentences (labelled 1, 2, 3, 4, 5) given in this question, when properly sequenced, form a coherent paragraph. Each sentence is labelled with a number. Decide on the proper order for the sentences and key in this sequence of five numbers as your answer.

1. Domestic investors were already spooked by a widening fiscal deficit, so the foreign selling now has managed to add pressure on the market.
2. Foreign investors have been net sellers of over \$1 billion in Indian debt this month, almost cancelling out inflows since the beginning of the year.
3. More people are losing their love for Indian bonds.
4. The yield on the benchmark 10-year bond has risen by almost 100 basis points since late-July amid lacklustre investor demand.
5. The deserting of the Indian market by foreign investors comes at a time when the Centre is looking at tapping the bond market aggressively to finance its election-year spending.

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Q.30

Directions for question 30: The five sentences (labelled 1, 2, 3, 4, 5) given in this question, when properly sequenced, form a coherent paragraph. Each sentence is labelled with a number. Decide on the proper order for the sentences and key in this sequence of five numbers as your answer.

1. The phrase 'it's not Cricket' refers to any act that is not fair.
2. Cricket is a sport, but it is also a code of honour.
3. The seemingly innocuous application of saliva and sweat, and more interventionist acts such as pressing chewed lozenges, throwing the ball hard on the surface, the use of nails or abrasive dust from the turf, and in some cases the use of bottle openers have plunged a knife into the game's heart even as they enhanced many a fast bowler's ability to extract reverse-swing.
4. Yet, like a few other things wrong with the game, ball-tampering remains one of its murkiest secrets.
5. That it has also been called 'a gentleman's game' suggests that it is held to high standards.

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Q.31

Directions for question 31: The five sentences (labelled 1, 2, 3, 4, 5) given in this question, when properly sequenced, form a coherent paragraph. Each sentence is labelled with a number. Decide on the proper order for the sentences and key in this sequence of five numbers as your answer.

1. An international team led by the University of Exeter in the UK showed that chemical genetic inhibition of a single protein in the fungus stops it from spreading inside a rice leaf – leaving it trapped within a single plant cell.
2. The finding is a breakthrough in terms of understanding rice blast, a disease that is hugely important in terms of global food security, researchers said.
3. The research led by Wasin Sakulkoo, revealed how the fungus can manipulate and then squeeze through natural channels (called plasmodesmata) that exist between plant cells.
4. However, the scientists caution that this is a "fundamental" discovery – not a cure that can yet be applied outside the laboratory.
5. In a breakthrough, scientists have found a way to stop the spread of rice blast, a fungus that destroys up to 30 per cent of the world's rice crop each year.



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 Answer key/Solution

Q.32

Directions for question 32: Five sentences related to a topic are given below. Four of them can be put together to form a meaningful and coherent short paragraph. Identify the odd one out.

1. The scene dates from the same period in 1882 when Van Gogh painted View of the Sea at Scheveningen, which was stolen by the Italian Camorra organised crime syndicate from the Van Gogh museum in Amsterdam in 2002.
 2. Women Mending Nets in the Dunes, which the Dutch artist painted early in his career at Scheveningen near The Hague, is expected to go for around €5m (£4.4m/US\$6m) when it is auctioned in June.
 3. But with the art market booming and prices for artists such as Vincent Van Gogh rocketing, experts said it was hard to predict exactly when the bidding would stop.
 4. One of them, a portrait of the artist's childhood friend Claude Antoine Charles Favre, is expected to go for between €180,000 and €250,000
 5. The first Van Gogh painting to go under the hammer in France in more than two decades has been unveiled.
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 Answer key/Solution

Q.33

Directions for question 33: Five sentences related to a topic are given below. Four of them can be put together to form a meaningful and coherent short paragraph. Identify the odd one out.

1. There she is, embroidered on the front of a £145 cushion. Look: she is bunting, she is necklace. She is gif, she is emoji, she is meme.
 2. Her clothes were an expression of her communist politics and her indigenous heritage.
 3. She is on T-shirts, candles, duvet covers; she is on the front cover of the Little Book of Feminist Saints and was a cake on The Great British Bake Off.
 4. It feels as though Frida Kahlo is everywhere.
 5. I bet anything you like she starts to appear in the baby name charts.
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🔍 Answer key/Solution

Q.34

Directions for question 34: Five sentences related to a topic are given below. Four of them can be put together to form a meaningful and coherent short paragraph. Identify the odd one out.

- 1. Two buildings were pulled down and a third had hammer-wielding workers perched on its roof by evening on the first day of a demolition exercise to reclaim land for the New Garia-Airport Metro corridor.**
- 2. The Mahisgote Free Primary School and a building adjacent to it that housed three shops were demolished with two earthmovers, one of them equipped with a pneumatic drill.**
- 3. New Town police station confirmed receiving a complaint.**
- 4. The team then moved to the Blue Orchid Hotel. Officers from New Town police station had twice visited Mahisbathan to ensure there was no trouble when the earthmovers moved in.**
- 5. The State Government has decided to open another route for the East-West Metro.**



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🔍 Answer key/Solution

Sec 2

Directions for questions 35 to 38: Answer the questions on the basis of the information given below.

A company named 'Nexus Ltd.' organized five parties on five different occasions - Deepawali, Holi, Navratri, Christmas and New Year - in 2017 for the enjoyment of its employees. In each party, there were four activities - dancing, singing, skit and story writing - to participate in. Only those employees attended the function who participated in any activity. An employee could participate in exactly one activity on each occasion. Each employee had attended at least one of the five parties.

Following table provides the information about the number of employees who participated in the different activities at different occasions.

	Dancing		Singing		Skit		Story Writing	
	Male	Female	Male	Female	Male	Female	Male	Female
Deepawali	16	27	33	43	21	32	45	55
Holi	47	47	14	35	25	59	36	22
Navratri	25	43	49	55	12	22	11	34
Christmas	45	50	23	40	38	30	19	25
New Year	22	35	20	29	44	43	31	58

Q.35

If each of the employees was absent for exactly one of the five parties, then find the total number of employees in the company.

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Answer key/Solution

Directions for questions 35 to 38: Answer the questions on the basis of the information given below.

A company named 'Nexus Ltd.' organized five parties on five different occasions - Deepawali, Holi, Navratri, Christmas and New Year - in 2017 for the enjoyment of its employees. In each party, there were four activities - dancing, singing, skit and story writing - to participate in. Only those employees attended the function who participated in any activity. An employee could participate in exactly one activity on each occasion. Each employee had attended at least one of the five parties.

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Navratri	25	43	49	55	12	22	11	34
Christmas	45	50	23	40	38	30	19	25
New Year	22	35	20	29	44	43	31	58

Q.36

Find the difference between the maximum and the minimum possible number of female employees in the company?

1 ☐ 201

2 ☐ 703

3 ☐ 804

4 ☐ 619

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 Answer key/Solution

Directions for questions 35 to 38: Answer the questions on the basis of the information given below.

A company named 'Nexus Ltd.' organized five parties on five different occasions - Deepawali, Holi, Navratri, Christmas and New Year - in 2017 for the enjoyment of its employees. In each party, there were four activities - dancing, singing, skit and story writing - to participate in. Only those employees attended the function who participated in any activity. An employee could participate in exactly one activity on each occasion. Each employee had attended at least one of the five parties.

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Christmas	45	50	23	40	38	30	19	25
New Year	22	35	20	29	44	43	31	58

Q.37

If the number of female employees is maximum possible and the number of male employees is minimum possible, then find the total number of employees in the company.

1 ☐ 909

2 ☐ 345

3 ☐ 748

4 ☐ 576

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 Answer key/Solution

Directions for questions 35 to 38: Answer the questions on the basis of the information given below.

A company named 'Nexus Ltd.' organized five parties on five different occasions - Deepawali, Holi, Navratri, Christmas and New Year - in 2017 for the enjoyment of its employees. In each party, there were four activities - dancing, singing, skit and story writing - to participate in. Only those employees attended the function who participated in any activity. An employee could participate in exactly one activity on each occasion. Each employee had attended at least one of the five parties.

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Navratri	25	43	49	55	12	22	11	34
Christmas	45	50	23	40	38	30	19	25
New Year	22	35	20	29	44	43	31	58

Q.38

If any female employee had participated in singing or dancing in any party, then that female employee can participate in neither singing nor dancing in any other party. What can be the minimum number of total female employees in the firm?

1 ☐ 202

2 ☐ 404

3 ☐ 165

4 ☐ 784

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 Answer key/Solution

Directions for questions 39 to 42: Answer the questions on the basis of the information given below.

In Aa-liga, a football tournament, there are 15 teams competing in a round robin format i.e. each team plays with all the other teams exactly once. The top two teams during the league will play the finals against each other. After every match, points will be awarded to both the teams based on the following criteria:

1 win \equiv 3 points;

1 draw \equiv 1 point;

1 loss \equiv 0 point

When 11 of the 15 teams were done playing all their matches, following observations were made about the top 5 scoring teams at that stage:

	Matches Played	Points
Barcelona	13	32
Atletico Madrid	12	29
Sevilla	12	23
Real Madrid	11	26
Valencia	14	28

Further, when all teams have played all their league matches, it is noted that:

(i) Real Madrid scored the highest points.

(ii) No two teams, among the top five, have the same number of drawn matches.

(iii) Among the top 5 teams, Valencia is not involved in the highest number of drawn matches.

Q.39

Who is the other finalist with Real Madrid?

1 ☐ Barcelona

2 ☐ Atletico Madrid

3 ☐ Sevilla

4 ☐ Cannot be determined

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🔍 Answer key/Solution

Directions for questions 39 to 42: Answer the questions on the basis of the information given below.

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Further, when all teams have played all their league matches, it is noted that:

(i) Real Madrid scored the highest points.

(ii) No two teams, among the top five, have the same number of drawn matches.

(iii) Among the top 5 teams, Valencia is not involved in the highest number of drawn matches.

Q.40

Out of all the matches played by Sevilla during the tournament, how many ended in a draw?

1 ☐ 6

2 ☐ 2

3 ☐ 5

4 ☐ Cannot be determined

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Answer key/Solution

Directions for questions 39 to 42: Answer the questions on the basis of the information given below.

In Aa-liga, a football tournament, there are 15 teams competing in a round robin format i.e. each team plays with all the other teams exactly once. The top two teams during the league will play the finals against each other. After every match, points will be awarded to both the teams based on the following criteria:

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Sevilla	12	23
Real Madrid	11	26
Valencia	14	28

Further, when all teams have played all their league matches, it is noted that:

(i) Real Madrid scored the highest points.

(ii) No two teams, among the top five, have the same number of drawn matches.

(iii) Among the top 5 teams, Valencia is not involved in the highest number of drawn matches.

Q.41

Which team scored the 4th highest?

1 ☐ Barcelona

2 ☐ Atletico Madrid

3 ☐ Valencia

4 ☐ Cannot be determined

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 Answer key/Solution

Directions for questions 39 to 42: Answer the questions on the basis of the information given below.

In Aa-liga, a football tournament, there are 15 teams competing in a round robin format i.e. each team plays with all the other teams exactly once. The top two teams during the league will play the finals against each other. After every match, points will be awarded to both the teams based on the following criteria:

1 win \equiv 3 points;

1 draw \equiv 1 point;

1 loss \equiv 0 point

When 11 of the 15 teams were done playing all their matches, following observations were made about the top 5 scoring teams at that stage:

	Matches Played	Points
Barcelona	13	32
Atletico Madrid	12	29
Sevilla	12	23
Real Madrid	11	26
Valencia	14	28

Further, when all teams have played all their league matches, it is noted that:

(i) Real Madrid scored the highest points.

(ii) No two teams, among the top five, have the same number of drawn matches.

(iii) Among the top 5 teams, Valencia is not involved in the highest number of drawn matches.

Q.42

Of the top five teams, which team lost the maximum number of matches?

1 ☐ Valencia

2 ☐ Sevilla

3 ☐ Barcelona

4 ☐ Cannot be determined

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 Answer key/Solution

Directions for questions 43 to 46: Answer the questions on the basis of the information given below.

There are 10 friends - Aditi, Akash, Charu, Gautam, Jyoti, Laxman, Mohan, Neeti, Sanya and Shashank - who each lives in a different rented house. Each of them has to pay a distinct house rent. House rent paid by each of them is an integral multiple of Rs.1000. Rent paid by each of the ten friends belongs to one of the following three categories:

- Rent lies in the range from Rs. 1000 to Rs. 5000 - LESS RENT
- Rent lies in the range from Rs. 6000 to Rs. 12000 - MODERATE RENT
- Rent lies in the range from Rs. 15000 to Rs. 19000 - OVER RENT

Some additional information is also known:

1. Number of friends with their house rents belonging to LESS, MODERATE and OVER RENT categories are 3, 5 and 2 respectively.
2. Total rent paid by Neeti, Gautam and Aditi taken together is Rs.29000, and Aditi's and Gautam's house rent do not belong to MODERATE RENT category.
3. Laxman pays the least rent and Jyoti pays the most.
4. Total rent paid by Charu, Akash and Mohan taken together is a multiple of 4000. Rent paid by Akash do not belong to LESS RENT category.
5. Difference between the rent paid by Jyoti and Aditi is equivalent to the house rent of Gautam.
6. Total rent paid by Sanya and Laxman taken together is equivalent to the rent paid by Shashank.
7. Nobody pays Rs.1000, Rs.10000 and Rs.17000 as their house rent.
8. Shashank pays more than Akash but less than Mohan, whose house rent belongs to MODERATE RENT category and had exactly 7 people paying less rent than him.
9. Laxman, Gautam and Charu pay the consecutive integral multiple of thousand as their house rent, where Gautam has to pay less than Charu.

Q.43

What is the total house rent (in Rs.) paid by Charu, Akash and Mohan taken together?

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🔑 Answer key/Solution

Directions for questions 43 to 46: Answer the questions on the basis of the information given below.

There are 10 friends - Aditi, Akash, Charu, Gautam, Jyoti, Laxman, Mohan, Neeti, Sanya and Shashank - who each lives in a different rented house. Each of them has to pay a distinct house rent. House rent paid by each of them is an integral multiple of Rs.1000. Rent paid by each of the ten friends belongs to one of the following three categories:

- Rent lies in the range from Rs. 1000 to Rs. 5000 - LESS RENT
- Rent lies in the range from Rs. 6000 to Rs. 12000 - MODERATE RENT
- Rent lies in the range from Rs. 15000 to Rs. 19000 - OVER RENT

Some additional information is also known:

1. Number of friends with their house rents belonging to LESS, MODERATE and OVER RENT categories are 3, 5 and 2 respectively.
2. Total rent paid by Neeti, Gautam and Aditi taken together is Rs.29000, and Aditi's and Gautam's house rent do not belong to MODERATE RENT category.
3. Laxman pays the least rent and Jyoti pays the most.
4. Total rent paid by Charu, Akash and Mohan taken together is a multiple of 4000. Rent paid by Akash do not belong to LESS RENT category.
5. Difference between the rent paid by Jyoti and Aditi is equivalent to the house rent of Gautam.
6. Total rent paid by Sanya and Laxman taken together is equivalent to the rent paid by Shashank.
7. Nobody pays Rs.1000, Rs.10000 and Rs.17000 as their house rent.
8. Shashank pays more than Akash but less than Mohan, whose house rent belongs to MODERATE RENT category and had exactly 7 people paying less rent than him.
9. Laxman, Gautam and Charu pay the consecutive integral multiple of thousand as their house rent, where Gautam has to pay less than Charu.

Q.44

If the rent paid by Jyoti and Mohan were interchanged, and that by Aditi and Gautam were also interchanged, then what is the absolute difference between the rent (in Rs.) paid by Mohan and Aditi?

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🔑 Answer key/Solution

Directions for questions 43 to 46: Answer the questions on the basis of the information given below.

There are 10 friends - Aditi, Akash, Charu, Gautam, Jyoti, Laxman, Mohan, Neeti, Sanya and Shashank - who each lives in a different rented house. Each of them has to pay a distinct house rent. House rent paid by each of them is an integral multiple of Rs.1000. Rent paid by each of the ten friends belongs to one of the following three categories:

- Rent lies in the range from Rs. 1000 to Rs. 5000 - LESS RENT
- Rent lies in the range from Rs. 6000 to Rs. 12000 - MODERATE RENT
- Rent lies in the range from Rs. 15000 to Rs. 19000 - OVER RENT

Some additional information is also known:

1. Number of friends with their house rents belonging to LESS, MODERATE and OVER RENT categories are 3, 5 and 2 respectively.
2. Total rent paid by Neeti, Gautam and Aditi taken together is Rs.29000, and Aditi's and Gautam's house rent do not belong to MODERATE RENT category.
3. Laxman pays the least rent and Jyoti pays the most.
4. Total rent paid by Charu, Akash and Mohan taken together is a multiple of 4000. Rent paid by Akash do not belong to LESS RENT category.
5. Difference between the rent paid by Jyoti and Aditi is equivalent to the house rent of Gautam.
6. Total rent paid by Sanya and Laxman taken together is equivalent to the rent paid by Shashank.
7. Nobody pays Rs.1000, Rs.10000 and Rs.17000 as their house rent.
8. Shashank pays more than Akash but less than Mohan, whose house rent belongs to MODERATE RENT category and had exactly 7 people paying less rent than him.
9. Laxman, Gautam and Charu pay the consecutive integral multiple of thousand as their house rent, where Gautam has to pay less than Charu.

Q.45

Which of the following statements is/are false?

- 1 ☐ The house rent of Akash is the fifth lowest.
- 2 ☐ Total house rent paid by Shashank and Jyoti taken together is same as the total house rent paid by Laxman, Mohan and Neeti taken together.
- 3 ☐ Rent paid by Akash, Shashank, Charu and Sanya belong to the same category.
- 4 ☐ Both (b) and (c)

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 Answer key/Solution

Directions for questions 43 to 46: Answer the questions on the basis of the information given below.

There are 10 friends - Aditi, Akash, Charu, Gautam, Jyoti, Laxman, Mohan, Neeti, Sanya and Shashank - who each lives in a different rented house. Each of them has to pay a distinct house rent. House rent paid by each of them is an integral multiple of Rs.1000. Rent paid by each of the ten friends belongs to one of the following three categories:

- Rent lies in the range from Rs. 1000 to Rs. 5000 - LESS RENT
- Rent lies in the range from Rs. 6000 to Rs. 12000 - MODERATE RENT
- Rent lies in the range from Rs. 15000 to Rs. 19000 - OVER RENT

Some additional information is also known:

1. Number of friends with their house rents belonging to LESS, MODERATE and OVER RENT categories are 3, 5 and 2 respectively.
2. Total rent paid by Neeti, Gautam and Aditi taken together is Rs.29000, and Aditi's and Gautam's house rent do not belong to MODERATE RENT category.
3. Laxman pays the least rent and Jyoti pays the most.
4. Total rent paid by Charu, Akash and Mohan taken together is a multiple of 4000. Rent paid by Akash do not belong to LESS RENT category.
5. Difference between the rent paid by Jyoti and Aditi is equivalent to the house rent of Gautam.
6. Total rent paid by Sanya and Laxman taken together is equivalent to the rent paid by Shashank.
7. Nobody pays Rs.1000, Rs.10000 and Rs.17000 as their house rent.
8. Shashank pays more than Akash but less than Mohan, whose house rent belongs to MODERATE RENT category and had exactly 7 people paying less rent than him.
9. Laxman, Gautam and Charu pay the consecutive integral multiple of thousand as their house rent, where Gautam has to pay less than Charu.

Q.46

Total rent (in Rs.) paid by all of them taken together is

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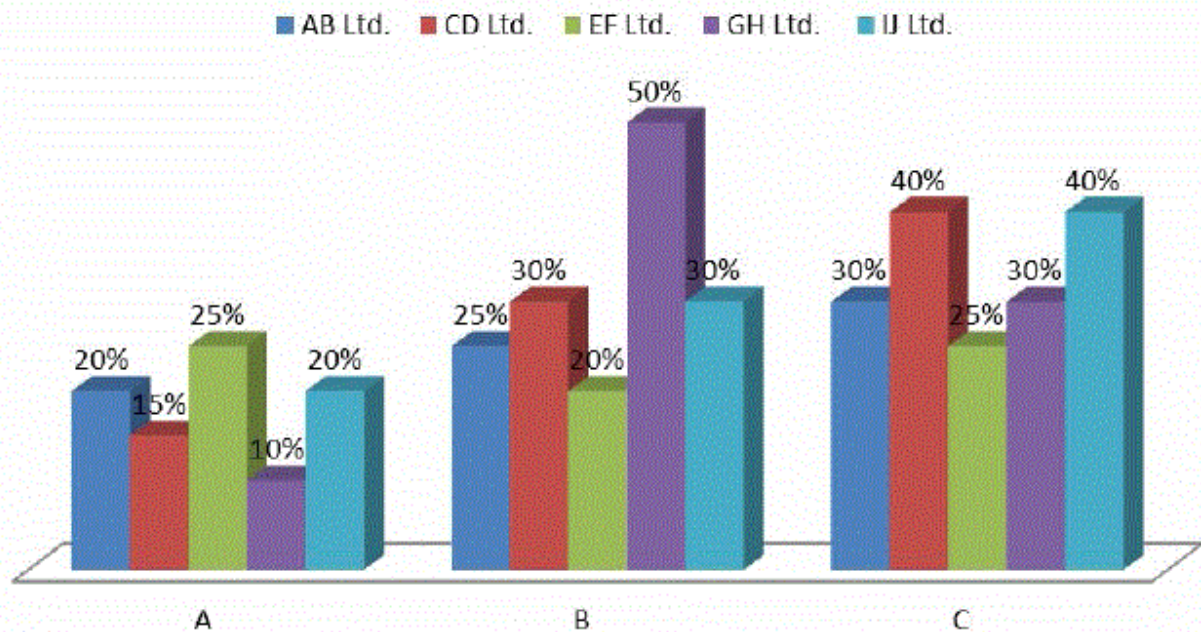
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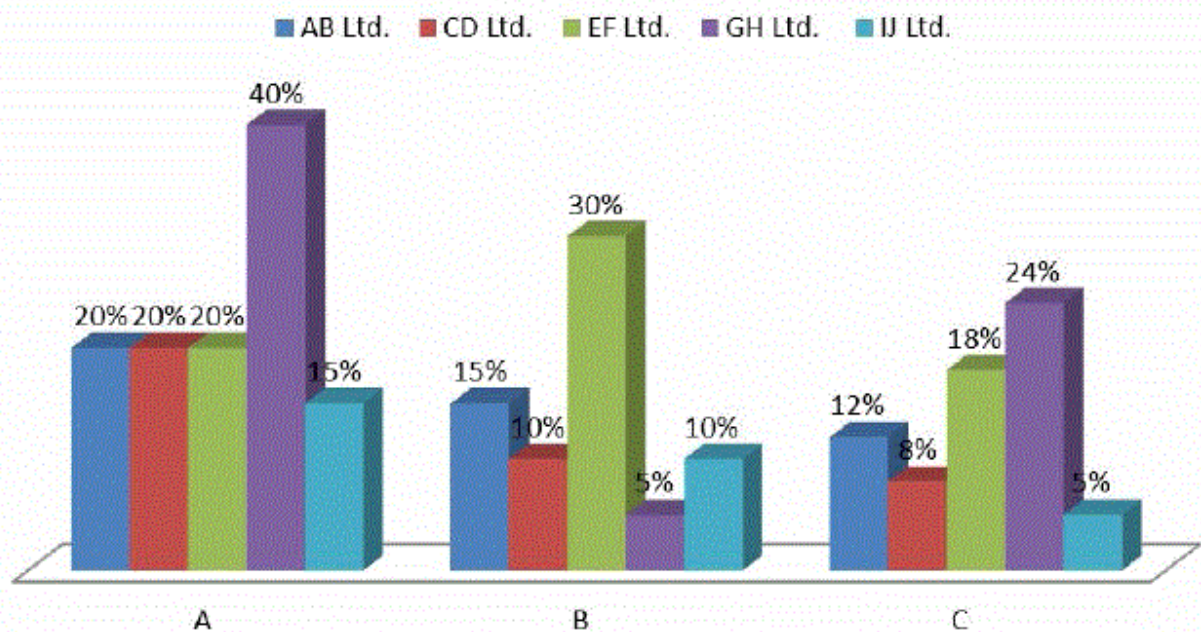
Directions for questions 47 to 50: Answer the questions on the basis of the information given below.

The following bar-graphs show the percentage discounts offered and profit earned by various companies to sell products A, B and C.

Discount offered



Profit earned



Q.47

If marked price of product A is same for all the companies then which company had the lowest cost price of A?

1 ☐ AB Ltd.

2 ☐ CD Ltd.

3 ☐ EF Ltd.

4 ☐ GH Ltd.



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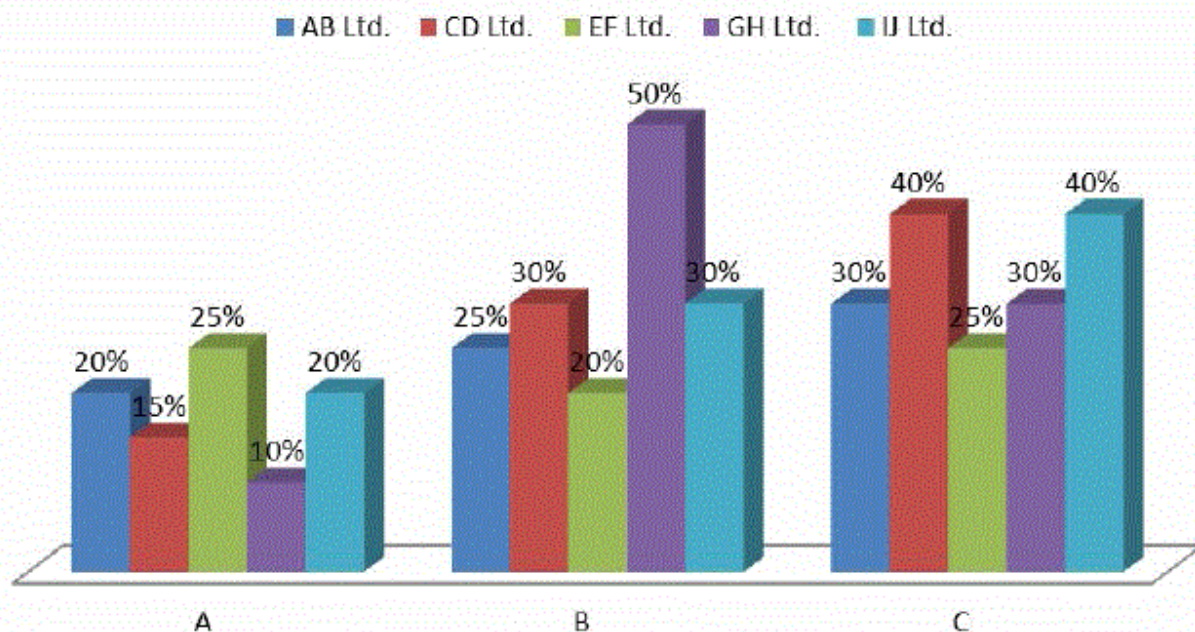
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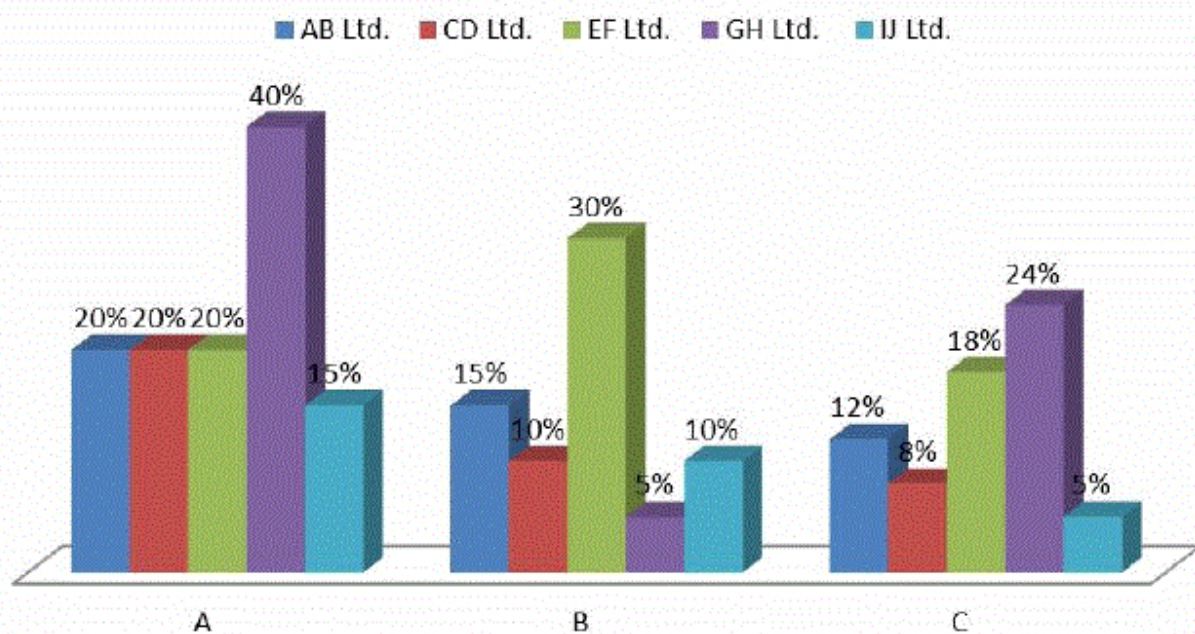
Directions for questions 47 to 50: Answer the questions on the basis of the information given below.

The following bar-graphs show the percentage discounts offered and profit earned by various companies to sell products A, B and C.

Discount offered



Profit earned



Q.48

If the cost price of products A and B are in the ratio of 3 : 4 for EF Ltd., then what is the ratio of their discounts?

1 ☐ 5:4

2 ☐ 12:13

3 ☐ 9:13

4 ☐ None of these



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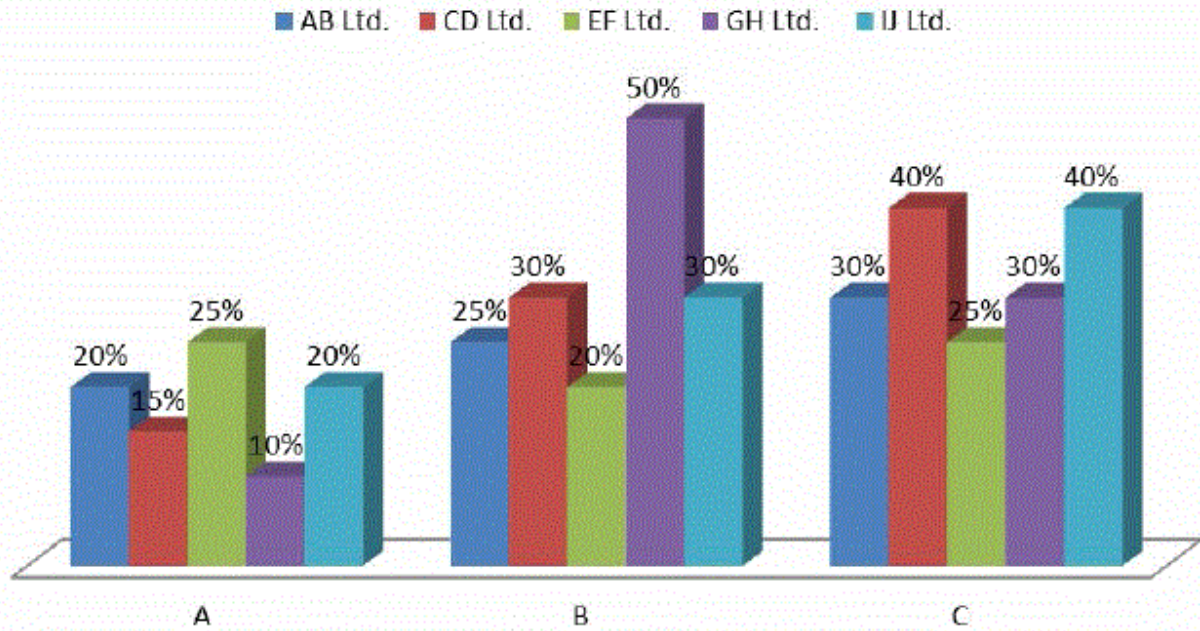
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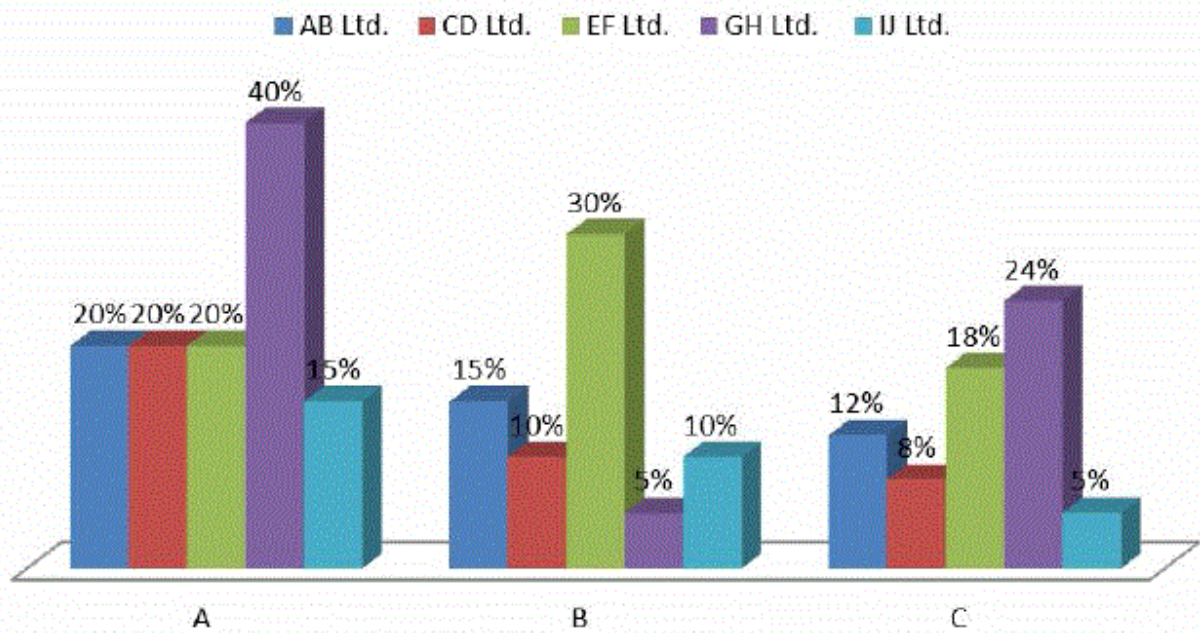
Directions for questions 47 to 50: Answer the questions on the basis of the information given below.

The following bar-graphs show the percentage discounts offered and profit earned by various companies to sell products A, B and C.

Discount offered



Profit earned



Q.49

For how many companies the mark up percentage for C is definitely more than 50%?

1 ☐ 1

2 ☐ 2

3 ☐ 3

4 ☐ 5



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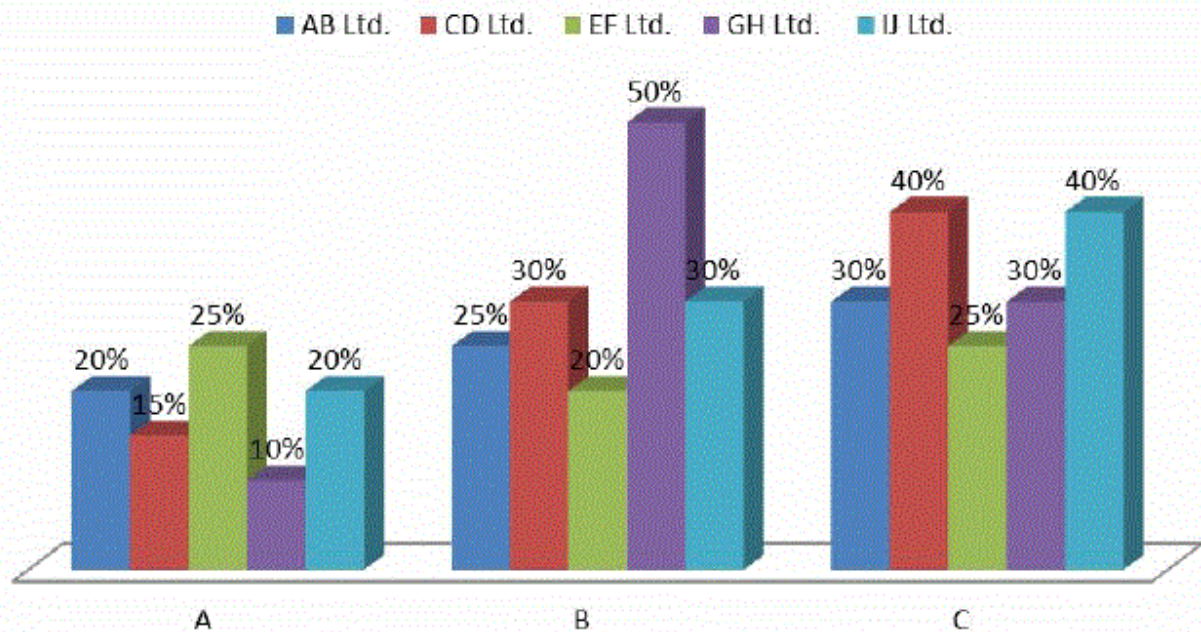
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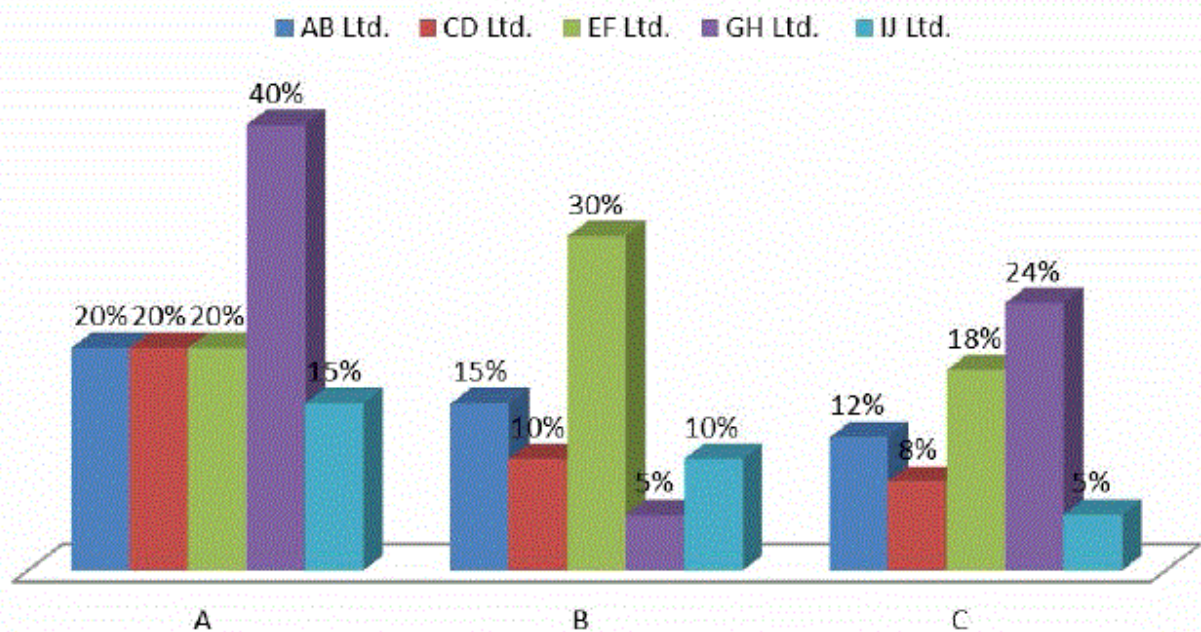
Directions for questions 47 to 50: Answer the questions on the basis of the information given below.

The following bar-graphs show the percentage discounts offered and profit earned by various companies to sell products A, B and C.

Discount offered



Profit earned



Q.50

If the cost price for each product is same for all the companies but different for each product for any company then how many companies definitely earned more or equal profit to that of IJ Ltd, if every company sold equal number of products of each type?

1 ☐ 0

2 ☐ 1

3 ☐ 2

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Directions for questions 51 to 54: Answer the questions on the basis of the information given below.

IIM Delhi was set up this year and it absorbed a batch of 80 students for its two-year PGP course in management. Every student satisfied all of the three given selection criteria. The criteria for selection were as follows:

I. The candidate should have taken exactly one of the CAT or XAT examinations.

II. The candidate must have:

Secured at least 96 percentile in the examination he/she had written OR secured a rank among the top 10 students in his or her university examination (university topper) OR both.

III. The candidate must either be a fresher or have work experience of more than 3 years.

Further information about the students absorbed by the Institute is as follows:

a. There were 45 students who had secured a rank among the top 10 students in their university examination. Of these 33.3 % were fresher while 66.66% had appeared for CAT.

b. 30 students had taken the XAT examination, of which 15 were fresher.

c. Of the students who had work experience greater than 3 years, 15 students were university toppers (i.e. in the top 10) and these students had also secured 96 or more percentile in the examination they had taken (i.e. CAT or XAT).

d. There were 20 students who had taken the CAT examination, had secured a rank among the top 10 students in their university examination and also had work experience of more than 3 years.

e. There were a total of 40 students who had work experience of more than 3 years.

f. No fresher satisfied both the criteria mentioned in (II) above.

Q.51

What was the number of students with work experience that the college had absorbed who were also university toppers, had taken CAT examination and secured more than 96 percentile.

1 ● 5

2 ● 7

3 ● 3

4 ● Cannot be determined

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Directions for questions 51 to 54: Answer the questions on the basis of the information given below.

IIM Delhi was set up this year and it absorbed a batch of 80 students for its two-year PGP course in management. Every student satisfied all of the three given selection criteria. The criteria for selection were as follows:

I. The candidate should have taken exactly one of the CAT or XAT examinations.

II. The candidate must have:

Secured at least 96 percentile in the examination he/she had written OR secured a rank among the top 10 students in his or her university examination (university topper) OR both.

III. The candidate must either be a fresher or have work experience of more than 3 years.

Further information about the students absorbed by the Institute is as follows:

a. There were 45 students who had secured a rank among the top 10 students in their university examination. Of these 33.3 % were fresher while 66.66% had appeared for CAT.

b. 30 students had taken the XAT examination, of which 15 were fresher.

c. Of the students who had work experience greater than 3 years, 15 students were university toppers (i.e. in the top 10) and these students had also secured 96 or more percentile in the examination they had taken (i.e. CAT or XAT).

d. There were 20 students who had taken the CAT examination, had secured a rank among the top 10 students in their university examination and also had work experience of more than 3 years.

e. There were a total of 40 students who had work experience of more than 3 years.

f. No fresher satisfied both the criteria mentioned in (II) above.

Q.52

Find the absolute difference between the number of CAT takers who were not freshers, and the number of freshers who were not CAT takers.

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 Answer key/Solution

Directions for questions 51 to 54: Answer the questions on the basis of the information given below.

IIM Delhi was set up this year and it absorbed a batch of 80 students for its two-year PGP course in management. Every student satisfied all of the three given selection criteria. The criteria for selection were as follows:

I. The candidate should have taken exactly one of the CAT or XAT examinations.

II. The candidate must have:

Secured at least 96 percentile in the examination he/she had written OR secured a rank among the top 10 students in his or her university examination (university topper) OR both.

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Further information about the students absorbed by the Institute is as follows:

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b. 30 students had taken the XAT examination, of which 15 were fresher.

c. Of the students who had work experience greater than 3 years, 15 students were university toppers (i.e. in the top 10) and these students had also secured 96 or more percentile in the examination they had taken (i.e. CAT or XAT).

d. There were 20 students who had taken the CAT examination, had secured a rank among the top 10 students in their university examination and also had work experience of more than 3 years.

e. There were a total of 40 students who had work experience of more than 3 years.

f. No fresher satisfied both the criteria mentioned in (II) above.

Q.53

How many CAT takers have scored more than 96+ percentile and are not university toppers?

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Directions for questions 51 to 54: Answer the questions on the basis of the information given below.

IIM Delhi was set up this year and it absorbed a batch of 80 students for its two-year PGP course in management. Every student satisfied all of the three given selection criteria. The criteria for selection were as follows:

I. The candidate should have taken exactly one of the CAT or XAT examinations.

II. The candidate must have:

Secured at least 96 percentile in the examination he/she had written OR secured a rank among the top 10 students in his or her university examination (university topper) OR both.

III. The candidate must either be a fresher or have work experience of more than 3 years.

Further information about the students absorbed by the Institute is as follows:

a. There were 45 students who had secured a rank among the top 10 students in their university examination. Of these 33.3 % were fresher while 66.66% had appeared for CAT.

b. 30 students had taken the XAT examination, of which 15 were fresher.

c. Of the students who had work experience greater than 3 years, 15 students were university toppers (i.e. in the top 10) and these students had also secured 96 or more percentile in the examination they had taken (i.e. CAT or XAT).

d. There were 20 students who had taken the CAT examination, had secured a rank among the top 10 students in their university examination and also had work experience of more than 3 years.

e. There were a total of 40 students who had work experience of more than 3 years.

f. No fresher satisfied both the criteria mentioned in (II) above.

Q.54

What is the sum of all the 96+ percentilers who are not university toppers, and all university toppers who are freshers?

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🔑 Answer key/Solution

Direction for questions 55 to 58: Answer the questions on the basis of the information given below.

In a school, selection trials were going on for the school basket ball team. Each participant was given 15 balls, and he/she was asked to put the ball into the basket. A person can either do a basket, i.e put the ball into the basket, or miss it. The table shown below gives the number of participants and the number of the baskets done by them. For example, there were 11 participants who were unable to do even a single basket; there were 6 participants who each did the basket exactly once; there were 4 participants who each did the basket exactly twice and so on. Some of the data in the table have been left blank intentionally.

Number of baskets done	0	1	2	3	.....	13	14	15
Number of participants	11	6	4	18	.....	4	3	1

- Average number of baskets done by the participants, who did 3 or more than 3 baskets, is 7.
- Average number of baskets done by the participants, who did 12 or less than 12 baskets, is 6.

Average number of baskets can be defined as,

Average number of baskets done by N participants

$$= \frac{\text{Total number of baskets done by N participants taken together}}{N}$$

Q.55

What was the total number of participants in the basket ball selection trials?

1 ☐ 147

2 ☐ 186

3 ☐ 194

4 ☐ None of these

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🔑 Answer key/Solution

Direction for questions 55 to 58: Answer the questions on the basis of the information given below.

In a school, selection trials were going on for the school basket ball team. Each participant was given 15 balls, and he/she was asked to put the ball into the basket. A person can either do a basket, i.e put the ball into the basket, or miss it. The table shown below gives the number of participants and the number of the baskets done by them. For example, there were 11 participants who were unable to do even a single basket; there were 6 participants who each did the basket exactly once; there were 4 participants who each did the basket exactly twice and so on. Some of the data in the table have been left blank intentionally.

Number of baskets done	0	1	2	3	.....	13	14	15
Number of participants	11	6	4	18	.....	4	3	1

- Average number of baskets done by the participants, who did 3 or more than 3 baskets, is 7.
- Average number of baskets done by the participants, who did 12 or less than 12 baskets, is 6.

Average number of baskets can be defined as,

Average number of baskets done by N participants

$$= \frac{\text{Total number of baskets done by N participants taken together}}{N}$$

Q.56

What was the total number of baskets done during the whole process?

1 ☐ 1211

2 ☐ 1225

3 ☐ 1048

4 ☐ Cannot be determined

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🔍 Answer key/Solution

Direction for questions 55 to 58: Answer the questions on the basis of the information given below.

In a school, selection trials were going on for the school basket ball team. Each participant was given 15 balls, and he/she was asked to put the ball into the basket. A person can either do a basket, i.e put the ball into the basket, or miss it. The table shown below gives the number of participants and the number of the baskets done by them. For example, there were 11 participants who were unable to do even a single basket; there were 6 participants who each did the basket exactly once; there were 4 participants who each did the basket exactly twice and so on. Some of the data in the table have been left blank intentionally.

Number of baskets done	0	1	2	3	.....	13	14	15
Number of participants	11	6	4	18	.....	4	3	1

- Average number of baskets done by the participants, who did 3 or more than 3 baskets, is 7.
- Average number of baskets done by the participants, who did 12 or less than 12 baskets, is 6.

Average number of baskets can be defined as,

Average number of baskets done by N participants

$$= \frac{\text{Total number of baskets done by N participants taken together}}{N}$$

Q.57

If the selection process is divided into three rounds as:

The participants who had done less than 4 baskets are eliminated after 1st round, and the participants who did more than 12 baskets were qualified directly for the 3rd round and need not participate in the 2nd one. Also for every basket the participant would be awarded '1' point and '0' point for every miss.

What is the mean score of the participants who participated in 1st round but not in 2nd round?

1 ☐ 3.76

2 ☐ 1.69

3 ☐ 2.71

4 ☐ 13.62

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 Answer key/Solution

Direction for questions 55 to 58: Answer the questions on the basis of the information given below.

In a school, selection trials were going on for the school basket ball team. Each participant was given 15 balls, and he/she was asked to put the ball into the basket. A person can either do a basket, i.e put the ball into the basket, or miss it. The table shown below gives the number of participants and the number of the baskets done by them. For example, there were 11 participants who were unable to do even a single basket; there were 6 participants who each did the basket exactly once; there were 4 participants who each did the basket exactly twice and so on. Some of the data in the table have been left blank intentionally.

Number of baskets done	0	1	2	3	.....	13	14	15
Number of participants	11	6	4	18	.....	4	3	1

- Average number of baskets done by the participants, who did 3 or more than 3 baskets, is 7.
- Average number of baskets done by the participants, who did 12 or less than 12 baskets, is 6.

Average number of baskets can be defined as,

Average number of baskets done by N participants

$$= \frac{\text{Total number of baskets done by N participants taken together}}{N}$$

Q.58

If the number of participants who did 4 baskets were 9, then what is the average number of baskets done by the participants who did between 5 to 12 baskets (both included)?

1 ☐ 5.22

2 ☐ 7.33

3 ☐ 3.91

4 ☐ 9.12

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 Answer key/Solution

Directions for questions 59 to 62: Answer the questions on the basis of the information given below.

Six friends A, B, C, D, E and F went for shopping and each of them spent some integral amount of rupees on shopping. No two of them spent the same amount.

It is further known that:

- (i) The amount (in Rs.) spent by each friend is a 3-digit number, having all distinct digits, out of 1, 2 and 3 only.
- (ii) Difference between the amount spent by C and F was a two digit number.
- (iii) Difference between the amount spent by A and E was Rs 9.
- (iv) B spent more than twice the amount which E spent.
- (v) Sum of the amounts spent by C, D and F was an odd number.

Q.59

If D spent more than B, then what is the difference between the amount spent by D and E?

1 ☐ 189

2 ☐ 198

3 ☐ 108

4 ☐ Cannot be determined

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 Answer key/Solution

Directions for questions 59 to 62: Answer the questions on the basis of the information given below.

Six friends A, B, C, D, E and F went for shopping and each of them spent some integral amount of rupees on shopping. No two of them spent the same amount.

It is further known that:

- (i) The amount (in Rs.) spent by each friend is a 3-digit number, having all distinct digits, out of 1, 2 and 3 only.
- (ii) Difference between the amount spent by C and F was a two digit number.
- (iii) Difference between the amount spent by A and E was Rs 9.
- (iv) B spent more than twice the amount which E spent.
- (v) Sum of the amounts spent by C, D and F was an odd number.

Q.60

If D spent less than both C and F, then the absolute difference of amount spent by C and F is

1 ☐ 18

2 ☐ 81

3 ☐ 90

4 ☐ 99

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🔍 Answer key/Solution

Directions for questions 59 to 62: Answer the questions on the basis of the information given below.

Six friends A, B, C, D, E and F went for shopping and each of them spent some integral amount of rupees on shopping. No two of them spent the same amount.

It is further known that:

- (i) The amount (in Rs.) spent by each friend is a 3-digit number, having all distinct digits, out of 1, 2 and 3 only.
- (ii) Difference between the amount spent by C and F was a two digit number.
- (iii) Difference between the amount spent by A and E was Rs 9.
- (iv) B spent more than twice the amount which E spent.
- (v) Sum of the amounts spent by C, D and F was an odd number.

Q.61

If A spent the minimum and F spent the maximum, then the amount spent by C and D taken together was

1 ☐ 345

2 ☐ 444

3 ☐ 543

4 ☐ Cannot be determined

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🔍 Answer key/Solution

Directions for questions 59 to 62: Answer the questions on the basis of the information given below.

Six friends A, B, C, D, E and F went for shopping and each of them spent some integral amount of rupees on shopping. No two of them spent the same amount.

It is further known that:

- (i) The amount (in Rs.) spent by each friend is a 3-digit number, having all distinct digits, out of 1, 2 and 3 only.
- (ii) Difference between the amount spent by C and F was a two digit number.
- (iii) Difference between the amount spent by A and E was Rs 9.
- (iv) B spent more than twice the amount which E spent.
- (v) Sum of the amounts spent by C, D and F was an odd number.

Q.62

If E spent more than A; and C spent more than F, then which of the following is the amount spent by D?

1 ☐ 213

2 ☐ 231

3 ☐ 321

4 ☐ Either (1) or (3)

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 Answer key/Solution

Directions for questions 63 to 66: Answer the questions on the basis of the information given below.

Global environment meet is held among eight different countries regarding the increased level of global warming. Each country is represented by its environment minister. These eight ministers – Nitesh, Manoj, Navin, Shashank, Saral, Praveen, Anuj and Shilpa – are sitting around a circular table. Some are facing towards the centre of the table while others are facing away from the centre. Further, it is also known that:

- (i) Anuj is sitting second to the right of Shilpa, and is facing towards centre.
- (ii) Shilpa is sitting to the immediate left of Praveen, who is facing the centre of the table.
- (iii) Nitesh is sitting opposite to Shilpa.
- (iv) Manoj is sitting opposite to Anuj, and is facing away from the centre.
- (v) Shashank and Navin are sitting opposite to each other such that one of them is facing towards the centre and the other away from the centre.
- (vi) Either Manoj or Shashank is sitting adjacent to Shilpa.

Q.63

Who is definitely sitting adjacent to Saral?

1 ☐ Manoj

2 ☐ Nitesh

3 ☐ Anuj

4 ☐ Shashank



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🔍 Answer key/Solution

Directions for questions 63 to 66: Answer the questions on the basis of the information given below.

Global environment meet is held among eight different countries regarding the increased level of global warming. Each country is represented by its environment minister. These eight ministers – Nitesh, Manoj, Navin, Shashank, Saral, Praveen, Anuj and Shilpa – are sitting around a circular table. Some are facing towards the centre of the table while others are facing away from the centre. Further, it is also known that:

- (i) Anuj is sitting second to the right of Shilpa, and is facing towards centre.
- (ii) Shilpa is sitting to the immediate left of Praveen, who is facing the centre of the table.
- (iii) Nitesh is sitting opposite to Shilpa.
- (iv) Manoj is sitting opposite to Anuj, and is facing away from the centre.
- (v) Shashank and Navin are sitting opposite to each other such that one of them is facing towards the centre and the other away from the centre.
- (vi) Either Manoj or Shashank is sitting adjacent to Shilpa.

Q.64

Which of the following could be a possible pair sitting opposite to each other and also facing each other?

1 ☐ Anuj - Saral

2 ☐ Shilpa - Nitesh

3 ☐ Saral - Praveen

4 ☐ Both (2) and (3)



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Directions for questions 63 to 66: Answer the questions on the basis of the information given below.

Global environment meet is held among eight different countries regarding the increased level of global warming. Each country is represented by its environment minister. These eight ministers – Nitesh, Manoj, Navin, Shashank, Saral, Praveen, Anuj and Shilpa – are sitting around a circular table. Some are facing towards the centre of the table while others are facing away from the centre. Further, it is also known that:

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- (iv) Manoj is sitting opposite to Anuj, and is facing away from the centre.
- (v) Shashank and Navin are sitting opposite to each other such that one of them is facing towards the centre and the other away from the centre.
- (vi) Either Manoj or Shashank is sitting adjacent to Shilpa.

Q.65

What could be the maximum number of ministers facing away from the centre?

1 ☐ 4

2 ☐ 5

3 ☐ 6

4 ☐ 3



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Directions for questions 63 to 66: Answer the questions on the basis of the information given below.

Global environment meet is held among eight different countries regarding the increased level of global warming. Each country is represented by its environment minister. These eight ministers – Nitesh, Manoj, Navin, Shashank, Saral, Praveen, Anuj and Shilpa – are sitting around a circular table. Some are facing towards the centre of the table while others are facing away from the centre. Further, it is also known that:

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- (v) Shashank and Navin are sitting opposite to each other such that one of them is facing towards the centre and the other away from the centre.
- (vi) Either Manoj or Shashank is sitting adjacent to Shilpa.

Q.66

How many different arrangements are possible?

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Sec 3

Q.67

If a, b and c are sides (in cm) of an obtuse angle triangle, where a, b and c are integers and $ab = 4$, then find the value(s) (in cm) that c can take.

1 ☐ 2

2 ☐ 3

3 ☐ 1

4 ☐ More than one possible value

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Q.68

A dummy spherical model of planet Earth was framed at NASA. The model was cut into two equal parts, the total surface area of one of which is equal to 48π . A meteor can hit on any point on the base of the any cut part with equal probability. If two identical square regions, defined as hot area, were inscribed one each on the base of each of the two parts, the probability for a meteor not hitting in those square regions is $\frac{7}{16}$. Find the side of the square region.

1 ☐ 6

2 ☐ 3

3 ☐ 5.31

4 ☐ 4.5

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🔍 Answer key/Solution

Q.69

Ravindra polish 3 chairs in 6 hours, where area of these three chairs is in the ratio of 1 : 2 : 3. In how many hours will he polish 3 chairs of first kind, 4 chairs of second kind, and 2 chairs of third kind, if his efficiency is increased by 70%?



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🔍 Answer key/Solution

Q.70

A three digit number, XYZ, when increased by 33.33% becomes ZXY and then the resulting number is again increased by 33.33% which then becomes YZX. How many such three digit numbers are possible, if X, Y, Z are distinct integers?

1 ☐ 0

2 ☐ 1

3 ☐ 2

4 ☐ 3

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🔍 Answer key/Solution

Q.71

Swami and his friends have made sweets after boiling sweetened milk. They had processed the sweetened milk to make the sweets which is poured into moulds each having shape of frustum with the diameters of its two circular faces as 30 cm and 35 cm. The vertical height of the mould is 14 cm. If each cubic cm of sweet has mass of 1.2 gm, then find the approximate mass of the sweet that can be poured into each mould?

1 ☐ 12 kg

2 ☐ 16 kg

3 ☐ 14 kg

4 ☐ 18 kg



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 Answer key/Solution

Q.72

Mr. X marks up the price of a fan by 14.28%. The percentage of discount he offered on fan, and the profit/loss he incurred on it is in the ratio 7 : 8. Find his profit or loss percentage.

1 ☐ 7.14% profit

2 ☐ 6.66% loss

3 ☐ 7.14% loss

4 ☐ 6.66% profit

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 Answer key/Solution

Q.73

A convex polygon has 90 diagonals, and its internal angles are in an AP with common difference 1. Find the measure of the highest interior angle of the polygon.

1 ☐ 149

2 ☐ 156

3 ☐ 163

4 ☐ 165

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 Answer key/Solution

Q.74

In a class, the marks obtained by 7 students with all distinct values, when arranged in the increasing order, form a GP. If there were a total of 200 Multiple Choice Questions (MCQs) of 1 mark each with no negative marking, then the maximum possible marks any student can obtain is,

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 Answer key/Solution

Q.75

Find the approximate maximum value of sum of the squares of the roots of equation:

$$x^2 + (a + 3)x - \left(a + \frac{15}{4}\right) = 0, \text{ if both the roots are imaginary.}$$

1 ☐ $-\frac{5}{2}$


2 ☐ 0

3 ☐ 27

4 ☐ $9/2$

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 Answer key/Solution

Q.76

Average of 10 terms increases by 10, when 10 more terms are added to it. Find the sum of these 10 newly added terms, if average of these new 10 terms is double the average of the initial 10 terms.

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 **Answer key/Solution**

Q.77

A certain amount invested at a certain rate of interest, yields Rs. 1470 as interest under simple interest while Rs. 1690 as interest under compound interest after 3 years. Find the rate of interest.

1 ☐ 6.25%

2 ☐ 7.14%

3 ☐ 12.5%

4 ☐ 14.28%

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 **Answer key/Solution**

Q.78

If x, y and z are positive integers such that $\frac{x}{(x+y)}(10) + \frac{y}{(x+y)}(20) = z$, and $x > y$, then which of the following can be the value of z?

1 ☐ 15

2 ☐ 18

3 ☐ 14

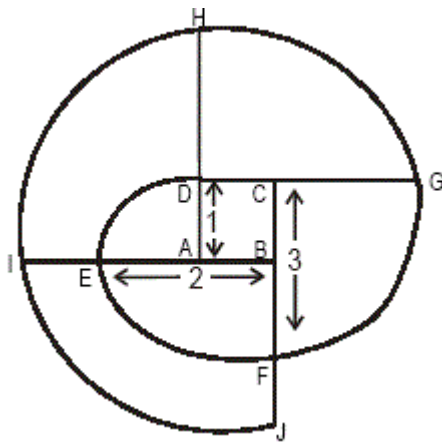
4 ☐ 20

[FeedBack](#)[Bookmark](#)[Answer key/Solution](#)**Q.79**

$f(x)$ is a quadratic polynomial having value 2 at $x = 0$. Also, $f(x)$ has a minimum value of 0 at $x = 1$. Find $f(3)$.

[FeedBack](#)[Bookmark](#)[Answer key/Solution](#)**Q.80**

A curve is drawn by connecting 6 quarter-circumferences of circles with different radii as shown in the figure. Side of the square ABCD is 1 cm. Find the length (in cm) of the curve DEFGHIJ.

1 ☐ 10π 2 ☐ $\frac{21\pi}{2}$ 3 ☐ 42π 4 ☐ 30π [FeedBack](#)[Bookmark](#)[Answer key/Solution](#)

Q.81

Cost price of a shirt, a trouser and a suit are in ratio 2 : 3 : 5. If a man incurred $x\%$ profit, $x\%$ loss and $x^2\%$ profit on selling a shirt, a trouser and a suit respectively, then find his overall profit percentage.

1 ☐ $\frac{15x}{2}\%$

2 ☐ $\frac{x(5x-1)}{10}\%$

3 ☐ $\frac{(3x^2-x)}{10}\%$

4 ☐ $x(x+1)\%$



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Q.82

In a race of length 5 km, A beats B by 1 km. In an another race of 1 km, B beats C by 100 m. What is the ratio of speeds of A and C.

1 ☐ 17 : 12

2 ☐ 11 : 12

3 ☐ 18 : 13

4 ☐ 25 : 18



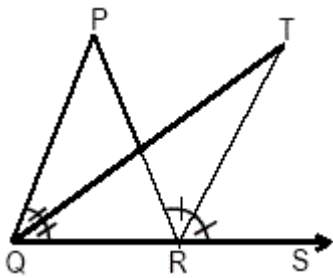
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Q.83

In the figure given below, the angle bisectors of $\angle PQR$ and $\angle PRS$ meet at point T. If $\angle QPR = 70^\circ$, then find $\angle QTR$ (in degrees).



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Q.84

A poultry farm produces some eggs every month. While transporting them to wholeseller 20% of the eggs got destroyed. Further 25% of the remaining eggs got destroyed while transported from whole seller to retailers. If these retailers received only 6000 eggs, then the number of eggs produced in the farm is

1 ☐ 8000

2 ☐ 15000

3 ☐ 12000

4 ☐ 10000



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Q.85

What is the remainder when 81^{281} is divided by 29?



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Q.86

There are 2 AP's:

$AP_1 \Rightarrow 3, 7, 11, 15, \dots, 403$

and $AP_2 \Rightarrow 5, 11, 17, 23, \dots, 507$

How many terms are common in both the AP's?



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Q.87

Ramu can do a work in 10 days, while Shamu can do that work in 15 days. Chirag can work with half the efficiency of Ramu, and Dinesh can work with twice the efficiency of Shamu. If all four of them work together, in how many days will the work get completed?

1 ☐ $4\frac{1}{2}$

2 ☐ 3

3 ☐ $2\frac{6}{7}$

4 ☐ 2.5



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🔍 Answer key/Solution

Q.88

A man can row a boat 10 km downstream and 5 km upstream in 4 hours. He can also row 5 km downstream and 10 km upstream in 6 hours. Time taken by him to row 50 km upstream is

1 ☐ 20.5 hour

2 ☐ $\frac{80}{3}$ hour

3 ☐ 30 hour

4 ☐ $\frac{100}{3}$ hour



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Answer key/Solution

Q.89

If $3x + 7y = 600$, where x and y are whole numbers, then which of the following are true?

1 ☐ No solution for x if $y > 85$

2 ☐ Atleast one solution for y , if $x \geq 200$

3 ☐ There are total 29 solutions for (x, y)

4 ☐ All of the above



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Answer key/Solution

Q.90

Monthly expenditures of A, B and C are Rs.6000, Rs.4000 and Rs.10000 respectively and their savings are in ratio 2 : 1 : 5. If monthly income of the three taken together is Rs.60000, then find the monthly income (in Rs.) of B?



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🔍 Answer key/Solution

Q.91

If a number 'x' is prime, and $(x^2 + 7)$ is also a prime, then how many values can 'x' take?

1 ☐ 0

2 ☐ 1

3 ☐ 2

4 ☐ 3



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🔍 Answer key/Solution

Q.92

Find the area enclosed by the graph $|3x - 4| + |4y - 3| = 12$.

1 ☐ 24

2 ☐ 36

3 ☐ 20

4 ☐ 48

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Q.93

Value of $(\log_{\sqrt{3}} 0.49) \times (\log_{\sqrt{0.2401}} 81)$ is

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Answer key/Solution

Q.94

A milkman marks up the cost of milk by 100%. He offers x% discount on the milk because of which he incurs a loss of y%. But now he wants to earn y% profit. For this he added 25% freely available water by volume to the milk and then again 20% freely available water by volume to the new milk solution. And then sell this on the same marked up and discount as earlier. Find the value of x .

1 ☐ 60

2 ☐ 50

3 ☐ 80

4 ☐ 40

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Answer key/Solution

Q.95

What is the HCF of $(30)_4$ and $(132)_4$, in base 4? ($(x)_4$ represents that x is written according to base 4 system)

1 ☐ $(8)_4$

2 ☐ $(10)_4$

3 ☐ $(12)_4$

4 ☐ $(15)_4$



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🔍 Answer key/Solution

Q.96

How many factors of $2^4 \times 3^7 \times 5^2$ will have exactly one zero at the end?

1 ☐ 24

2 ☐ 64

3 ☐ 40

4 ☐ 32

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🔍 Answer key/Solution

Q.97

If $\frac{mp^2 + nq^2}{mp^2 - nq^2} = \frac{77}{13}$ and $\frac{pq^2 + mn^2}{pq^2 - mn^2} = \frac{17}{7}$, then find the value of $p : n$?

1 ☐ 2 : 3

2 ☐ 4 : 9

3 ☐ 9 : 4

4 ☐ 3 : 2

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Q.98

In a New Year's party there were 13 couples, 5 single males and 7 single females. Every male dances with every female once, except his own wife. How many dances took place in the party in a pair of a male and a female?

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 Answer key/Solution

Q.99

If $x = (5^7 - 5^5)^2 / (3^4 - 3^2)^{(-2)}$ then x is not divisible by which one of the following?

1 ☐ 2430000


2 ☐ 62500

3 ☐ 138700

4 ☐ 1000000

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 Answer key/Solution

Q.100

If $f(x) = ax + b$ and $f^{-1}(x) = bx + a$, find the integral value of a and b.

1 ☐ 1, 1

2 ☐ -1, 1

3 ☐ 1, -1

4 ☐ -1, -1

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 Answer key/Solution