CAT 2020

Question Paper with Answers

- Slot 2

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CAT 2020

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Test Center Name	[illegible]
Test Date	29/11/2020
Shift	2
Subject	CAT 2020

Section : **VARC**

Comprehension:

The passage below is accompanied by a set of questions. Choose the best answer to each question.

The claims advanced here may be condensed into two assertions: [first, that visual] culture is what images, acts of seeing, and attendant intellectual, emotional, and perceptual sensibilities do to build, maintain, or transform the worlds in which people live. [And second, that the] study of visual culture is the analysis and interpretation of images and the ways of seeing (or gazes) that configure the agents, practices, conceptualities, and institutions that put images to work. . . .

Accordingly, the study of visual culture should be characterized by several concerns. First, scholars of visual culture need to examine any and all imagery – high and low, art and nonart. They must not restrict themselves to objects of a particular beauty or aesthetic value. Indeed, any kind of imagery may be found to offer up evidence of the visual construction of reality. . . .

Second, the study of visual culture must scrutinize visual practice as much as images themselves, asking what images do when they are put to use. If scholars engaged in this enterprise inquire what makes an image beautiful or why this image or that constitutes a masterpiece or a work of genius, they should do so with the purpose of investigating an artist's or a work's contribution to the experience of beauty, taste, value, or genius. No amount of social analysis can account fully for the existence of Michelangelo or Leonardo. They were unique creators of images that changed the way their contemporaries thought and felt and have continued to shape the history of art, artists, museums, feeling, and aesthetic value. But study of the critical, artistic, and popular reception of works by such artists as Michelangelo and Leonardo can shed important light on the meaning of these artists and their works for many different people. And the history of meaning-making has a great deal to do with how scholars as well as lay audiences today understand these artists and their achievements.

Third, scholars studying visual culture might properly focus their interpretative work on life worlds by examining images, practices, visual technologies, taste, and artistic style as constitutive of social relations. The task is to understand how artifacts contribute to the construction of a world Important methodological implications follow: ethnography and reception studies become productive forms of gathering information, since these move beyond the image as a closed and fixed meaning-event. . . .

Fourth, scholars may learn a great deal when they scrutinize the constituents of vision, that is, the structures of perception as a physiological process as well as the epistemological frameworks informing a system of visual representation. Vision is a socially and a biologically constructed operation, depending on the design of the human body and how it engages the interpretive devices developed by a culture in order to see intelligibly. . . . Seeing . . . operates on the foundation of covenants with images that establish the conditions for meaningful visual experience.

Finally, the scholar of visual culture seeks to regard images as evidence for explanation, not as epiphenomena.

SubQuestion No : 1

Q.1 Which set of keywords below most closely captures the arguments of the passage?

Ans

1. Scholars, Social Analysis, Michelangelo and Leonardo, Interpretive Devices.

2. Imagery, Visual Practices, Lifeworlds, Structures of Perception.

3. Visual Culture, Aesthetic Value, Lay Audience, Visual Experience.

4. Visual Construction of Reality, Work of Genius, Ethnography, Epiphenomena.

Comprehension:

The passage below is accompanied by a set of questions. Choose the best answer to each question.

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SubQuestion No : 2

Q.2 All of the following statements may be considered valid inferences from the passage, EXCEPT:

Ans

✗ 1. understanding the structures of perception is an important part of understanding how visual cultures work.

✗ 2. visual culture is not just about how we see, but also about how our visual practices can impact and change the world.

✓ 3. studying visual culture requires institutional structures without which the structures of perception cannot be analysed.

✗ 4. artifacts are meaningful precisely because they help to construct the meanings of the world for us.

Comprehension:

The passage below is accompanied by a set of questions. Choose the best answer to each question.

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SubQuestion No : 3

Q.3 "No amount of social analysis can account fully for the existence of Michelangelo or Leonardo." In light of the passage, which one of the following interpretations of this sentence is the most accurate?

Ans

✔ 1. Social analytical accounts of people like Michelangelo or Leonardo cannot explain their genius.

✘ 2. Michelangelo or Leonardo cannot be subjected to social analysis because of their genius.

✘ 3. Socially existing beings cannot be analysed, unlike the art of Michelangelo or Leonardo which can.

✘ 4. No analyses exist of Michelangelo's or Leonardo's social accounts.

Comprehension:

The passage below is accompanied by a set of questions. Choose the best answer to each question.

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SubQuestion No : 4

Q.4 Which one of the following best describes the word "epiphenomena" in the last sentence of the passage?

Ans

1. Visual phenomena of epic proportions.

2. Overarching collections of images.

3. Phenomena amenable to analysis.

4. Phenomena supplemental to the evidence.

Comprehension:

The passage below is accompanied by a set of questions. Choose the best answer to each question.

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Finally, the scholar of visual culture seeks to regard images as evidence for explanation, not as epiphenomena.

SubQuestion No : 5

Q.5 "Seeing...... **operates on the foundation of covenants with images that establish the conditions for meaningful visual experience." In light of the passage, which one of the following statements best conveys the meaning of this sentence?**

Ans

1. Sight as a meaningful visual experience is possible when there is a foundational condition established in images of covenants.

2. Images are meaningful visual experiences when they have a foundation of covenants seeing them.

3. Sight becomes a meaningful visual experience because of covenants of meaningfulness that we establish with the images we see.

4. The way we experience sight is through images operated on by meaningful covenants.

Comprehension:

The passage below is accompanied by a set of questions. Choose the best answer to each question.

In a low-carbon world, renewable energy technologies are hot business. For investors looking to redirect funds, wind turbines and solar panels, among other technologies, seem a straightforward choice. But renewables need to be further scrutinized before being championed as forging a path toward a low-carbon future. Both the direct and indirect impacts of renewable energy must be examined to ensure that a climate-smart future does not intensify social and environmental harm. As renewable energy production requires land, water, and labor, among other inputs, it imposes costs on people and the environment. Hydropower projects, for instance, have led to community dispossession and exclusion . . . Renewable energy supply chains are also intertwined with mining, and their technologies contribute to growing levels of electronic waste . . . Furthermore, although renewable energy can be produced and distributed through small-scale, local systems, such an approach might not generate the high returns on investment needed to attract capital.

Although an emerging sector, renewables are enmeshed in long-standing resource extraction through their dependence on minerals and metals . . . Scholars document the negative consequences of mining . . . even for mining operations that commit to socially responsible practices[:] “many of the world’s largest reservoirs of minerals like cobalt, copper, lithium, [and] rare earth minerals”—the ones needed for renewable technologies—“are found in fragile states and under communities of marginalized peoples in Africa, Asia, and Latin America.” Since the demand for metals and minerals will increase substantially in a renewable-powered future . . . this intensification could exacerbate the existing consequences of extractive activities.

Among the connections between climate change and waste, O’Neill . . . highlights that “devices developed to reduce our carbon footprint, such as lithium batteries for hybrid and electric cars or solar panels[,] become potentially dangerous electronic waste at the end of their productive life.” The disposal of toxic waste has long perpetuated social injustice through the flows of waste to the Global South and to marginalized communities in the Global North . . .

While renewable energy is a more recent addition to financial portfolios, investments in the sector must be considered in light of our understanding of capital accumulation. As agricultural finance reveals, the concentration of control of corporate activity facilitates profit generation. For some climate activists, the promise of renewables rests on their ability not only to reduce emissions but also to provide distributed, democratized access to energy . . . But Burke and Stephens . . . caution that “renewable energy systems offer a possibility but not a certainty for more democratic energy futures.” Small-scale, distributed forms of energy are only highly profitable to institutional investors if control is consolidated somewhere in the financial chain. Renewable energy can be produced at the household or neighborhood level. However, such small-scale, localized production is unlikely to generate high returns for investors. For financial growth to be sustained and expanded by the renewable sector, production and trade in renewable energy technologies will need to be highly concentrated, and large asset management firms will likely drive those developments.

SubQuestion No : 6

Q.6 Which one of the following statements, if false, could be seen as best supporting the arguments in the passage?

Ans

1. Renewable energy systems are as expensive as non-renewable energy systems.

2. Renewable energy systems have little or no environmental impact.

3. Renewable energy systems are not as profitable as non-renewable energy systems.

4. The production and distribution of renewable energy through small-scale, local systems is not economically sustainable.

Comprehension:

The passage below is accompanied by a set of questions. Choose the best answer to each question.

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SubQuestion No : 7

Q.7 Based on the passage, we can infer that the author would be most supportive of which one of the following practices?

Ans

✔ 1. More stringent global policies and regulations to ensure a more just system of toxic waste disposal.

✘ 2. The localised, small-scale development of renewable energy systems.

✘ 3. Encouragement for the development of more environment-friendly carbon-based fuels.

✘ 4. The study of the coexistence of marginalised people with their environments.

Comprehension:

The passage below is accompanied by a set of questions. Choose the best answer to each question.

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SubQuestion No : 8

Q.8 Which one of the following statements, if true, could be an accurate inference from the first paragraph of the passage?

Ans

✗ 1. The author’s only reservation is about the profitability of renewable energy systems.

✓ 2. The author has reservations about the consequences of renewable energy systems.

✗ 3. The author does not think renewable energy systems can be as efficient as non-renewable energy systems.

✗ 4. The author has reservations about the consequences of non-renewable energy systems.

Comprehension:

The passage below is accompanied by a set of questions. Choose the best answer to each question.

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SubQuestion No : 9

Q.9 All of the following statements, if true, could be seen as supporting the arguments in the passage, EXCEPT:

Ans

1. The example of agricultural finance helps us to see how to concentrate corporate activity in the renewable energy sector.

2. Marginalised people in Africa, Asia and Latin America have often been the main sufferers of corporate mineral extraction projects.

3. The possible negative impacts of renewable energy need to be studied before it can be offered as a financial investment opportunity.

4. One reason for the perpetuation of social injustice lies in the problem of the disposal of toxic waste.

Comprehension:

The passage below is accompanied by a set of questions. Choose the best answer to each question.

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SubQuestion No : 10

Q.10 Which one of the following statements best captures the main argument of the last paragraph of the passage?

Ans

✔ 1. The development of the renewable energy sector is a double-edged sword.

✘ 2. Most forms of renewable energy are not profitable investments for institutional investors.

✘ 3. Renewable energy systems are not democratic unless they are corporate-controlled.

✘ 4. Renewable energy produced at the household or neighbourhood level is more efficient than mass-produced forms of energy.

Comprehension:

The passage below is accompanied by a set of questions. Choose the best answer to each question.

174 incidents of piracy were reported to the International Maritime Bureau last year, with Somali pirates responsible for only three. The rest ranged from the discreet theft of coils of rope in the Yellow Sea to the notoriously ferocious Nigerian gunmen attacking and hijacking oil tankers in the Gulf of Guinea, as well as armed robbery off Singapore and the Venezuelan coast and kidnapping in the Sundarbans in the Bay of Bengal. For [Dr. Peter] Lehr, an expert on modern-day piracy, the phenomenon's history should be a source of instruction rather than entertainment, piracy past offering lessons for piracy present. . . .

But . . . where does piracy begin or end? According to St Augustine, a corsair captain once told Alexander the Great that in the forceful acquisition of power and wealth at sea, the difference between an emperor and a pirate was simply one of scale. By this logic, European empire-builders were the most successful pirates of all time. A more eclectic history might have included the conquistadors, Vasco da Gama and the East India Company. But Lehr sticks to the disorganised small fry, making comparisons with the renegades of today possible.

The main motive for piracy has always been a combination of need and greed. Why toil away as a starving peasant in the 16th century when a successful pirate made up to £4,000 on each raid? Anyone could turn to freebooting if the rewards were worth the risk . . . .

Increased globalisation has done more to encourage piracy than suppress it. European colonialism weakened delicate balances of power, leading to an influx of opportunists on the high seas. A rise in global shipping has meant rich pickings for freebooters. Lehr writes: "It quickly becomes clear that in those parts of the world that have not profited from globalisation and modernisation, and where abject poverty and the daily struggle for survival are still a reality, the root causes of piracy are still the same as they were a couple of hundred years ago." . . .

Modern pirate prevention has failed. After the French yacht Le Gonant was ransomed for $2 million in 2008, opportunists from all over Somalia flocked to the coast for a piece of the action....... A consistent rule, even today, is there are never enough warships to patrol pirate-infested waters. Such ships are costly and only solve the problem temporarily; Somali piracy is bound to return as soon as the warships are withdrawn. Robot shipping, eliminating hostages, has been proposed as a possible solution; but as Lehr points out, this will only make pirates switch their targets to smaller carriers unable to afford the technology.

His advice isn't new. Proposals to end illegal fishing are often advanced but they are difficult to enforce. Investment in local welfare put a halt to Malaysian piracy in the 1970s, but was dependent on money somehow filtering through a corrupt bureaucracy to the poor on the periphery. Diplomatic initiatives against piracy are plagued by mutual distrust: the Russians execute pirates, while the EU and US are reluctant to capture them for fear they'll claim asylum.

SubQuestion No : 11

Q.11 "Why toil away as a starving peasant in the 16th century when a successful pirate made up to £4,000 on each raid?" In this sentence, the author's tone can best be described as being:

Ans

1. analytical, to explain the contrasts between peasant and pirate life in medieval England.

2. ironic, about the reasons why so many took to piracy in medieval times.

3. facetious, about the hardships of peasant life in medieval England.

4. indignant, at the scale of wealth successful pirates could amass in medieval times.

Comprehension:

The passage below is accompanied by a set of questions. Choose the best answer to each question.

174 incidents of piracy were reported to the International Maritime Bureau last year, with Somali pirates responsible for only three. The rest ranged from the discreet theft of coils of rope in the Yellow Sea to the notoriously ferocious Nigerian gunmen attacking and hijacking oil tankers in the Gulf of Guinea, as well as armed robbery off Singapore and the Venezuelan coast and kidnapping in the Sundarbans in the Bay of Bengal. For [Dr. Peter] Lehr, an expert on modern-day piracy, the phenomenon's history should be a source of instruction rather than entertainment, piracy past offering lessons for piracy present. . . .

But . . . where does piracy begin or end? According to St Augustine, a corsair captain once told Alexander the Great that in the forceful acquisition of power and wealth at sea, the difference between an emperor and a pirate was simply one of scale. By this logic, European empire-builders were the most successful pirates of all time. A more eclectic history might have included the conquistadors, Vasco da Gama and the East India Company. But Lehr sticks to the disorganised small fry, making comparisons with the renegades of today possible.

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SubQuestion No : 12

Q.12 We can deduce that the author believes that piracy can best be controlled in the long run:

Ans

1. through lucrative welfare schemes to improve the lives of people in affected regions.

2. if we eliminate poverty and income disparities in affected regions.

3. through the extensive deployment of technology to track ships and cargo.

4. through international cooperation in enforcing stringent deterrents.

Comprehension:

The passage below is accompanied by a set of questions. Choose the best answer to each question.

174 incidents of piracy were reported to the International Maritime Bureau last year, with Somali pirates responsible for only three. The rest ranged from the discreet theft of coils of rope in the Yellow Sea to the notoriously ferocious Nigerian gunmen attacking and hijacking oil tankers in the Gulf of Guinea, as well as armed robbery off Singapore and the Venezuelan coast and kidnapping in the Sundarbans in the Bay of Bengal. For [Dr. Peter] Lehr, an expert on modern-day piracy, the phenomenon's history should be a source of instruction rather than entertainment, piracy past offering lessons for piracy present. . . .

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SubQuestion No : 13

Q.13 The author ascribes the rise in piracy today to all of the following factors EXCEPT:

Ans

✗ 1. the growth in international shipping with globalisation.

✓ 2. decreased surveillance of the high seas.

✗ 3. the high rewards via ransoms for successful piracy attempts.

✗ 4. colonialism's disruption of historic ties among countries.

Comprehension:

The passage below is accompanied by a set of questions. Choose the best answer to each question.

174 incidents of piracy were reported to the International Maritime Bureau last year, with Somali pirates responsible for only three. The rest ranged from the discreet theft of coils of rope in the Yellow Sea to the notoriously ferocious Nigerian gunmen attacking and hijacking oil tankers in the Gulf of Guinea, as well as armed robbery off Singapore and the Venezuelan coast and kidnapping in the Sundarbans in the Bay of Bengal. For [Dr. Peter] Lehr, an expert on modern-day piracy, the phenomenon's history should be a source of instruction rather than entertainment, piracy past offering lessons for piracy present. . . .

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SubQuestion No : 14

Q.14 "A more eclectic history might have included the conquistadors, Vasco da Gama and the East India Company. But Lehr sticks to the disorganised small fry . . ." From this statement we can infer that the author believes that:

Ans

✗ 1. Vasco da Gama and the East India Company laid the ground for modern piracy.

✗ 2. Lehr does not assign adequate blame to empire builders for their past deeds.

✓ 3. colonialism should be considered an organised form of piracy.

✗ 4. the disorganised piracy of today is no match for the organised piracy of the past.

Comprehension:

The passage below is accompanied by a set of questions. Choose the best answer to each question.

Aggression is any behavior that is directed toward injuring, harming, or inflicting pain on another living being or group of beings. Generally, the victim(s) of aggression must wish to avoid such behavior in order for it to be considered true aggression. Aggression is also categorized according to its ultimate intent. Hostile aggression is an aggressive act that results from anger, and is intended to inflict pain or injury because of that anger. Instrumental aggression is an aggressive act that is regarded as a means to an end other than pain or injury. For example, an enemy combatant may be subjected to torture in order to extract useful intelligence, though those inflicting the torture may have no real feelings of anger or animosity toward their subject. The concept of aggression is very broad, and includes many categories of behavior (e.g., verbal aggression, street crime, child abuse, spouse abuse, group conflict, war, etc.). A number of theories and models of aggression have arisen to explain these diverse forms of behavior, and these theories/models tend to be categorized according to their specific focus. The most common system of categorization groups the various approaches to aggression into three separate areas, based upon the three key variables that are present whenever any aggressive act or set of acts is committed. The first variable is the aggressor him/herself. The second is the social situation or circumstance in which the aggressive act(s) occur. The third variable is the target or victim of aggression.

Regarding theories and research on the aggressor, the fundamental focus is on the factors that lead an individual (or group) to commit aggressive acts. At the most basic level, some argue that aggressive urges and actions are the result of inborn, biological factors. Sigmund Freud (1930) proposed that all individuals are born with a death instinct that predisposes us to a variety of aggressive behaviors, including suicide (self directed aggression) and mental illness (possibly due to an unhealthy or unnatural suppression of aggressive urges). Other influential perspectives supporting a biological basis for aggression conclude that humans evolved with an abnormally low neural inhibition of aggressive impulses (in comparison to other species), and that humans possess a powerful instinct for property accumulation and territorialism. It is proposed that this instinct accounts for hostile behaviors ranging from minor street crime to world wars. Hormonal factors also appear to play a significant role in fostering aggressive tendencies. For example, the hormone testosterone has been shown to increase aggressive behaviors when injected into animals. Men and women convicted of violent crimes also possess significantly higher levels of testosterone than men and women convicted of non violent crimes. Numerous studies comparing different age groups, racial/ethnic groups, and cultures also indicate that men, overall, are more likely to engage in a variety of aggressive behaviors (e.g., sexual assault, aggravated assault, etc.) than women. One explanation for higher levels of aggression in men is based on the assumption that, on average, men have higher levels of testosterone than women.

SubQuestion No : 15

Q.15 All of the following statements can be seen as logically implied by the arguments of the passage EXCEPT:

Ans

✔ 1. a common theory of aggression is that it is the result of an abnormally low neural regulation of testosterone.

✘ 2. if the alleged aggressive act is not sought to be avoided, it cannot really be considered aggression.

✘ 3. Freud's theory of aggression proposes that aggression results from the suppression of aggressive urges.

✘ 4.
the Freudian theory of suicide as self-inflicted aggression implies that an aggressive act need not be sought to be avoided in order for it to be considered aggression.

Comprehension:

The passage below is accompanied by a set of questions. Choose the best answer to each question.

Aggression is any behavior that is directed toward injuring, harming, or inflicting pain on another living being or group of beings. Generally, the victim(s) of aggression must wish to avoid such behavior in order for it to be considered true aggression. Aggression is also categorized according to its ultimate intent. Hostile aggression is an aggressive act that results from anger, and is intended to inflict pain or injury because of that anger. Instrumental aggression is an aggressive act that is regarded as a means to an end other than pain or injury. For example, an enemy combatant may be subjected to torture in order to extract useful intelligence, though those inflicting the torture may have no real feelings of anger or animosity toward their subject. The concept of aggression is very broad, and includes many categories of behavior (e.g., verbal aggression, street crime, child abuse, spouse abuse, group conflict, war, etc.). A number of theories and models of aggression have arisen to explain these diverse forms of behavior, and these theories/models tend to be categorized according to their specific focus. The most common system of categorization groups the various approaches to aggression into three separate areas, based upon the three key variables that are present whenever any aggressive act or set of acts is committed. The first variable is the aggressor him/herself. The second is the social situation or circumstance in which the aggressive act(s) occur. The third variable is the target or victim of aggression.

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SubQuestion No : 16

Q.16 The author identifies three essential factors according to which theories of aggression are most commonly categorised. Which of the following options is closest to the factors identified by the author?

Ans

✗ 1. Hostile – Instrumental – Hormonal.

✗ 2. Extreme – Moderate – Mild.

✓ 3. Aggressor – Circumstances of aggression – Victim.

✗ 4. Psychologically – Sociologically – Medically.

Comprehension:

The passage below is accompanied by a set of questions. Choose the best answer to each question.

Aggression is any behavior that is directed toward injuring, harming, or inflicting pain on another living being or group of beings. Generally, the victim(s) of aggression must wish to avoid such behavior in order for it to be considered true aggression. Aggression is also categorized according to its ultimate intent. Hostile aggression is an aggressive act that results from anger, and is intended to inflict pain or injury because of that anger. Instrumental aggression is an aggressive act that is regarded as a means to an end other than pain or injury. For example, an enemy combatant may be subjected to torture in order to extract useful intelligence, though those inflicting the torture may have no real feelings of anger or animosity toward their subject. The concept of aggression is very broad, and includes many categories of behavior (e.g., verbal aggression, street crime, child abuse, spouse abuse, group conflict, war, etc.). A number of theories and models of aggression have arisen to explain these diverse forms of behavior, and these theories/models tend to be categorized according to their specific focus. The most common system of categorization groups the various approaches to aggression into three separate areas, based upon the three key variables that are present whenever any aggressive act or set of acts is committed. The first variable is the aggressor him/herself. The second is the social situation or circumstance in which the aggressive act(s) occur. The third variable is the target or victim of aggression.

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SubQuestion No : 17

Q.17 "[A]n enemy combatant may be subjected to torture in order to extract useful intelligence, though those inflicting the torture may have no real feelings of anger or animosity toward their subject." Which one of the following best explicates the larger point being made by the author here?

Ans

1. When an enemy combatant refuses to reveal information, the use of torture can sometimes involve real feelings of hostility.

2. The use of torture to extract information is most effective when the torturer is not emotionally involved in the torture.

3. In certain kinds of aggression, inflicting pain is not the objective, and is no more than a utilitarian means to achieve another end.

4. Information revealed by subjecting an enemy combatant to torture is not always reliable because of the animosity involved.

Comprehension:

The passage below is accompanied by a set of questions. Choose the best answer to each question.

Aggression is any behavior that is directed toward injuring, harming, or inflicting pain on another living being or group of beings. Generally, the victim(s) of aggression must wish to avoid such behavior in order for it to be considered true aggression. Aggression is also categorized according to its ultimate intent. Hostile aggression is an aggressive act that results from anger, and is intended to inflict pain or injury because of that anger. Instrumental aggression is an aggressive act that is regarded as a means to an end other than pain or injury. For example, an enemy combatant may be subjected to torture in order to extract useful intelligence, though those inflicting the torture may have no real feelings of anger or animosity toward their subject. The concept of aggression is very broad, and includes many categories of behavior (e.g., verbal aggression, street crime, child abuse, spouse abuse, group conflict, war, etc.). A number of theories and models of aggression have arisen to explain these diverse forms of behavior, and these theories/models tend to be categorized according to their specific focus. The most common system of categorization groups the various approaches to aggression into three separate areas, based upon the three key variables that are present whenever any aggressive act or set of acts is committed. The first variable is the aggressor him/herself. The second is the social situation or circumstance in which the aggressive act(s) occur. The third variable is the target or victim of aggression.

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SubQuestion No : 18

Q.18 The author discusses all of the following arguments in the passage EXCEPT that:

Ans

1. several studies indicate that aggression may have roots in the biological condition of humanity.

2. aggression in most societies is kept under control through moderating the death instinct identified by Freud.

3. the nature of aggression can vary depending on several factors, including intent.

4. men in general are believed to be more hormonally driven to exhibit violence than women.

Q.19 The four sentences (labelled 1, 2, 3, 4) below, when properly sequenced would yield a coherent paragraph. Decide on the proper sequencing of the order of

the sentences and key in the sequence of the four numbers as your answer:

1. But the attention of the layman, not surprisingly, has been captured by the atom bomb, although there is at least a chance that it may never be used again.
2. Of all the changes introduced by man into the household of nature, [controlled] large-scale nuclear fission is undoubtedly the most dangerous and most profound.
3. The danger to humanity created by the so-called peaceful uses of atomic energy may, however, be much greater.
4. The resultant ionizing radiation has become the most serious agent of pollution of the environment and the greatest threat to man's survival on earth.

Case Sensitivity: No

Answer Type: Equal

Possible Answer: 2413

Q.20 The four sentences (labelled 1, 2, 3, 4) below, when properly sequenced would yield a coherent paragraph. Decide on the proper sequencing of the order of the sentences and key in the sequence of the four numbers as your answer:

1. While you might think that you see or are aware of all the changes that happen in your immediate environment, there is simply too much information for your brain to fully process everything.
2. Psychologists use the term 'change blindness' to describe this tendency of people to be blind to changes though they are in the immediate environment.
3. It cannot be aware of every single thing that happens in the world around you.
4. Sometimes big shifts happen in front of your eyes and you are not at all aware of these changes.

Case Sensitivity: No

Answer Type: Equal

Possible Answer: 1342

Q.21 The four sentences (labelled 1, 2, 3, 4) below, when properly sequenced would yield a coherent paragraph. Decide on the proper sequencing of the order of the sentences and key in the sequence of the four numbers as your answer:

1. It also has four movable auxiliary telescopes 1.8 m in diameter.
2. Completed in 2006, the Very Large Telescope (VLT) has four reflecting telescopes, 8.2 m in diameter that can observe objects 4 billion times weaker than can normally be seen with the naked eye.
3. This configuration enables one to distinguish an astronaut on the Moon.
4. When these are combined with the large telescopes, they produce what is

called interferometry: a simulation of the power of a mirror 16 m in diameter and the resolution of a telescope of 200 m.

Case Sensitivity: No

Answer Type: Equal

Possible Answer: 2143

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Q.22 The passage given below is followed by four alternate summaries. Choose the option that best captures the essence of the passage.

The rural-urban continuum and the heterogeneity of urban settings pose an obvious challenge to identifying urban areas and measuring urbanization rates in a consistent way within and across countries. An objective methodology for distinguishing between urban and rural areas that is based on one or two metrics with fixed thresholds may not adequately capture the wide diversity of places. A richer combination of criteria would better describe the multifaceted nature of a city's function and its environment, but the joint interpretation of these criteria may require an element of human judgment.

Ans

1. With the diversity of urban landscapes, measurable criteria for defining urban areas may need to be supplemented with human judgement.

2. Current methodologies used to define urban and rural areas are no longer relevant to our being able to study trends in urbanisation.

3. Distinguishing between urban and rural areas might call for some judgement on the objective methodology being used to define a city's functions.

4. The difficulty of accurately identifying urban areas means that we need to create a rich combination of criteria that can be applied to all urban areas.

Q.23 Five jumbled up sentences, related to a topic, are given below. Four of them can be put together to form a coherent paragraph. Identify the odd one out and key in the number of the sentence as your answer:

1. You can observe the truth of this in every e-business model ever constructed: monopolise and protect data.
2. Economists and technologists believe that a new kind of capitalism is being created - different from industrial capitalism as was merchant capitalism.
3. In 1962, Kenneth Arrow, the guru of mainstream economics, said that in a free market economy the purpose of inventing things is to create intellectual property rights.
4. There is, alongside the world of monopolised information and surveillance, a different dynamic growing up: information as a social good, incapable of being owned or exploited or priced.

5. Yet information is abundant. Information goods are freely replicable. Once a thing is made, it can be copied and pasted infinitely.

Case Sensitivity: No

Answer Type: Equal

Possible Answer: 2

Q.24 The passage given below is followed by four alternate summaries. Choose the option that best captures the essence of the passage.

With the Treaty of Westphalia, the papacy had been confined to ecclesiastical functions, and the doctrine of sovereign equality reigned. What political theory could then explain the origin and justify the functions of secular political order? In his Leviathan, published in 1651, three years after the Peace of Westphalia, Thomas Hobbes provided such a theory. He imagined a "state of nature" in the past when the absence of authority produced a "war of all against all." To escape such intolerable insecurity, he theorized, people delivered their rights to a sovereign power in return for the sovereign's provision of security for all within the state's border. The sovereign state's monopoly on power was established as the only way to overcome the perpetual fear of violent death and war.

Ans

✗ 1. Thomas Hobbes theorized the emergence of sovereign states as a form of transactional governance to limit the power of the papacy.

✓ 2. Thomas Hobbes theorized the emergence of sovereign states based on a transactional relationship between people and sovereign state that was necessitated by a sense of insecurity of the people.

✗ 3. Thomas Hobbes theorized the voluntary surrender of rights by people as essential for emergence of sovereign states.

✗ 4. Thomas Hobbes theorized that sovereign states emerged out of people's voluntary desire to overcome the sense of insecurity and establish the doctrine of sovereign equality.

Q.25 Five jumbled up sentences, related to a topic, are given below. Four of them can be put together to form a coherent paragraph. Identify the odd one out and key in the number of the sentence as your answer:

1. The victim's trauma after assault rarely gets the attention that we lavish on the moment of damage that divided the survivor from a less encumbered past.

2. One thing we often do with narratives of sexual assault is sort their respective parties into different temporalities: it seems we are interested in perpetrators' futures and victims' pasts.

3. One result is that we don't have much of a vocabulary for what happens in a victim's life after the painful past has been excavated, even when our shared language gestures toward the future, as the term "survivor" does.

4. Even the most charitable questions asked about the victims seem to focus on the past, in pursuit of understanding or of corroboration of painful details.
5. As more and more stories of sexual assault have been made public in the last two years, the genre of their telling has exploded --- crimes have a tendency to become not just stories but genres.

Case Sensitivity: No

Answer Type: Equal

Possible Answer: 4

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Q.26 The passage given below is followed by four alternate summaries. Choose the option that best captures the essence of the passage.

All humans make decisions based on one or a combination of two factors. This is either intuition or information. Decisions made through intuition are usually fast, people don't even think about the problem. It is quite philosophical, meaning that someone who made a decision based on intuition will have difficulty explaining the reasoning behind it. The decision-maker would often utilize her senses in drawing conclusions, which again is based on some experience in the field of study. On the other side of the spectrum, we have decisions made based on information. These decisions are rational — it is based on facts and figures, which unfortunately also means that it can be quite slow. The decision-maker would frequently use reports, analyses, and indicators to form her conclusion. This methodology results in accurate, quantifiable decisions, meaning that a person can clearly explain the rationale behind it.

Ans

1. While decisions based on intuition can be made fast, the reasons that led to these cannot be spelt out.

2. It is better to make decisions based on information because it is more accurate, and the rationale behind it can be explained.

3. Decisions based on intuition and information result in differential speed and ability to provide a rationale.

4. We make decisions based on intuition or information on the basis of the time available.

Section : **DILR**

Comprehension:

The Humanities department of a college is planning to organize eight seminars, one for each of the eight doctoral students - A, B, C, D, E, F, G and H. Four of them are from Economics, three from Sociology and one from Anthropology department. Each student is guided by one among P, Q, R, S and T. Two students are guided by each of P, R and T, while one student is guided by each of Q and S. Each student is guided by a guide belonging to their department.

Each seminar is to be scheduled in one of four consecutive 30-minute slots starting at 9:00 am, 9:30 am, 10:00 am and 10:30 am on the same day. More than one seminars can be scheduled in a slot, provided the guide is free. Only three rooms are available and hence at the most three seminars can be scheduled in a slot. Students who are guided by the same guide must be scheduled in consecutive slots.

The following additional facts are also known.

1. Seminars by students from Economics are scheduled in each of the four slots.
2. A’s is the only seminar that is scheduled at 10:00 am. A is guided by R.
3. F is an Anthropology student whose seminar is scheduled at 10:30 am.
4. The seminar of a Sociology student is scheduled at 9:00 am.
5. B and G are both Sociology students, whose seminars are scheduled in the same slot. The seminar of an Economics student, who is guided by T, is also scheduled in the same slot.
6. P, who is guiding both B and C, has students scheduled in the first two slots.
7. A and G are scheduled in two consecutive slots.

SubQuestion No : 1

Q.1 Which one of the following statements is true?

Ans

1. Three seminars are scheduled in the first slot.

2. Only one seminar is scheduled in the second slot.

3. Two seminars are scheduled in the first slot.

4. Three seminars are scheduled in the last slot.

Comprehension:

The Humanities department of a college is planning to organize eight seminars, one for each of the eight doctoral students - A, B, C, D, E, F, G and H. Four of them are from Economics, three from Sociology and one from Anthropology department. Each student is guided by one among P, Q, R, S and T. Two students are guided by each of P, R and T, while one student is guided by each of Q and S. Each student is guided by a guide belonging to their department.

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4. The seminar of a Sociology student is scheduled at 9:00 am.
5. B and G are both Sociology students, whose seminars are scheduled in the same slot. The seminar of an Economics student, who is guided by T, is also scheduled in the same slot.
6. P, who is guiding both B and C, has students scheduled in the first two slots.
7. A and G are scheduled in two consecutive slots.

SubQuestion No : 2

Q.2 Who all are NOT guiding any Economics students?

Ans

1. Q, R and S

2. P, R and S

3. P, Q and R

4. P, Q and S

Comprehension:

The Humanities department of a college is planning to organize eight seminars, one for each of the eight doctoral students - A, B, C, D, E, F, G and H. Four of them are from Economics, three from Sociology and one from Anthropology department. Each student is guided by one among P, Q, R, S and T. Two students are guided by each of P, R and T, while one student is guided by each of Q and S. Each student is guided by a guide belonging to their department.

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1. Seminars by students from Economics are scheduled in each of the four slots.
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5. B and G are both Sociology students, whose seminars are scheduled in the same slot. The seminar of an Economics student, who is guided by T, is also scheduled in the same slot.
6. P, who is guiding both B and C, has students scheduled in the first two slots.
7. A and G are scheduled in two consecutive slots.

SubQuestion No : 3

Q.3 Which of the following statements is necessarily true?

Ans

1. S is guiding F.

2. Q is guiding G.

3. H is an Economics student.

4. B is scheduled in the first slot.

Comprehension:

The Humanities department of a college is planning to organize eight seminars, one for each of the eight doctoral students - A, B, C, D, E, F, G and H. Four of them are from Economics, three from Sociology and one from Anthropology department. Each student is guided by one among P, Q, R, S and T. Two students are guided by each of P, R and T, while one student is guided by each of Q and S. Each student is guided by a guide belonging to their department.

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4. The seminar of a Sociology student is scheduled at 9:00 am.
5. B and G are both Sociology students, whose seminars are scheduled in the same slot. The seminar of an Economics student, who is guided by T, is also scheduled in the same slot.
6. P, who is guiding both B and C, has students scheduled in the first two slots.
7. A and G are scheduled in two consecutive slots.

SubQuestion No : 4

Q.4 If D is scheduled in a slot later than Q's, then which of the following two statement(s) is(are) true?
(i) E and H are guided by T.
(ii) G is guided by Q.

Ans

✗ 1. Only (i)

✓ 2. Both (i) and (ii)

✗ 3. Neither (i) nor (ii)

✗ 4. Only (ii)

Comprehension:

The Humanities department of a college is planning to organize eight seminars, one for each of the eight doctoral students - A, B, C, D, E, F, G and H. Four of them are from Economics, three from Sociology and one from Anthropology department. Each student is guided by one among P, Q, R, S and T. Two students are guided by each of P, R and T, while one student is guided by each of Q and S. Each student is guided by a guide belonging to their department.

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4. The seminar of a Sociology student is scheduled at 9:00 am.
5. B and G are both Sociology students, whose seminars are scheduled in the same slot. The seminar of an Economics student, who is guided by T, is also scheduled in the same slot.
6. P, who is guiding both B and C, has students scheduled in the first two slots.
7. A and G are scheduled in two consecutive slots.

SubQuestion No : 5

Q.5 If E and Q are both scheduled in the same slot, then which of the following statements BEST describes the relationship between D, H, and T?

Ans

1. Exactly one of D and H is guided by T.

2. At least one of D and H is guided by T.

3. Both D and H are guided by T.

4. Neither D nor H is guided by T.

Comprehension:

The Humanities department of a college is planning to organize eight seminars, one for each of the eight doctoral students - A, B, C, D, E, F, G and H. Four of them are from Economics, three from Sociology and one from Anthropology department. Each student is guided by one among P, Q, R, S and T. Two students are guided by each of P, R and T, while one student is guided by each of Q and S. Each student is guided by a guide belonging to their department.

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1. Seminars by students from Economics are scheduled in each of the four slots.
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5. B and G are both Sociology students, whose seminars are scheduled in the same slot. The seminar of an Economics student, who is guided by T, is also scheduled in the same slot.
6. P, who is guiding both B and C, has students scheduled in the first two slots.
7. A and G are scheduled in two consecutive slots.

SubQuestion No : 6

Q.6 If D is scheduled in the slot immediately before Q’s, then which of the following is NOT necessarily true?

Ans

1. G is guided by Q.

2. D is guided by T.

3. E is guided by R.

4. F is guided by S.

Comprehension:

In an election several candidates contested for a constituency. In any constituency, the winning candidate was the one who polled the highest number of votes, the first runner up was the one who polled the second highest number of votes, the second runner up was the one who polled the third highest number of votes, and so on. There were no ties (in terms of number of votes polled by the candidates) in any of the constituencies in this election.

In an electoral system, a security deposit is the sum of money that a candidate is required to pay to the election commission before he or she is permitted to contest. Only the defeated candidates (i.e., one who is not the winning candidate) who fail to secure more than one sixth of the valid votes polled in the constituency, lose their security deposits.

The following table provides some incomplete information about votes polled in four constituencies: A, B, C and D, in this election.

	Constituency			
	A	B	C	D
No. of candidates contesting	10	12	5	8
Total No. of valid votes polled	5,00,000	3,25,000	6,00,030	
No. of votes polled by the winning candidate	2,75,000	48,750		
No. of votes polled by the first runner up	95,000			37,500
No. of votes polled by the second runner up				30,000
% of valid votes polled by the third runner up				10%

The following additional facts are known:

1. The first runner up polled 10,000 more votes than the second runner up in constituency A.
2. None of the candidates who contested in constituency C lost their security deposit. The difference in votes polled by any pair of candidates in this constituency was at least 10,000.
3. The winning candidate in constituency D polled 5% of valid votes more than that of the first runner up. All the candidates who lost their security deposits while contesting for this constituency, put together, polled 35% of the valid votes.

SubQuestion No : 7

Q.7 **What is the percentage of votes polled in total by all the candidates who lost their security deposits while contesting for constituency A?**

Case Sensitivity: No

Answer Type: Equal

Possible Answer: 9

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Comprehension:

In an election several candidates contested for a constituency. In any constituency, the winning candidate was the one who polled the highest number of votes, the first runner up was the one who polled the second highest number of votes, the second runner up was the one who polled the third highest number of votes, and so on. There were no ties (in terms of number of votes polled by the candidates) in any of the constituencies in this election.

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No. of votes polled by the second runner up				30,000
% of valid votes polled by the third runner up				10%

The following additional facts are known:

1. The first runner up polled 10,000 more votes than the second runner up in constituency A.
2. None of the candidates who contested in constituency C lost their security deposit. The difference in votes polled by any pair of candidates in this constituency was at least 10,000.
3. The winning candidate in constituency D polled 5% of valid votes more than that of the first runner up. All the candidates who lost their security deposits while contesting for this constituency, put together, polled 35% of the valid votes.

SubQuestion No : 8

Q.8 **How many candidates who contested in constituency B lost their security deposit?**

Case Sensitivity: No

Answer Type: Equal

Possible Answer: 11

Comprehension:

In an election several candidates contested for a constituency. In any constituency, the winning candidate was the one who polled the highest number of votes, the first runner up was the one who polled the second highest number of votes, the second runner up was the one who polled the third highest number of votes, and so on. There were no ties (in terms of number of votes polled by the candidates) in any of the constituencies in this election.

In an electoral system, a security deposit is the sum of money that a candidate is required to pay to the election commission before he or she is permitted to contest. Only the defeated candidates (i.e., one who is not the winning candidate) who fail to secure more than one sixth of the valid votes polled in the constituency, lose their security deposits.

The following table provides some incomplete information about votes polled in four constituencies: A, B, C and D, in this election.

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No. of votes polled by the second runner up				30,000
% of valid votes polled by the third runner up				10%

The following additional facts are known:

1. The first runner up polled 10,000 more votes than the second runner up in constituency A.
2. None of the candidates who contested in constituency C lost their security deposit. The difference in votes polled by any pair of candidates in this constituency was at least 10,000.
3. The winning candidate in constituency D polled 5% of valid votes more than that of the first runner up. All the candidates who lost their security deposits while contesting for this constituency, put together, polled 35% of the valid votes.

SubQuestion No : 9

Q.9 What BEST can be concluded about the number of votes polled by the winning candidate in constituency C?

Ans

1. 1,40,006

2. less than 2,00,010

3. between 1,40,005 and 1,40,010

4. 1,40,010

Comprehension:

In an election several candidates contested for a constituency. In any constituency, the winning candidate was the one who polled the highest number of votes, the first runner up was the one who polled the second highest number of votes, the second runner up was the one who polled the third highest number of votes, and so on. There were no ties (in terms of number of votes polled by the candidates) in any of the constituencies in this election.

In an electoral system, a security deposit is the sum of money that a candidate is required to pay to the election commission before he or she is permitted to contest. Only the defeated candidates (i.e., one who is not the winning candidate) who fail to secure more than one sixth of the valid votes polled in the constituency, lose their security deposits.

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% of valid votes polled by the third runner up				10%

The following additional facts are known:

1. The first runner up polled 10,000 more votes than the second runner up in constituency A.
2. None of the candidates who contested in constituency C lost their security deposit. The difference in votes polled by any pair of candidates in this constituency was at least 10,000.
3. The winning candidate in constituency D polled 5% of valid votes more than that of the first runner up. All the candidates who lost their security deposits while contesting for this constituency, put together, polled 35% of the valid votes.

SubQuestion No : 10

Q.10 What was the number of valid votes polled in constituency D?

Ans

1. 1,25,000

2. 1,75,000

3. 1,50,000

4. 62,500

Comprehension:

In an election several candidates contested for a constituency. In any constituency, the winning candidate was the one who polled the highest number of votes, the first runner up was the one who polled the second highest number of votes, the second runner up was the one who polled the third highest number of votes, and so on. There were no ties (in terms of number of votes polled by the candidates) in any of the constituencies in this election.

In an electoral system, a security deposit is the sum of money that a candidate is required to pay to the election commission before he or she is permitted to contest. Only the defeated candidates (i.e., one who is not the winning candidate) who fail to secure more than one sixth of the valid votes polled in the constituency, lose their security deposits.

The following table provides some incomplete information about votes polled in four constituencies: A, B, C and D, in this election.

	Constituency			
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1. The first runner up polled 10,000 more votes than the second runner up in constituency A.
2. None of the candidates who contested in constituency C lost their security deposit. The difference in votes polled by any pair of candidates in this constituency was at least 10,000.
3. The winning candidate in constituency D polled 5% of valid votes more than that of the first runner up. All the candidates who lost their security deposits while contesting for this constituency, put together, polled 35% of the valid votes.

SubQuestion No : 11

Q.11 **The winning margin of a constituency is defined as the difference of votes polled by the winner and that of the first runner up. Which of the following CANNOT be the list of constituencies, in increasing order of winning margin?**

Ans

1. B, D, C, A

2. B, C, D, A

3. D, B, C, A

4. D, C, B, A

Comprehension:

In an election several candidates contested for a constituency. In any constituency, the winning candidate was the one who polled the highest number of votes, the first runner up was the one who polled the second highest number of votes, the second runner up was the one who polled the third highest number of votes, and so on. There were no ties (in terms of number of votes polled by the candidates) in any of the constituencies in this election.

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3. The winning candidate in constituency D polled 5% of valid votes more than that of the first runner up. All the candidates who lost their security deposits while contesting for this constituency, put together, polled 35% of the valid votes.

SubQuestion No : 12

Q.12 **For all the four constituencies taken together, what was the approximate number of votes polled by all the candidates who lost their security deposit expressed as a percentage of the total valid votes from these four constituencies?**

Ans

1. 23.91%

2. 32.00%

3. 38.25%

4. 23.54%

Comprehension:

A shopping mall has a large basement parking lot with parking slots painted in it along a single row. These slots are quite narrow; a compact car can fit in a single slot but an SUV requires two slots. When a car arrives, the parking attendant guides the car to the first available slot from the beginning of the row into which the car can fit.

For our purpose, cars are numbered according to the order in which they arrive at the lot. For example, the first car to arrive is given a number 1, the second a number 2, and so on. This numbering does not indicate whether a car is a compact or an SUV. The configuration of a parking lot is a sequence of the car numbers in each slot. Each single vacant slot is represented by letter V.

For instance, suppose cars numbered 1 through 5 arrive and park, where cars 1, 3 and 5 are compact cars and 2 and 4 are SUVs. At this point, the parking lot would be described by the sequence 1, 2, 3, 4, 5. If cars 2 and 5 now vacate their slots, the parking lot would now be described as 1, V, V, 3, 4. If a compact car (numbered 6) arrives subsequently followed by an SUV (numbered 7), the parking lot would be described by the sequence 1, 6, V, 3, 4, 7.

Answer the following questions INDEPENDENTLY of each other.

SubQuestion No : 13

Q.13 Initially cars numbered 1, 2, 3, and 4 arrive among which 1 and 4 are SUVs while 2 and 3 are compact cars. Car 1 then leaves, followed by the arrivals of car 5 (a compact car) and car 6 (an SUV). Car 4 then leaves. Then car 7 (an SUV) and car 8 (a compact car) arrive. At this moment, which among the following numbered car is parked next to car 3?

Ans

1. 6

2. 5

3. 8

4. 7

Comprehension:

A shopping mall has a large basement parking lot with parking slots painted in it along a single row. These slots are quite narrow; a compact car can fit in a single slot but an SUV requires two slots. When a car arrives, the parking attendant guides the car to the first available slot from the beginning of the row into which the car can fit.

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Answer the following questions INDEPENDENTLY of each other.

SubQuestion No : 14

Q.14 Suppose eight cars have arrived, of which two have left. Also suppose that car 4 is a compact and car 7 is an SUV. Which of the following is a POSSIBLE current configuration of the parking lot?

Ans

1. V, 2, 3, 7, 5, 6, 8
2. 8, 2, 3, V, 6, 5, 7
3. 8, 2, 3, V, 5, 6, 7
4. 8, 2, 3, V, 5, 7, 6

Comprehension:

A shopping mall has a large basement parking lot with parking slots painted in it along a single row. These slots are quite narrow; a compact car can fit in a single slot but an SUV requires two slots. When a car arrives, the parking attendant guides the car to the first available slot from the beginning of the row into which the car can fit.

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Answer the following questions INDEPENDENTLY of each other.

SubQuestion No : 15

Q.15 Suppose the sequence at some point of time is 4, 5, 6, V, 3. Which of the following is NOT necessarily true?

Ans

1. Car 4 is a compact.
2. Car 3 is an SUV.
3. Car 5 is a compact.

---

4. Car 1 is an SUV.

Comprehension:

A shopping mall has a large basement parking lot with parking slots painted in it along a single row. These slots are quite narrow; a compact car can fit in a single slot but an SUV requires two slots. When a car arrives, the parking attendant guides the car to the first available slot from the beginning of the row into which the car can fit.

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Answer the following questions INDEPENDENTLY of each other.

SubQuestion No : 16

Q.16 Suppose that car 4 is not the first car to leave and that the sequence at a time between the arrival of the car 7 and car 8 is V, 7, 3, 6, 5. Then which of the following statements MUST be false?

Ans

1. Car 4 is an SUV.

2. Car 2 is a compact.

3. Car 7 is a compact.

4. Car 6 is a compact.

Comprehension:

Twenty five coloured beads are to be arranged in a grid comprising of five rows and five columns. Each cell in the grid must contain exactly one bead. Each bead is coloured either Red, Blue or Green.

While arranging the beads along any of the five rows or along any of the five columns, the rules given below are to be followed:

1. Two adjacent beads along the same row or column are always of different colours.
2. There is at least one Green bead between any two Blue beads along the same row or column.
3. There is at least one Blue and at least one Green bead between any two Red

beads along the same row or column.

Every unique, complete arrangement of twenty five beads is called a configuration.

SubQuestion No : 17

Q.17 **The total number of possible configurations using beads of only two colours is:**

Case Sensitivity: No

Answer Type: Equal

Possible Answer: 2

Comprehension:

Twenty five coloured beads are to be arranged in a grid comprising of five rows and five columns. Each cell in the grid must contain exactly one bead. Each bead is coloured either Red, Blue or Green.

While arranging the beads along any of the five rows or along any of the five columns, the rules given below are to be followed:

1. Two adjacent beads along the same row or column are always of different colours.
2. There is at least one Green bead between any two Blue beads along the same row or column.
3. There is at least one Blue and at least one Green bead between any two Red beads along the same row or column.

Every unique, complete arrangement of twenty five beads is called a configuration.

SubQuestion No : 18

Q.18 **What is the maximum possible number of Red beads that can appear in any configuration?**

Case Sensitivity: No

Answer Type: Equal

Possible Answer: 9

--

Comprehension:

Twenty five coloured beads are to be arranged in a grid comprising of five rows and five columns. Each cell in the grid must contain exactly one bead. Each bead is coloured either Red, Blue or Green.

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3. There is at least one Blue and at least one Green bead between any two Red beads along the same row or column.

Every unique, complete arrangement of twenty five beads is called a configuration.

SubQuestion No : 19

Q.19 **What is the minimum number of Blue beads in any configuration?**

Case Sensitivity: No

Answer Type: Equal

Possible Answer: 6

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Comprehension:

Twenty five coloured beads are to be arranged in a grid comprising of five rows and five columns. Each cell in the grid must contain exactly one bead. Each bead is coloured either Red, Blue or Green.

While arranging the beads along any of the five rows or along any of the five columns, the rules given below are to be followed:

1. Two adjacent beads along the same row or column are always of different colours.
2. There is at least one Green bead between any two Blue beads along the same row or column.
3. There is at least one Blue and at least one Green bead between any two Red beads along the same row or column.

Every unique, complete arrangement of twenty five beads is called a configuration.

SubQuestion No : 20

Q.20 **Two Red beads have been placed in 'second row, third column' and 'third row, second column'. How many more Red beads can be placed so as to maximise the number of Red beads used in the configuration?**

Case Sensitivity: No

Answer Type: Equal

Possible Answer: 6

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Comprehension:

A chain of departmental stores has outlets in Delhi, Mumbai, Bengaluru and Kolkata. The sales are categorized by its three departments – 'Apparel', 'Electronics', and 'HomeDecor'. An Accountant has been asked to prepare a summary of the 2018 and 2019 sales amounts for an internal report. He has collated partial information and prepared the following table.

	Sales Amounts (Crore Rupees)						
	Delhi		Mumbai		Bengaluru		K
	2018	2019	2018	2019	2018	2019	2018
Apparels	-	-	-	-	-	-	-
Electronics	78	98	82	102	90	70	80
HomeDecor	-	100	-	72	-	80	-

The following additional information is known.
1. The sales amounts in the Apparel departments were the same for Delhi and Kolkata in 2018.
2. The sales amounts in the Apparel departments were the same for Mumbai and Bengaluru in 2018. This sales amount matched the sales amount in the Apparel department for Delhi in 2019.
3. The sales amounts in the HomeDecor departments were the same for Mumbai and Kolkata in 2018.
4. The sum of the sales amounts of four Electronics departments increased by the same amount as the sum of the sales amounts of four Apparel departments from 2018 to 2019.
5. The total sales amounts of the four HomeDecor departments increased by Rs 70 Crores from 2018 to 2019.
6. The sales amounts in the HomeDecor departments of Delhi and Bengaluru each increased by Rs 20 Crores from 2018 to 2019.
7. The sales amounts in the Apparel departments of Delhi and Bengaluru each increased by the same amount in 2019 from 2018. The sales amounts in the Apparel departments of Mumbai and Kolkata also each increased by the same amount in 2019 from 2018.
8. The sales amounts in the Apparel departments of Delhi, Kolkata and Bengaluru in 2019 followed an Arithmetic Progression.

SubQuestion No : 21

Q.21 In HomeDecor departments of which cities were the sales amounts the highest in 2018 and 2019, respectively?

Ans

1. Mumbai and Mumbai

2. Delhi and Delhi

3. Mumbai and Delhi

4. Bengaluru and Delhi

Comprehension:

A chain of departmental stores has outlets in Delhi, Mumbai, Bengaluru and Kolkata. The sales are categorized by its three departments – 'Apparel', 'Electronics', and 'HomeDecor'. An Accountant has been asked to prepare a summary of the 2018 and 2019 sales amounts for an internal report. He has collated partial information and prepared the following table.

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7. The sales amounts in the Apparel departments of Delhi and Bengaluru each increased by the same amount in 2019 from 2018. The sales amounts in the Apparel departments of Mumbai and Kolkata also each increased by the same amount in 2019 from 2018.
8. The sales amounts in the Apparel departments of Delhi, Kolkata and Bengaluru in 2019 followed an Arithmetic Progression.

SubQuestion No : 22

Q.22 What was the increase in sales amount, in Crore Rupees, in the Apparel department of Mumbai from 2018 to 2019?

Ans

1. 12

2. 10

3. 5

4. 8

Comprehension:

A chain of departmental stores has outlets in Delhi, Mumbai, Bengaluru and Kolkata. The sales are categorized by its three departments – ‘Apparel’, ‘Electronics’, and ‘HomeDecor’. An Accountant has been asked to prepare a summary of the 2018 and 2019 sales amounts for an internal report. He has collated partial information and prepared the following table.

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8. The sales amounts in the Apparel departments of Delhi, Kolkata and Bengaluru in 2019 followed an Arithmetic Progression.

SubQuestion No : 23

Q.23 Among all the 12 departments (i.e., the 3 departments in each of the 4 cities), what was the maximum percentage increase in sales amount from 2018 to 2019?

Ans

1. 50 ✔
2. 28 ✘
3. 25 ✘
4. 75 ✘

Comprehension:

A chain of departmental stores has outlets in Delhi, Mumbai, Bengaluru and Kolkata. The sales are categorized by its three departments – 'Apparel', 'Electronics', and 'HomeDecor'. An Accountant has been asked to prepare a summary of the 2018 and 2019 sales amounts for an internal report. He has collated partial information and prepared the following table.

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8. The sales amounts in the Apparel departments of Delhi, Kolkata and Bengaluru in 2019 followed an Arithmetic Progression.

SubQuestion No : 24

Q.2 What was the total sales amount, in Crore Rupees, in 2019 for the chain of departmental stores?
4

Ans

1. 150
2. 900
3. 600
4. 750

Section : **QA**

Q.1 The number of pairs of integers (x, y) satisfying $x \geq y \geq -20$ and $2x + 5y = 9$

Case Sensitivity: No

Answer Type: Equal

Possible Answer: 17

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Q.2 **Anil buys 12 toys and labels each with the same selling price. He sells 8 toys initially at 20% discount on the labeled price. Then he sells the remaining 4 toys at an additional 25% discount on the discounted price. Thus, he gets a total of Rs 2112, and makes a 10% profit. With no discounts, his percentage of profit would have been**

Ans

1. 50
2. 55
3. 60
4. 54

Q.3 For real x, the maximum possible value of $\frac{x}{\sqrt{1+x^4}}$ is

Ans

1. $\frac{1}{\sqrt{2}}$

✗ 2. $\frac{1}{2}$

✗ 3. $\frac{1}{\sqrt{3}}$

✗ 4. 1

Q. 4 In a car race, car A beats car B by 45 km, car B beats car C by 50 km, and (in km) over which the race has been conducted is

Ans

✗ 1. 475

✗ 2. 500

✓ 3. 450

✗ 4. 550

Q.5 **Students in a college have to choose at least two subjects from chemistry, mathematics and physics. The number of students choosing all three subjects is 18, choosing mathematics as one of their subjects is 23 and choosing physics as one of their subjects is 25. The smallest possible number of students who could choose chemistry as one of their subjects is**

Ans

✗ 1. 21

✗ 2. 19

✓ 3. 20

✗ 4. 22

Q.6 **In how many ways can a pair of integers (x , a) be chosen such that $x^2 - 2|x| + |a - 2| = 0$?**

Ans

✗ 1. 5

✗ 2. 4

3. 7

4. 6

Q.7 The number of integers that satisfy the equality $(x^2 - 5x + 7)^{x+1} = 1$ is

Ans

1. 3
2. 5
3. 4
4. 2

$2\sqrt{2}$

2. $\frac{1}{2}$

Q. 8 A and $\sqrt{2}$ are two points on a straight line. Ram runs from A to B while Rah
other, Ram and Rahim reach their destinations in one minute and four mint
time, then the ratio of Ram's speed to Rahim's speed is

Ans

1.

3.

4. 2

Q.9 **How many 4-digit numbers, each greater than 1000 and each having all four digits distinct, are there with 7 coming before 3?**

Case Sensitivity: No

Answer Type: Equal

Possible Answer: 315

--

Q.10 In a group of 10 students, the mean of the lowest 9 scores is 42 while the mean of the highest 9 scores is 47. For the entire group of 10 students, the maximum possible mean exceeds the minimum possible mean by

Ans

✗ 1. 5

✓ 2. 4

✗ 3. 6

✗ 4. 3

Q.11 For the same principal amount, the compound interest for two years at 5% per annum exceeds the simple interest for three years at 3% per annum by Rs 1125. Then the principal amount in rupees is

Case Sensitivity: No

Answer Type: Equal

Possible Answer: 90000

Q. 12 From an interior point of an equilateral triangle, perpendiculars are drawn on all thr of the three perpendiculars is s. Then the area of the triangle is

Ans

✗ 1. $\frac{\sqrt{3}s^2}{2}$

✗ 2. $\frac{s^2}{2\sqrt{3}}$

✓ 3. $\frac{s^2}{\sqrt{3}}$

✗ 4. $\frac{2s^2}{\sqrt{3}}$

Q.13 **Two circular tracks T1 and T2 of radii 100 m and 20 m, respectively touch at a point A. Starting from A at the same time, Ram and Rahim are walking on track T1 and track T2 at speeds 15 km/hr and 5 km/hr respectively. The number of full rounds that Ram will make before he meets Rahim again for the first time is**

Ans

✗ 1. 2

✗ 2. 4

✗ 3. 5

✓ 4. 3

Q. 14 The sum of the perimeters of an equilateral triangle and a rectangle is 90 area, R, of the rectangle, both in sq cm, satisfy the relationship $R = T^2$. If 1:3, then the length, in cm, of the longer side of the rectangle, is

Ans

✗ 1. 21

✓ 2. 27

✗ 3. 24

✗ 4. 18

Q.15 If x and y are positive real numbers satisfying $x + y = 102$, then the n

$2601\left(1+\frac{1}{x}\right)\left(1+\frac{1}{y}\right)$ is

Case Sensitivity: No

Answer Type: Equal

Possible Answer: 2704

--

Q.16 **Aron bought some pencils and sharpeners. Spending the same amount of money as Aron, Aditya bought twice as many pencils and 10 less sharpeners.**

If the cost of one sharpener is ₹ 2 more than the cost of a pencil, then the minimum possible number of pencils bought by Aron and Aditya together is

Ans

1. 30
2. 33
3. 27
4. 36

Q. 17 Let $f(x) = x^2 + ax + b$ and $g(x) = f(x+1) - f(x-1)$. If $f(x) \geq$ (
smallest possible value of b is

Ans

1. 1
2. 16
3. 0

4

Q.18 The value of $\log_a\left(\frac{a}{b}\right) + \log_b\left(\frac{b}{a}\right)$, for $1 < a \leq b$ cannot be equal to

Ans

1. -0.5
2. 0
3. -1
4. 1

Q.19 **John takes twice as much time as Jack to finish a job. Jack and Jim together take one-thirds of the time to finish the job than John takes working alone. Moreover, in order to finish the job, John takes three days more than that taken by three of them working together. In how many days will Jim finish the job working alone?**

Case Sensitivity: No

Answer Type: Equal

Possible Answer: 4

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Q.20 In May, John bought the same amount of rice and the same amount of wheat as he had bought in April, but spent ₹ 150 more due to price increase of rice and wheat by 20% and 12%, respectively. If John had spent ₹ 450 on rice in April, then how much did he spend on wheat in May?

Ans

1. ₹ 560
2. ₹ 570
3. ₹ 590
4. ₹ 580

Q.21 Let the m-th and n-th terms of a geometric progression be $\frac{3}{4}$ and 12, respectively, where m <
of the progression is an integer r, then the smallest possible value of r + n − m is

Ans

1. -4
2. 6
3. 2
4. -2

Q.22 Let C1 and C2 be concentric circles such that the diameter of C1 is 2 cm longe
6 cm and is a tangent to C2, then the diameter, in cm, of C1 is

Case Sensitivity: No

Answer Type: Equal

Possible Answer: 10

--

Q.23 Let C be a circle of radius 5 meters having center at O. Let PQ be a chord of C that passes through points A and B where A is located 4 meters north of O and B is located 3 meters east of O. Then, the length of PQ, in meters, is nearest to

Ans

✔ 1. 8.8

✘ 2. 7.2

✘ 3. 6.6

✘ 4. 7.8

Q.24 A sum of money is split among Amal, Sunil and Mita so that the ratio of the shares of Amal and Sunil is 3:2, while the ratio of the shares of Sunil and Mita is 4:5. If the difference between the largest and the smallest of these three shares is Rs 400, then Sunil's share, in rupees, is

Case Sensitivity: No

Answer Type: Equal

Possible Answer: 800

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Q.25 If x and y are non-negative integers such that $x + 9 = z$, $y + 1 = z$ and $x + y < z + 5$, then the maximum possible value of $2x + y$ equals

Case Sensitivity: No

Answer Type: Equal

Possible Answer: 23

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Q.26 The distance from B to C is thrice that from A to B. Two trains travel from A to C via B. The speed of train 2 is double that of train 1 while traveling from A to B and their speeds are interchanged while traveling from B to C. The ratio of the time taken by train 1 to that taken by train 2 in travelling from A to C is

Ans

✘ 1. 1:4

2. 4:1

3. 5:7

4. 7:5