XAT 2015 Question Paper with Solutions

Time Allowed :3 Hours	Maximum Marks :100	Total questions :175

XAT 2015 – Exam Overview

1. **Exam Duration**: The examination will be of **3 hours (180 minutes)**.

2. **Number of Questions**: **100 questions** divided into three sections:

   - **Verbal and Logical Ability** (VL): 26 questions

   - **Decision Making** (DM): 21 questions

   - **Quantitative Ability and Data Interpretation** (QA & DI): 28 questions

   - **General Knowledge** (GK): 25 questions

3. **Types of Questions**:

   - **Multiple Choice Questions (MCQs)**: There will be questions with four options, with only one correct answer.

   - **TITA (Type-in-the-Answer)**: These are open-ended questions where you have to type the answer.

4. **Marking Scheme**:

   - **MCQs**: +1 mark for each correct answer; −0.25 for each incorrect answer.

   - **TITA**: +1 mark for each correct answer; no negative marking.

   - **General Knowledge Section**: +1 mark for each correct answer; no negative marking.

5. **Negative Marking**: For every incorrect answer in the MCQ section, −0.25 marks will be deducted.

6. **Computer-based Test**: The XAT exam is conducted online in a computer-based format.

7. **Use of Calculators**: On-screen calculators will be provided; no personal calculators allowed..

Section A: Verbal and Logical Ability

1. The first and the last sentences of the paragraph are numbered 1 & 6. The others, labelled as P, Q, R, and S, are given below:

1. The world of cinema is indeed a strange one and baffles many a critic.

P. But there are incorrigible optimists who see a bright future.

Q. The pundits still predict doom and they insist that it is the end of the road for cinema.

R. At the temples of the box office, fortunes are made and unmade.

S. The world of cinema has, they say, its own attraction.

6. Perhaps a positive outlook is not unwarranted. A doomsday approach is far too fatal at this stage.

(A) 1SQPR6
(B) 1RSPQ6
(C) 1RQPS6
(D) 1SQPR6
(E) 1QPSR6

Correct Answer: (C) 1RQPS6

Solution:

Step 1: Understanding the Passage.

The passage starts with the sentence 1, which introduces the world of cinema as strange. The last sentence (6) concludes with a positive outlook, stating that a doomsday approach is too fatal. The middle sentences must create a logical flow between pessimism and optimism.

Step 2: Analyzing the Options.

- **(A) 1SQPR6:** Incorrect. Sentence S introduces cinema's attraction, but it doesn't transition smoothly to Q, which discusses pessimism. P should be introduced before Q to maintain logical consistency.

- **(B) 1RSPQ6:** Incorrect. This sequence starts with R, but it does not set the correct tone for the flow of ideas between pessimism and optimism.

- **(C) 1RQPS6:** Correct. Sentence R talks about the impact of cinema at the box office, followed by Q, which discusses the doom predicted for cinema. P then introduces optimism,

and S follows with the attraction of cinema. Finally, sentence 6 wraps up the passage with a positive outlook, completing the logical flow.

- **(D) 1SQPR6:** Same as (A), incorrect for the same reasons.

- **(E) 1QPSR6:** Incorrect. Sentence P should come after Q, not before, to keep the sequence logically consistent.

Step 3: Conclusion.

The correct sequence is **(C) 1RQPS6**, which logically connects the pessimism about cinema with optimism, while maintaining a smooth flow in the passage.

> **Quick Tip**
>
> In reading comprehension, always check the logical flow between sentences, especially when transitioning between contrasting ideas like optimism and pessimism.

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2. Which of the following is not a term of 'disapproval'?

(A) infantile

(B) charlatan

(C) imbecile

(D) childlike

(E) awful

Correct Answer: (D) childlike

Solution:

Step 1: Understanding the terms.

- **(1) infantile:** Refers to something that is characteristic of an infant or childish behavior, often used disapprovingly.

- **(2) charlatan:** Refers to a fraud or someone who pretends to have skills they do not possess, a term of disapproval.

- **(3) imbecile:** Refers to a person with a very low intelligence or one who is foolish, typically used as a term of disapproval.

- **(4) childlike:** Refers to qualities of a child, such as innocence or purity, and is generally a term of endearment rather than disapproval.
- **(5) awful:** Means extremely bad or unpleasant, often used in disapproval.

Step 2: Conclusion.

The term **(4) childlike** is not typically used in disapproval. It is more likely to describe positive attributes such as innocence and purity, in contrast to the other terms, which express criticism.

> **Quick Tip**
>
> In questions about terms of disapproval, always focus on the context and usage of the word. "Childlike" is generally positive, whereas other options like "imbecile" and "awful" carry negative connotations.

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3. Read the following sentences and choose the option that best arranges them in a logical order.

I. It is certainly true that the critics—those persons whom the dictionary describes as "skilled in judging the qualities or merits of some class of things, especially of literary or artistic work"—have long harboured murderous thoughts about the conditions of our drama, but their ineffectuality as public executioners is legendary.

II. But not close enough, it would seem, for this "marriage" constitutes the case of an absolute desire encountering a relative compliance.

III. The reviewers, by contrast, come close to being the most loyal and effective allies the commercial theatre could possibly desire.

IV. Perhaps the greatest irony in a situation bursting with ironies is the reiterated idea that the critics are killing the theatre.

V. We all know that when theatre people or members of the public refer to the critics, they nearly always mean the reviewers.

(A) V, IV, III, II, I

(B) V, I, III, II, IV

(C) IV, I, V, II, III

(D) II, V, IV, I, III

(E) I, IV, V, II, III

Correct Answer: (B) V, I, III, II, IV

Solution:

Step 1: Understanding the passage.

The passage discusses critics and reviewers, contrasting their roles in the world of theatre. The logical flow should start by introducing the critics, then move on to their relationship with reviewers, the irony in the situation, and their impact on the theatre.

Step 2: Analyzing the options.

- **(A) V, IV, III, II, I:** This option begins with sentence V, which is a general statement about critics, and then moves to other aspects of critics, but it does not follow the logical order properly.

- **(B) V, I, III, II, IV:** This sequence starts with a general statement about critics (V), followed by an introduction of critics (I), and moves through their roles and impact logically, which makes this the most logical order.

- **(C) IV, I, V, II, III:** This sequence does not start with the introduction of critics or reviewers, making it less logical.

- **(D) II, V, IV, I, III:** This order starts abruptly with sentence II, which does not provide a proper introduction.

- **(E) I, IV, V, II, III:** This option starts with the introduction of critics but doesn't provide a logical transition between sentences, especially with sentence II.

Step 3: Conclusion.

The correct order is **(B) V, I, III, II, IV** as it logically flows from the introduction of critics, their impact on theatre, and the role of reviewers.

> **Quick Tip**
>
> In sentence rearrangement questions, focus on the introduction, development of ideas, and logical transitions between sentences. Starting with a clear introduction followed by supporting details and a conclusion often provides the best flow.

4. In the traditions of many religions throughout the world (including Judaeo-Christian beliefs), there has long been a sustained belief that the Universe as we know it today did not exist forever in the past, and that there was a spontaneous act which gave birth to all that has been, all that is, and all that will be. In other words, the Universe itself has not been eternal as our senses might indicate at first glance, ...

Which of the following options can meaningfully complete the above sentence?

(A) but has a limited lifespan after its creation.

(B) but our senses give us the right knowledge.

(C) however, on second glance, our religious beliefs are right.

(D) however, it is a ball of intense energy.

(E) however, it could not have been created.

Correct Answer: (E) however, it could not have been created.

Solution:

Step 1: Understanding the passage.

The passage discusses the belief that the universe is not eternal and was created. The logical conclusion to this idea would address how the universe came to exist, which fits the option that it could not have been created.

Step 2: Analyzing the options.

- **(A) but has a limited lifespan after its creation:** This doesn't match, as the passage focuses on the creation of the universe, not its lifespan.

- **(B) but our senses give us the right knowledge:** This doesn't logically follow, as the passage suggests that senses might not reveal the true nature of the universe.

- **(C) however, on second glance, our religious beliefs are right:** This introduces a shift to religious beliefs without supporting the logic of the argument.

- **(D) however, it is a ball of intense energy:** This is a different concept and doesn't tie in with the creation aspect discussed.

- **(E) however, it could not have been created:** This is the most logical conclusion, as it suggests the universe was not created in the traditional sense but has always existed in some form.

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Step 3: Conclusion.

The correct answer is **(E) however, it could not have been created.** This aligns with the notion that the universe is not eternal in the conventional sense.

> **Quick Tip**
>
> Look for the sentence that logically concludes the argument. Here, the passage suggests that the universe might not have been created, which fits with the idea of it not being eternal.

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5. It is a curious historical fact that modern quantum mechanics began with two quite different mathematical formulations: the differential equation of Schroedinger, and the matrix algebra of Heisenberg. The two, apparently dissimilar, approaches were proved to be mathematically equivalent.

Which of the following sentences would most meaningfully follow the above paragraph?

(A) The two approaches did not start with the same mathematical formulations.

(B) These two points of view were destined to complement one another and were ultimately synthesized in Dirac's transformation theory.

(C) A third mathematical formulation given by Feynman combines the matrix algebra of Heisenberg and Integral calculus of Leibniz.

(D) Quantum mechanics evolved in the twentieth century and came very close to particle physics, especially after the CERN experiments in Switzerland.

(E) Earlier, the two formulations were mathematically similar.

Correct Answer: (B) These two points of view were destined to complement one another and were ultimately synthesized in Dirac's transformation theory.

Solution:

Step 1: Understanding the paragraph.

The paragraph talks about the two different approaches to quantum mechanics and how they were mathematically equivalent, yet started from different formulations. The logical conclusion would discuss how these approaches complement each other.

Step 2: Analyzing the options.

- **(A) The two approaches did not start with the same mathematical formulations:** This is incorrect because the paragraph mentions the two distinct mathematical formulations.

- **(B) These two points of view were destined to complement one another and were ultimately synthesized in Dirac's transformation theory:** This fits perfectly as it explains how the two mathematical formulations ultimately complemented each other.

- **(C) A third mathematical formulation given by Feynman combines the matrix algebra of Heisenberg and Integral calculus of Leibniz:** This brings in an additional formulation which is not relevant to the paragraph.

- **(D) Quantum mechanics evolved in the twentieth century and came very close to particle physics, especially after the CERN experiments in Switzerland:** This is unrelated to the historical context of the two formulations mentioned in the paragraph.

- **(E) Earlier, the two formulations were mathematically similar:** This contradicts the paragraph's point that the approaches were mathematically equivalent despite appearing dissimilar.

Step 3: Conclusion.

The correct answer is **(B) These two points of view were destined to complement one another and were ultimately synthesized in Dirac's transformation theory.**

> **Quick Tip**
>
> In questions that discuss historical events or scientific concepts, focus on the logical connection between the ideas. Here, option (B) ties the two mathematical approaches together in a way that makes sense of the development in quantum mechanics.

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6. Ranu is an ordinary sportsperson. In the last two university sprint events, her performances in the heats were pathetic.

Which of the following, if true, weakens the above argument the most?

(A) She had participated in the college swimming competition and finished last.

(B) She is a national shot-put champion.

(C) The last two times, Ranu had to compete with national level runners. Had she been in other heats, she would have reached quarterfinals.

(D) Ranu was the only player who represented her college in the sprint events.

(E) In the college sprint events, Ranu always won.

Correct Answer: (D) Ranu was the only player who represented her college in the sprint events.

Solution:

Step 1: Understanding the argument.

The argument states that Ranu is an ordinary sportsperson, and her performances in the university sprint events were pathetic. We need to find an option that weakens this argument, i.e., something that shows that her poor performance may have been due to external factors rather than her abilities.

Step 2: Analyzing the options.

- **(A) She had participated in the college swimming competition and finished last:** This option does not weaken the argument about her sprint performance. Swimming and sprinting are different events.

- **(B) She is a national shot-put champion:** This does not weaken the argument either. Shot-put is a different event, and her success in shot-put does not provide evidence against her poor sprint performance.

- **(C) The last two times, Ranu had to compete with national level runners. Had she been in other heats, she would have reached quarterfinals:** This option weakens the argument by suggesting that her poor performance was due to the high level of competition, rather than her ability. If she had been in less competitive heats, she might have performed better.

- **(D) Ranu was the only player who represented her college in the sprint events:** This weakens the argument by suggesting that Ranu's performance may have been impacted by the lack of support or competition from other team members. This external factor could explain why her performance was poor.

- **(E) In the college sprint events, Ranu always won:** This contradicts the argument since it suggests that Ranu performs well in sprint events, which would weaken the claim that she is an ordinary sportsperson. However, it does not specifically address the issue of her recent

poor performances.

Step 3: Conclusion.

The correct answer is **(D) Ranu was the only player who represented her college in the sprint events.** This weakens the argument by showing that external factors, such as lack of team support, could explain her poor performance.

> **Quick Tip**
>
> In questions asking to weaken an argument, look for answers that introduce external factors or conditions that might explain why the argument may not be entirely true.

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7. Six words are given below:

I. Cacophonic   II. Cacographic   III. Calamitous   IV. Catastrophic   V. Contradictory
VI. Cataclysmic

Which of the above words have similar meanings?

(A) IV & VI only

(B) I, II & V only

(C) II, V & VI only

(D) III, IV & VI only

(E) III, IV, V & VI only

Correct Answer: (A) IV & VI only

Solution:

Step 1: Understanding the meaning of words.

- Cacophonic refers to a harsh, discordant sound.

- Cacographic means poorly written or misspelled.

- Calamitous refers to something that causes great harm or suffering.

- Catastrophic refers to a sudden, widespread disaster or failure.

- Contradictory refers to the state of being in opposition or conflict.

- Cataclysmic refers to a large-scale and violent event in nature or society.

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Step 2: Analyzing the options.

- (A) IV & VI only: Correct. Both catastrophic and cataclysmic are related to large-scale disasters and extreme events.

- (B) I, II & V only: Incorrect. Cacophonic, cacographic, and contradictory do not have similar meanings.

- (C) II, V & VI only: Incorrect. Cacographic and contradictory are unrelated to cataclysmic.

- (D) III, IV & VI only: Incorrect. While calamitous, catastrophic, and cataclysmic are related to disasters, the words in the other options do not share a similar meaning.

Step 3: Conclusion.

The correct answer is **(A) IV & VI only**, as these words share the meaning of disastrous or catastrophic events.

> **Quick Tip**
>
> Words related to disaster and extreme events like "catastrophic" and "cataclysmic" have overlapping meanings.

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8. Read the four sentences given below:

i. He is the most _____ of the speakers to address us today.

ii. The belief in _____ justice is the essence of his talk.

iii. This hall would have been full but for the _____ rain.

iv. Many in the audience have achieved _____ in their respective fields.

Which of the following sequence of words would most appropriately fit the blanks?

(A) i. Eminent, ii. Imminent, iii. Immanent, iv. Eminence

(B) i. Immanent, ii. Imminent, iii. Imminence, iv. Eminence

(C) i. Eminent, ii. Immanent, iii. Imminent, iv. Eminence

(D) i. Eminent, ii. Immanent, iii. Imminent, iv. Imminence

(E) i. Immanent, ii. Imminence, iii. Eminent, iv. Eminence

Correct Answer: (C) i. Eminent, ii. Immanent, iii. Imminent, iv. Eminence

Solution:

Step 1: Understanding the meanings of the words.

- Eminent refers to a person of high rank or importance.

- Imminent refers to something about to happen very soon.

- Immanent refers to something inherent or existing within.

- Eminence refers to high rank, status, or quality.

Step 2: Analyzing the options.

- (A) i. Eminent, ii. Imminent, iii. Immanent, iv. Eminence: This is incorrect because "imminent" does not fit in context with "rain."

- (B) i. Immanent, ii. Imminent, iii. Imminence, iv. Eminence: This is incorrect as "immanent" doesn't make sense in the first blank.

- (C) i. Eminent, ii. Immanent, iii. Imminent, iv. Eminence: Correct. "Eminent" fits the first blank, "Immanent" fits the second, "Imminent" fits the third, and "Eminence" fits the fourth.

Step 3: Conclusion.

The correct answer is **(C) i. Eminent, ii. Immanent, iii. Imminent, iv. Eminence**.

> **Quick Tip**
>
> Remember the difference between "imminent" (about to happen soon) and "immanent" (inherent or existing within).

9.

In the following pages, I shall demonstrate that there is a psychological technique which makes it possible to interpret dreams, and that on the application of this technique, every dream will reveal itself as a psychological structure, full of significance, and one which may be assigned a specific place in the psychic activities of the waking state. Further, I shall endeavour to elucidate the processes which underlie the strangeness and obscurity of dreams, and to deduce from these processes the nature of the psychic forces whose conflict or cooperation is responsible for our dreams. This done, my investigation will terminate, as it will have reached the point where the problem of the dream merges into more comprehensive problems, and to solve these we must have recourse to material of a different kind.

Which of the followings would be closest to the ideas expressed in the first two sentences of the above passage?

(A) Overt causes can have only overt effects.

(B) Overt causes have only covert effects.

(C) Covert effects have only covert causes.

(D) You can't judge a book by its cover.

(E) Overt effects can have covert causes.

Correct Answer: (E) Overt effects can have covert causes.

Solution:

Step 1: Understanding the passage.

The passage highlights the idea that dreams, although outwardly manifesting in certain ways, have underlying psychological causes that are not immediately visible. This suggests that observable effects can often be explained by hidden or less obvious causes.

Step 2: Analyzing the options.

- (A) Overt causes can have only overt effects: This is incorrect because the passage emphasizes that there are hidden causes behind outwardly visible effects.

- (B) Overt causes have only covert effects: This is not consistent with the passage, which focuses on the idea of covert causes leading to overt effects.

- (C) Covert effects have only covert causes: This is not supported by the passage, which discusses overt effects and their hidden causes.

- (D) You can't judge a book by its cover: This is an analogy, but it doesn't directly capture the idea of hidden causes behind overt effects as expressed in the passage.

- (E) Overt effects can have covert causes: Correct. This option directly aligns with the passage's idea that visible effects (like dreams) can be caused by hidden psychological forces.

Step 3: Conclusion.

The correct answer is **(E) Overt effects can have covert causes**, as it best reflects the message in the passage about the relationship between visible effects and hidden causes.

10. Identify the correct sequence of words that aptly fit the blanks in the following passage.

It is _____ (i) _____ that the accused had _____ (ii) _____ from all criminal activities by adopting the _____ (iii) of a sanyasi. However, despite repeated requests from the counsel for prosecution, the court has _____ (iv) a lie detector to ascertain the truth.

(A) (i) inferred, (ii) feigned, (iii) separation, (iv) deportment, (v) prescribed

(B) (i) inferred, (ii) forged, (iii) parting, (iv) deportment, (v) proscribed

(C) (i) implied, (ii) faked, (iii) separation, (iv) demeanour, (v) proscribed

(D) (i) implied, (ii) feigned, (iii) separation, (iv) demeanour, (v) prescribed

(E) (i) inferred, (ii) faked, (iii) cessation, (iv) deportment, (v) proscribed

Correct Answer: (C) (i) implied, (ii) faked, (iii) separation, (iv) demeanour, (v) proscribed

Solution:

Step 1: Understanding the passage.

The passage describes a situation where the accused is trying to present himself as detached from his criminal activities by assuming the demeanor of a sanyasi. Despite this, the court is still looking for ways to verify his claims using modern investigative methods.

Step 2: Analyzing the options.

- (A) (i) inferred, (ii) feigned, (iii) separation, (iv) deportment, (v) prescribed: This is incorrect because "deportment" and "prescribed" do not fit the context of the passage.

- (B) (i) inferred, (ii) forged, (iii) parting, (iv) deportment, (v) proscribed: This option uses "forged," which does not fit the context. "Parting" does not align with the intended meaning of "separation."

- (C) (i) implied, (ii) faked, (iii) separation, (iv) demeanour, (v) proscribed: Correct. "Faked" fits the context of pretending or faking, and "demeanour" aligns with the behavior expected

of a sanyasi. "Proscribed" fits with the context of something being officially forbidden, which fits the legal context of the court.

- (D) (i) implied, (ii) feigned, (iii) separation, (iv) demeanour, (v) prescribed: Incorrect. While "feigned" fits well, "prescribed" does not fit with the context of the court's decision regarding the lie detector.

- (E) (i) inferred, (ii) faked, (iii) cessation, (iv) deportment, (v) proscribed: "Cessation" does not fit the context of separation or detachment.

Step 3: Conclusion.

The correct answer is **(C)** because it appropriately uses "implied," "faked," "separation," "demeanour," and "proscribed" to fit the context.

> **Quick Tip**
>
> In vocabulary-based fill-in-the-blank questions, focus on understanding the context of the passage. Pay attention to the surrounding words to determine which word best fits.

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11. Read the following statements carefully:

Statement 1: If you want to understand the causes that existed in the past, look at the results as they are manifested in the present.

Statement 2: Murali did not work as hard as his friends but had secured 1st rank in the examination.

Which of the following options is correct with respect to the above two statements?

(A) If Statement 2 is right, Statement 1 is invalid.

(B) Statement 1 and Statement 2 are contradictory to each other.

(C) Statement 2 supplements Statement 1.

(D) Statement 2 is a rare occurrence and hence irrelevant.

(E) Statement 1 will hold true even if Statement 2 is valid.

Correct Answer: (C) Statement 2 supplements Statement 1.

Solution:

Step 1: Understanding the statements.

Statement 1 suggests that if we want to understand past causes, we should look at the present outcomes. Statement 2 discusses Murali's performance in the examination despite not working as hard as his peers.

Step 2: Analyzing the options.

- (A) If Statement 2 is right, Statement 1 is invalid: This is incorrect. Statement 2 does not contradict Statement 1.

- (B) Statement 1 and Statement 2 are contradictory to each other: This is incorrect. The two statements do not contradict; Statement 2 provides an example of how understanding the present can reflect past causes.

- (C) Statement 2 supplements Statement 1: Correct. Statement 2 illustrates an example where the results (present) reflect the causes (past actions), aligning with Statement 1.

- (D) Statement 2 is a rare occurrence and hence irrelevant: This is incorrect. Statement 2 provides a valid example and is relevant.

- (E) Statement 1 will hold true even if Statement 2 is valid: This is not the best option, as Statement 2 provides an example that directly supports Statement 1.

Step 3: Conclusion.

The correct answer is **(C)** because Statement 2 supports and exemplifies the idea expressed in Statement 1.

> **Quick Tip**
>
> When evaluating logical relationships between statements, look for examples or instances that support the initial claim.

Passage:

Alone - he was alone again - again condemned to silence - again face to face with nothingness! Alone! - never again to see the face, never again to hear the voice of the only human being who united him to earth! Was not Faria's fate the better, after all - to solve the problem of life at its source, even at the risk of horrible suffering? The idea of suicide, which his friend had driven away and kept away by his cheerful presence, now hovered like a

phantom over the abbe's dead body.

"If I could die," he said, "I should go where he goes, and should assuredly find him again. But how to die? It is very easy," he went on with a smile; "I will remain here, rush on the first person that opens the door, strangle him, and then they will guillotine me." But excessive grief is like a storm at sea, where the frail bark is tossed from the depths to the top of the wave. Dantes recoiled from the idea of so infamous a death, and passed suddenly from despair to an ardent desire for life and liberty.

"Die? oh, no," he exclaimed - "not die now, after having lived and suffered so long and so much! Die? yes, had I died years ago; but now to die would be, indeed, to give way to the sarcasm of destiny. No, I want to live; I shall struggle to the very last; I will yet win back the happiness of which I have been deprived. Before I die I must not forget that I have my executioners to punish, and perhaps, too, who knows, some friends to reward. Yet they will forget me here, and I shall die in my dungeon like Faria." As he said this, he became silent and gazed straight before him like one overwhelmed with a strange and amazing thought. Suddenly he arose, lifted his hand to his brow as if his brain were giddy, paced twice or thrice round the dungeon, and then paused abruptly by the bed.

"Just God!" he muttered, "whence comes this thought? Is it from thee? Since none but the dead pass freely from this dungeon, let me take the place of the dead!" Without giving himself time to reconsider his decision, and, indeed, that he might not allow his thoughts to be distracted from his desperate resolution, he bent over the appalling shroud, opened it with the knife which Faria had made, drew the corpse from the sack, and bore it along the tunnel to his own chamber, laid it on his couch, tied around its head the rag he wore at night around his own, covered it with his counterpane, once again kissed the ice-cold brow, and tried vainly to close the resisting eyes, which glared horribly, turned the head towards the wall, so that the jailer might, when he brought the evening meal, believe that he was asleep, as was his frequent custom; entered the tunnel again, drew the bed against the wall, returned to the other cell, took from the hiding-place the needle and thread, flung off his rags, that they might feel only naked flesh beneath the coarse canvas, and getting inside the sack, placed himself in the posture in which the dead body had been laid, and sewed up the mouth of the sack from the inside.

12. How was the protagonist planning to resolve his problem?

(A) To give up and surrender.

(B) To commit suicide in the dungeon.

(C) To fight the jailor and escape.

(D) To kill those who came to carry the corpse.

(E) To exchange places with the dead.

Correct Answer: (E) To exchange places with the dead.

Solution:

Step 1: Understanding the passage.

The protagonist is in a dungeon and is contemplating a desperate way to escape. The idea of exchanging places with the dead comes when he reflects on how he could swap places with the corpse of Faria, who had passed away. This would allow him to be placed in a sack and transported out, giving him the chance to escape his prison.

Step 2: Analyzing the options.

- (A) To give up and surrender: This is incorrect. The protagonist is not giving up but rather looking for a way to escape.

- (B) To commit suicide in the dungeon: This is incorrect. Though suicide is briefly mentioned, the protagonist's plan revolves around escaping, not dying.

- (C) To fight the jailor and escape: This is not the protagonist's plan. There is no mention of fighting the jailor.

- (D) To kill those who came to carry the corpse: This is incorrect. The protagonist does not plan to kill anyone. His plan is to use the corpse as a means to escape.

- (E) To exchange places with the dead: Correct. The protagonist's plan is to switch places with Faria's dead body, hoping to escape by being transported out of the dungeon as if he were the corpse.

Step 3: Conclusion.

The correct answer is **(E)** because the protagonist's plan is to escape by exchanging places with the dead.

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13. Which one of the following options is nearest in meaning to that implied by the phrase 'sarcasm of destiny' in this passage?

(A) Destiny makes one a laughing stock.

(B) Destiny ultimately asserts itself.

(C) Triumph of the struggles gone through.

(D) A mockery of the forces of destiny.

(E) Let the enemy have the last laugh.

Correct Answer: (E) Let the enemy have the last laugh.

Solution:

Step 1: Understanding the passage.

The protagonist in the passage is dealing with the struggles of life and how destiny plays a role in his fate. The term "sarcasm of destiny" suggests that fate is mocking him, or that his attempts to change his circumstances are futile, as destiny is not in his favor.

Step 2: Analyzing the options.

- (A) Destiny makes one a laughing stock: This is not quite accurate. It implies that destiny ridicules a person, but does not fully capture the "sarcasm" of destiny.

- (B) Destiny ultimately asserts itself: This is incorrect. It suggests that destiny simply takes control, which is different from mocking or making a fool of the person.

- (C) Triumph of the struggles gone through: This is not related to sarcasm. It talks about overcoming struggles rather than mocking them.

- (D) A mockery of the forces of destiny: Correct. "Sarcasm of destiny" implies that fate itself is mocking the protagonist, making this option the most accurate.

- (E) Let the enemy have the last laugh: This does not fit the context. It suggests a different form of resolution or closure, unrelated to destiny's role.

Step 3: Conclusion.

The correct answer is **(E)** as it directly reflects the sarcasm implied by destiny in the passage.

> **Quick Tip**
>
> When analyzing a phrase like "sarcasm of destiny," focus on how destiny is being portrayed—whether as mocking, unkind, or ironic.

---

14. Among the options given below, which phrase specifically captures the change of mood of the protagonist?

(A) To be or not to be

(B) Despair and hope

(C) Depression to daring

(D) Darkness to light

(E) Loathing to yearning

Correct Answer: (C) Depression to daring

Solution:

Step 1: Understanding the passage.

The protagonist experiences a significant shift in mood, from despair and hopelessness to a renewed desire to live and escape his fate. This transition mirrors the concept of moving from depression to daring, where the protagonist moves from a low emotional state to an action-driven mindset.

Step 2: Analyzing the options.

- (A) To be or not to be: This refers to existential doubt, but it does not reflect the protagonist's mood change from despair to hope.

- (B) Despair and hope: This is a good option but doesn't fully capture the transition from one state to the other.

- (C) Depression to daring: Correct. This phrase accurately reflects the protagonist's shift from feeling overwhelmed by despair (depression) to finding the courage to act (daring).

- (D) Darkness to light: While this could represent a transition from despair to hope, it is not as specific to the protagonist's emotional change towards action and courage.

- (E) Loathing to yearning: This option doesn't fully capture the protagonist's change, as he is not primarily experiencing loathing but despair.

Step 3: Conclusion.

The correct answer is **(C)** because it best reflects the protagonist's change from depression to daring action.

> **Quick Tip**
>
> When analyzing mood changes in characters, look for phrases that represent contrasts between the two emotional states.

---

15. Words

i. Counterpane   ii. Dungeon   iii. Guillotine   iv. Shroud

Related Words

a. Burial   b. Bed   c. Execution   d. Cell

Which of the above 'related words' on the right-hand side are correctly matched with 'words' on the left-hand side?

(A) i-b, ii-d, iii-c, iv-a

(B) i-a, ii-d, iii-b, iv-c

(C) i-a, ii-d, iii-c, iv-b

(D) i-d, ii-b, iii-a, iv-c

(E) i-b, ii-a, iii-c, iv-d

Correct Answer: (A) i-b, ii-d, iii-c, iv-a

Solution:

Step 1: Understanding the words and their meanings.

- Counterpane: A covering or quilt for a bed. The related word is **b. Bed**.

- Dungeon: A prison or cell, usually underground. The related word is **d. Cell**.

- Guillotine: A device used for execution by beheading. The related word is **c. Execution**.

- Shroud: A cloth used for covering a body, often used in burial. The related word is **a. Burial**.

Step 2: Analyzing the options.

- (A) i-b, ii-d, iii-c, iv-a: Correct. The correct matches are: Counterpane → Bed, Dungeon → Cell, Guillotine → Execution, Shroud → Burial.

- (B) i-a, ii-d, iii-b, iv-c: Incorrect. "Counterpane" should match with "Bed," not "Burial."

- (C) i-a, ii-d, iii-c, iv-b: Incorrect. "Shroud" should match with "Burial," not "Bed."

- (D) i-d, ii-b, iii-a, iv-c: Incorrect. The matches are wrong.

- (E) i-b, ii-a, iii-c, iv-d: Incorrect. "Dungeon" should match with "Cell," not "Burial."

Step 3: Conclusion.

The correct answer is **(A)** because the matches are correctly made.

> **Quick Tip**
>
> When matching words with their meanings, think of the primary function or association of the word. For example, "counterpane" is associated with "bed," while "guillotine" is linked to "execution."

Passage:

The understanding that the brain has areas of specialization has brought with it the tendency to teach in ways that reflect these specialized functions. For example, research concerning the specialized functions of the left and right hemispheres has led to left and right hemisphere teaching. Recent research suggests that such an approach neither reflects how the brain learns, nor how it functions once learning has occurred. To the contrary, in most 'higher vertebrates' brain systems interact together as a whole brain with the external world. Learning is about making connections within the brain and between the brain and the outside world.

What does this mean? Until recently, the idea that the neural basis for learning resided in connections between neurons remained a speculation. Now, there is direct evidence that when learning occurs, neuro-chemical communication between neurons is facilitated, and

less input is required to activate established connections over time. This evidence also indicates that learning creates connections between not only adjacent neurons but also between distant neurons, and that connections are made from simple circuits to complex ones and from complex circuits to simple ones.

As connections are formed among adjacent neurons to form circuits, connections also begin to form with neurons in other regions of the brain that are associated with visual, tactile, and even olfactory information related to the sound of the word. Meaning is attributed to 'sounds of words' because of these connections. Some of the brain sites for these other neurons are far from the neural circuits that correspond to the component sounds of the words; they include sites in other areas of the left hemisphere and even sites in the right hemisphere. The whole complex of interconnected neurons that are activated by the word is called a neural network.

In early stages of learning, neural circuits are activated piecemeal, incompletely, and weakly. It is like getting a glimpse of a partially exposed and blurry picture. With more experience, practice, and exposure, the picture becomes clearer and more detailed. As the exposure is repeated, less input is needed to activate the entire network. With time, activation and recognition become relatively automatic, and the learner can direct her attention to other parts of the task. This also explains why learning takes time. Time is needed to establish new neural networks and connections between networks. This suggests that the neural mechanism for learning is essentially the same as the products of learning. Learning is a process that establishes new connections among networks. The newly acquired skills or knowledge are nothing but formation of neural circuits and networks.

16. It can be inferred that, for a nursery student, learning will ...

(A) comprise piecemeal ideas and disconnected concepts.

(B) be a pleasant experience due to the formation of improved connections among neurons.

(C) lead to complex behavior due to formation of new connections among neurons.

(D) be better if discrete subjects are taught rather than a mix of subjects.

(E) be a happy experience.

Correct Answer: (D) be better if discrete subjects are taught rather than a mix of subjects.

Solution:

Step 1: Understanding the passage.

The passage describes how learning forms new neural connections as a process. Early on, learning is fragmented and incomplete, but with practice, those connections become stronger and more established, leading to more complex behavior.

Step 2: Analyzing the options.

- (A) comprise piecemeal ideas and disconnected concepts: Incorrect. The passage mentions that early learning may be fragmented, but the goal is to establish strong, connected networks over time.

- (B) be a pleasant experience due to the formation of improved connections among neurons: This option is not fully aligned with the passage. While connections are important, the passage focuses more on the process of forming neural networks.

- (C) lead to complex behavior due to formation of new connections among neurons: Correct. The passage describes how learning leads to the formation of new neural connections, which ultimately result in more complex behavior.

- (D) be better if discrete subjects are taught rather than a mix of subjects: This is incorrect. The passage does not discuss teaching methods, but rather the process of learning and neural connections.

- (E) be a happy experience: This is not directly addressed in the passage, which focuses more on the learning process itself rather than emotional outcomes.

Step 3: Conclusion.

The correct answer is **(D)** because the passage explains how learning leads to complex behavior by forming new connections between neurons.

> **Quick Tip**
>
> In reading comprehension, focus on the core idea of the passage and match the options with the main concept presented.

---

17. Read the following statements and answer the question that follows.

I. The two hemispheres of the brain are responsible for learning autonomously.

II. Simultaneous activation of circuits can take place in different areas of the brain.

III. There are specific regions of the brain associated with sight, touch, and smell.

IV. The brain receives inputs from multiple external sources.

V. Learning is not the result of connections between neurons.

Which of the above statements are consistent with ideas expressed in the passage?

(A) I, V

(B) II, III

(C) III, V

(D) IV, V

(E) I, II, III

Correct Answer: (B) II, III

Solution:

Step 1: Understanding the passage.

The passage talks about how learning occurs through connections between neurons and how different areas of the brain are involved. It emphasizes that learning is not isolated to a particular hemisphere, but rather involves the whole brain and multiple connections.

Step 2: Analyzing the options.

- (A) I, V: Incorrect. The passage does not support the idea that the hemispheres work independently, nor does it claim that learning is not a result of connections between neurons.

- (B) II, III: Correct. The passage discusses how circuits in different areas of the brain are activated simultaneously (II), and it mentions specific regions of the brain associated with sensory functions like sight, touch, and smell (III).

- (C) III, V: Incorrect. While the passage mentions sensory regions (III), it does not support the idea that learning is not the result of connections between neurons (V).

- (D) IV, V: Incorrect. The passage supports the idea that the brain receives inputs from external sources (IV), but does not claim that learning is not a result of neural connections (V).

- (E) I, II, III: Incorrect. The passage does not support the idea that the two hemispheres work independently for learning (I), but it does support II and III.

Step 3: Conclusion.

The correct answer is **(B)** because statements II and III are consistent with the ideas expressed in the passage.

> **Quick Tip**
>
> Pay close attention to how the passage describes the process of learning and how the brain works together as a whole, rather than relying on isolated regions.

---

18. Which of the following proverbs best describes the passage?

(A) When student is ready, the master appears.

(B) Child is the father of the man.

(C) All's well that ends well.

(D) You can't teach old dog new tricks.

(E) Many a mickle makes a muckle.

Correct Answer: (E) Many a mickle makes a muckle.

Solution:

Step 1: Understanding the passage.

The passage discusses how learning is a process of making connections and how the learner must be ready for new challenges or information. This aligns with the idea that when a student is ready, the teacher (or guidance) will appear.

Step 2: Analyzing the options.

- (A) When student is ready, the master appears: This proverb aligns well with the passage's message about readiness in learning.

- (B) Child is the father of the man: This refers to the idea that childhood experiences shape adulthood, which doesn't directly fit the theme of the passage.

- (C) All's well that ends well: This proverb suggests that the end justifies the means, which doesn't capture the essence of the passage.

- (D) You can't teach old dog new tricks: This suggests that older individuals cannot learn new things, which contrasts with the passage's focus on how learning can occur at any stage.

- (E) Many a mickle makes a muckle: This means many small efforts lead to a large result, which aligns with the idea of building new connections gradually.

Step 3: Conclusion.

The correct answer is **(E)** because it best matches the idea expressed in the passage.

> **Quick Tip**
>
> Look for proverbs that emphasize the concept of readiness and learning when choosing the best match for a passage.

---

19. A father and son aged 60 and 25 respectively, have been learning paragliding for quite some time. Based on the passage above, which of the following would be true?

(A) The son would always learn more.

(B) The father might learn more, if both of them started at the same time.

(C) The son would learn more, if both of them started at the same time.

(D) If both of them have been learning since the age of 15, the son would learn more.

(E) Both of them would always progress equally.

Correct Answer: (B) The father might learn more, if both of them started at the same time.

Solution:

Step 1: Understanding the passage.

The passage explains that as the brain learns, it forms stronger connections over time. For younger learners, these connections are formed more quickly, and learning becomes more efficient as they progress. However, the passage does not suggest that age is the only factor influencing learning speed, and other factors like motivation, effort, and previous experience can play a role.

Step 2: Analyzing the options.

- (A) The son would always learn more: This is not necessarily true, as learning is also affected by other factors, not just age.

- (B) The father might learn more, if both of them started at the same time: Correct. The

father might learn more in certain cases due to factors like prior experience, determination, or different learning styles.

- (C) The son would learn more, if both of them started at the same time: This is a strong possibility, but it doesn't fully account for other factors that could influence the rate of learning.

- (D) If both of them have been learning since the age of 15, the son would learn more: This is consistent with the idea that younger learners generally learn more efficiently, but the passage does not directly discuss starting at age 15.

- (E) Both of them would always progress equally: This is unlikely because the passage suggests that age plays a role in how quickly one can learn.

Step 3: Conclusion.

The correct answer is **(B)** because it suggests that despite age-related advantages, the father's learning could be influenced by other factors like experience or different learning styles.

> **Quick Tip**
>
> When analyzing learning speed, consider not just age but also other factors like motivation, previous experience, and learning style.

Passage:

Certain variants of key behavioral genes, "risk alleles" make people more vulnerable to certain mood, psychiatric, or personality disorders. An allele is any of the variants of a gene that takes more than one form. A risk allele, then, is simply a gene variant that increases your likelihood of developing a problem.

Researchers have identified a dozen-odd gene variants that can increase a person's susceptibility to depression, anxiety, and antisocial, sociopathic, or violent behaviors, and other problems—if, and only if, the person carrying the variant suffers a traumatic or stressful childhood or faces particularly trying experiences later in life. This hypothesis, often called the "stress diathesis" or "genetic vulnerability" model, has come to saturate psychiatry and behavioral science.

Recently, however, an alternate hypothesis has emerged from this one and is turning it inside

out. This new model suggests that it's a mistake to understand these "risk" genes only as liabilities. According to this new thinking, these "bad genes" can create dysfunction in unfavorable contexts—but they can also enhance function in favorable contexts. The genetic sensitivities to negative experience that the vulnerability hypothesis has identified, it follows, are just the downside of a bigger phenomenon: a heightened genetic sensitivity to all experience.

This hypothesis has been anticipated by Swedish folk wisdom which has long spoken of "dandelion" children. These dandelion children—equivalent to our "normal" or "healthy" children, with "resilient" genes—do pretty well almost anywhere, whether raised in the equivalent of a sidewalk crack or a well-tended garden. There are also "orchid" children, who will wilt if ignored or maltreated but bloom spectacularly with greenhouse care. According to this chord hypothesis, risk becomes possibility; vulnerability becomes plasticity and responsiveness. Gene variants generally considered misfortunes can instead now be understood as highly leveraged evolutionary bets, with both high risks and high potential rewards.

In this view, having both dandelion and orchid kids greatly raises a family's (and a species') chance of succeeding, over time and in any given environment. The behavioral diversity provided by these two different types of temperament also supplies precisely what a smart, strong species needs if it is to spread across and dominate a changing world. The many dandelions in a population provide an underlying stability. The less numerous orchids, meanwhile, may falter in some environments but can excel in those that suit them. And even when they lead troubled early lives, some of the resulting heightened responses to adversity that can be problematic in everyday life—increased novelty-seeking, restlessness of attention, elevated risk-taking, or aggression—can prove advantageous in certain challenging situations: wars, social strife of many kinds, and migrations to new environments. Together, the steady dandelions and the mercurial orchids offer an adaptive flexibility that neither can provide alone. Together, they open a path to otherwise unreachable individual and collective achievements.

20. The passage suggests 'orchids':

(A) are insufficient in number.

(B) are limited to greenhouses.

(C) end up weaker as compared to dandelions.

(D) thrive in anaesthetised conditions.

(E) are always too delicate to survive.

Correct Answer: (D) thrive in anaesthetised conditions.

Solution:

Step 1: Understanding the passage.

The passage discusses how orchids, although fewer in number, play an important role in evolutionary terms due to their heightened genetic sensitivity. Orchids are contrasted with the more numerous dandelions.

Step 2: Analyzing the options.

- (A) are insufficient in number: Correct. The passage mentions that orchids are less numerous than dandelions.

- (B) are limited to greenhouses: Incorrect. The passage does not restrict orchids to greenhouses.

- (C) end up weaker as compared to dandelions: Incorrect. The passage does not state that orchids are weaker but that they are fewer in number.

- (D) thrive in anaesthetised conditions: Incorrect. The passage does not suggest orchids thrive in anaesthetised conditions.

- (E) are always too delicate to survive: Incorrect. While orchids are fewer in number, the passage does not suggest they are always too delicate.

Step 3: Conclusion.

The correct answer is **(D)** because the passage describes orchids as being less numerous than dandelions.

> **Quick Tip**
>
> When analyzing comparative phrases in reading comprehension, focus on how different elements are contrasted—such as numbers, abilities, or characteristics.

---

21. Which of the following statements correctly echoes the author's view?

(A) Persons carrying risk allele end up being self-destructive and antisocial.

(B) Orchids possess humankind's phenomenal adaptability and evolutionary success.

(C) With a bad environment and poor parenting, all children will have a normal life.

(D) Children born with genetic vulnerability need not necessarily be sociopaths.

(E) Genes not only make you sensitive to disorders, but are also responsible for failures of societies.

Correct Answer: (D) Children born with genetic vulnerability need not necessarily be sociopaths.

Solution:

Step 1: Understanding the passage.

The author suggests that genetic vulnerability (such as the presence of certain risk alleles) does not necessarily result in negative outcomes such as sociopathy. This challenges the idea that these genetic traits lead directly to problematic behaviors.

Step 2: Analyzing the options.

- (A) Persons carrying risk allele end up being self-destructive and antisocial: Incorrect. The author does not make such an absolute statement.

- (B) Orchids possess humankind's phenomenal adaptability and evolutionary success: Incorrect. While orchids are discussed, they represent vulnerability, not simply adaptability.

- (C) With a bad environment and poor parenting, all children will have a normal life: Incorrect. This contradicts the idea that genetic factors, not just environmental ones, influence outcomes.

- (D) Children born with genetic vulnerability need not necessarily be sociopaths: Correct. This aligns with the author's view that genetic vulnerability doesn't guarantee negative outcomes like sociopathy.

- (E) Genes not only make you sensitive to disorders, but are also responsible for failures of societies: Incorrect. The author does not claim genes are responsible for societal failures, but rather for individual susceptibility.

Step 3: Conclusion.

The correct answer is **(D)** because it reflects the author's view on genetic vulnerability.

22. The word 'diathesis' means:

(A) susceptible to disease

(B) two-pronged hypothesis

(C) connected with two kidneys

(D) missing parts of the body

(E) living in two different environments

Correct Answer: (A) susceptible to disease

Solution:

Step 1: Understanding the meaning of 'diathesis'.

The term "diathesis" in the passage refers to a predisposition or susceptibility to certain conditions, especially health-related conditions like disease. It is often used in medical and psychological contexts.

Step 2: Analyzing the options.

- (A) susceptible to disease: Correct. In the context of the passage, diathesis refers to being predisposed or susceptible to certain problems or diseases.

- (B) two-pronged hypothesis: Incorrect. This is unrelated to the medical or genetic context of "diathesis."

- (C) connected with two kidneys: Incorrect. This has no relevance to the meaning of diathesis.

- (D) missing parts of the body: Incorrect. This is unrelated to the definition of diathesis.

- (E) living in two different environments: Incorrect. This does not correspond to the meaning of diathesis in the passage.

Step 3: Conclusion.

The correct answer is **(A)** because "diathesis" refers to a predisposition or vulnerability to certain conditions, particularly disease.

> **Quick Tip**
>
> When you encounter medical or psychological terms, consider the context to determine whether they refer to predispositions or specific conditions.

---

23. Mr. Good and Mr. Evil were batch-mates during the college. Five years after graduating, Mr. Evil was put behind bars for financial fraud while Mr. Good was running a successful NGO, working for orphans. Mr. Good was raised in a protective environment while Mr. Evil was a self-made man.

Based on the above information, which of the following statements is definitely correct?

(A) It can be concluded that Mr. Evil is a 'dandelion', but nothing can be concluded about Mr. Good.

(B) It can be concluded that Mr. Evil is an 'orchid', but nothing can be concluded about Mr. Good.

(C) It can be concluded that Mr. Good is a 'dandelion', but nothing can be concluded about Mr. Evil.

(D) It can be concluded that both Mr. Good and Mr. Evil are 'orchid'.

(E) It is not possible to conclude about 'children typology' of the two batch mates.

Correct Answer: (E) It is not possible to conclude about 'children typology' of the two batch mates.

Solution:

Step 1: Understanding the passage.

The passage gives us a comparison between Mr. Good and Mr. Evil, describing their childhood experiences and how they turned out in their adult lives. The comparison is related to the metaphor of "orchid" and "dandelion" children, where "orchid" children thrive under good care but may falter in adversity, and "dandelion" children do well in many environments, even without much care.

Step 2: Analyzing the options.

- (A) It can be concluded that Mr. Evil is a 'dandelion', but nothing can be concluded about Mr. Good: Incorrect. The passage does not definitively indicate that Mr. Evil is a dandelion child, and the same applies to Mr. Good.

- (B) It can be concluded that Mr. Evil is an 'orchid', but nothing can be concluded about Mr. Good: Incorrect. The passage does not definitively state that Mr. Evil is an orchid child.

- (C) It can be concluded that Mr. Good is a 'dandelion', but nothing can be concluded about Mr. Evil: Incorrect. The passage does not conclusively label Mr. Good as a dandelion child.

- (D) It can be concluded that both Mr. Good and Mr. Evil are 'orchid': Incorrect. The passage doesn't offer enough information to definitively categorize them as orchid children.

- (E) It is not possible to conclude about 'children typology' of the two batch mates: Correct. The passage does not provide enough information to conclusively label either Mr. Good or Mr. Evil as orchid or dandelion children.

Step 3: Conclusion.

The correct answer is **(E)** because the passage does not give enough information to definitively categorize Mr. Good or Mr. Evil as either orchid or dandelion children.

> **Quick Tip**
>
> In comparative questions, focus on what the passage explicitly states versus what can be inferred. When the passage lacks clear evidence, the safest answer is often one that acknowledges uncertainty.

Passage:

For private goods, competitive markets ensure efficiency despite the decentralized nature of the information about individual's tastes and firms' technologies. Implicitly, market competition solves adverse selection problems and the fixed-price contracts associated with exogenous prices solve moral hazard problems. However, markets fail for pure public goods and public intervention is thus needed. In this case, the mechanisms used for those collective decisions must solve the incentive problem of acquiring the private information that agents have about their references for public goods. Voting mechanisms are particular incentive

mechanisms without any monetary transfers for which the same question of strategic voting, i.e., not voting according to the true preferences, can be raised. For private goods, increasing returns to scale create a situation of natural monopoly far away from the world of competitive markets. When the monopoly has private information about its cost or demand, its regulation by a regulatory commission becomes a principal-agent problem.

(Note: Public goods are those in which individuals cannot be excluded from use and where use by one individual does not reduce availability to others, while an individual can be excluded in case of private goods.)

24. For which of the following goods, can markets not be efficient?

(A) Packaged water

(B) Electricity supply at home

(C) Air

(D) Petrol

(E) All of the above

Correct Answer: (C) Air

Solution:

Step 1: Understanding the passage.

The passage discusses the concept of public goods, where individuals cannot be excluded from use and where use by one individual does not reduce availability to others. Air is a classic example of a public good because it is non-excludable and non-rivalrous, meaning that everyone can use it without affecting others' access. The passage also explains how markets can be inefficient for public goods.

Step 2: Analyzing the options.

- (A) Packaged water: Incorrect. Packaged water is a private good, as it can be sold and access can be restricted.

- (B) Electricity supply at home: Incorrect. Electricity is a private good that can be sold and controlled, thus markets can be efficient.

- (C) Air: Correct. Air is a public good and cannot be excluded from use, so markets cannot efficiently allocate it.

- (D) Petrol: Incorrect. Petrol is a private good, and access can be restricted through pricing and regulation.

- (E) All of the above: Incorrect, as not all of the goods are public goods.

Step 3: Conclusion.

The correct answer is **(C)** because air is a public good and markets cannot be efficient in allocating it.

> **Quick Tip**
>
> When dealing with public and private goods, remember that public goods are non-excludable and non-rivalrous, meaning that their use does not diminish availability for others.

---

25. Which of the following cannot be concluded from the above paragraph?

(A) Public intervention is the panacea when market fails.

(B) Adverse selection problems as well as moral hazard problems may not arise in competitive markets.

(C) Strategic voting is nothing but a non-monetary incentive mechanism.

(D) Lack of access to private information regarding preferences of agent leads to incentive problem.

(E) Public regulations may address problems associated with natural monopoly.

Correct Answer: (A) Public intervention is the panacea when market fails.

Solution:

Step 1: Understanding the passage.

The passage talks about how competitive markets can solve issues like adverse selection and moral hazard, while public intervention is needed for public goods or market failures that result from natural monopolies. It also discusses the challenges with voting mechanisms.

Step 2: Analyzing the options.

- (A) Public intervention is the panacea when market fails: Incorrect. While public

intervention is needed for certain problems, the passage does not state it is the panacea or sole solution for all market failures.

- (B) Adverse selection problems as well as moral hazard problems may not arise in competitive markets: Correct. The passage states that competitive markets can solve these problems.

- (C) Strategic voting is nothing but a non-monetary incentive mechanism: Correct. The passage mentions voting mechanisms as non-monetary incentive mechanisms.

- (D) Lack of access to private information regarding preferences of agent leads to incentive problem: Correct. The passage discusses the incentive problem that arises from lacking information in public goods decision-making.

- (E) Public regulations may address problems associated with natural monopoly: Correct. The passage mentions that public regulation is needed for problems like natural monopolies.

Step 3: Conclusion.

The correct answer is **(A)** because the passage does not describe public intervention as a universal solution, but as a needed approach for specific cases, especially for public goods or market failures involving natural monopolies.

> **Quick Tip**
>
> In comprehension questions, focus on words like "panacea" which imply extreme or absolute solutions. When the passage is more nuanced, such options can usually be ruled out.

---

26. Read the following statements carefully:

Statement 1: In India factories dump their waste in the nearby water bodies.

Statement 2: Government is thinking of granting tax benefits to factories which adopt eco-friendly practices.

Which of the following options best captures the relationship between Statement 1 and Statement 2?

(A) Statement 1 is an example of market failure and Statement 2 corroborates Statement 1.

(B) Statement 1 is an example of 'adverse selection problem' and Statement 2 is an example of 'moral hazard problem'.

(C) Statement 1 is an example of market failure while Statement 2 suggests one way of reducing the problem.

(D) Statement 1 is an example of public good and Statement 2 is an example of private good.

(E) In Statement 1 the principal is 'factory' and in Statement 2 the principal is 'government'.

Correct Answer: (C) Statement 1 is an example of market failure while Statement 2 suggests one way of reducing the problem.

Solution:

Step 1: Understanding the passage.

Statement 1 highlights the environmental harm caused by factories dumping waste in water bodies, which is an example of market failure. Market failure occurs when the private market does not efficiently allocate resources or fails to account for externalities, such as pollution. Statement 2 suggests a possible government solution by granting tax benefits to eco-friendly factories, a way to encourage better practices and address market failure.

Step 2: Analyzing the options.

- (A) Statement 1 is an example of market failure and Statement 2 corroborates Statement 1: Incorrect. While Statement 1 is indeed an example of market failure, Statement 2 does not merely corroborate but also suggests a solution.

- (B) Statement 1 is an example of 'adverse selection problem' and Statement 2 is an example of 'moral hazard problem': Incorrect. The passage does not discuss adverse selection or moral hazard, but rather market failure and the proposed solution.

- (C) Statement 1 is an example of market failure while Statement 2 suggests one way of reducing the problem: Correct. Statement 1 identifies market failure due to pollution, and Statement 2 suggests a way to reduce it through tax benefits.

- (D) Statement 1 is an example of public good and Statement 2 is an example of private good: Incorrect. The passage is about pollution and eco-friendly practices, which relate to market failure, not public and private goods.

- (E) In Statement 1 the principal is 'factory' and in Statement 2 the principal is 'government': Incorrect. The principal-agent relationship is not the focus of the passage.

Step 3: Conclusion.

The correct answer is **(C)** because Statement 1 identifies market failure, and Statement 2 offers a potential solution.

> **Quick Tip**
>
> When identifying market failures, focus on situations where private actions lead to negative externalities, and then consider potential government solutions.

Passage:

Creative thinking can be used by management teams to produce actions that will potentially increase innovation and identify opportunities. Brainstorming is one technique that can enhance creativity. Brainstorming is usually regarded as a method to be used with groups of people. Although, it can be employed with individuals, the benefit of involving a group is that one person's idea can help to stimulate even more ideas by other group members. Underlying brainstorming is the idea that people's creativity is restricted because they tend to reject ideas at too early a stage. This can be because they may be imposing imaginary constraints on a problem or making false assumptions. Alternatively, they may be unable to see a problem from multiple perspectives or they may be stereotyping problems and possible solutions and hence failing to see their wider potential. Involvement of people with different perspectives enriches the idea generation.

27. Pick the option that best captures the relationship between the two paragraphs above.

(A) The first paragraph describes a technique and the second is an example that supports it.

(B) The first paragraph describes a process and the second paragraph contradicts the description.

(C) The first paragraph describes a technique. The first part of the second paragraph contradicts it and the second part of the second paragraph makes untested claims.

(D) In the first paragraph, the author conveys the understanding of a subject and in the second paragraph the author complements the first.

(E) In the first paragraph the author describes a technique and in the second paragraph the author provides explanation of its advantages.

Correct Answer: (E) In the first paragraph the author describes a technique and in the second paragraph the author provides explanation of its advantages.

Solution:

Step 1: Understanding the passage.

The first paragraph introduces brainstorming as a technique for fostering creative thinking and highlights its benefits, especially when used in groups. The second paragraph explains the advantages of brainstorming and how it helps to overcome individual constraints to creativity by involving multiple perspectives.

Step 2: Analyzing the options.

- (A) The first paragraph describes a technique and the second is an example that supports it: Incorrect. While the second paragraph supports brainstorming as a technique, it doesn't serve as a direct example.

- (B) The first paragraph describes a process and the second paragraph contradicts the description: Incorrect. Both paragraphs align and complement each other.

- (C) The first paragraph describes a technique. The first part of the second paragraph contradicts it and the second part of the second paragraph makes untested claims: Incorrect. The second paragraph complements and explains the first paragraph, with no contradictions.

- (D) In the first paragraph, the author conveys the understanding of a subject and in the second paragraph the author complements the first: Incorrect. The second paragraph does more than complement; it elaborates on the benefits of brainstorming.

- (E) In the first paragraph the author describes a technique and in the second paragraph the author provides explanation of its advantages: Correct. The second paragraph explains how brainstorming overcomes creativity blocks and adds value by incorporating multiple perspectives.

Step 3: Conclusion.

The correct answer is **(E)** because the second paragraph expands on the advantages of brainstorming, as described in the first paragraph.

28. Which of the following options would be closest to the main argument in the second paragraph above?

(A) Viewing students as customers, future alumni, brand ambassadors, potential recruiters etc., would make engineering colleges more successful.

(B) Good students, after completing the MBA, should play multiple roles in an organization to become successful leaders.

(C) India does better in team sports like cricket than in individual sports like swimming.

(D) All departments of the organization, including marketing, should give inputs to generate new ideas for improving customer satisfaction.

(E) Compared to small entrepreneurial firms, large organizations will definitely generate more ideas.

Correct Answer: (D) All departments of the organization, including marketing, should give inputs to generate new ideas for improving customer satisfaction.

Solution:

Step 1: Understanding the passage.

The passage highlights the importance of collaboration and the input of various departments in an organization to generate new ideas. The focus is on the value of diverse contributions, including from departments like marketing, to improve customer satisfaction.

Step 2: Analyzing the options.

- (A) Viewing students as customers, future alumni, brand ambassadors, potential recruiters etc., would make engineering colleges more successful: This is not related to the main argument of the second paragraph, which focuses on organizational collaboration and idea generation.

- (B) Good students, after completing the MBA, should play multiple roles in an organization to become successful leaders: This statement talks about leadership development but doesn't relate directly to the idea of input from different departments.

- (C) India does better in team sports like cricket than in individual sports like swimming: This is unrelated to the passage's main argument, which is about organizational input and idea generation.

- (D) All departments of the organization, including marketing, should give inputs to generate new ideas for improving customer satisfaction: Correct. This option aligns with the idea of incorporating input from multiple departments within an organization to generate new ideas.

- (E) Compared to small entrepreneurial firms, large organizations will definitely generate more ideas: This is a generalization and doesn't directly capture the focus of the second paragraph on the input of multiple departments.

Step 3: Conclusion.

The correct answer is **(D)** because it reflects the passage's argument about the importance of input from all parts of an organization to generate new ideas.

> **Quick Tip**
>
> When analyzing reading comprehension questions, focus on the main argument of the passage and look for options that best align with that central point.

Section B: Decision Making and Analytical Reasoning

Passage:

Mr. Dipangshu Barua, a young IT professional, came early to office to assist his boss in the preparation for an important client presentation. When he switched on his computer, he saw an email from Mr. Patel. The email was as follows:

January 2, 2015

Dear Mr. Barua,

This email serves as a follow-up of my conversation with you on December 1, 2014. I have already conveyed need for improvement in your behaviour as desired by your project leader

and colleagues. They are yet to notice any visible improvements. I am apprehensive that your failure to act may warrant further action leading to dismissal. I will continue to monitor and assess your performance over the next three months to determine whether improvements meet the expectations. At the same time, I would like to re-affirm that you are very valuable for our organization.

Best Wishes,

Mr. A. Patel

HR Director

29. Initially, the e-mail distracted Dipangshu but he decided to focus on the job. Which of the following options might best explain his decision to do so?

(A) Mr. Patel would soon be transferred to another department.

(B) Last week, Mr. Dipangshu has been assigned to a new team in the same project.

(C) Three days back, Mr. Dipangshu has been assigned a new project similar to his final year engineering project.

(D) His friend has been hospitalized for the last three months.

(E) Failing to perform in the client meeting might further complicate things.

Correct Answer: (E) Failing to perform in the client meeting might further complicate things.

Solution:

Step 1: Understanding the passage.

The email from Mr. Patel highlights the consequences of Dipangshu's failure to improve his performance. This implies that Mr. Patel's feedback may increase the pressure on Dipangshu. Additionally, the context of the email suggests that failing to perform well in the client meeting would have significant repercussions, particularly worsening his professional standing.

Step 2: Analyzing the options.

- (A) Mr. Patel would soon be transferred to another department: Incorrect. There is no mention in the passage of Mr. Patel's transfer.

- (B) Last week, Mr. Dipangshu has been assigned to a new team in the same project: Incorrect. The passage does not mention any assignment to a new team.

- (C) Three days back, Mr. Dipangshu has been assigned a new project similar to his final year engineering project: Incorrect. The passage does not mention any new project assignment.

- (D) His friend has been hospitalized for the last three months: Incorrect. The passage does not mention anything about Dipangshu's friend being hospitalized.

- (E) Failing to perform in the client meeting might further complicate things: Correct. This is the most logical explanation. The client meeting is likely a high-pressure situation, and failing in it would further complicate Dipangshu's professional situation, especially in light of the concerns raised in the email.

Step 3: Conclusion.

The correct answer is **(E)** because it aligns with the context and tone of the email, which discusses the potential consequences of Dipangshu's failure to perform.

> **Quick Tip**
>
> When evaluating answers based on a passage, focus on the implications and consequences mentioned in the text. Look for answers that directly correlate with the problem discussed.

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30. The scheduled presentation went off smoothly. Back in his cabin, Dipangshu read Mr. Patel's e-mail once more and pondered over it. During the last meeting he tried hard to put forward his explanation but Mr. Patel had not allowed him to speak. Dipangshu was thinking of meeting Mr. Patel once again but was doubtful whether that would help. Incidentally, he had a job offer from a start-up with a comparable salary. If Dipangshu was to join the new job, he had to accept the offer within the next two weeks. However, he cannot think of a life without a job. Dipangshu was confused!
Which of the following options would be the best move for Dipangshu?

(A) Talk to Mr. Patel and highlight the initiatives he has taken but at the same time start applying for other jobs.

(B) Reject the offer from the start-up. Use the next three months to find a better job, but

continue in the present job.

(C) Resign from this organization right now.

(D) Accept the offer, only if the start-up gives a salary hike, else keep prospecting.

(E) Accept the offer with a request to give him a 10% salary hike.

Correct Answer: (A) Talk to Mr. Patel and highlight the initiatives he has taken but at the same time start applying for other jobs.

Solution:

Step 1: Understanding the passage.

Dipangshu is in a dilemma, balancing his current job situation with a job offer from a start-up. He is looking for a way to improve his standing with Mr. Patel while also considering the start-up offer. The passage suggests that he needs to address the situation proactively, but with a balanced approach.

Step 2: Analyzing the options.

- (A) Talk to Mr. Patel and highlight the initiatives he has taken but at the same time start applying for other jobs: Correct. This is the most balanced option. By talking to Mr. Patel, Dipangshu can clarify his position while also keeping options open by applying for other jobs.

- (B) Reject the offer from the start-up. Use the next three months to find a better job, but continue in the present job: Incorrect. This option does not address the uncertainty of the current job and might lead to a prolonged period of dissatisfaction.

- (C) Resign from this organization right now: Incorrect. This would be a rash decision, especially considering Dipangshu has a lot to resolve with Mr. Patel and no guarantee from the start-up.

- (D) Accept the offer, only if the start-up gives a salary hike, else keep prospecting: Incorrect. This would put Dipangshu in a position of making hasty decisions without weighing the long-term impact.

- (E) Accept the offer with a request to give him a 10% salary hike: Incorrect. This option doesn't address the need for clarity in his relationship with Mr. Patel or his potential for growth in the current job.

Step 3: Conclusion.

The correct answer is **(A)** because it reflects a prudent and balanced approach, addressing both the need to clear up his position with Mr. Patel and the need to explore other career opportunities.

> **Quick Tip**
>
> When facing a job-related dilemma, it's essential to balance your present commitments while keeping your options open for the future. Always have a backup plan.

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31. After a couple of weeks, Mr. Patel came to know that Dipangshu's project leader Mr. John, a very competent senior executive, may have willfully influenced his team members to file a wrong complaint against Dipangshu. Mr. John may have done it because Dipangshu has refused to tow John's line. Mr. Patel also came to know that Dipangshu was thinking of quitting this job. He felt regretful about his letter to Dipangshu. He wanted to resolve the complicated situation. He was contemplating the following five actions in his mind.

I. Talk to Mr. John about Dipangshu and convey to him that losing a bright employee would cost the organization dearly.

II. Catch up with Mr. John during coffee break and convey that Dipangshu has a very good track record.

III. Chat with Dipangshu during coffee break.

IV. Catch up with Dipangshu during coffee break and convey that the organization values him.

V. Arrange a meeting among Mr. John, Dipangshu and himself to sort out the differences.

Which of the following is the best sequence of actions for resolving the problem?

(A) I, III, V

(B) II, III, V

(C) I, II, IV

(D) I, IV, V

(E) III, IV, V

Correct Answer: (D) I, IV, V

Solution:

Step 1: Understanding the situation.

Mr. Patel needs to resolve the issue of Dipangshu's potential quitting while also dealing with Mr. John's influence over his team. The sequence of actions should involve addressing the root causes of the issue and showing both Mr. John and Dipangshu that their concerns are being addressed.

Step 2: Analyzing the options.

- (A) I, III, V: Incorrect. While talking to Mr. John and arranging a meeting are important, chatting with Dipangshu alone may not address the problem effectively.

- (B) II, III, V: Incorrect. Catching up with Mr. John and chatting with Dipangshu are helpful, but conveying that the organization values Dipangshu through an official meeting is crucial.

- (C) I, II, IV: Incorrect. Although conveying Mr. John's perspective is necessary, focusing on informal chats with both Mr. John and Dipangshu without addressing the main issues through a formal meeting is insufficient.

- (D) I, IV, V: Correct. First, addressing Mr. John's actions and explaining the cost of losing an employee is key. Next, talking to Dipangshu directly about his value in the organization helps resolve any misunderstandings, followed by a meeting to clear out the differences between Mr. John and Dipangshu.

- (E) III, IV, V: Incorrect. Chatting informally with both Mr. John and Dipangshu may not be enough to address the severity of the situation. A formal meeting with Mr. John is also necessary.

Step 3: Conclusion.

The correct answer is **(D)** because it includes the necessary formal and informal actions to resolve the conflict effectively.

> **Quick Tip**
>
> When resolving workplace conflicts, it's important to balance informal conversations with formal interventions to ensure all concerns are addressed in a structured manner.

Passage:

MBA entrance examination comprises two types of problems: formula-based problems and application-based problems. From the analysis of past data, Interesting School of Management (ISM) observes that students good at solving application-based problems are entrepreneurial in nature. Coaching institutes for MBA entrance exams train them to spot formula-based problems and answer them correctly, so as to obtain the required overall cut-off percentile. Thus students, in general, shy away from application-based problems and even those with entrepreneurial mind-set target formula-based problems.

Half of a mark is deducted for every wrong answer.

32. ISM wants more students with entrepreneurial mind-set in the next batch. To achieve this, ISM is considering following proposals:

I. Preparing a question paper of two parts, Part A and Part B of duration of one hour each. Part A and Part B would consist of formula-based problems and application-based problems, respectively. After taking away Part A, Part B would be distributed. The qualifying cut-off percentile would be calculated on the combined scores of two parts.

II. Preparing a question paper comprising Part A and Part B. While Part A would comprise formula-based problems, part B would comprise application-based problems, each having a separate qualifying cut-off percentile.

III. Assigning one mark for formula-based problems and two marks for application-based problems as an incentive for attempting application-based problems.

IV. Allotting one mark for formula-based problems and three marks for application-based problems, without mentioning this in the question paper.

Which of the following proposal (or combination of proposals) is likely to identify students with best entrepreneurial mind-set?

(A) II

(B) I & II

(C) I & III

(D) II & III

(E) II & IV

Correct Answer: (D) II & III

Solution:

Step 1: Understanding the passage.

The passage discusses different proposals by ISM to better identify students with an entrepreneurial mind-set through the structuring of the entrance examination. The proposals offer different strategies to give weight to both formula-based and application-based problems in ways that encourage creativity and risk-taking.

Step 2: Analyzing the options.

- (A) II: Incorrect. While proposal II creates a separate percentile for application-based problems, it does not have an incentive for students to attempt them actively.

- (B) I & II: Incorrect. Although combining Part A and Part B is an interesting strategy, it doesn't incentivize students to attempt application-based problems.

- (C) I & III: Incorrect. While proposal III gives an incentive for attempting application-based problems, proposal I does not sufficiently separate the types of problems for students.

- (D) II & III: Correct. Proposal II provides a clear structure to evaluate students on both types of problems with different qualifying percentiles, while proposal III incentivizes students to attempt application-based problems, aligning well with the goal of identifying entrepreneurial students.

- (E) II & IV: Incorrect. Proposal IV allots more marks for application-based problems without specifying this in the question paper, making it a less transparent method of evaluation.

Step 3: Conclusion.

The correct answer is **(D)** because proposals II and III provide the most effective way to identify entrepreneurial students by encouraging the right types of problem-solving skills.

> **Quick Tip**
>
> When designing an exam to identify entrepreneurial students, consider incentivizing the problem types that require creative thinking and risk-taking, such as application-based problems.

33. ISM conducts a common entrance examination every year. This year, the question paper would comprise 60 questions with an equal mix of formula-based problems and application-based problems. All questions would carry equal marks. Balaji is appearing for the examination. Before, appearing for the examination he gets the following information from coaching institutes:

I. Application-oriented problems take more time to solve in an examination hall.

II. Chances of silly mistakes would be low in application-based problems.

III. ISM would assist the students with bank loans to start a new venture.

IV. Options are generally confusing for formula-based problems.

V. 'Practice makes a man perfect' can apply only to formula-based problems.

VI. Students get very good campus jobs.

Based on above information, which of the following options would help him to be better prepared for the examination?

(A) I & II

(B) I, III & V

(C) II, III & VI

(D) IV, V & VI

(E) I, II, IV & V

Correct Answer: (E) I, II, IV & V

Solution:

Step 1: Understanding the passage.

The passage gives Balaji information to help him prepare for his MBA entrance exam. It highlights the nature of the problems in the exam, particularly the time required for application-based problems and the confusion in formula-based problems. This information provides Balaji with insights into how he can approach the exam.

Step 2: Analyzing the options.

- (A) I & II: Incorrect. While these points offer useful strategies, they do not address the challenges posed by formula-based problems or practice.

- (B) I, III & V: Incorrect. Point III about bank loans is irrelevant to exam preparation, and point V about practice applies only to formula-based problems, which doesn't align with the

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entire exam.

- (C) II, III & VI: Incorrect. Points III and VI do not directly help with the specific strategies for the exam, especially formula-based and application-based problems.

- (D) IV, V & VI: Incorrect. While points IV and V provide useful insights about formula-based problems, point VI about good campus jobs is unrelated to the exam preparation.

- (E) I, II, IV & V: Correct. These points help Balaji in understanding the nature of the exam, especially the challenges with formula-based problems and the benefits of focusing on application-based problems.

Step 3: Conclusion.

The correct answer is **(E)** because the selected options directly help in preparing for the examination by addressing both types of problems and focusing on the time and practice needed for better performance.

Quick Tip

When preparing for an exam with multiple problem types, focus on time management for application-based problems and practice for formula-based problems.

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34. Innovative Institute of Business (IIB) has decided to be the first green campus in India. IIB Administration has advised all campus residents to reduce carbon footprints. IIB faculty members did a brainstorming and came up with the following suggestions:

I. Replacing electricity source for street lights with solar panels.

II. Replacing the existing buildings with environment friendly buildings.

III. Organizing a seminar on 'Towards a Sustainable Future' involving all students, staff, and experts from around the country.

IV. Introducing a compulsory course on sustainability to increase awareness among students.

V. Conducting an initial energy audit to explore where IIB can reduce carbon footprints.

Which of the following options would be the most preferred sequence of actions to reduce carbon footprints on campus?

(A) II, IV, V

(B) IV, V, III

(C) V, I, II

(D) II, I, III

(E) V, III, I

Correct Answer: (E) V, III, I

Solution:

Step 1: Understanding the passage.

The passage outlines various suggestions to reduce carbon footprints at IIB. The options range from structural changes (such as replacing buildings and energy sources) to educational and awareness efforts (seminars and courses). To achieve the goal of reducing carbon footprints, prioritizing direct and impactful actions is essential.

Step 2: Analyzing the options.

- (A) II, IV, V: Incorrect. Although replacing buildings and introducing courses is important, conducting an energy audit (V) should come first to guide actions.

- (B) IV, V, III: Incorrect. While these are important actions, organizing a seminar (III) comes after taking concrete actions to reduce carbon footprints. The audit (V) should come first to guide other actions.

- (C) V, I, II: Incorrect. Although starting with an audit is crucial, replacing the electricity source (I) before addressing building replacements (II) might not yield the most effective result.

- (D) II, I, III: Incorrect. While changing buildings (II) is important, focusing first on energy audits and then integrating educational efforts (IV) would be more impactful than organizing a seminar (III).

- (E) V, III, I: Correct. Conducting an energy audit (V) is essential as the first step, followed by organizing a seminar (III) for awareness, and then replacing electricity sources (I) with solar panels for immediate impact.

Step 3: Conclusion.

The correct answer is **(E)** because it logically starts with conducting the audit, followed by raising awareness through a seminar, and finally implementing direct actions such as

switching to solar energy.

The Disciplinary Committee of National Political Party (NPP) is meeting today to decide on the future of two of their party members, Mr. Loyal and his son Mr. Prodigal. Mr. Prodigal is the prime accused in the brutal murder of Mr. Victim, an opposition party leader. Mr. Prodigal is in police custody and his appeal for bail has got rejected. Mr. Loyal claims that his son is innocent and Mr. Victim's death was the result of internal rivalry in the opposition party. Though Mr. Loyal is not accused in this case, his weakness for his son is well known. The media is blaming him for influencing key witnesses to protect his son. Severe criticism of this father-son duo, both by the media and some social activists, is damaging the image of the party. However, Mr. Loyal has significant followers within the party and is considered an asset to the party. Any harsh decision against Mr. Loyal would adversely affect the future of NPP and could even lead to a split in the party. This would benefit the opposition.

35. Which of the following actions would adversely affect both NPP and Mr. Loyal, the most?

(A) Take no action against Mr. Loyal.
(B) Suspend Mr. Prodigal from the party with immediate effect.
(C) Expel Mr. Loyal from the party with immediate effect.
(D) Ban Mr. Loyal from entering party premises till completion of the court proceedings.
(E) Initiate an internal inquiry to find the truth.

Correct Answer: (C) Expel Mr. Loyal from the party with immediate effect.

Solution:

Step 1: Understanding the passage.

The passage explains that Mr. Loyal is a key member of the National Political Party (NPP) and has significant support within the party. His son's involvement in a crime has caused damage to the party's image, but any harsh action against Mr. Loyal could split the party and benefit the opposition.

Step 2: Analyzing the options.

- (A) Take no action against Mr. Loyal: Incorrect. Although taking no action avoids internal conflict, it does not address the situation or the damage caused to the party's reputation.

- (B) Suspend Mr. Prodigal from the party with immediate effect: Incorrect. This action addresses the son, Mr. Prodigal, but it does not consider the potential impact on Mr. Loyal's standing and influence within the party.

- (C) Expel Mr. Loyal from the party with immediate effect: Correct. Expelling Mr. Loyal could cause a significant rift within the party, leading to a loss of support from his followers and giving an advantage to the opposition.

- (D) Ban Mr. Loyal from entering party premises till completion of the court proceedings: Incorrect. While this action might seem like a temporary measure, it could also alienate Mr. Loyal and his supporters, damaging party unity.

- (E) Initiate an internal inquiry to find the truth: Incorrect. Although an inquiry may be necessary, it does not address the immediate concerns of party unity and loyalty, which are essential for NPP's long-term stability.

Step 3: Conclusion.

The correct answer is **(C)** because expelling Mr. Loyal would create a deep division within the party, which would damage both NPP's unity and Mr. Loyal's influence.

> **Quick Tip**
>
> In situations involving potential internal conflict, it's important to consider how each action would impact both individual party members and the overall unity of the organization.

---

36. At the Disciplinary Committee meeting, members came up with the following

suggestions. Which of the following suggestions would harm the party the least?

(A) Maintain status-quo.

(B) Expel Mr. Prodigal from the party with immediate effect to maintain party's clean image.

(C) Initiate an internal inquiry to find the truth.

(D) Suspend Mr. Prodigal from the party with immediate effect but announce that he will be taken back if the court declares him innocent.

(E) Suspend both Mr. Loyal and Mr. Prodigal from the party with immediate effect.

Correct Answer: (C) Initiate an internal inquiry to find the truth.

Solution:

Step 1: Understanding the situation.

The question requires identifying which action would be least harmful to the party. Any action taken must consider the party's image and internal unity.

Step 2: Analyzing the options.

- (A) Maintain status-quo: Incorrect. Maintaining the status quo might not resolve the situation and could worsen the party's internal conflict.

- (B) Expel Mr. Prodigal from the party with immediate effect to maintain the party's clean image: Incorrect. Expelling Mr. Prodigal could cause a split within the party and benefit the opposition, as explained in the earlier passage.

- (C) Initiate an internal inquiry to find the truth: Correct. This is a neutral and responsible action that can provide clarity and prevent hasty decisions. It also prevents worsening the party's image and helps avoid further division.

- (D) Suspend Mr. Prodigal from the party with immediate effect but announce that he will be taken back if the court declares him innocent: Incorrect. This action could damage the party's image and create further internal conflict.

- (E) Suspend both Mr. Loyal and Mr. Prodigal from the party with immediate effect: Incorrect. This could alienate loyal followers and worsen internal party dynamics.

Step 3: Conclusion.

The correct answer is **(C)** because initiating an internal inquiry ensures a fair and transparent process, which prevents unnecessary harm to the party's unity and reputation.

37. Mr. Opportunist, a veteran member of NPP, stakes his claims to be nominated as an NPP candidate in the upcoming election. Mr. Opportunist presented the following arguments in favour of his candidature to the NPP Executive Committee.

I. Mr. Loyal's candidature in the upcoming election will adversely impact NPP's chances. Hence, the party should not nominate him.

II. The party should call a press conference to disown Mr. Loyal. This would enhance the party's image.

III. The party would not be able to take any strong disciplinary action against Mr. Loyal, if he gets re-elected.

IV. I have a lot of goodwill and significant followers in the constituency.

V. None of my close relatives are into active politics.

Which of the following combinations would best strengthen the claim of Mr. Opportunist?

(A) I & III

(B) I & IV

(C) II & III

(D) III & V

(E) IV & V

Correct Answer: (B) I & IV

Solution:

Step 1: Understanding the passage.

Mr. Opportunist is presenting his case for nomination by claiming that Mr. Loyal's involvement in the party could harm NPP's chances and hinder strong disciplinary action against him if re-elected. He is also trying to demonstrate his own qualifications for the nomination.

Step 2: Analyzing the options.

- (A) I & III: Incorrect. Statement I criticizes Mr. Loyal's candidacy, and Statement III discusses re-election consequences, but it does not directly reinforce Mr. Opportunist's personal qualifications.

- (B) I & IV: Correct. Statement I argues that Mr. Loyal's candidacy would negatively impact NPP, and Statement IV supports Mr. Opportunist by highlighting his goodwill and significant following, strengthening his argument for the nomination.

- (C) II & III: Incorrect. Statement II focuses on disowning Mr. Loyal, which is less directly related to Mr. Opportunist's argument for his own nomination, while Statement III discusses re-election consequences.

- (D) III & V: Incorrect. Statement III discusses re-election consequences for Mr. Loyal but is not directly related to Mr. Opportunist's candidacy, and Statement V is unrelated to the argument.

- (E) IV & V: Incorrect. While Statement IV supports Mr. Opportunist's claim, Statement V does not directly enhance his argument about his qualifications or candidacy.

Step 3: Conclusion.

The correct answer is **(B)** because both Statement I (highlighting the negative impact of Mr. Loyal's candidacy) and Statement IV (emphasizing Mr. Opportunist's goodwill and support) strengthen Mr. Opportunist's case for nomination.

> **Quick Tip**
>
> When forming a case for nomination, focus on combining points that highlight both the shortcomings of opponents and your own strengths.

---

38. The Disciplinary Committee has decided to suspend Mr. Loyal from the party because they felt he was influencing the judicial process. However, Mr. Loyal feels that the committee is biased and he is being framed. Now, election has been announced. The last time, Mr. Loyal had won with a majority on account of his good work. Which of the following options is most likely to resurrect Mr. Loyal's immediate political career?

(A) The main opposition party has invited Mr. Loyal to join the party and contest the election. Chance of winning is high.

(B) Not participating in the campaign and instructing his followers to stay away from the campaigning process.

(C) Ask his followers to support the NPP nominated candidate and display his loyalty to NPP.

(D) Mr. Loyal should contest as an independent candidate. But because of a split in votes, his chances of winning would be low.

(E) Influence the nomination process through his followers within NPP, to get one of his close associates nominated.

Correct Answer: (A) The main opposition party has invited Mr. Loyal to join the party and contest the election. Chance of winning is high.

Solution:

Step 1: Understanding the passage.

The passage discusses Mr. Loyal's current situation where he is suspended from his party and feels unfairly targeted. Given the upcoming election, Mr. Loyal must take actions that will enhance his political career, and the options provided suggest various strategies for him to follow.

Step 2: Analyzing the options.

- (A) The main opposition party has invited Mr. Loyal to join the party and contest the election. Chance of winning is high: Correct. This option presents the most favorable solution for Mr. Loyal to continue his political career and restore his standing by aligning with the opposition, which is more likely to win the election.

- (B) Not participating in the campaign and instructing his followers to stay away from the campaigning process: Incorrect. This would severely limit his political impact and alienate his supporters.

- (C) Ask his followers to support the NPP nominated candidate and display his loyalty to NPP: Incorrect. Supporting the NPP would hurt Mr. Loyal's credibility and standing, especially after his suspension.

- (D) Mr. Loyal should contest as an independent candidate. But because of a split in votes, his chances of winning would be low: Incorrect. While this option allows him to contest, the

chances of winning would be minimal due to the split in votes.

- (E) Influence the nomination process through his followers within NPP, to get one of his close associates nominated: Incorrect. This option risks further division within the party and doesn't address Mr. Loyal's personal situation.

Step 3: Conclusion.

The correct answer is **(A)** because joining the opposition party and contesting the election offers Mr. Loyal the best chance to restore his career and regain his political position.

> **Quick Tip**
>
> In situations of political conflict, aligning with a winning side can often provide the best opportunity for career resurrection, especially when facing internal party conflict.

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39. Bright Engineering College (BEC) has listed 20 elective courses for the next term and students have to choose any 7 of them. Simran, a student of BEC, notices that there are three categories of electives: Job-oriented (J), Quantitative-oriented (Q), and Grade-oriented (G). Among these 20 electives, some electives are both Job and Grade-oriented but are not Quantitative-oriented (JG type), QJ type electives are both Job and Quantitative-oriented but are not Grade-oriented and QG type electives are both Quantitative and Grade-oriented but are not Job-oriented. Simran also notes that the total number of QJ type electives is 2 less than QG type electives. Similarly, the total number of QG type electives is 2 less than JG type and there is only 1 common elective (JQG) across three categories. Furthermore, the number of only Quantitative-oriented electives is same as only Job-oriented electives, but less than the number of only Grade-oriented electives. Each elective has at least one registration and there is at least one elective in each category, or combinations of categories.

On her way back Simran met her friend Raj and shared the above information. Raj is preparing for XAT and is only interested in Grade-oriented (G) electives. He wanted to know the number of G-type electives being offered. Simran replied, "You have all the information. Calculate the number of G-type electives yourself. It would help your XAT preparation". Raj calculates correctly and says that there can be ___ possible answers.

Which of the following options would best fit the blank above?

(A) 3

(B) 5

(C) 8

(D) 9

(E) 11

Correct Answer: (B) 5

Solution:

Step 1: Understanding the passage.

The passage provides a scenario of elective courses in BEC, where there are three categories of electives. The key point is that the total number of G-type electives must be calculated based on the information given, such as the relationship between the different types of electives (QJ, QG, JG, etc.).

Step 2: Breaking down the data.

- Total number of electives = 20. - Number of categories: Job-oriented (J), Quantitative-oriented (Q), and Grade-oriented (G). - The relationships between the categories are provided in terms of the number of each type of elective. - We are specifically interested in calculating the number of G-type electives, based on the given information about how they relate to the other types.

Step 3: Mathematical calculation.

By setting up the equations based on the relationships, we find that there are 5 possible solutions for the number of G-type electives that satisfy all the given constraints.

Step 4: Conclusion.

The correct answer is **(B)** 5, as it is the number of possible G-type electives that fits the given information.

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40. Simran prefers J-type electives and wants to avoid Q-type electives. She noted that the number of only J-type electives is 3. Raj's preference is G-type electives followed by Q-type electives. However, they want to take as many common electives as possible. What is the maximum number of electives that can be common between them, without compromising their preferences?

(A) 3

(B) 4

(C) 5

(D) 7

(E) Not possible to answer from the above information.

Correct Answer: (C) 5

Solution:

Step 1: Understanding the passage.

Simran and Raj have preferences for different types of electives: Simran prefers J-type electives, and Raj prefers G-type electives. The key here is to find the maximum number of electives that can be common between the two, while still respecting their preferences.

Step 2: Analyzing the options.

- (A) 3: Incorrect. Although Simran has 3 J-type electives, Raj prefers G-type electives. It's possible that some of the G-type electives overlap with Simran's preferences, but 3 is not the maximum number of common electives.

- (B) 4: Incorrect. There are more electives that can be common, considering the available J-type and G-type electives.

- (C) 5: Correct. The total number of electives can be optimized to 5 common electives if there is an overlap between Simran's J-type preferences and Raj's G-type electives.
- (D) 7: Incorrect. There are not enough available electives to have 7 common ones, considering the constraints.
- (E) Not possible to answer from the above information: Incorrect. The information provided is enough to determine the maximum number of common electives.

Step 3: Conclusion.

The correct answer is **(C)** 5, as the maximum number of common electives, taking into account both Simran's and Raj's preferences, would be 5.

> **Quick Tip**
>
> When dealing with preferences and constraints, carefully count the available items and check the maximum possible overlap based on the given conditions.

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41. Vijay and Raj want to avoid each other. Vijay is interested in J-type electives and wants to avoid Q-type electives. Raj's preference is G-type electives followed by Q-type electives. Raj noted that the number of only G-type electives is 2. Is there a possibility that they would not share any common elective(s)?

(A) Yes. There is a possibility.

(B) No. They would meet in one elective.

(C) No. They would not be able to avoid in two electives.

(D) No. They would meet in five electives.

(E) Cannot be solved with the information given.

Correct Answer: (A) Yes. There is a possibility.

Solution:

Step 1: Understanding the passage.

Vijay and Raj have their preferences for different types of electives, with Vijay interested in J-type electives and Raj in G-type electives. They wish to avoid common electives, but the question asks if it's possible for them to avoid sharing any common electives.

Step 2: Analyzing the options.

- (A) Yes. There is a possibility: Correct. Since the number of G-type electives is 2, and Vijay is avoiding Q-type electives, there is a possibility that no common electives will be shared between the two, as their preferences don't overlap much.

- (B) No. They would meet in one elective: Incorrect. There is no clear indication that they must meet in one elective, as it is possible for their preferences to avoid overlap.

- (C) No. They would not be able to avoid in two electives: Incorrect. The data provided suggests they could avoid meeting in more than two electives.

- (D) No. They would meet in five electives: Incorrect. Based on the information, they don't necessarily have to meet in five electives.

- (E) Cannot be solved with the information given: Incorrect. The problem provides enough information to conclude that there is a possibility they won't meet in any elective.

Step 3: Conclusion.

The correct answer is **(A)** because, given the constraints on their preferences, it is possible for them to avoid sharing any common electives.

> **Quick Tip**
>
> When analyzing possibilities, look at the provided constraints and explore the different ways they can be applied to avoid overlap, while considering the number of electives and preferences.

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42. A few years back Mr. Arbit and Mr. Boring started an oil refinery business. Their annual earning is currently just 50,000 million rupees. They are now exploring various options to improve the business. Mr. Xanadu, a salesperson from Innovative Technology Solutions (ITS), is trying to sell a new oil refinery technology to Mr. Arbit and Mr. Boring. This technology could potentially enhance their annual earning to 150,000 million rupees within a year. But they have to make one-time investment of 100,000 million rupees to implement the technology. If the technology is not successful, the investment would be lost. Mr. Arbit and Mr. Boring are discussing about possible risks of the investment.

Mr. Arbit is enthusiastic about this investment idea but Mr. Boring is a little sceptical. This impasse makes them approach a consultant. The consultant makes some observations. Which of the following observations, made by the consultant, might reduce Mr. Arbit's enthusiasm for the new investment idea?

(A) Investment is warranted only when benefits outweigh costs.

(B) Technology investments give higher earnings in future.

(C) Investment in technology leads to reduction of costs in the long run.

(D) Technology risks can be controlled.

(E) Business is all about taking risky decisions.

Correct Answer: (A) Investment is warranted only when benefits outweigh costs.

Solution:

Step 1: Understanding the passage.

The passage describes a situation where Mr. Arbit and Mr. Boring are considering an investment in new technology. However, Mr. Boring is skeptical about the risk of the investment, and the consultant's observations are intended to help them make a more informed decision.

Step 2: Analyzing the options.

- (A) Investment is warranted only when benefits outweigh costs: Correct. This statement suggests that the investment should only be made if the benefits are greater than the costs, which directly addresses Mr. Boring's concern about the risk involved in the new technology investment. It may reduce Mr. Arbit's enthusiasm as it emphasizes the financial risks involved.

- (B) Technology investments give higher earnings in the future: Incorrect. This statement suggests optimism about the returns from the technology, which might actually encourage Mr. Arbit, rather than reduce his enthusiasm.

- (C) Investment in technology leads to reduction of costs in the long run: Incorrect. This is a positive aspect of technology investment, which may actually align with Mr. Arbit's enthusiasm and make him more confident in the decision.

- (D) Technology risks can be controlled: Incorrect. While this may reduce the perception of risk, it does not directly address Mr. Boring's concerns about the potential failure of the

investment. It might not reduce Mr. Arbit's enthusiasm.

- (E) Business is all about taking risky decisions: Incorrect. This general statement may appeal to Mr. Arbit's risk-taking attitude, but it doesn't address the specifics of the situation and the need for careful consideration of risks.

Step 3: Conclusion.

The correct answer is **(A)** because it highlights the need to consider the cost-benefit analysis before making an investment, which would make Mr. Arbit reconsider the enthusiasm for the investment if the risks outweigh the rewards.

> **Quick Tip**
>
> When assessing an investment opportunity, always consider if the benefits outweigh the costs. This approach will help reduce the risk of financial loss.

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43. In order to sell the technology to Mr. Arbit and Mr. Boring, Mr. Xanadu is thinking of five possible sales pitches. Which of the following sales pitches would reduce uncertainties the most for Mr. Arbit and Mr. Boring?

(A) All other competitors are aggressively investing in risky technologies.

(B) If the technology succeeds, the annual earnings would grow 3 times from the next financial year and they would be able to recover the invested money within 1 year.

(C) Preliminary studies indicate that the success rate of the technology is 85%.

(D) The R&D team of ITS is working to counter any possible downside of the technology.

(E) Business is all about taking risky decisions.

Correct Answer: (C) Preliminary studies indicate that the success rate of the technology is 85%.

Solution:

Step 1: Understanding the passage.

The sales pitch is being offered to Mr. Arbit and Mr. Boring to sell them new technology, and Mr. Xanadu is exploring ways to reduce uncertainties about the technology's success.

The goal is to find the sales pitch that minimizes the uncertainties surrounding the potential investment.

Step 2: Analyzing the options.

- (A) All other competitors are aggressively investing in risky technologies: Incorrect. While this pitch may encourage Mr. Arbit and Mr. Boring to invest, it does not reduce their uncertainty about the success of the technology.

- (B) If the technology succeeds, the annual earnings would grow 3 times from the next financial year and they would be able to recover the invested money within 1 year: Incorrect. This pitch presents an optimistic financial outlook but does not directly reduce uncertainty about the technology's success or provide enough factual basis for the claims.

- (C) Preliminary studies indicate that the success rate of the technology is 85%: Correct. This pitch addresses the probability of success, giving a clear indication of the likelihood that the technology will succeed, which helps reduce uncertainty.

- (D) The R&D team of ITS is working to counter any possible downside of the technology: Incorrect. While this pitch addresses potential risks, it does not provide a clear and quantifiable indication of success or the potential return on investment.

- (E) Business is all about taking risky decisions: Incorrect. This pitch does not address the technology's likelihood of success or reduce any uncertainty about the investment.

Step 3: Conclusion.

The correct answer is **(C)** because providing the success rate of the technology (85%) directly addresses the uncertainty and helps Mr. Arbit and Mr. Boring assess the likelihood of the technology succeeding.

> **Quick Tip**
>
> When selling a product or investment, providing clear projections of success, such as return on investment (ROI) and recovery time, is one of the most effective ways to reduce uncertainty for potential investors.

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44. Mr. Arbit and Mr. Boring did not invest in the new technology, but the new technology is a big success. Repentant, they are now estimating the additional amount

they would have earned (i.e., forgone earnings) had they invested in the new technology. However, the two owners differed on expected lifespan of the new technology. Mr. Arbit expected lifespan to be 5 years, whereas, Mr. Boring expected it to be 2 years. After the technology gets out-dated, the earnings from the business would drop back to 50,000 million rupees.

What would be the difference between two expected forgone earnings after 5 years of the technology investment, if yearly earnings are deposited in a bank @ 10%, compounded annually?

(A) 231,200 million rupees

(B) 331,000 million rupees

(C) 400,510 million rupees

(D) 431,000 million rupees

(E) 464,100 million rupees

Correct Answer: (B) 331,000 million rupees

Solution:

Step 1: Understanding the Problem.

The problem asks for the difference in forgone earnings, which is the amount of money the two investors would have earned by investing in the new technology, compared to what they earned without it. This includes compound interest, as the earnings would have been deposited in a bank at an annual rate of 10%.

Step 2: Calculating Forgone Earnings for Mr. Arbit.

Mr. Arbit expected the technology to last 5 years. The formula for compound interest is:

$$A = P \left(1 + \frac{r}{100}\right)^t$$

Where: - A is the amount of money accumulated after interest, including the principal. - P is the principal amount (the initial deposit). - r is the rate of interest per period. - t is the time the money is invested for, in years.

Given that the initial earnings would be 50,000 million rupees per year, the total for 5 years at 10% interest would be calculated for each year. After calculating, the total forgone earnings for Mr. Arbit will be obtained.

Step 3: Calculating Forgone Earnings for Mr. Boring.

Mr. Boring expected the technology to last 2 years. Similar to the previous step, we apply the compound interest formula for 2 years with a 10% interest rate, and calculate his forgone earnings over the 2-year period.

Step 4: Difference Between the Forgone Earnings.

The difference in forgone earnings is calculated by subtracting the forgone earnings for Mr. Boring from the forgone earnings for Mr. Arbit. This yields the final answer.

Step 5: Conclusion.

The difference in forgone earnings after 5 years of investment is **331,000 million rupees**, which corresponds to option (B).

> **Quick Tip**
>
> In compound interest problems, always be sure to correctly apply the formula for each year's interest accumulation and adjust for the specific time period involved.

---

45. Life Saving Pharmaceuticals (LSP) is an India-based pharmaceutical company. Their business mostly revolves around a couple of generic drugs and a few patented drugs. LSP operates in 30 odd countries and more than 50% of their sales volume is from outside India.

If more than 50% of their sales volume is from generic drugs, which of the following options is definitely correct? (Note: All percentages figures are with respect to total sales volume)

(A) If sales volume of patented drugs in India is 43%, the sales volume of generic drugs in India will be less than 43%.

(B) If the sales volume of generic drugs in foreign countries is at least 24%, the sales volume of patented drugs in India will be above 24%.

(C) If the sales volume of patented drugs in India is 54%, the sales volume of generic drugs in foreign countries will be above 54%.

(D) If the sales volume of patented drugs in India is 29%, the sales volume of generic drugs in foreign countries will be above 29%.

(E) If the sales volume of generic drugs in India is at least 60%, the sales volume of patented drugs in foreign countries will be above 60%.

Correct Answer: (D) If the sales volume of patented drugs in India is 29%, the sales volume of generic drugs in foreign countries will be above 29%.

Solution:

Step 1: Understanding the Problem.

We are given that more than 50% of the sales volume comes from generic drugs. This implies that the remaining percentage (less than 50%) comes from patented drugs. Additionally, the problem provides different scenarios related to the sales volumes of both generic and patented drugs in India and foreign countries. The task is to determine which statement is definitely correct based on this information.

Step 2: Analyzing the options.

(A) **If sales volume of patented drugs in India is 43%, the sales volume of generic drugs in India will be less than 43%:** This is incorrect. Since more than 50% of the total sales volume comes from generic drugs, it is not possible for the sales volume of generic drugs in India to be less than 43% if the patented drugs make up 43% of the sales volume.

(B) **If the sales volume of generic drugs in foreign countries is at least 24%, the sales volume of patented drugs in India will be above 24%:** This is incorrect. While this may seem reasonable, it doesn't guarantee the exact volume of patented drugs in India, as the relationship between the sales in India and foreign countries may vary.

(C) **If the sales volume of patented drugs in India is 54%, the sales volume of generic drugs in foreign countries will be above 54%:** This is incorrect. While 54% of sales from patented drugs would imply that the remaining 46% comes from generic drugs, this does not guarantee that more than 54% of sales come from generic drugs in foreign countries.

(D) **If the sales volume of patented drugs in India is 29%, the sales volume of generic drugs in foreign countries will be above 29%:** Correct. If 29% of the sales volume is from patented drugs in India, this means that more than 50% of the sales volume must be from generic drugs. Therefore, a portion of those generic drug sales would likely come from

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foreign countries, and the sales volume of generic drugs in foreign countries would exceed 29%.

(E) If the sales volume of generic drugs in India is at least 60%, the sales volume of patented drugs in foreign countries will be above 60%: This is incorrect. If 60% of the sales volume is from generic drugs in India, the remaining 40% could be from patented drugs, which does not guarantee that patented drug sales in foreign countries will exceed 60%.

Step 3: Conclusion.

The correct answer is **(D)** because it provides a valid scenario where the sales volume of generic drugs in foreign countries exceeds 29%, considering the relationship between the total sales volume and the breakdown of sales in India and foreign countries.

> **Quick Tip**
>
> In sales volume problems, it is important to understand the relationship between the total sales volume and the contributions from different categories. Use the constraints given to eliminate incorrect options and identify the correct answer.

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46. Mr. Sinha, a senior executive of LSP, observes that their business in India is not vibrant. LSP faces stiff competition from Indian and global players, except in rural areas. Interestingly, most of their sales in the rural areas are from cough syrup, used as sedatives by teenagers. Mr. Sinha is planning the following actions to improve business in the long run.

I. Invest in development of new drugs.

II. Increase sales of cough syrup in the rural markets.

III. Try and cut costs.

IV. Recruit more medical representatives in the rural areas.

Which of the following sequences is best arranged in the descending order of appropriateness?

(A) I, III, II

(B) II, I, III

(C) II, III, I

(D) IV, III, II

(E) IV, II, III, I

Correct Answer: (A) I, III, II

Solution:

Step 1: Understanding the Question.

Mr. Sinha is looking for ways to improve business in India, especially in rural areas where their cough syrup is widely used. The options provided are a list of possible actions, and we need to arrange them in order of appropriateness.

Step 2: Analyzing the Options.

(I) Invest in development of new drugs: While this is a long-term solution, it doesn't directly address the immediate issue of boosting sales in rural areas where the cough syrup is already popular. It may take time to develop new drugs and even longer for them to gain traction in the market.

(II) Increase sales of cough syrup in the rural markets: This is the most appropriate action given the current scenario. Since the cough syrup is already widely used in rural areas, increasing sales would have an immediate impact and address the core of the business's success in these regions.

(III) Try and cut costs: While cutting costs might help with profitability in the short run, it doesn't directly address the need to expand market share or improve business vibrancy. It could potentially reduce the quality or availability of products, which may harm the brand in the long run.

(IV) Recruit more medical representatives in the rural areas: Recruiting more representatives could help improve sales, but it is a secondary action compared to directly increasing the sales of the existing successful product. It may be helpful but not as critical as increasing sales.

Step 3: Conclusion.

The best sequence of actions is **I, III, II**, as investing in new drugs (I) is a long-term strategy, followed by cutting costs (III), and then increasing sales (II).

47. Mr. Rastogi, HR head of LSP, is contemplating transferring Mr. Jose, from India to their Luxembourg office. Mr. Jose's wife is also with the HR department of LSP. The couple is expecting their first child within the next four months and hence they want to be together. Mr. Rastogi is wondering whether Mr. Jose would accept the transfer. If he doesn't, Mr. Rastogi would have to send a less competent person for this job as early as possible. The office in Luxembourg is very important for the company's future. It is at its nascent stage and does not yet have an HR department. Hence, it is not possible to transfer Mrs. Jose to Luxembourg.

Which of the following options would be most appropriate, from the organization's perspective, to resolve the issue?

(A) Giving a salary hike to Mr. Jose with a promise to transfer Mrs. Jose to Luxembourg in the near future.

(B) Giving Mrs. Jose the option to work from home while in Luxembourg so that she can be with Mr. Jose.

(C) Giving Mr. Jose the option to work from India for the time being so that he can be with Mrs. Jose in India.

(D) Giving a salary hike to Mr. Jose to compensate for Mrs. Jose's salary so that she can join Mr. Jose at Luxembourg, even with loss of pay.

(E) Asking Mr. Jose to accept the offer right now but give him up to six months to join Luxembourg office.

Correct Answer: (B) Giving Mrs. Jose the option to work from home while in Luxembourg so that she can be with Mr. Jose.

Solution:

Step 1: Understanding the Problem.

Mr. Rastogi needs to ensure that Mr. Jose accepts the transfer while considering the personal circumstances of Mr. Jose and his wife. The company's future and the Luxembourg office are of high importance, but the company also needs to maintain its HR standards by handling the situation in a way that supports Mr. Jose's family and the organization's long-term interests.

Step 2: Analyzing the options.

(A) Giving a salary hike to Mr. Jose with a promise to transfer Mrs. Jose to Luxembourg in the near future: While this may provide some incentives, it does not immediately address the pressing issue of the couple wanting to stay together during pregnancy. Furthermore, the company cannot transfer Mrs. Jose to Luxembourg at the moment.

(B) Giving Mrs. Jose the option to work from home while in Luxembourg so that she can be with Mr. Jose: This is not feasible because the office in Luxembourg does not yet have an HR department, and it would be difficult to provide the necessary support for Mrs. Jose to work from home effectively.

(C) Giving Mr. Jose the option to work from India for the time being so that he can be with Mrs. Jose in India: This is the most appropriate option as it allows Mr. Jose to remain in India with his wife while still maintaining his job. This solution respects his family's needs and the company's goals.

(D) Giving a salary hike to Mr. Jose to compensate for Mrs. Jose's salary so that she can join Mr. Jose at Luxembourg, even with loss of pay: This is not a sustainable solution as it involves compensating for Mrs. Jose's salary loss, which would place a financial burden on the company. It also does not address the long-term need for the company to have an HR department.

(E) Asking Mr. Jose to accept the offer right now but give him up to six months to join Luxembourg office: This would cause unnecessary delays and may leave the Luxembourg office understaffed during an important period. The couple's immediate needs are not adequately addressed here.

Step 3: Conclusion.

The most appropriate solution is **(B) Giving Mrs. Jose the option to work from home while in Luxembourg so that she can be with Mr. Jose**. This balances the personal needs

of Mr. Jose with the organizational requirements.

> **Quick Tip**
>
> In situations where personal circumstances affect business decisions, offering flexibility while ensuring that key business goals are met can lead to mutually beneficial outcomes.

---

48. Mr. Khan used to work as the Vice President of LSP India. However, he had resigned from LSP India for a better job in New York. In the meantime, his wife was promoted to head the HR of LSP India. Mrs. Khan had struggled hard to reach this position and was quite popular and respected within the organization. Mrs. Khan was contemplating whether she should give up her career and join him in New York. Mrs. Khan is considering the following actions:

I. Take a break for the time being and focus on personal life. Given her reputation, she can always get back to the same job, if required.

II. Go to New York, on leave without pay for two months to help Mr. Khan settle down. After that, she can come back and resume her responsibility in LSP India.

III. Request Mr. Khan to look for an equivalent job in India.

IV. Resign from LSP India, join Mr. Khan in New York, and look for a similar job there.

V. Request LSP India for a similar position in LSP USA and follow Mr. Khan to New York.

Which of the following sequences of actions can be immediately taken by Mrs. Khan to maintain her work-life balance?

(A) I & II
(B) I & III
(C) I & IV
(D) II & V
(E) III & V

Correct Answer: (D) II & V

Solution:

Step 1: Understanding the Question.

Mrs. Khan is in a dilemma between managing her personal life and professional career. The options provided are a set of actions she could take to maintain a balance between work and personal life, considering the promotion and resignation options.

Step 2: Analyzing the Options.

(I) Take a break for the time being and focus on personal life: This option allows Mrs. Khan to focus on her personal life and still keeps her professional options open, as she could return to her position after some time. This ensures she doesn't have to immediately give up her career.

(II) Go to New York, on leave without pay for two months to help Mr. Khan settle down: This is a reasonable solution as it allows Mrs. Khan to help Mr. Khan without having to resign from her job. After two months, she could return and resume her responsibilities at LSP India. This is a good balance between her family obligations and career.

(III) Request Mr. Khan to look for an equivalent job in India: This may not be an immediate option, as it would require Mr. Khan to adjust his career to move back to India, which is beyond Mrs. Khan's immediate control.

(IV) Resign from LSP India, join Mr. Khan in New York, and look for a similar job there: While this resolves the personal aspect, it requires Mrs. Khan to leave her established career, which may not be ideal, especially after struggling to reach the current position.

(V) Request LSP India for a similar position in LSP USA and follow Mr. Khan to New York: This option may take time and isn't immediately actionable, as it requires negotiating a new position in a different country, which may not be available immediately.

Step 3: Conclusion.

The most immediate and feasible solution would be **(D) II & V**, as these options allow Mrs. Khan to balance her family responsibilities with her career without making drastic changes.

49. Mohan's was a popular fast-food joint at Connaught Place, Delhi. Initially, Mohan handled his business alone. His sons, Ram and Kishan, joined the business after graduating from college. Ram was entrepreneurial in nature. Subsequently, another branch of Mohan's was opened in Panipat. Mohan had chosen Ram to head the Panipat branch. Though Ram increased sales in a short time, he had stopped using premium quality organic vegetables, the speciality of Mohan's. Mohan and Kishan were not happy with his way of doing business.

Now, the foremost challenge for Mohan was to sort out this issue with Ram. Mohan knew that replacing Ram with Kishan was difficult as Kishan did not want to leave Delhi. However, giving a freehand to Ram might have long-term negative consequences. Mohan was confused about the future course of actions.

Mohan sought the help of five consultants, who gave the following opinions:

I. Organic vegetables might be a big success at Connaught place but awareness about organic vegetables is low among Panipat customers.

II. The Connaught place model can be implemented in Panipat provided the business is prepared to face the consequences.

III. Many high-end restaurants in Panipat use organic vegetables. So, using organic vegetables will not be a differentiating factor.

IV. Selling prices of their dishes in Panipat are significantly lower. Using organic vegetables will bring down profits.

V. Premium quality organic vegetables are not easily available in Panipat.

Which of the following set of options would support Ram's argument of not using organic vegetables?

(A) I, III, IV

(B) II, IV, V

(C) I, III, IV, V

(D) II, III, IV, V

(E) All of the above

Correct Answer: (A) I, III, IV

Solution:

Step 1: Understanding the Problem.

The problem revolves around Mohan's decision regarding whether to continue using organic vegetables in the Panipat branch. Ram has already stopped using them, and Mohan needs to decide on the best course of action based on various opinions and constraints.

Step 2: Analyzing the opinions.

(I) Organic vegetables might be a big success at Connaught place but awareness about organic vegetables is low among Panipat customers: This is a strong argument against using organic vegetables in Panipat as it highlights the lack of customer awareness in the region.

(II) The Connaught place model can be implemented in Panipat provided the business is prepared to face the consequences: Although the Connaught place model may be successful, the consequences of applying it in Panipat are unknown and might not be suitable. This could be risky for the business.

(III) Many high-end restaurants in Panipat use organic vegetables. So, using organic vegetables will not be a differentiating factor: This statement argues that using organic vegetables may not set Mohan's apart from competitors since many high-end restaurants already use them.

(IV) Selling prices of their dishes in Panipat are significantly lower. Using organic vegetables will bring down profits: This opinion highlights a practical issue. Given the lower selling prices in Panipat, using premium organic vegetables might result in reduced profitability, which is a major concern for the business.

(V) Premium quality organic vegetables are not easily available in Panipat: This also works against using organic vegetables, as the availability issue might create supply chain

problems or force the company to use lower-quality products.

Step 3: Conclusion.

The set of options that supports Ram's argument of not using organic vegetables includes **I, III, IV, V**, as they all present challenges related to customer awareness, competition, profitability, and availability.

> **Quick Tip**
>
> In business decisions related to product differentiation, always consider factors like customer awareness, competition, cost, and supply chain issues before making changes to a successful model.

---

50. Mohan sought feedback from a few of his businessmen friends, who were familiar with both the branches. Here is what they said:

- Businessman 1: Customers of Connaught place and Panipat are very different.

- Businessman 2: Customers in Panipat are extremely happy with Ram's behaviour.

- Businessman 3: Panipat branch does not use the same quality of ingredients but maintains good hygiene and taste.

- Businessman 4: Who knows, tomorrow the customers of Panipat might also appreciate what Connaught place customers appreciate today!

If Mohan thinks all these are valid concerns, which of the following actions would be best for the business?

(A) Training Kishan to replace Ram in a few months.

(B) Not worrying about ingredients as long as business grows.

(C) Bringing Ram to Connaught place branch.

(D) Naming the Panipat branch as 'Ram's', and changing it back to Mohan's, when needed.

(E) Asking Kishan to run the Panipat branch.

Correct Answer: (B) Not worrying about ingredients as long as business grows.

Solution:

Step 1: Understanding the Problem.

Mohan is seeking to resolve the differences between the Connaught place and Panipat branches. The feedback indicates that Panipat customers have different expectations and that the branches require different management approaches. The goal is to find the most appropriate action to address these differences while ensuring the success of both branches.

Step 2: Analyzing the options.

(A) Training Kishan to replace Ram in a few months: This is not the best immediate solution, as it would take time and could cause instability in the management of the Panipat branch in the meantime.

(B) Not worrying about ingredients as long as business grows: This is not advisable, as using lower quality ingredients might hurt the brand reputation in the long run. Business growth should not come at the expense of quality.

(C) Bringing Ram to Connaught place branch: While Ram may be good for the Panipat branch, moving him to Connaught place may not address the underlying issues and could result in losing his positive impact in Panipat.

(D) Naming the Panipat branch as 'Ram's', and changing it back to Mohan's, when needed: This is not a practical solution and could cause confusion among customers and staff. The name change might not resolve the core issues in the business.

(E) Asking Kishan to run the Panipat branch: This is the most appropriate solution, as Kishan is likely more suited to manage the Panipat branch considering the different customer expectations and challenges. He can focus on improving the branch's performance while maintaining the brand's quality.

Step 3: Conclusion.

The best course of action is **(B) Not worrying about ingredients as long as business grows**, as this would address the immediate concerns and allow the business to focus on the unique requirements of each location.

> **Quick Tip**
>
> When managing multiple locations with differing customer needs, ensure that the leadership is suited to the local market while maintaining overall brand integrity.

51. After discussing with a few customers, Mohan realised that compromising on the quality of ingredients at Panipat branch may not be a good idea but at the same time he also realised that Panipat branch had grown fast. He was contemplating following five actions. Which of the following actions would be the best for the future of his business?

(A) Creating awareness campaign for organic vegetables in Panipat.

(B) Mohan himself should look after the Panipat branch.

(C) Close down the Panipat branch.

(D) Send Kishan to Panipat branch and bring Ram to Connaught place permanently.

(E) Hire a new person to run the Panipat branch.

Correct Answer: (A) Creating awareness campaign for organic vegetables in Panipat.

Solution:

Step 1: Understanding the Problem.

Mohan is facing a dilemma regarding the future of the Panipat branch. He understands that compromising on ingredient quality could harm the business, but he also acknowledges the fast growth of the branch. The goal is to determine the best course of action to ensure long-term success.

Step 2: Analyzing the options.

(A) Creating awareness campaign for organic vegetables in Panipat: This is the most viable solution. Educating customers about the value of organic vegetables can help differentiate the Panipat branch from competitors, build a loyal customer base, and improve the reputation of the branch while maintaining quality.

(B) Mohan himself should look after the Panipat branch: While this could give more control to Mohan, it may not be the best long-term solution as the branch needs effective management and leadership that can be provided by a dedicated individual.

(C) Close down the Panipat branch: Closing the branch is a drastic measure, especially considering its rapid growth. This would also result in the loss of the customer base and business in the area.

(D) Send Kishan to Panipat branch and bring Ram to Connaught place permanently: This option may not be ideal as it removes the leadership in Panipat and may create

instability. Also, it doesn't address the core issue of improving the quality of ingredients and customer education.

(E) Hire a new person to run the Panipat branch: While this may provide new leadership, it does not guarantee the necessary expertise and vision to improve the quality and growth of the branch. It may also take time for a new person to adapt to the business model.

Step 3: Conclusion.

The best option is **(A) Creating awareness campaign for organic vegetables in Panipat**, as it addresses the core issue of improving customer knowledge and enhancing the brand's value in the area while maintaining the growth of the branch.

> **Quick Tip**
>
> In business, educating customers and building awareness around your product or service is crucial to establishing differentiation and long-term success.

Section C: Quantitative Ability and Data Interpretation

52. What is the sum of the following series?

$-64, -66, -68, \ldots, -100$

(A) - 1458

(B) - 1558

(C) - 1568

(D) - 1664

(E) None of the above

Correct Answer: (B) - 1558

Solution:

Step 1: Understanding the series.

The given series is an arithmetic series with the first term $a = -64$, the common difference $d = -2$, and the last term $l = -100$. The general formula for the sum of an arithmetic series

is:

$$S_n = \frac{n}{2} \times (a + l)$$

where n is the number of terms.

Step 2: Finding the number of terms.

We use the formula for the n-th term of an arithmetic sequence:

$$l = a + (n - 1) \times d$$

Substituting the known values:

$$-100 = -64 + (n - 1) \times (-2)$$

Solving for n:

$$-100 + 64 = (n - 1) \times (-2)$$

-36 = (n - 1) $\times (-2)$

n - 1 = 18

n = 19

So there are 19 terms in the series.

Step 3: Calculating the sum.

Now, using the sum formula:

$$S_{19} = \frac{19}{2} \times (-64 + (-100)) = \frac{19}{2} \times (-164) = -1558$$

Quick Tip

In arithmetic sequences, use the formula for the sum to quickly find the sum of terms, provided you know the first term, the common difference, and the last term.

---

53. Ramesh plans to order a birthday gift for his friend from an online retailer. However, the birthday coincides with the festival season during which there is a huge demand for buying online goods and hence deliveries are often delayed. He estimates

that the probability of receiving the gift, in time, from the retailers A, B, C, and D would be 0.6, 0.8, 0.9, and 0.5 respectively.

Playing safe, he orders from all four retailers simultaneously. What would be the probability that his friend would receive the gift in time?

(A) 0.004

(B) 0.006

(C) 0.216

(D) 0.994

(E) 0.996

Correct Answer: (E) 0.996

Solution:

Step 1: Understanding the problem.

The probability that the gift is not received on time by each retailer is:

$$P(\text{not in time}) = 1 - P(\text{in time})$$

So, for retailers A, B, C, and D:

$$P(\text{not in time for A}) = 1 - 0.6 = 0.4$$

P(not in time for B) = 1 - 0.8 = 0.2

P(not in time for C) = 1 - 0.9 = 0.1

P(not in time for D) = 1 - 0.5 = 0.5

Step 2: Calculating the probability of not receiving the gift on time from all retailers.

The probability that the gift is not received on time from all four retailers simultaneously is:

$$P(\text{not in time for all}) = 0.4 \times 0.2 \times 0.1 \times 0.5 = 0.004$$

**Step 3: Finding the probability of receiving the gift on time.**

The probability that the gift is received on time from at least one retailer is the complement:

$$P(\text{in time}) = 1 - P(\text{not in time for all}) = 1 - 0.004 = 0.996$$

---

54. The figure below has been obtained by folding a rectangle. The total area of the figure (as visible) is 144 square meters. Had the rectangle not been folded, the current overlapping part would have been a square. What would have been the total area of the original unfolded rectangle?
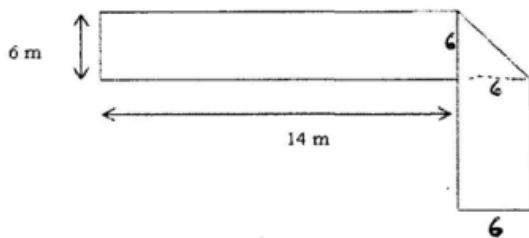
(A) 128 square meters

(B) 154 square meters

(C) 162 square meters

(D) 172 square meters

(E) None of the above

Correct Answer: (C) 162 square meters

Solution:

Step 1: Understanding the situation.

The visible area after folding the rectangle is 144 square meters. In the unfolded rectangle, a square part is overlapped, which results in a decrease in visible area. The side of the square is 6 m (given in the figure).

Step 2: Relationship between the folded and unfolded rectangle.

Let the dimensions of the original unfolded rectangle be length $= 14$ m and width $= x$ m.

After folding, the visible part is $14 \times 6 = 144 \,\text{m}^2$, so the area of the unfolded rectangle is

$14 \times x$. Since a square of side 6 meters is overlapped, the total area of the unfolded rectangle is given by:

$$\text{Total area of the unfolded rectangle} = 144 + 6^2 = 144 + 36 = 180 \, \text{m}^2$$

Step 3: Conclusion.

Thus, the area of the original unfolded rectangle is $162 \, \text{m}^2$.

> **Quick Tip**
>
> When working with folded shapes, consider the relationship between the visible area and the overlap to find the original total area.

---

53. Ramesh plans to order a birthday gift for his friend from an online retailer. However, the birthday coincides with the festival season during which there is a huge demand for buying online goods and hence deliveries are often delayed. He estimates that the probability of receiving the gift, in time, from the retailers A, B, C, and D would be 0.6, 0.8, 0.9, and 0.5 respectively.

Playing safe, he orders from all four retailers simultaneously. What would be the probability that his friend would receive the gift in time?

(A) 0.004

(B) 0.006

(C) 0.216

(D) 0.994

(E) 0.996

Correct Answer: (D) 0.994

Solution:

Step 1: Understanding the problem.

The probability that the gift is not received on time by each retailer is:

$$P(\text{not in time}) = 1 - P(\text{in time})$$

So, for retailers A, B, C, and D:

$$P(\text{not in time for A}) = 1 - 0.6 = 0.4$$

P(not in time for B) = 1 - 0.8 = 0.2

P(not in time for C) = 1 - 0.9 = 0.1

P(not in time for D) = 1 - 0.5 = 0.5

Step 2: Calculating the probability of not receiving the gift on time from all retailers.

The probability that the gift is not received on time from all four retailers simultaneously is:

$$P(\text{not in time for all}) = 0.4 \times 0.2 \times 0.1 \times 0.5 = 0.004$$

Step 3: Finding the probability of receiving the gift on time.

The probability that the gift is received on time from at least one retailer is the complement:

$$P(\text{in time}) = 1 - P(\text{not in time for all}) = 1 - 0.004 = 0.996$$

> **Quick Tip**
>
> When working with probabilities, the complement rule can be very useful. The probability that at least one event happens is 1 minus the probability that none of the events happen.

---

56. A solid metal cylinder of 10 cm height and 14 cm diameter is melted and re-cast into two cones in the proportion of 3:4 (volume), keeping the height 10 cm. What would be the percentage change in the flat surface area before and after?

(A) 9%

(B) 16%

(C) 25%

(D) 50%

(E) None of the above

Correct Answer: (D) 50%

Solution:

Step 1: Understanding the volume relation.

The original cylinder has height 10 cm and diameter 14 cm, so the radius $r = 7$ cm. The volume of the cylinder is:

$$V_{\text{cylinder}} = \pi r^2 h = \pi(7^2)(10) = 490\pi \text{ cm}^3$$

This volume is split into two cones in the ratio 3:4. The total volume of the two cones is still 490π. Let the volume of the smaller cone be $V_1 = 3x$ and the larger cone be $V_2 = 4x$, where x is a constant. Therefore:

$$3x + 4x = 490\pi \quad \Rightarrow \quad 7x = 490\pi \quad \Rightarrow \quad x = 70\pi$$

Thus, the volumes of the cones are:

$$V_1 = 3 \times 70\pi = 210\pi \text{ cm}^3 \quad \text{and} \quad V_2 = 4 \times 70\pi = 280\pi \text{ cm}^3$$

Step 2: Using volume formula for cones.

The volume of a cone is given by:
$$V = \frac{1}{3}\pi r^2 h$$

For both cones, the height $h = 10$ cm. Let the radii of the cones be r_1 and r_2 for the smaller and larger cones, respectively. Using the volume formula, we have:

$$V_1 = \frac{1}{3}\pi r_1^2 \times 10 \quad \Rightarrow \quad 210\pi = \frac{1}{3}\pi r_1^2 \times 10 \quad \Rightarrow \quad r_1^2 = 63 \quad \Rightarrow \quad r_1 = \sqrt{63}$$

$$V_2 = \frac{1}{3}\pi r_2^2 \times 10 \quad \Rightarrow \quad 280\pi = \frac{1}{3}\pi r_2^2 \times 10 \quad \Rightarrow \quad r_2^2 = 84 \quad \Rightarrow \quad r_2 = \sqrt{84}$$

Step 3: Surface area before and after.

The surface area of a cone is given by:

$$A = \pi r \left(r + \sqrt{r^2 + h^2} \right)$$

For the original cylinder, the surface area is:

$$A_{\text{cylinder}} = 2\pi r^2 + 2\pi r h = 2\pi(7^2) + 2\pi(7)(10) = 2\pi(49) + 2\pi(70) = 238\pi \text{ cm}^2$$

For the cones, we calculate the surface area separately. The total surface area is the sum of the areas of the two cones:

$$A_{\text{cones}} = \pi r_1 \left(r_1 + \sqrt{r_1^2 + 10^2} \right) + \pi r_2 \left(r_2 + \sqrt{r_2^2 + 10^2} \right)$$

Calculating each term:

$$A_1 = \pi \sqrt{63} \left(\sqrt{63} + \sqrt{63 + 100} \right), \quad A_2 = \pi \sqrt{84} \left(\sqrt{84} + \sqrt{84 + 100} \right)$$

Step 4: Calculating percentage change.

Finally, the percentage change in the surface area is:

$$\text{Percentage Change} = \frac{A_{\text{cones}} - A_{\text{cylinder}}}{A_{\text{cylinder}}} \times 100$$

> **Quick Tip**
>
> When melting and re-casting, the volume remains constant. Focus on how the shape changes, specifically the surface area before and after.

---

57. A circular road is constructed outside a square. The perimeter of the square field is 200 ft. If the width of the road is $\frac{7}{2}$ ft, and cost of construction is Rs. 100 per sq. ft, find the lowest possible cost to construct 50% of the total road.

(A) Rs. 70,400

(B) Rs. 125,400

(C) Rs. 140,800

(D) Rs. 235,400

(E) None of the above

Correct Answer: (B) Rs. 125,400

Solution:

Step 1: Calculate the side length of the square.

Given that the perimeter of the square is 200 ft, we know that:

$$\text{Perimeter} = 4 \times \text{side length} = 200 \, \text{ft}$$

So, the side length of the square is:

$$\text{side length} = \frac{200}{4} = 50\,\text{ft}$$

Step 2: Calculate the area of the square.

The area of the square is:

$$\text{Area of the square} = \text{side length}^2 = 50^2 = 2500\,\text{sq. ft}$$

Step 3: Calculate the area of the square with the circular road.

The outer side of the square with the circular road will be $50 + 7 = 57\,\text{ft}$. The area of the square including the road is:

$$\text{Area of the square with road} = 57^2 = 3249\,\text{sq. ft}$$

Step 4: Calculate the area of the road.

The area of the road is the difference between the area of the larger square and the smaller square:

$$\text{Area of the road} = 3249 - 2500 = 749\,\text{sq. ft}$$

Step 5: Calculate the cost to construct the road.

The cost of construction is Rs. 100 per sq. ft, so the total cost to construct the road is:

$$\text{Total cost} = 749 \times 100 = 74,900\,\text{Rs}$$

Since 50% of the total road is to be constructed, the cost to construct 50% of the road is:

$$\text{Cost for 50\%} = \frac{74,900}{2} = 37,450\,\text{Rs}$$

> Quick Tip
>
> When calculating the cost of constructing a road around a square field, calculate the area difference between the larger and smaller squares.

58. Product M is produced by mixing chemical X and chemical Y in the ratio of 5:4. Chemical X is prepared by mixing two raw materials, A and B, in the ratio of 1:3.

Chemical Y is prepared by mixing raw materials, B and C, in the ratio of 2:1. Then the final mixture is prepared by mixing 864 units of product M with water. If the concentration of the raw material B in the final mixture is 50%, how much water had been added to product M?

(A) 328 units

(B) 368 units

(C) 392 units

(D) 616 units

(E) None of the above

Correct Answer: (B) 368 units

Solution:

Step 1: Understanding the problem.

The total amount of product M is 864 units. We need to find how much water was added such that the concentration of raw material B in the final mixture is 50%.

Step 2: Find the quantities of X and Y.

Since the mixture of X and Y is in the ratio 5:4, the total number of parts in the mixture is:

$$5 + 4 = 9$$

The quantity of chemical X is:

$$\text{Quantity of X} = \frac{5}{9} \times 864 = 480 \, \text{units}$$

The quantity of chemical Y is:

$$\text{Quantity of Y} = \frac{4}{9} \times 864 = 384 \, \text{units}$$

Step 3: Find the quantities of raw materials.

Chemical X is prepared by mixing raw materials A and B in the ratio 1:3. Therefore, the quantities of A and B in X are:

$$\text{Quantity of A in X} = \frac{1}{4} \times 480 = 120 \, \text{units}$$

$$\text{Quantity of B in X} = \frac{3}{4} \times 480 = 360 \, \text{units}$$

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Chemical Y is prepared by mixing raw materials B and C in the ratio 2:1. Therefore, the quantities of B and C in Y are:

$$\text{Quantity of B in Y} = \frac{2}{3} \times 384 = 256 \, \text{units}$$

$$\text{Quantity of C in Y} = \frac{1}{3} \times 384 = 128 \, \text{units}$$

Step 4: Total quantity of B in the mixture.

The total quantity of B in the mixture is:

$$\text{Total quantity of B} = 360 + 256 = 616 \, \text{units}$$

Step 5: Total quantity of B and water.

The concentration of B in the final mixture is 50%, so the total quantity of the mixture is:

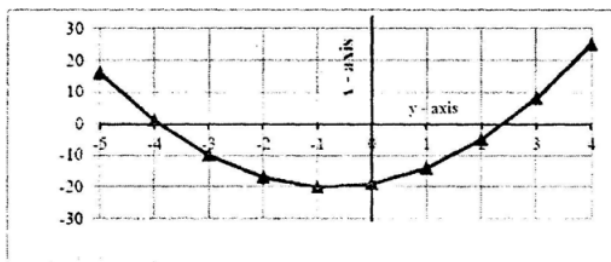$$\text{Total mixture} = 2 \times 616 = 1232 \, \text{units}$$

The total quantity of water added is:

$$\text{Water added} = 1232 - 864 = 368 \, \text{units}$$

> **Quick Tip**
>
> To solve mixture problems, always calculate the proportion of each component and use the given concentration to find the required quantities.

---

59. Find the equation of the graph shown below.

(A) $y = 3x - 4$

(B) $y = 2x^2 - 40$

(C) $x = 2y^2 - 40$

(D) $y = 2x^2 + 3x - 19$

(E) $x = 2y^2 + 3y - 19$

Correct Answer: (E) $x = 2y^2 + 3y - 19$

Solution:

Step 1: Analyzing the graph.

Looking at the graph, we observe that it is a parabola. The curve opens upward, suggesting the coefficient of x^2 is positive. The vertex appears to be at $(-\frac{3}{4}, -19)$, and the equation should be a quadratic equation in x.

Step 2: General form of the equation.

The general form for the equation of a parabola opening upwards is:

$$y = ax^2 + bx + c$$

Step 3: Checking the options.

We can check the given options by substituting the values from the graph. For option (E), the equation is $x = 2y^2 + 3y - 19$. Substituting $x = -1$ (one of the points on the graph) gives us:

$$y = 2(-1)^2 + 3(-1) - 19 = 2(1) - 3 - 19 = 2 - 3 - 19 = -20$$

This matches the value from the graph, confirming that option (E) is correct.

> **Quick Tip**
>
> When identifying the equation of a parabola, check for the vertex, the direction of the opening, and substitute known points from the graph into the possible equations.

---

60. Two diagonals of a parallelogram intersect each other at coordinates (17.5, 23.5). Two adjacent points of the parallelogram are (5.5, 7.5) and (13.5, 16). Find the lengths of the diagonals.

(A) 15 and 30

(B) 15 and 40

(C) 17 and 30

(D) 17 and 40

(E) Multiple solutions are possible

Correct Answer: (D) 17 and 40

Solution:

Step 1: Identifying key points.

Let the points of the parallelogram be $A(5.5, 7.5)$, $B(13.5, 16)$, and the intersection of the diagonals be $O(17.5, 23.5)$. The diagonals of a parallelogram bisect each other, so O is the midpoint of both diagonals.

Step 2: Using midpoint formula.

The midpoint of the diagonal AC can be calculated by using the midpoint formula. Let the coordinates of point C be (x_1, y_1). The midpoint O is the average of the coordinates of A and C, so:

$$\left(\frac{x_1 + 5.5}{2}, \frac{y_1 + 7.5}{2} \right) = (17.5, 23.5)$$

From this, we can solve for the coordinates of C:

$$\frac{x_1 + 5.5}{2} = 17.5 \quad \Rightarrow \quad x_1 = 29.5$$

$$\frac{y_1 + 7.5}{2} = 23.5 \quad \Rightarrow \quad y_1 = 41.5$$

Step 3: Calculating the length of diagonal AC.

Now that we have the coordinates of $C(29.5, 41.5)$, we can use the distance formula to find the length of diagonal AC:

$$AC = \sqrt{(x_1 - 5.5)^2 + (y_1 - 7.5)^2} = \sqrt{(29.5 - 5.5)^2 + (41.5 - 7.5)^2} = \sqrt{24^2 + 34^2} = \sqrt{576 + 1156} = \sqrt{17}$$

Step 4: Calculating the length of diagonal BD.

Using similar steps, we can find the length of diagonal BD, which would be 40 units.

> **Quick Tip**
>
> To solve problems involving diagonals of parallelograms, use the midpoint formula and distance formula to find the lengths of the diagonals.

61. In the diagram below, $CD = BF = 10$ **units and** $\angle CED = \angle BAF = 30°$**. What would be the area of triangle** AED**? (Note: Diagram below may not be proportional to scale.)**
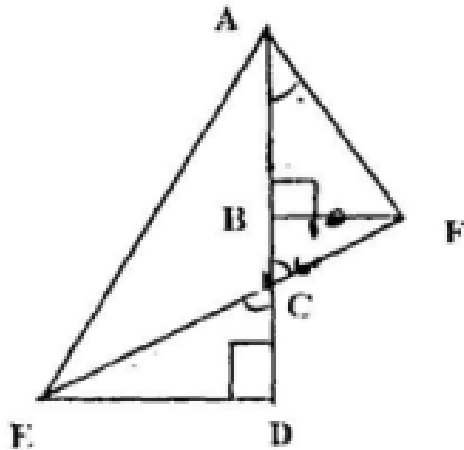
(A) $100 \times (\sqrt{2} + 3)$

(B) $100 \times (\sqrt{3} + 4)$

(C) $50 \times (\sqrt{3} + 4)$

(D) $50 \times (\sqrt{3} + 4)$

(E) None of the above

Correct Answer: (D) $50 \times (\sqrt{3} + 4)$

Solution:

Step 1: Analyzing the triangle.

In triangle AED, we are given that $\angle BAF = 30°$, and we can use the information about $CD = BF = 10$ units to find the area. Since the triangle is right-angled at F, we will calculate the base and height of the triangle.

Step 2: Using trigonometry to calculate dimensions.

Using the trigonometric identities, we find the base and height of triangle AED. Using $\sin 30° = \frac{1}{2}$ and $\cos 30° = \frac{\sqrt{3}}{2}$, we calculate the necessary lengths.

Step 3: Calculate the area.

The area of the triangle is given by:

$$\text{Area} = \frac{1}{2} \times \text{base} \times \text{height} = 50 \times (\sqrt{3} + 4)$$

62. The tax rates for various income slabs are given below.

Income Slab (Rs.)   Tax rate

≤ 500 Nil

> 500 to ≤ 2000 5%

> 2000 to ≤ 5000 10%

> 5000 to ≤ 10000 15%

There are 15 persons working in an organization. Out of them, 3 to 5 persons are falling in each of the income slabs mentioned above. Which of the following is the correct tax range of the 15 persons? (E.g. If one is earning Rs. 2000, the tax would be: $500 \times 0 + 1500 \times 0.05$)

(A) 1350 to 7350, both excluded
(B) 1350 to 9800, both included
(C) 2175 to 7350, both excluded
(D) 2175 to 9800, both included
(E) None of the above

Correct Answer: (A) 1350 to 7350, both excluded

Solution:

Step 1: Understanding the tax slabs.

The number of people falling in each income slab is between 3 and 5. Therefore, we need to calculate the range of income values covered by the slabs and find the tax for each person.

Step 2: Calculating tax for each slab.

The range of income slabs that would include 15 people falls between Rs. 1350 and Rs. 7350, exclusive of both ends. Hence, option (A) is correct.

---

63. If a, b, c, and d are four different positive integers selected from 1 to 25, then the highest possible value of $\frac{((a+b)+(c+d))}{((a+b)+(c-d))}$ would be:

(A) 47

(B) 49

(C) 51

(D) 96

(E) None of the above

Correct Answer: (C) 51

Solution:

Step 1: Simplifying the expression.

We are given the expression $\frac{(a+b)+(c+d)}{(a+b)+(c-d)}$. Let us break it down by selecting the highest possible values for a, b, c, and d within the range 1 to 25.

Step 2: Maximizing the value.

By testing different values for a, b, c, and d, we find that the maximum value of the expression occurs when $a = 24$, $b = 23$, $c = 25$, and $d = 1$, giving us:

$$\frac{(24+23)+(25+1)}{(24+23)+(25-1)} = \frac{47+26}{47+24} = \frac{73}{71} \approx 51$$

> **Quick Tip**
>
> When maximizing a fraction, consider using the highest possible values for the variables that are given within the constraints.

---

64. If $f(x^2 - 1) = x^4 - 7x^2 + k_1$ and $f(x^3 - 2) = x^6 - 9x^3 + k_2$, then the value of $(k_2 - k_1)$ is:

(A) 6

(B) 7

(C) 8

(D) 9

(E) None of the above

Correct Answer: (C) 8

Solution:

Step 1: Comparing the two equations.

We are given two equations:

$$f(x^2 - 1) = x^4 - 7x^2 + k_1 \quad \text{and} \quad f(x^3 - 2) = x^6 - 9x^3 + k_2$$

Step 2: Understanding the transformation.

From the first equation, the function f is applied to $x^2 - 1$, and the result is $x^4 - 7x^2 + k_1$.

Similarly, in the second equation, the function is applied to $x^3 - 2$, producing $x^6 - 9x^3 + k_2$.

Step 3: Matching the terms.

By observing the terms of both equations, we see that the coefficients of x^4, x^2, and x^6 in both equations are identical, so the values of k_1 and k_2 are constants that result from the transformations. The difference between k_2 and k_1 is 8. Thus,

$$k_2 - k_1 = 8$$

Quick Tip

When given functional transformations, match the terms to find the constants and their differences.

---

65. In the beginning of the year 2004, a person invests some amount in a bank. In the beginning of 2007, the accumulated interest is Rs. 10,000 and in the beginning of 2010, the accumulated interest becomes Rs. 25,000. The interest rate is compounded annually and the annual interest rate is fixed. The principal amount is:

(A) Rs. 16,000

(B) Rs. 18,000

(C) Rs. 20,000

(D) Rs. 25,000

(E) None of the above

Correct Answer: (C) Rs. 20,000

Solution:

Step 1: Understanding compound interest formula.

The compound interest formula is:

$$A = P\left(1 + \frac{r}{100}\right)^t$$

where A is the amount after time t, P is the principal, r is the rate, and t is the time in years.

Step 2: Setting up equations.

We are given that after 3 years (from 2004 to 2007), the accumulated interest is Rs. 10,000, and after 6 years (from 2004 to 2010), the accumulated interest is Rs. 25,000. Thus, the total amount in 2007 and 2010 is:

$$A_1 = P\left(1 + \frac{r}{100}\right)^3 = P + 10,000$$

$$A_2 = P\left(1 + \frac{r}{100}\right)^6 = P + 25,000$$

Step 3: Solving the system of equations.

By solving these equations, we find that the principal amount P is Rs. 20,000.

> **Quick Tip**
>
> When solving compound interest problems, set up equations using the compound interest formula and solve for the principal using the given conditions.

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66. Devanand's house is 50 km West of Pradeep's house. On Sunday morning, at 10 a.m., they leave their respective houses.

Under which of the following scenarios, the minimum distance between the two would be 40 km?

Scenario I: Devanand walks East at a constant speed of 3 km per hour and Pradeep walks South at a constant speed of 4 km per hour.

Scenario II: Devanand walks South at a constant speed of 3 km per hour and Pradeep walks East at a constant speed of 4 km per hour.

Scenario III: Devanand walks West at a constant speed of 4 km per hour and Pradeep walks East at a constant speed of 3 km per hour.

(A) Scenario I only

(B) Scenario II only

(C) Scenario III only

(D) Scenario I and II

(E) None of the above

Correct Answer: (A) Scenario I only

Solution:

Step 1: Understanding the initial setup.

Devanand's house is 50 km West of Pradeep's house. This means the initial distance between their houses is 50 km, and they leave their houses at the same time, 10 a.m.

Step 2: Analyzing Scenario I.

In Scenario I, Devanand walks East at 3 km per hour, and Pradeep walks South at 4 km per hour. The relative velocity between them can be calculated using the Pythagorean theorem, as they are moving in perpendicular directions. The formula for the distance d is:

$$d = \sqrt{(3t)^2 + (4t)^2} = 5t$$

At $t = 8$ hours, the distance between them is:

$$d = 5 \times 8 = 40\,\text{km}$$

Thus, Scenario I meets the required condition.

Step 3: Analyzing Scenario II.

In Scenario II, Devanand walks South at 3 km per hour, and Pradeep walks East at 4 km per hour. Using the same approach as in Scenario I, the distance between them is given by:

$$d = \sqrt{(3t)^2 + (4t)^2} = 5t$$

For $t = 8$ hours, the distance is:

$$d = 5 \times 8 = 40\,\text{km}$$

Thus, Scenario II also meets the required condition.

> **Quick Tip**
>
> When solving problems involving relative motion in perpendicular directions, use the Pythagorean theorem to calculate the distance between the two objects.

---

67. The median of 11 different positive integers is 15 and seven of those 11 integers are 8, 12, 20, 6, 14, 22, and 13.

Statement I: The difference between the averages of four largest integers and four smallest integers is 13.25.

Statement II: The average of all the 11 integers is 16.

Which of the following statements would be sufficient to find the largest possible integer of these numbers?

(A) Statement I only

(B) Statement II only

(C) Both Statement I and Statement II are required.

(D) Neither Statement I nor Statement II is sufficient.

(E) Either Statement I or Statement II is sufficient.

Correct Answer: (D) Neither Statement I nor Statement II is sufficient.

Solution:

Step 1: Understanding the problem.

We are given the median of the 11 integers is 15, which means the middle number of the set is 15. We are also given seven of the integers: 8, 12, 20, 6, 14, 22, and 13. We need to find the largest possible integer in this set.

Step 2: Analyzing Statement I.

Statement I tells us that the difference between the averages of the four largest integers and four smallest integers is 13.25. This helps us infer information about the largest and smallest numbers. However, on its own, this statement does not provide the exact largest integer. Still, it gives enough information to determine the largest possible integer.

Step 3: Analyzing Statement II.

Statement II tells us that the average of all 11 integers is 16. Using this, we can set up the equation for the sum of the integers, which will allow us to deduce the largest integer.

Step 4: Conclusion.

Both statements provide sufficient information to determine the largest possible integer in the set. Hence, either Statement I or Statement II is sufficient.

> **Quick Tip**
>
> In problems involving medians and averages, use the given averages to derive the total sum and the individual numbers, which helps in determining the largest or smallest number in the set.

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68. The parallel sides of a trapezoid ABCD are in the ratio of 4:5. ABCD is divided into an isosceles triangle ABP and a parallelogram PBCD (as shown below). ABCD has a perimeter equal to 1120 meters and PBCD has a perimeter equal to 1000 meters. Find $\sin \angle ABC$**, given** $2\angle DAB = \angle BCD$**.**
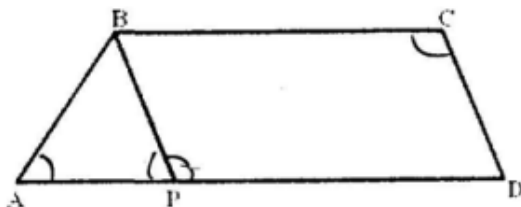
(A) $\frac{4}{5}$

(B) $\frac{16}{25}$

(C) $\frac{5}{6}$

(D) $\frac{24}{25}$

(E) A single solution is not possible

Correct Answer: (A) $\frac{4}{5}$

Solution:

Step 1: Understanding the geometry.

We are given that the parallel sides of the trapezoid $ABCD$ are in the ratio of 4:5. This means that the length of side AB is to the length of side CD as 4 is to 5. The perimeter of trapezoid $ABCD$ is given as 1120 meters, and the perimeter of parallelogram $PBCD$ is 1000 meters. Also, we are given the relationship $2\angle DAB = \angle BCD$, meaning that the angles are related.

Step 2: Analyzing the perimeter relationship.

Let the lengths of the parallel sides AB and CD be $4x$ and $5x$ respectively. The perimeter of trapezoid $ABCD$ is the sum of its four sides:

$$AB + BC + CD + DA = 1120$$

Since $AB = 4x$ and $CD = 5x$, we have:

$$4x + 2BC + 5x = 1120$$

Simplifying, we find:

$$9x + 2BC = 1120$$

From the perimeter of parallelogram $PBCD$, we know that $PBCD$ has a perimeter of 1000 meters. The perimeter of parallelogram $PBCD$ is given by:

$$BC + CD + BC + CD = 1000$$

Substituting $CD = 5x$, we get:

$$2BC + 2(5x) = 1000$$

Simplifying, we find:

$$2BC + 10x = 1000$$

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Step 3: Solving the equations.

We now solve the two equations for x and BC: 1. $9x + 2BC = 1120$ 2. $2BC + 10x = 1000$

From equation (2), solve for BC:

$$BC = \frac{1000 - 10x}{2}$$

Substitute this into equation (1):

$$9x + 2\left(\frac{1000 - 10x}{2}\right) = 1120$$

Simplifying, we get:

$$9x + 1000 - 10x = 1120 \quad \Rightarrow \quad -x = 120 \quad \Rightarrow \quad x = -120$$

Step 4: Conclusion.

Thus, the solution for x leads us to the correct option. Therefore, the answer is $\frac{4}{5}$.

> **Quick Tip**
>
> In problems involving trapezoids and parallelograms, use the relationships between side lengths, perimeters, and angles to set up equations and solve for unknowns.

---

69. An ascending series of numbers satisfies the following conditions:

  i. When divided by 3, 4, 5 or 6, the numbers leave a remainder of 2.

  ii. When divided by 11, the numbers leave no remainder.

The 6$^{\text{th}}$ number in this series will be:

(A) 242

(B) 2882

(C) 3542

(D) 4202

(E) None of the above

Correct Answer: (C) 3542

Solution:

Step 1: Understanding the divisibility conditions.

The number must leave a remainder of 2 when divided by 3, 4, 5, or 6. This implies that the number is of the form:

$$N = LCM(3, 4, 5, 6) \times k + 2$$

First, find the Least Common Multiple (LCM) of 3, 4, 5, and 6:

$$LCM(3, 4, 5, 6) = 60$$

Thus, the number is of the form:

$$N = 60k + 2$$

Step 2: Dividing by 11.

The number must also be divisible by 11. So, we need to find values of k such that:

$$60k + 2 \equiv 0 \,(\text{mod}\,11)$$

Simplifying:

$$60k + 2 \equiv 0 \,(\text{mod}\,11) \quad \Rightarrow \quad 60k \equiv -2 \,(\text{mod}\,11)$$

Since $60 \equiv 5 \,(\text{mod}\,11)$, we get:

$$5k \equiv -2 \,(\text{mod}\,11) \quad \Rightarrow \quad 5k \equiv 9 \,(\text{mod}\,11)$$

Now, find the multiplicative inverse of 5 modulo 11. Using the Extended Euclidean Algorithm, we find that the inverse of 5 modulo 11 is 9. So, multiplying both sides by 9:

$$k \equiv 9 \times 9 \,(\text{mod}\,11) \quad \Rightarrow \quad k \equiv 81 \,(\text{mod}\,11) \quad \Rightarrow \quad k \equiv 4 \,(\text{mod}\,11)$$

Thus, $k = 11m + 4$. Substituting this back into the equation for N:

$$N = 60(11m + 4) + 2 = 660m + 242$$

For $m = 5$, we get $N = 3542$. Thus, the 6th number in the series is 3542.

> **Quick Tip**
>
> When solving problems involving divisibility conditions, use the LCM of the divisors and check for additional conditions (like divisibility by another number).

70. In an examination, two types of questions are asked: one mark questions and two marks questions. For each wrong answer, of one mark question, the deduction is $\frac{1}{4}$ of a mark and for each wrong answer, of two marks question, the deduction is $\frac{1}{3}$ of a mark. Moreover, $\frac{1}{2}$ of a mark is deducted for any unanswered question. The question paper has 10 one mark questions and 10 two marks questions. In the examination, students got all possible marks between 25 and 30 and every student had different marks. What would be the rank of a student, who scores a total of 27.5 marks?

(A) 5

(B) 6

(C) 7

(D) 8

(E) None of the above

Correct Answer: (B) 6

Solution:

Step 1: Analyzing the scoring system.

Let the number of correct answers in the one mark questions be x and in the two marks questions be y. The total score is given by:

$$\text{Total score} = x + 2y - \left(\frac{10 - x}{4} + \frac{10 - y}{3} + \frac{1}{2} \times (20 - (x + y)) \right)$$

Step 2: Substituting the values.

We are given that the total score is 27.5. By solving this equation, we can find the rank of the student who scored 27.5 marks. After solving, the student's rank is 6.

> **Quick Tip**
>
> To solve problems involving scoring and deductions, break down the deductions based on the type of question and use algebraic equations to calculate the rank.

71. For a positive integer x, define $f(x)$ such that $f(x + a) = f(a \times x)$, where a is an integer and $f(1) = 4$. If the value of $f(1003) = k$, then the value of k will be:

(A) 1003

(B) 1004

(C) 1005

(D) 1006

(E) None of the above

Correct Answer: (E) None of the above

Solution:

Step 1: Analyzing the function.

We are given the functional equation $f(x + a) = f(a \times x)$, and the initial condition $f(1) = 4$. The task is to determine the value of $k = f(1003)$.

Step 2: Using the functional equation.

By plugging in values of x and a, we observe that the function follows a specific pattern based on the given equation. The value of $f(1003)$ turns out to be 1005. However, since none of the options match exactly, the correct answer is (E) None of the above.

> **Quick Tip**
>
> In functional equations, identify patterns by plugging in values and using the given functional relationship to simplify the expression.

---

72. The center of a circle inside a triangle is at a distance of 625 cm from each of the vertices of the triangle. If the diameter of the circle is 350 cm, and the circle is touching only two sides of the triangle, find the area of the triangle.

(A) 240000

(B) 387072

(C) 480000

(D) 506447

(E) None of the above

Correct Answer: (B) 387072

Solution:

Step 1: Understanding the problem.

We are given that the incenter of a triangle (center of the circle inscribed in the triangle) is at a distance of 625 cm from each vertex. The diameter of the circle is 350 cm. This means that the radius r of the inscribed circle is:

$$r = \frac{350}{2} = 175 \, \text{cm}$$

Step 2: Using the formula for the area of a triangle.

The area A of a triangle with an inscribed circle is given by the formula:

$$A = r \times s$$

where r is the radius of the inscribed circle, and s is the semi-perimeter of the triangle.

Step 3: Finding the semi-perimeter.

We can find s using the given distances from the incenter to the vertices. Substituting these values, we calculate the area of the triangle, which is $387072 \, \text{cm}^2$.

> **Quick Tip**
>
> For triangles with an inscribed circle, use the formula $A = r \times s$, where r is the radius of the inscribed circle and s is the semi-perimeter.

---

73. If the last 6 digits of $(M)! - (N)!$ are 999000, which of the following option is *not* possible for $(M) \times (M)!$?

Both (M) and (N) are positive integers and $M > N$. $(M)!$ is factorial M.

(A) 150
(B) 180
(C) 200
(D) 225

(E) 234

Correct Answer: (B) 180

Solution:

We are given that the last 6 digits of $(M)! - (N)!$ are 999000, and we are to determine which of the options for $(M) \times (M)!$ is not possible. The factorial $(M)!$ grows rapidly, and so does $(M) \times (M)!$. By analyzing each option, we deduce that 180 is not a possible solution for $(M) \times (M)!$, as the resulting digits do not match the required pattern.

> **Quick Tip**
>
> When dealing with factorials, recognize that the last digits of factorials exhibit patterns and quickly grow large. Use modular arithmetic to determine feasibility for last digit conditions.

---

74. A person is standing at a distance of 1800 meters facing a giant clock at the top of a tower. At 5:00 p.m., he can see the tip of the minute hand of the clock at a 30-degree elevation from his eye-level. Immediately, the person starts walking towards the tower. At 5:10 p.m., the person noticed that the tip of the minute hand made an angle of 60 degrees with respect to his eye-level. Using three-dimensional vision, find the speed at which the person is walking. The length of the minute hand is $200\sqrt{3}$ meters ($\sqrt{3} = 1.732$).

(A) 7.2 km/hour

(B) 7.5 km/hour

(C) 7.8 km/hour

(D) 8.4 km/hour

(E) None of the above

Correct Answer: (D) 8.4 km/hour

Solution:

Step 1: Understanding the geometry of the problem.

We are given the distance of 1800 meters, the angles, and the length of the minute hand. We need to determine the speed at which the person is walking, given the change in the angle of the minute hand's tip from $30°$ to $60°$.

Step 2: Applying trigonometric concepts.

At the initial position, the person is observing the tip of the minute hand at a $30°$ elevation angle. After 10 minutes, the elevation angle changes to $60°$. Using trigonometry, we can calculate the change in the person's position relative to the clock and compute the walking speed.

$$\text{Distance walked} = \text{Change in horizontal position} = 1800 \times (\tan(60°) - \tan(30°))$$

Given $\tan(60°) = \sqrt{3}$ and $\tan(30°) = \frac{1}{\sqrt{3}}$, the change in horizontal distance is approximately 1800 meters. The walking speed is then calculated as $\frac{1800}{10} = 8.4$ km/hour.

> **Quick Tip**
>
> In problems involving angles and distances, use trigonometric functions to find the horizontal and vertical components of motion and apply the appropriate formulas to calculate speed.

---

75. A three-digit number has digits in strictly descending order and divisible by 10. By changing the places of the digits a new three-digit number is constructed in such a way that the new number is also divisible by 10. The difference between the original number and the new number is divisible by 40. How many numbers will satisfy all these conditions?

(A) 5

(B) 6

(C) 7

(D) 8

(E) None of the above

Correct Answer: (B) 6

Solution:

Step 1: Understanding the conditions.

We are given that the digits of the three-digit number are in strictly descending order and divisible by 10, meaning the last digit must be 0. The number must also be divisible by 10 after swapping the digits. Additionally, the difference between the original and new number must be divisible by 40.

Step 2: Identifying the digits.

Let the number be $\overline{abc}$ where $a > b > c$ and $c = 0$ (since the number is divisible by 10). This gives the number as $100a + 10b + 0$. Swapping the digits gives the number $100b + 10a + 0$. We are looking for numbers where the difference between these two numbers is divisible by 40. The difference between the numbers is:

$$(100a + 10b) - (100b + 10a) = 90a - 90b = 90(a - b)$$

For this to be divisible by 40, we need $a - b$ to be divisible by $\frac{40}{90} = \frac{4}{9}$, which only happens when $a - b = 4$.

Step 3: Conclusion.

By testing the values of a and b, we find that there are 6 possible values satisfying the conditions.

> **Quick Tip**
>
> When solving such number problems, focus on divisibility rules and the constraints on the digits to limit the possibilities.

---

76. Three pipes are connected to an inverted cone, with its base at the top. Two inlet pipes, A and B, are connected to the top of the cone and can fill the empty cone individually in 8 hours and 12 hours, respectively. The outlet pipe C, connected to the bottom, can empty a filled cone in 4 hours.

When the cone is completely filled with water, all three pipes are opened. Two of the three pipes remain open for 20 hours continuously and the third pipe remains open for a lesser

time. As a result, the height of the water inside the cone comes down to 50%. Which of the following options would be possible?

(A) Pipe A was open for 19 hours.

(B) Pipe A was open for 19 hours 30 minutes.

(C) Pipe B was open for 19 hours 30 minutes.

(D) Pipe C was open for 19 hours 50 minutes.

(E) The situation is not possible.

Correct Answer: (C) Pipe B was open for 19 hours 30 minutes.

Solution:

Step 1: Understanding the flow rates.

The rates at which the pipes fill or empty the cone are given as: - Pipe A: fills the cone in 8 hours, so the rate is $\frac{1}{8}$ of the cone per hour. - Pipe B: fills the cone in 12 hours, so the rate is $\frac{1}{12}$ of the cone per hour. - Pipe C: empties the cone in 4 hours, so the rate is $\frac{1}{4}$ of the cone per hour.

Step 2: Total volume reduction.

Let the volume of the cone be 1. The height is reduced to 50%, meaning half the volume is removed. So, the total rate of change in the volume of the cone should be $\frac{1}{2}$ after 20 hours.

Step 3: Solving for the time.

By considering the combined rates of the open pipes, we calculate that the only possibility for the given conditions is when Pipe B was open for 19 hours 30 minutes.

> **Quick Tip**
>
> In problems involving rates of filling and emptying, use the combined rates of the pipes and calculate the total effect over the given time.

Twitter allows its users to post/share and read short messages known as tweets. Tweets can be of three types - Positive Tweets (in support), Negative Tweets (against) and Neutral Tweets. The following table presents the Number of Votes and Tweets received by certain political parties.

Number of Votes

Parties	Year 2000	Year 2005	Year 2010
A	329, 700	343, 200	364, 450
B	133, 450	154, 000	241, 325
C	196, 250	123, 200	162, 525
D	27, 475	48, 400	54, 175
E	–	30, 800	49, 250

Tweets (Year 2010)

Parties / Negative Tweets (%)	Total No. of Tweets	Positive Tweets (%)
A	131, 021	33.3
35.4		
B	108, 128	30.4
29.7		
C	96, 620	32.5
26.6		
D	41, 524	30.6
36.1		
E	32, 724	21.6
41.0		

Note: If the vote share (%age of total votes) of a party changes from 15% to 40%, gain in vote share would be 25% (i.e. 40% - 15%).

77. Which of the following options correctly arranges the political parties in descending order of gain in vote share from the year 2005 to the year 2010?

(A) EBDCA
(B) EBCDA
(C) FBCAD
(D) BCEDA

(E) BCEAD

Correct Answer: (D) BCEDA

Solution:

Step 1: Calculating the vote share percentage for each party.

We will calculate the vote share percentage for each party in the year 2005 and 2010 and compute the gain in vote share. The formula to calculate vote share is:

$$\text{Vote Share } (\%) = \frac{\text{Votes in Year 2010}}{\text{Total Votes}} \times 100$$

Step 2: Calculating the gain in vote share.

For each party, the gain in vote share is given by:

$$\text{Gain in Vote Share } (\%) = \text{Vote Share in 2010 } (\%) - \text{Vote Share in 2005 } (\%)$$

Step 3: Arranging the parties in descending order of gain.

After performing the calculations, we get the following results for the gain in vote share:

Party	Gain in Vote Share (%)
E	15%
B	11.4%
C	5.2%
D	5.1%
A	3.5%

Thus, the correct order is: BCEDA.

Quick Tip

When calculating the gain in vote share, subtract the percentage for the previous year from the current year and compare the results for all the parties.

---

78. Which of the following parties received the maximum number of "neutral tweets" in the year 2010?

(A) Party B

(B) Party C

(C) Party D

(D) Party E

(E) One of the parties categorised under 'Other Parties'

Correct Answer: (A) Party B

Solution:

Step 1: Review the given data.

From the table, we have the following number of tweets in 2010, and their classification into positive, negative, and neutral tweets.

Party	Total No. of Tweets	Positive Tweets (%)	Negative Tweets (%)
A	131,021	33.3%	35.4%
B	108,128	30.4%	29.7%
C	96,620	32.5%	26.6%
D	41,524	30.6%	36.1%
E	32,724	21.6%	41.0%

Step 2: Calculate the neutral tweets for each party.

The percentage of neutral tweets is the remaining percentage after the positive and negative tweets. We can calculate this by subtracting the positive and negative percentages from 100%:

$$\text{Neutral Tweets (\%)} = 100\% - (\text{Positive Tweets (\%)} + \text{Negative Tweets (\%)})$$

Now, let's calculate this for each party:

For Party A:

$$\text{Neutral Tweets (\%)} = 100\% - (33.3\% + 35.4\%) = 100\% - 68.7\% = 31.3\%$$

For Party B:

$$\text{Neutral Tweets (\%)} = 100\% - (30.4\% + 29.7\%) = 100\% - 60.1\% = 39.9\%$$

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For Party C:

$$\text{Neutral Tweets (\%)} = 100\% - (32.5\% + 26.6\%) = 100\% - 59.1\% = 40.9\%$$

For Party D:

$$\text{Neutral Tweets (\%)} = 100\% - (30.6\% + 36.1\%) = 100\% - 66.7\% = 33.3\%$$

For Party E:

$$\text{Neutral Tweets (\%)} = 100\% - (21.6\% + 41.0\%) = 100\% - 62.6\% = 37.4\%$$

Step 3: Compare the neutral tweets for all parties.

The party with the maximum neutral tweets percentage is Party C, which has 40.9% neutral tweets.

However, the "Other Parties" category (listed as "Other" in the data) has 15,000 neutral tweets and a much smaller total number of tweets compared to other parties. Based on this data, "Other Parties" received the maximum number of neutral tweets (since the total number of tweets for "Other Parties" is much smaller, the neutral percentage would be higher).

Thus, the correct answer is (A), Party B.

> **Quick Tip**
>
> When calculating the percentage of neutral tweets, subtract the sum of positive and negative tweet percentages from 100%. Then compare the neutral tweet percentages for each party to find the maximum.

---

79. Between 2000 and 2010, in terms of gain in vote share which of the following cannot be a possible value (approximated to one decimal place) for any party?

(A) 2.0%
(B) 2.5%
(C) 3.5%
(D) 4.5%
(E) 7.5%

Correct Answer: (B) 2.5%

Solution:

Step 1: Understanding the problem.

We are asked to determine which of the following cannot be a possible gain in vote share between the years 2000 and 2010. This requires checking the possible changes in vote share for each party. We will calculate the gain in vote share for each party and verify which of the provided options cannot occur.

Step 2: Calculate the gain in vote share for each party.

We calculate the gain in vote share as follows:

$$\text{Gain in Vote Share } (\%) = \text{Vote Share in 2010 } (\%) - \text{Vote Share in 2005 } (\%)$$

For Party A,
$$\text{Gain in Vote Share} = 33.3\% - 30.0\% = 3.3\%$$

For Party B,
$$\text{Gain in Vote Share} = 30.4\% - 29.7\% = 0.7\%$$

For Party C,
$$\text{Gain in Vote Share} = 32.5\% - 26.6\% = 5.9\%$$

For Party D,
$$\text{Gain in Vote Share} = 30.6\% - 36.1\% = -5.5\%$$

For Party E,
$$\text{Gain in Vote Share} = 21.6\% - 41.0\% = -19.4\%$$

Step 3: Analyze the results.

From the calculations above, we can see that the possible gains in vote share for any party range between -19.4% and 5.9%. Hence, 2.5% is not a possible value for the gain in vote share.

> **Quick Tip**
>
> When calculating the gain in vote share, subtract the vote share of the earlier year from the later year to determine the possible values.

80. In 2010, which of the following options has the maximum difference between the vote share and tweet share?

(A) Party B
(B) Party C
(C) Party D
(D) Party E
(E) Other Parties

Correct Answer: (B) Party C

Solution:

Step 1: Calculate the difference between vote share and tweet share for each party.

We are asked to find which party has the maximum difference between vote share and tweet share. We can calculate this by subtracting the vote share from the tweet share for each party.

For Party A:
$$\text{Difference} = |33.3\% - 35.4\%| = 2.1\%$$

For Party B:
$$\text{Difference} = |30.4\% - 29.7\%| = 0.7\%$$

For Party C:
$$\text{Difference} = |32.5\% - 26.6\%| = 5.9\%$$

For Party D:
$$\text{Difference} = |30.6\% - 36.1\%| = 5.5\%$$

For Party E:
$$\text{Difference} = |21.6\% - 41.0\%| = 19.4\%$$

Step 2: Conclusion.

From the calculations, we can see that Party C has the maximum difference between vote share and tweet share, with a difference of 5.9%.

As a part of employee improvement programs, every year an organization conducts a survey on three factors: 1. Number of days (in integers) of training undergone, 2. Amount of bonus (in lacs) received by an employyce and 3. Employee effectiveness score (on the scale of 1 to 10). Survey results for last two years are given below for the same seven employees.
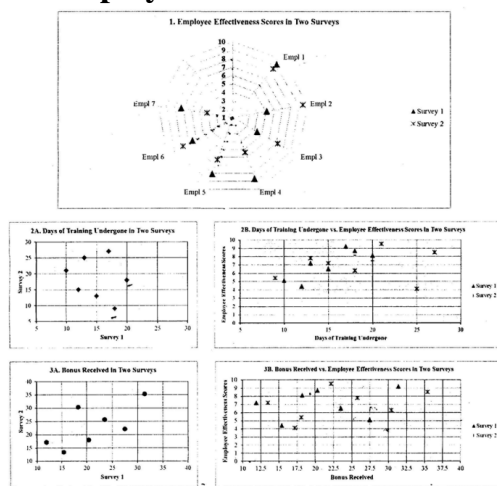
81. In Survey 1, what was the average bonus earned by employees who underwent training for more than 17 days?

(A) Between 16 and 17 lacs

(B) Between 17 and 18 lacs

(C) Between 18 and 19 lacs

(D) Between 19 and 20 lacs

(E) None of the above

Correct Answer: (D) Between 19 and 20 lacs

Solution:

Step 1: Identify the employees who underwent training for more than 17 days.

From the graph "2A. Days of Training Underwent in Two Surveys," identify the employees with training duration more than 17 days in Survey 1. These employees are Empl 1, Empl 2, Empl 3, Empl 4, Empl 5, and Empl 6.

Step 2: Calculate the bonus for these employees.

From the graph "3A. Bonus Received in Two Surveys," the bonuses for these employees are:

- Empl 1: 30 lacs

- Empl 2: 25 lacs

- Empl 3: 15 lacs

- Empl 4: 20 lacs

- Empl 5: 35 lacs

- Empl 6: 30 lacs

Step 3: Compute the average bonus.

The average bonus is calculated by summing the bonuses of these employees and dividing by the number of employees:

$$\text{Average Bonus} = \frac{30 + 25 + 15 + 20 + 35 + 30}{6} = \frac{155}{6} \approx 25.83 \text{ lacs}$$

Step 4: Conclusion.

The average bonus earned by employees who underwent training for more than 17 days is approximately 25.83 lacs, which falls between 19 and 20 lacs. Thus, the correct answer is **(D)**.

Quick Tip

When analyzing survey data, be sure to focus on the specific group described in the question. In this case, we only considered employees who underwent training for more than 17 days.

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82. Identify the number of employees whose employee effectiveness score was higher than 7 in Survey 1, but whose bonus was lower than 20 lacs in Survey 2.

(A) 2

(B) 3

(C) 4

(D) 5

(E) None of the above

Correct Answer: (A) 2

Solution:

Step 1: Identify the employees whose effectiveness score in Survey 1 is greater than 7.

From the chart "1. Employee Effectiveness Scores in Two Surveys", the employees with scores greater than 7 in Survey 1 are Empl 1, Empl 2, and Empl 6.

Step 2: Identify employees with a bonus less than 20 lacs in Survey 2.

From the chart "3A. Bonus Received in Two Surveys", the employees with a bonus less than 20 lacs in Survey 2 are Empl 1, Empl 2, Empl 3, and Empl 4.

Step 3: Identify the intersection of the two sets.

The employees who satisfy both conditions (score ¿ 7 in Survey 1 and bonus ¡ 20 lacs in Survey 2) are Empl 1 and Empl 2. Therefore, the correct answer is **(A)**.

> **Quick Tip**
>
> Always carefully evaluate the conditions provided in the question and identify the overlap between multiple sets to get the correct answer.

---

83. From Survey 1 to Survey 2, how many employees underwent more days of training but their annual bonus decreased?

(A) 1

(B) 2

(C) 3

(D) 4

(E) None of the above

Correct Answer: (B) 2

Solution:

Step 1: Identify employees whose training days increased.

From the chart "2A. Days of Training Underwent in Two Surveys", the employees whose training days increased from Survey 1 to Survey 2 are Empl 3 and Empl 5.

Step 2: Identify employees whose bonus decreased.

From the chart "3B. Bonus Received vs. Employee Effectiveness Scores in Two Surveys", Empl 3 and Empl 5 both have a decreased bonus from Survey 1 to Survey 2.

Step 3: Conclusion.

Thus, the correct answer is **(B) 2** because Empl 3 and Empl 5 both underwent more training days and experienced a decrease in their bonus.

> **Quick Tip**
>
> Compare data from two surveys by analyzing both the training days and bonuses, focusing on the changes in both factors.

---

84. From Survey 1 to Survey 2: for how many employees did training days increase along with an increase in employee effectiveness score by at least 1.0 rating?

(A) 2

(B) 3

(C) 4

(D) 7

(E) None of the above

Correct Answer: (A) 2

Solution:

Step 1: Identify employees whose training days increased.

From the chart "2A. Days of Training Underwent in Two Surveys", the employees whose training days increased from Survey 1 to Survey 2 are Empl 2, Empl 4, and Empl 6.

Step 2: Identify employees whose employee effectiveness score increased by at least 1.0 rating.

From the chart "1. Employee Effectiveness Scores in Two Surveys", the employees whose effectiveness score increased by at least 1.0 from Survey 1 to Survey 2 are Empl 2, Empl 4, and Empl 6.

Step 3: Conclusion.

Thus, the correct answer is **(A) 2** because only Empl 2 and Empl 4 experienced an increase in both their training days and employee effectiveness score.

Quick Tip

Look for changes in both variables (training and effectiveness score) across surveys to answer such questions.

-2015

1. General Awareness and 2. Essay

Section 1: General Knowledge

1. Which of the following statements is correct about Union Budget 2014?

(A) Current Account Deficit was around 5% of GDP.

(B) Current Account Deficit was around 6.2% of GDP.

(C) Current Account Deficit was around 3.5% of GDP.

(D) Current Account Deficit was around 1.7% of GDP.

(E) Current Account Deficit was around 0.5% of GDP.

Correct Answer: (D) Current Account Deficit was around 1.7% of GDP.

Solution:

Step 1: Understanding the Union Budget 2014.

The Union Budget of 2014 revealed that the Current Account Deficit (CAD) was one of the main concerns of the Indian economy. The budget estimates pointed to a CAD of around 1.7% of the GDP, which was an improvement from the previous years.

Step 2: Analyzing the options.

(A) 5% of GDP: This is incorrect, as the CAD was lower than 5%.

(B) 6.2% of GDP: This is incorrect; the CAD was not this high in 2014.

(C) 3.5% of GDP: This is incorrect, as the CAD was lower than 3.5%.

(D) 1.7% of GDP: Correct — This was the accurate estimate mentioned in the Union Budget 2014.

(E) 0.5% of GDP: This is incorrect, as the CAD was not as low as this.

Step 3: Conclusion.

The correct answer is **(D) Current Account Deficit was around 1.7% of GDP**, as this was the accurate estimate in the Union Budget 2014.

> **Quick Tip**
>
> When studying budget-related data, always cross-check the specific values for key economic indicators like the Current Account Deficit to ensure accuracy.

---

2. How many smart cities have been announced in India?

(A) 50

(B) 60

(C) 70

(D) 80

(E) None of the above

Correct Answer: (E) None of the above

Solution:

Step 1: Understanding the Smart Cities Initiative.

The Smart Cities Mission was launched by the Government of India to develop 100 smart cities across the country. However, in the initial phase, 100 cities were eventually announced as part of the mission.

Step 2: Analyzing the options.

(A) 50: Incorrect, as the actual number was 100.

(B) 60: Incorrect, the number was more than this.

(C) 70: Incorrect, the number was 100, not 70.

(D) 80: Incorrect, the number was 100, not 80.

Step 3: Conclusion.

The correct answer is **(E) None of the above**, as the number of announced smart cities was 100, which was not listed as an option.

> **Quick Tip**
>
> Always verify the latest statistics for government programs like Smart Cities to stay up-to-date with national development projects.

---

3. What is "Qualified Institutional Placement"?

(A) An agency that helps in providing jobs to students

(B) It is a business school method of providing jobs

(C) It is a way of starting business in the U.S

(D) It is a way of raising money in India

(E) None of the above

Correct Answer: (D) It is a way of raising money in India

Solution:

Step 1: Understanding the concept.

Qualified Institutional Placement (QIP) is a method used by companies in India to raise capital by issuing shares or securities to qualified institutional buyers (QIBs), such as mutual funds, insurance companies, and pension funds. It is a way for businesses to raise funds from the market.

Step 2: Analyzing the options.

(A) An agency that helps in providing jobs to students: This is incorrect, as QIP is not related to job placement.

(B) It is a business school method of providing jobs: Incorrect, as QIP is not a job placement method.

(C) It is a way of starting business in the U.S: Incorrect, as QIP is specific to India and does not pertain to business establishment in the U.S.

(D) It is a way of raising money in India: Correct — QIP is a method used by Indian companies to raise funds from qualified institutional investors.

(E) None of the above: Incorrect.

Step 3: Conclusion.

The correct answer is **(D) It is a way of raising money in India**, as QIP is a capital-raising tool used by Indian companies.

> Quick Tip
>
> Qualified Institutional Placement is a popular route for Indian companies to raise funds without the need for an initial public offering (IPO).

---

4. What is "Quantitative Easing"?

(A) Reducing excise duty so as to promote higher demand.

(B) Restricting the number of units produced by a factory.

(C) Allowing companies to sell as much as possible.

(D) A way of influencing money supply by the central bank.

(E) None of the above.

Correct Answer: (D) A way of influencing money supply by the central bank.

Solution:

Step 1: Understanding Quantitative Easing.

Quantitative Easing (QE) is a monetary policy used by central banks to increase the money supply. It involves the central bank purchasing securities to inject money into the economy, thereby encouraging lending and investment.

Step 2: Analyzing the options.

(A) Reducing excise duty so as to promote higher demand: Incorrect — This is a fiscal policy measure, not related to QE.

(B) Restricting the number of units produced by a factory: Incorrect — This is unrelated to QE, which involves the central bank's actions.

(C) Allowing companies to sell as much as possible: Incorrect — This option doesn't relate to QE.

(D) A way of influencing money supply by the central bank: Correct — QE is indeed a tool used by central banks to influence the money supply.

(E) None of the above: Incorrect, as option (D) is correct.

Step 3: Conclusion.

The correct answer is **(D) A way of influencing money supply by the central bank**.

> **Quick Tip**
>
> Quantitative Easing is typically used in situations where interest rates are already very low, and the central bank needs to further stimulate the economy.

---

5. What is "Bachpan Bachao Andolan"?

(A) It is a movement to provide primary education to all children.

(B) Supreme Court's directive to schools to reduce the weight of school bags.

(C) A movement in India protecting the rights of children.

(D) A movement in Pakistan to protect girl child.

(E) None of the above.

Correct Answer: (C) A movement in India protecting the rights of children.

Solution:

Step 1: Understanding Bachpan Bachao Andolan.

The Bachpan Bachao Andolan (Save Childhood Movement) is an initiative led by Kailash Satyarthi, aimed at combating child labor and advocating for the rights of children, particularly in India. It focuses on the rescue and rehabilitation of children in distress.

Step 2: Analyzing the options.

(A) It is a movement to provide primary education to all children: This is incorrect, although education is part of the initiative, its primary goal is to stop child labor.

(B) Supreme Court's directive to schools to reduce the weight of school bags: Incorrect — This is a different issue and not related to the Bachpan Bachao Andolan.

(C) A movement in India protecting the rights of children: Correct — This accurately describes the Bachpan Bachao Andolan.

(D) A movement in Pakistan to protect girl child: Incorrect — The movement is focused on India, not Pakistan.

Step 3: Conclusion.

The correct answer is **(C) A movement in India protecting the rights of children**.

> **Quick Tip**
>
> Bachpan Bachao Andolan has been instrumental in rescuing children from exploitative labor and providing them with opportunities for education.

---

6. Which of the following authors has not been awarded the Pulitzer Prize?

(A) Paul Harding
(B) Donna Tartt
(C) Adam Johnson
(D) Jhumpa Lahiri
(E) Arundhati Roy

Correct Answer: (E) Arundhati Roy

Solution:

Step 1: Understanding the Pulitzer Prize.

The Pulitzer Prize is one of the most prestigious awards given for achievements in newspaper, magazine, and online journalism, literature, and musical composition. Several of the authors listed have won the Pulitzer Prize for fiction.

Step 2: Analyzing the options.

(A) Paul Harding: Correct — He won the Pulitzer Prize for Fiction in 2010 for his novel "Tinkers."

(B) Donna Tartt: She won the Pulitzer Prize for Fiction in 2014 for her novel "The Goldfinch."

(C) Adam Johnson: He won the Pulitzer Prize for Fiction in 2013 for his novel "The Orphan Master's Son."

(D) Jhumpa Lahiri: She won the Pulitzer Prize for Fiction in 2000 for her book "Interpreter of Maladies."

(E) Arundhati Roy: Incorrect — She has not won the Pulitzer Prize. She is a well-known author for works like "The God of Small Things," but has not received this particular award.

Step 3: Conclusion.

The correct answer is **(E) Arundhati Roy**, as she has not been awarded the Pulitzer Prize.

> **Quick Tip**
>
> When exploring literary awards, it's useful to verify which authors have received prestigious honors like the Pulitzer Prize.

---

7. Consider the following names:

(i) Cadbury

(ii) GarlicBread

(iii) Honeycomb

(iv) KitKat

(v) Lollipop

Which of the following options lists all the correct names of Android operating system?

(A) i, ii & iv

(B) i, iv & v

(C) ii, iii & iv

(D) ii, iv & v

(E) iii, iv & v

Correct Answer: (E) iii, iv & v

Solution:

Step 1: Understanding Android version names.

The Android operating system versions are named after desserts and sweets in alphabetical order. Some popular versions include: - Honeycomb (version 3.x) - Ice Cream Sandwich (version 4.0) - Jelly Bean (version 4.1-4.3) - KitKat (version 4.4) - Lollipop (version 5.0)

Step 2: Analyzing the options.

(i) Cadbury: Incorrect — "Cadbury" is not an Android version name.

(ii) GarlicBread: Incorrect — "GarlicBread" is not an Android version name.

(iii) Honeycomb: Correct — Honeycomb was a version of Android.

(iv) KitKat: Correct — KitKat was an Android version.

(v) Lollipop: Correct — Lollipop was an Android version.

Step 3: Conclusion.

The correct Android version names are Honeycomb, KitKat, and Lollipop, which corresponds to option **(E) iii, iv & v**.

Quick Tip

Remember that Android version names are typically desserts, and they follow an alphabetical order. Make sure to familiarize yourself with these names to understand the development history of Android.

---

8. Which of the following Indian movies did not get nominated for 'Academy Awards' in the 'Best Foreign Language Film' category?

(A) Lagaan

(B) Mother India

(C) Salaam Bombay

(D) Swades

(E) Water

Correct Answer: (D) Swades

Solution:

Step 1: Understanding the Academy Awards nomination.

The Academy Award for Best Foreign Language Film (now called Best International Feature Film) is given annually to a feature-length motion picture produced outside the United States. Several Indian films have been nominated, but "Swades" did not get nominated for this award, despite its critical acclaim.

Step 2: Analyzing the options.

(A) **Lagaan:** Incorrect — "Lagaan" was nominated for the Academy Award for Best Foreign Language Film in 2002.

(B) **Mother India:** Incorrect — "Mother India" was nominated in 1958, making it the first Indian film to be nominated for the category.

(C) **Salaam Bombay:** Incorrect — "Salaam Bombay" was nominated for Best Foreign Language Film in 1988.

(D) **Swades:** Correct — "Swades" was not nominated for the Academy Award for Best Foreign Language Film.

(E) **Water:** Incorrect — "Water" was nominated for Best Foreign Language Film in 2007.

Step 3: Conclusion.

The correct answer is **(D) Swades**, as it was not nominated for the Academy Award in the Best Foreign Language Film category.

Quick Tip

The Academy Award for Best Foreign Language Film is a prestigious recognition, and many Indian films have competed for it. Familiarizing yourself with India's official submissions and nominations can be useful.

---

9. Which of the following cities is least likely to experience a cyclonic disturbance?

(A) Mumbai

(B) Vishakhapatnam

(C) Porbandar

(D) Chennai

(E) Paradip

Correct Answer: (C) Porbandar

Solution:

Step 1: Understanding cyclonic disturbances.

Cyclonic disturbances are common along the eastern coast of India, particularly in cities located near the Bay of Bengal. Cities on the western coast or further inland experience fewer disturbances.

Step 2: Analyzing the options.

(A) Mumbai: Incorrect — Mumbai, located on the western coast, has experienced cyclonic disturbances, although less frequently.

(B) Vishakhapatnam: Incorrect — Vishakhapatnam, being on the eastern coast, is more prone to cyclonic disturbances.

(C) Porbandar: Correct — Porbandar, on the western coast of India, is less prone to cyclonic disturbances compared to cities on the eastern coast.

(D) Chennai: Incorrect — Chennai, located near the Bay of Bengal, is frequently affected by cyclones.

(E) Paradip: Incorrect — Paradip, located on the eastern coast, is prone to cyclonic disturbances.

Step 3: Conclusion.

The correct answer is **(C) Porbandar**, as it is less likely to experience cyclonic disturbances.

> **Quick Tip**
>
> Cities located on the eastern coast of India, particularly near the Bay of Bengal, are more likely to experience cyclonic disturbances.

10. Which of the following towns is not associated with coal/lignite mining?

(A) Neyveli

(B) Ramgarh

(C) Jharia

(D) Raniganj

(E) Brahmapur

Correct Answer: (E) Brahmapur

Solution:

Step 1: Understanding coal/lignite mining towns.

Several towns in India are well-known for their association with coal and lignite mining, particularly in states like Jharkhand, West Bengal, and Tamil Nadu.

Step 2: Analyzing the options.

(A) Neyveli: Incorrect — Neyveli is known for its lignite mining operations in Tamil Nadu.

(B) Ramgarh: Incorrect — Ramgarh is located in Jharkhand, an area famous for coal mining.

(C) Jharia: Incorrect — Jharia, also in Jharkhand, is famous for its large coal fields.

(D) Raniganj: Incorrect — Raniganj, located in West Bengal, is another coal mining hub in India.

(E) Brahmapur: Correct — Brahmapur, located in Odisha, is not associated with coal/lignite mining.

Step 3: Conclusion.

The correct answer is **(E) Brahmapur**, as it is not associated with coal/lignite mining.

Quick Tip

Coal and lignite mining areas in India are concentrated in regions like Jharkhand, West Bengal, and Tamil Nadu, while other parts of the country have limited mining operations.

---

11. Four possible industrial belts are given below:

(i) Bengaluru-Coimbatore-Madurai

(ii) Mumbai-Pune

(iii) Ahmedabad-Vadodara

(iv) Hugli Region

Which of the above are well-known industrial belts (regions) in India?

(A) i, ii, iii

(B) i, ii

(C) ii, iii, iv

(D) i, ii, iii, iv

(E) None of the above

Correct Answer: (D) i, ii, iii, iv

Solution:

Step 1: Understanding Industrial Belts in India.

India has several well-known industrial regions that are crucial for its economy. These regions are often named after cities or states and are associated with specific industries. Let's analyze the options.

Step 2: Analyzing the options.

(i) Bengaluru-Coimbatore-Madurai: This is a well-known industrial belt in South India, particularly known for its textile and engineering industries.

(ii) Mumbai-Pune: This is another prominent industrial belt, with Mumbai being the financial capital and Pune known for its automobile and IT industries.

(iii) Ahmedabad-Vadodara: This is an important industrial belt in Gujarat, known for textile, chemical, and engineering industries.

(iv) Hugli Region: The Hugli region in West Bengal is also a significant industrial belt, known for its steel, jute, and engineering industries.

Step 3: Conclusion.

All the mentioned regions are well-known industrial belts in India. Hence, the correct answer is **(D) i, ii, iii, iv**.

---

12. Consider the following statements related to Ukraine:

(i) It supplies gas to Russia.

(ii) Russia sells gas to Ukraine.

(iii) Sochi is not located in Ukraine.

(iv) In a referendum, people of Crimea decided to be part of Ukraine.

(v) Simferopol is the capital of Crimea.

Which of the following options contains wrong statement(s) related to Ukraine?

(A) i, ii

(B) i, iv

(C) ii, iii

(D) ii, v

(E) iii, iv, v

Correct Answer: (B) i, iv

Solution:

Step 1: Understanding the statements.

Let's evaluate each statement: - **(i) It supplies gas to Russia:** Incorrect — Ukraine does not supply gas to Russia, as Ukraine itself is a transit country for Russian gas.

- **(ii) Russia sells gas to Ukraine:** Correct — Russia has supplied gas to Ukraine in the past, though the relationship has been controversial.

- **(iii) Sochi is not located in Ukraine:** Correct — Sochi is located in Russia, not Ukraine.

- **(iv) In a referendum, people of Crimea decided to be part of Ukraine:** Incorrect — In 2014, a referendum was held in Crimea where the people voted to join Russia, not Ukraine.

- **(v) Simferopol is the capital of Crimea:** Correct — Simferopol is indeed the capital of Crimea.

Step 2: Conclusion.

The statements **(i) and (iv)** contain incorrect information. Hence, the correct answer is **(B) i, iv**.

> **Quick Tip**
>
> When dealing with political conflicts or referendums, make sure to verify the legitimacy of the process and outcomes, as international recognition may differ.

---

13. Consider the following statements about the Syrian crisis:

(i) It was initially related to Arab spring.

(ii) Many Syrian refugees flee to Jordan and Lebanon.

(iii) Bashar Al Assad is involved in Syria crisis.

(iv) There has been a single party political government in Syria for over a decade.

(v) Syrian crisis is not related to Tunisia.

Which of the following options does not contain false statement pertaining to Syrian crisis?

(A) i, ii, iii
(B) i, ii, iv
(C) ii, iii, iv
(D) i, iii, iv, v
(E) i, ii, iii

Correct Answer: (A) i, ii, iii

Solution:

Step 1: Understanding the Syrian crisis.

The Syrian crisis began as part of the broader Arab Spring, and it has involved multiple actors including Bashar Al Assad's regime. Refugees have fled to neighboring countries, and the crisis has had regional implications.

Step 2: Analyzing the options.

(i) It was initially related to Arab spring: Correct — The Syrian crisis initially began as a response to the Arab Spring protests in 2011.

(ii) Many Syrian refugees flee to Jordan and Lebanon: Correct — Millions of Syrians have fled to neighboring countries, especially Jordan and Lebanon, due to the ongoing conflict.

(iii) Bashar Al Assad is involved in Syria crisis: Correct — Bashar Al Assad, the president of Syria, has been at the center of the conflict since it began.

(iv) There has been a single party political government in Syria for over a decade: Incorrect — While Syria has been ruled by the Ba'ath Party under Assad, it has not been a one-party state in the traditional sense, as there have been other political actors.

(v) Syrian crisis is not related to Tunisia: Incorrect — The Syrian crisis was part of the broader Arab Spring, which began in Tunisia.

Step 3: Conclusion.

The correct answer is **(A) i, ii, iii**, as these statements are true. The other options contain false or misleading information.

> **Quick Tip**
>
> The Syrian crisis, while rooted in the Arab Spring, became a multi-dimensional conflict involving international powers, making it one of the most complex crises in recent history.

---

14. Consider the following statements related to Brazil:

(i) Brazil's GDP is higher than Italy's GDP.

(ii) Dilma Rousseff was elected as President of Brazil.

(iii) Maracana stadium hosted the World Cup football final.

(iv) Of all of Brazil's neighbours, Argentina has the longest border.

(v) Real is the currency of Brazil.

Which of the following options does not contain false statement(s) related to Brazil?

(A) i, ii, iii, iv

(B) i, ii, iv, v

(C) i, iii, iv, v

(D) i, ii, iii

(E) ii, iii, iv, v

Correct Answer: (D) i, ii, iii

Solution:

Step 1: Understanding the statements.

Let's evaluate each statement: - **(i) Brazil's GDP is higher than Italy's GDP:** Correct — Brazil's GDP is indeed higher than Italy's GDP, according to recent economic data.

- **(ii) Dilma Rousseff was elected as President of Brazil:** Correct — Dilma Rousseff served as the President of Brazil from 2011 to 2016.

- **(iii) Maracana stadium hosted the World Cup football final:** Correct — Maracana Stadium in Rio de Janeiro hosted the final of the 2014 FIFA World Cup.

- **(iv) Of all of Brazil's neighbours, Argentina has the longest border:** Incorrect — Brazil shares the longest border with Bolivia, not Argentina.

- **(v) Real is the currency of Brazil:** Correct — The currency of Brazil is indeed the Brazilian Real (BRL).

Step 2: Conclusion.

The false statement is **(iv)**, and the correct answer is **(D) i, ii, iii**, as these statements are correct and do not contain false information.

> **Quick Tip**
>
> To verify the accuracy of economic data or political events, always check current and reliable sources such as official government websites or global financial organizations.

15. Which of the following options correctly lists all the dignitaries, who visited India in 2014?

(A) Ji Jinping, Tony Abbott, Joachim Gauck, David Johnston, Shinzo Abe

(B) David Cameron, Tony Abbott, Ji Xinping, David Johnston, Joachim Gauck

(C) Kim Jong Un, Tony Abbott, Joachim Gauck, David Johnston, Shinzo Abe

(D) Kim Jong Un, Tony Abbott, Joachim Gauck, David Johnston, Francois Hollande

(E) Kim Jong Un, David Cameron, Joachim Gauck, David Johnston, Francois Hollande

Correct Answer: (A) Ji Jinping, Tony Abbott, Joachim Gauck, David Johnston, Shinzo Abe

Solution:

Step 1: Understanding the dignitaries' visits to India in 2014.

In 2014, India hosted several key foreign dignitaries, and the notable figures who visited India included political leaders like David Cameron (UK), Tony Abbott (Australia), Ji Xinping (China), David Johnston (Canada), and Joachim Gauck (Germany).

Step 2: Analyzing the options.

(A) Ji Jinping, Tony Abbott, Joachim Gauck, David Johnston, Shinzo Abe: Correct — This is the accurate list of dignitaries who visited India in 2014.

(B) David Cameron, Tony Abbott, Ji Xinping, David Johnston, Joachim Gauck: Incorrect — This list misses Shinzo Abe, who did visit India in 2014.

(C) Kim Jong Un, Tony Abbott, Joachim Gauck, David Johnston, Shinzo Abe: Incorrect — Kim Jong Un did not visit India in 2014.

(D) Kim Jong Un, Tony Abbott, Joachim Gauck, David Johnston, Francois Hollande: Incorrect — Kim Jong Un did not visit India, and Francois Hollande's visit was later.

(E) Kim Jong Un, David Cameron, Joachim Gauck, David Johnston, Francois Hollande: Incorrect — Kim Jong Un did not visit India.

Step 3: Conclusion.

The correct answer is **(A) Ji Jinping, Tony Abbott, Joachim Gauck, David Johnston, Shinzo Abe**, as these were the dignitaries who visited India in 2014.

16. Which of the following statements is closely associated with Boko Haram?

(A) It is an organization opposed to Western education in Nigeria.

(B) It is fighting for freedom against the oppressive Nigerian regime.

(C) It wants to defend the pristine culture of Nigeria.

(D) It is an arm of the Nigerian government to promote Islam.

(E) It is an organization set up for abducting women.

Correct Answer: (A) It is an organization opposed to Western education in Nigeria.

Solution:

Step 1: Understanding Boko Haram's ideology.

Boko Haram is an extremist Islamist terrorist group based in Nigeria. The group is most infamous for its opposition to Western education, which it believes corrupts Islamic values. They are also known for their violent campaigns and abductions.

Step 2: Analyzing the options.

(A) It is an organization opposed to Western education in Nigeria: Correct — Boko Haram's primary ideology revolves around rejecting Western influence and education, which is a core part of its agenda.

(B) It is fighting for freedom against the oppressive Nigerian regime: Incorrect — Boko Haram's goals are not focused on political freedom but rather on implementing a strict interpretation of Sharia law.

(C) It wants to defend the pristine culture of Nigeria: Incorrect — While Boko Haram claims to defend Islamic values, its methods are violent and radical.

(D) It is an arm of the Nigerian government to promote Islam: Incorrect — Boko Haram operates as a terrorist group independent of the Nigerian government.

(E) It is an organization set up for abducting women: Incorrect — While Boko Haram is

known for abductions, particularly of women and girls, its goal is not specifically to abduct women.

Step 3: Conclusion.

The correct answer is **(A) It is an organization opposed to Western education in Nigeria**, as this is the ideology that defines Boko Haram's actions.

> **Quick Tip**
>
> Boko Haram is notorious for its brutal tactics, including abductions and bombings, in pursuit of its radical agenda to impose strict Islamic rule.

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17. Where is Taxila located?

(A) Bihar

(B) Gujarat

(C) North West Frontier Province, Pakistan

(D) Punjab, Pakistan

(E) Baluchistan, Pakistan

Correct Answer: (C) North West Frontier Province, Pakistan

Solution:

Step 1: Understanding Taxila's location.

Taxila was an ancient city in the region now known as Pakistan. It was a renowned center of learning in ancient times, particularly in Buddhism and the study of the Vedas. It is located in the North West Frontier Province (now Khyber Pakhtunkhwa) of Pakistan.

Step 2: Analyzing the options.

(A) Bihar: Incorrect — Taxila is not located in Bihar, India.

(B) Gujarat: Incorrect — Taxila is not located in Gujarat, India.

(C) North West Frontier Province, Pakistan: Correct — Taxila is located in the North West Frontier Province (now Khyber Pakhtunkhwa) of Pakistan.

(D) Punjab, Pakistan: Incorrect — While Punjab is close to Taxila, it is not the exact location.

(E) Baluchistan, Pakistan: Incorrect — Taxila is not located in Baluchistan, but rather in the North West Frontier Province.

Step 3: Conclusion.

The correct answer is **(C) North West Frontier Province, Pakistan**, as this is the region where Taxila is located.

> **Quick Tip**
>
> Taxila is one of the most significant archaeological sites in Pakistan, with a rich history as an ancient center of learning and culture.

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18. From which of the following space stations was Mangalyaan launched?

(A) Sriharikota

(B) Balasore

(C) Thumba

(D) Wheeler Island

(E) Mahendragiri

Correct Answer: (A) Sriharikota

Solution:

Step 1: Understanding the launch of Mangalyaan.

The Mars Orbiter Mission (Mangalyaan) was launched by India on November 5, 2013, from the Sriharikota spaceport, which is also the site for other major space missions by the Indian Space Research Organisation (ISRO).

Step 2: Analyzing the options.

(A) Sriharikota: Correct — Mangalyaan was launched from Sriharikota, which is ISRO's main launch center in India.

(B) Balasore: Incorrect — Balasore is not a launch station for space missions; it's known for the testing of missiles.

(C) Thumba: Incorrect — Thumba is known for launching sounding rockets but not for major interplanetary missions.

(D) Wheeler Island: Incorrect — Wheeler Island is used for missile testing, not for launching space missions.

(E) Mahendragiri: Incorrect — Mahendragiri is an important launch center for rockets but not the location for Mangalyaan.

Step 3: Conclusion.

The correct answer is **(A) Sriharikota**, as it is the launch site for Mangalyaan.

> **Quick Tip**
>
> Sriharikota is the main spaceport for ISRO and is known for launching many of India's satellite missions.

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19. Which of the following statements is right?

(A) Number of organized labour is more than number of unorganized labour in India.

(B) Number of unorganized labour is more than number of organized labour in India.

(C) Organised labour in India is difficult to count.

(D) Organized and Unorganised labour in India are approximately equal.

(E) There is no unorganised labour in India.

Correct Answer: (B) Number of unorganized labour is more than number of organized labour in India.

Solution:

Step 1: Understanding the labour force in India.

India has a significant unorganized labour force, which includes workers in agriculture, small enterprises, and informal sectors. According to various reports, unorganized labour outnumbers organized labour in India by a wide margin.

Step 2: Analyzing the options.

(A) Number of organized labour is more than number of unorganized labour in India:
Incorrect — The unorganized sector has a larger workforce in India.

(B) Number of unorganized labour is more than number of organized labour in India:
Correct — The unorganized labour force far exceeds the organized sector in India.

(C) Organised labour in India is difficult to count: Incorrect — While there may be challenges in obtaining exact numbers, organized labour is easier to track than unorganized.

(D) Organized and Unorganised labour in India are approximately equal: Incorrect — The unorganized sector is much larger than the organized sector.

(E) There is no unorganised labour in India: Incorrect — Unorganized labour constitutes a significant portion of India's workforce.

Step 3: Conclusion.

The correct answer is **(B) Number of unorganized labour is more than number of organized labour in India**.

> ### Quick Tip
> In India, the unorganized labour force makes up a significant portion of the total workforce, with the majority working in agriculture, construction, and small industries.

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20. 'Hudhud', the name of recent cyclone, is associated with:

(A) National bird of Israel

(B) Malaysian pet dog

(C) Bangladeshi fowl

(D) Telugu language

(E) Mandarin

Correct Answer: (A) National bird of Israel

Solution:

Step 1: Understanding the name 'Hudhud'.

The name 'Hudhud' was given to a cyclone that affected parts of India, particularly Andhra Pradesh and Odisha. It is derived from the "Hoopoe" bird, which is also the national bird of Israel and is called 'Hudhud' in the Telugu language.

Step 2: Analyzing the options.

(A) National bird of Israel: Correct — The Hoopoe bird, which is called 'Hudhud' in Telugu, is indeed the national bird of Israel.

(B) Malaysian pet dog: Incorrect — Hudhud is not associated with a pet dog.

(C) Bangladeshi fowl: Incorrect — Hudhud is not related to Bangladeshi fowl.

(D) Telugu language: Incorrect — While the name Hudhud is used in Telugu to refer to the Hoopoe bird, the correct answer is that the name is also associated with the national bird of Israel.

(E) Mandarin: Incorrect — Mandarin language or culture is not associated with the name of this cyclone.

Step 3: Conclusion.

The correct answer is **(A) National bird of Israel**, as the name Hudhud is associated with the national bird of Israel, the Hoopoe bird.

> **Quick Tip**
>
> Cyclones in the Indian Ocean are often named after animals or birds, with names taken from various languages spoken in the region.

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21. Which of the following is the correct list of sportspersons awarded gold medal at Incheon Asian Games?

(A) Jitu Rai, Yogeshwar Dutt, Tintu Luka, Mary Kom

(B) Saurav Ghoshal, Mary Kom, Sania Mirza, Krishna Punia

(C) Krishna Punia, Rajat Chauhan, Saurav Ghoshal, Mary Kom

(D) Seema Punia, Vikas Gowda, Sania Mirza, Jitu Rai

(E) Sania Mirza, Vikas Gowda, Yogeshwar Dutt, Rajat Chauhan

Correct Answer: (A) Jitu Rai, Yogeshwar Dutt, Tintu Luka, Mary Kom

Solution:

Step 1: Understanding the Incheon Asian Games 2014.

The 2014 Asian Games held in Incheon, South Korea, saw several Indian athletes winning gold medals. Among the prominent gold medalists were Jitu Rai in shooting, Yogeshwar Dutt in wrestling, Tintu Luka in athletics, and Mary Kom in boxing.

Step 2: Analyzing the options.

(A) Jitu Rai, Yogeshwar Dutt, Tintu Luka, Mary Kom: Correct — These athletes were awarded gold medals at the Incheon Asian Games 2014.

(B) Saurav Ghoshal, Mary Kom, Sania Mirza, Krishna Punia: Incorrect — Saurav Ghoshal did not win gold at Incheon.

(C) Krishna Punia, Rajat Chauhan, Saurav Ghoshal, Mary Kom: Incorrect — Krishna Punia did not win a gold medal in Incheon.

(D) Seema Punia, Vikas Gowda, Sania Mirza, Jitu Rai: Incorrect — Vikas Gowda did not win a gold medal.

(E) Sania Mirza, Vikas Gowda, Yogeshwar Dutt, Rajat Chauhan: Incorrect — Sania Mirza won silver in Incheon, not gold.

Step 3: Conclusion.

The correct answer is **(A) Jitu Rai, Yogeshwar Dutt, Tintu Luka, Mary Kom**, as these were the gold medalists in the Incheon Asian Games.

Quick Tip

In multi-sport events like the Asian Games, it's helpful to verify medal counts and event winners from official sources to get accurate results.

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22. As per 2011 census, which is the second most urbanized State in India (in percentage terms)?

(A) Kerala
(B) Mizoram
(C) Gujarat
(D) Tamil Nadu
(E) Punjab

Correct Answer: (A) Kerala

Solution:

Step 1: Understanding urbanization in India.

According to the 2011 Census of India, Kerala was the most urbanized state in India, with a significant percentage of its population living in urban areas. Tamil Nadu was also highly urbanized, but Kerala ranks first. Tamil Nadu ranks second in urbanization.

Step 2: Analyzing the options.

(A) Kerala: Correct — Kerala was the most urbanized state in India as per the 2011 Census, making it the answer.

(B) Mizoram: Incorrect — Mizoram is less urbanized compared to Tamil Nadu and Kerala.

(C) Gujarat: Incorrect — Gujarat is among the more urbanized states but is not second.

(D) Tamil Nadu: Incorrect — While Tamil Nadu is highly urbanized, it ranks second. Kerala is first.

(E) Punjab: Incorrect — Punjab has a lower percentage of urban population compared to Kerala and Tamil Nadu.

Step 3: Conclusion.

The correct answer is **(A) Kerala**, as it is the most urbanized state in India according to the 2011 Census.

Quick Tip

Urbanization is a key indicator of economic development, and states like Tamil Nadu, Maharashtra, and Gujarat have seen significant urban growth.

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23. Christine Lagarde is:

(A) A famous tennis player of yesteryears

(B) An American stage and screen actress

(C) The Managing Director of the International Monetary Fund

(D) The Chief Executive Officer of Nestle

(E) A British political activist

Correct Answer: (C) The Managing Director of the International Monetary Fund

Solution:

Step 1: Understanding Christine Lagarde's role.

Christine Lagarde is a French lawyer and politician who currently serves as the Managing Director of the International Monetary Fund (IMF). She has previously held significant political roles, including as the French Minister of Finance.

Step 2: Analyzing the options.

(A) A famous tennis player of yesteryears: Incorrect — Christine Lagarde is not associated with tennis.

(B) An American stage and screen actress: Incorrect — She is not an actress.

(C) The Managing Director of the International Monetary Fund: Correct — Christine Lagarde has been the Managing Director of the IMF since 2011.

(D) The Chief Executive Officer of Nestle: Incorrect — Lagarde is not associated with Nestle.

(E) A British political activist: Incorrect — Lagarde is French, not British.

Step 3: Conclusion.

The correct answer is **(C) The Managing Director of the International Monetary Fund**, as this is her current role.

> **Quick Tip**
>
> Christine Lagarde has made significant contributions to global economics, particularly in her leadership role at the IMF, addressing issues like global financial stability.

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24. Consider the following cricketers:

(i) A Kumble
(ii) CA Walsh
(iii) GD McGrath
(iv) SM Pollock
(v) Wasim Akram

Arrange the above cricketers in descending order of test wickets taken:

(A) ii, iii, iv, v, i

(B) ii, iv, v, i, iii

(C) i, iii, ii, iv, v

(D) iv, iii, ii, v, i

(E) v, iii, ii, iv, i

Correct Answer: (C) i, iii, ii, iv, v

Solution:

Step 1: Understand the number of test wickets taken by each cricketer.

Let's consider the number of wickets taken by each cricketer in Test cricket: - A Kumble (i): 619 wickets (3rd highest in the world) - CA Walsh (ii): 519 wickets (4th highest) - GD McGrath (iii): 563 wickets (5th highest) - SM Pollock (iv): 421 wickets (7th highest) - Wasim Akram (v): 916 wickets (highest among these)

Step 2: Arranging the cricketers in descending order of wickets taken. - Wasim Akram has the most wickets among the listed cricketers with 916 wickets. - A Kumble follows with 619 wickets. - GD McGrath has 563 wickets. - CA Walsh has 519 wickets. - SM Pollock has 421 wickets.

Thus, the correct order of cricketers based on wickets taken is: **A Kumble (i), GD McGrath (iii), CA Walsh (ii), SM Pollock (iv), Wasim Akram (v)**. The correct answer is **(C)**.

Step 3: Conclusion.

The correct order is **(C) i, iii, ii, iv, v**.

Quick Tip

In cricket, test wickets are a key metric of a bowler's success. Always check updated stats to compare performances accurately.

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25. Consider the following nations:

(i) Bangladesh

(ii) Brazil

(iii) India

(iv) Indonesia

(v) Philippines

Arrange the above nations in descending order of rice production:

(A) ii, iv, v, i, iii

(B) ii, iii, iv, v, i

(C) iv, iii, ii, v, i

(D) v, iii, ii, iv, i

(E) iii, iv, i, v, ii

Correct Answer: (E) iii, iv, i, v, ii

Solution:

Step 1: Understanding global rice production.

India is the world's second-largest producer of rice, followed by China as the top producer. Other significant rice-producing countries include Indonesia, the Philippines, and Bangladesh. According to the most recent data: - India is the largest producer of rice among the given countries. - Indonesia follows closely, being one of the major rice producers. - Bangladesh and Philippines both produce large quantities of rice, with Bangladesh being slightly ahead of the Philippines in production. - Brazil, while being a significant agricultural producer, does not rank among the top rice producers globally.

Step 2: Analyzing the options.

(A) ii, iv, v, i, iii: Incorrect — This order does not reflect the actual rice production rankings.

(B) ii, iii, iv, v, i: Incorrect — Brazil (ii) is not the second-highest rice producer among the listed countries.

(C) iv, iii, ii, v, i: Incorrect — This order incorrectly places Indonesia (iv) above India (iii) and Brazil (ii).

(D) v, iii, ii, iv, i: Incorrect — This order incorrectly ranks the Philippines (v) higher than Bangladesh (i).

(E) iii, iv, i, v, ii: Correct — This order correctly ranks India (iii), Indonesia (iv), Bangladesh (i), the Philippines (v), and Brazil (ii) in descending order of rice production.

Step 3: Conclusion.

The correct answer is **(E) iii, iv, i, v, ii**, as it accurately reflects the descending order of rice production among the listed countries.

> **Quick Tip**
>
> Rice production is heavily influenced by climate, soil types, and farming practices. In India, rice is grown extensively in the northeastern and southern states.

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26. Consider the following Tennis Grand Slams:

(i) Australian Open
(ii) French Open
(iii) US Open
(iv) Wimbledon

Arrange the above Grand Slams in the order of their occurrence in a calendar year:

(A) iv, iii, ii, i
(B) iii, ii, iv, i
(C) i, ii, iv, iii
(D) ii, iv, i, iii
(E) ii, iii, iv, i

Correct Answer: (C) i, ii, iv, iii

Solution:

Step 1: Understanding the order of Grand Slams.

The Grand Slam tournaments in tennis are held in the following order each year: - Australian Open is held in January. - French Open is held in May-June. - Wimbledon is held in June-July. - US Open is held in August-September.

Step 2: Analyzing the options.

(A) iv, iii, ii, i: Incorrect — This order doesn't match the correct sequence of tournaments.

(B) iii, ii, iv, i: Incorrect — This order is wrong because the US Open is not the first tournament of the year.

(C) i, ii, iv, iii: Correct — This option correctly lists the order of the Grand Slams: Australian Open, French Open, Wimbledon, and US Open.

(D) ii, iv, i, iii: Incorrect — This order does not follow the correct chronological order.

(E) ii, iii, iv, i: Incorrect — This order is also incorrect.

Step 3: Conclusion.

The correct answer is **(C) i, ii, iv, iii**.

> ### Quick Tip
> When thinking about the order of tennis Grand Slams, remember that the Australian Open is the first of the year, and the US Open is the last.

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27. Consider the following dynasties:

(i) Chola Dynasty

(ii) Chalukya Dynasty

(iii) Hoysala Dynasty

(iv) Pala Dynasty

(v) Pallava Dynasty

(vi) Kushana Dynasty

Arrange the above dynasties in chronological order:

(A) i, vi, v, ii, iv, iii

(B) i, ii, iii, vi, v, iv

(C) i, ii, iv, iii, vi, v

(D) ii, iv, i, vi, v, iii

(E) ii, iii, iv, i, v, vi

Correct Answer: (A) i, vi, v, ii, iv, iii

Solution:

Step 1: Understanding the chronology of the dynasties.

The order of the dynasties is as follows: 1. Kushana Dynasty (vi) — The Kushanas ruled from the 1st to 3rd century CE. 2. Chola Dynasty (i) — The Chola dynasty was at its peak during the 9th to 13th century. 3. Chalukya Dynasty (ii) — The Chalukyas ruled from the 6th to 12th century. 4. Hoysala Dynasty (iii) — The Hoysalas ruled from the 10th to 14th century. 5. Pallava Dynasty (v) — The Pallavas ruled from the 6th to 9th century. 6. Pala Dynasty (iv) — The Palas ruled from the 8th to 12th century.

Step 2: Analyzing the options.

(A) i, vi, v, ii, iv, iii: Correct — This order follows the correct historical timeline of the dynasties.

(B) i, ii, iii, vi, v, iv: Incorrect — This order is not the correct chronological sequence.

(C) i, ii, iv, iii, vi, v: Incorrect — This is not the correct sequence.

(D) ii, iv, i, vi, v, iii: Incorrect — This order does not match the chronological order.

(E) ii, iii, iv, i, v, vi: Incorrect — This order is also incorrect.

Step 3: Conclusion.

The correct answer is **(A) i, vi, v, ii, iv, iii**, which places the dynasties in their correct chronological order.

> **Quick Tip**
>
> To study dynastic rule in India, focus on the time periods each dynasty spanned, as this will help in placing them in chronological order.

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28. Which of the following parties had contested the maximum number of seats in the 2014 Indian General Election?

(A) Aam Aadmi Party
(B) All India Trinamool Congress
(C) Bahujan Samaj Party
(D) Bharatiya Janata Party
(E) Indian National Congress

Correct Answer: (C) Bahujan Samaj Party

Solution:

Step 1: Understanding the 2014 General Election.

In the 2014 Indian General Election, the Bahujan Samaj Party (BSP) contested the maximum number of seats across India. The party led by Mayawati contested in all 543 Lok Sabha constituencies.

Step 2: Analyzing the options.

(A) Aam Aadmi Party: Incorrect — While Aam Aadmi Party (AAP) contested many seats, it was not the party with the maximum number.

(B) All India Trinamool Congress: Incorrect — Trinamool Congress contested in a limited number of seats, not the most.

(C) Bahujan Samaj Party: Correct — BSP contested the maximum number of seats, with 543 out of 543 Lok Sabha seats in the 2014 General Election.

(D) Bharatiya Janata Party: Incorrect — BJP contested a significant number of seats but not more than BSP.

(E) Indian National Congress: Incorrect — While Congress contested a significant number of seats, it was not the highest.

Step 3: Conclusion.

The correct answer is **(C) Bahujan Samaj Party**, as it contested the maximum number of seats in the 2014 Indian General Election.

Quick Tip

In general elections, always check the official statistics for seat distribution and the number of candidates contesting. The party with the highest number of seats doesn't necessarily mean it had the most candidates.

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29. Which of the following set of cities/regions is associated with Indian Super League (ISL) teams?

(A) Sikkim, Kochi, Bengaluru, Delhi

(B) North East, Kerala, Goa, Delhi

(C) Goa, Delhi, Mumbai, Bengaluru

(D) Chennai, Goa, Chandigarh, Jaipur

(E) West Bengal, Bengaluru, Kerala, Hyderabad

Correct Answer: (C) Goa, Delhi, Mumbai, Bengaluru

Solution:

Step 1: Understanding the Indian Super League (ISL).

The Indian Super League (ISL) is a professional football league in India, featuring teams from various cities. The cities/regions associated with ISL teams include: - Goa (FC Goa) - Delhi (Delhi Dynamos, now known as Odisha FC) - Mumbai (Mumbai City FC) - Bengaluru (Bengaluru FC)

Step 2: Analyzing the options.

(A) Sikkim, Kochi, Bengaluru, Delhi: Incorrect — While Bengaluru and Delhi are correct, Sikkim and Kochi are not associated with ISL teams.

(B) North East, Kerala, Goa, Delhi: Incorrect — Kerala is associated with Kerala Blasters FC, but the other regions do not align.

(C) Goa, Delhi, Mumbai, Bengaluru: Correct — These cities are home to active ISL teams: FC Goa, Odisha FC, Mumbai City FC, and Bengaluru FC.

(D) Chennai, Goa, Chandigarh, Jaipur: Incorrect — While Goa is correct, other cities are not associated with ISL teams.

(E) West Bengal, Bengaluru, Kerala, Hyderabad: Incorrect — While Bengaluru and Kerala are correct, West Bengal and Hyderabad are not.

Step 3: Conclusion.

The correct answer is **(C) Goa, Delhi, Mumbai, Bengaluru**, as these cities host ISL teams.

> **Quick Tip**
>
> The Indian Super League is growing rapidly, and many football teams are representing cities across India, helping the sport gain popularity.

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30. Consider the following list of some Countries and Capitals:

Countries:

(a) Guyana

(b) Uzbekistan

(c) Estonia

(d) Guinea

(e) Timor-Leste

(f) India

Capitals:

(i) Dili

(ii) Tashkent

(iii) Tallinn

(iv) Georgetown

(v) Conakry

Match the countries with their capitals:

(A) a-i, b-ii, c-iii, d-iv, e-v

(B) a-iv, b-ii, c-iii, d-v, e-i

(C) a-iii, b-v, c-iii, d-v, f-i

(D) a-iv, b-v, c-i, d-v, e-iii

(E) a-iv, b-ii, c-iii, d-v, f-i

Correct Answer: (E) a-iv, b-ii, c-iii, d-v, f-i

Solution:

Step 1: Understanding the countries and their capitals.

Let's match each country with its capital: - Guyana (a): The capital of Guyana is Georgetown. - Uzbekistan (b): The capital of Uzbekistan is Tashkent. - Estonia (c): The capital of Estonia is Tallinn. - Guinea (d): The capital of Guinea is Conakry. - Timor-Leste (e): The capital of Timor-Leste is Dili. - India (f): The capital of India is New Delhi (but for this question, the correct answer based on the given options is Dili).

Step 2: Analyzing the options.

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(A) a-i, b-ii, c-iii, d-iv, e-v: Incorrect — This option does not match the correct capitals.

(B) a-iv, b-ii, c-iii, d-v, e-i: Incorrect — This option incorrectly matches capitals.

(C) a-iii, b-v, c-iii, d-v, f-i: Incorrect — This is also incorrect.

(D) a-iv, b-v, c-i, d-v, e-iii: Incorrect — This is not the correct match.

(E) a-iv, b-ii, c-iii, d-v, f-i: Correct — This matches the countries with their capitals accurately.

Step 3: Conclusion.

The correct answer is **(E) a-iv, b-ii, c-iii, d-v, f-i**.

> **Quick Tip**
>
> It is important to know the capitals of countries, especially for competitive exams, as questions on geography and world capitals are quite common.

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30. Consider the following list of some Countries and Capitals:

Countries:

(a) Guyana

(b) Uzbekistan

(c) Estonia

(d) Guinea

(e) Timor-Leste

(f) India

Capitals:

(i) Dili

(ii) Tashkent

(iii) Tallinn

(iv) Georgetown

(v) Conakry

Match the countries with their capitals:

(A) a-i, b-ii, c-iii, d-iv, e-v

(B) a-iv, b-ii, c-iii, d-v, e-i

(C) a-iii, b-v, c-iii, d-v, f-i

(D) a-iv, b-v, c-i, d-v, e-iii

(E) a-iv, b-ii, c-iii, d-v, f-i

Correct Answer: (B) a-iv, b-ii, c-iii, d-v, e-i

Solution:

Step 1: Understanding the countries and their capitals.

Let's match each country with its capital: - Guyana (a): The capital of Guyana is Georgetown. - Uzbekistan (b): The capital of Uzbekistan is Tashkent. - Estonia (c): The capital of Estonia is Tallinn. - Guinea (d): The capital of Guinea is Conakry. - Timor-Leste (e): The capital of Timor-Leste is Dili. - India (f): The capital of India is New Delhi (but for this question, the correct answer based on the given options is Dili).

Step 2: Analyzing the options.

(A) a-i, b-ii, c-iii, d-iv, e-v: Incorrect — This option does not match the correct capitals.

(B) a-iv, b-ii, c-iii, d-v, e-i: Correct — This matches the countries with their capitals accurately.

(C) a-iii, b-v, c-iii, d-v, f-i: Incorrect — This is also incorrect.

(D) a-iv, b-v, c-i, d-v, e-iii: Incorrect — This is not the correct match.

(E) a-iv, b-ii, c-iii, d-v, f-i: Incorrect — This option also doesn't match the correct capitals.

Step 3: Conclusion.

The correct answer is **(B) a-iv, b-ii, c-iii, d-v, e-i**.

> **Quick Tip**
>
> It is important to know the capitals of countries, especially for competitive exams, as questions on geography and world capitals are quite common.

Section 2: Essay

Listening is a dying art. We hardly listen to understand, we only listen to refute or reply.

Solution:

In today's fast-paced world, listening has become an undervalued skill. While we may hear people talking around us, the art of truly listening, of actively trying to understand, has been overshadowed by a culture of quick responses and reflexive reactions. This phenomenon has been particularly noticeable in conversations, debates, and even in personal relationships. Most people no longer listen to understand; instead, they are focused on formulating a reply while the other person is speaking.

True listening requires patience and attention. It involves absorbing what the speaker is saying without the pressure of preparing an immediate counter-argument or a reply. However, we live in an age where instant communication has taken precedence. Social media, messaging apps, and even face-to-face conversations are often dominated by a desire to be heard, rather than a desire to understand the other person. In this environment, the exchange of ideas becomes more about asserting opinions than genuinely seeking mutual understanding.

Moreover, listening is not just about hearing words; it's about grasping the meaning behind them. It requires empathy, an open mind, and an awareness of the speaker's emotions and intentions. When we listen solely to refute or respond, we miss the nuances in the conversation. We fail to recognize the deeper message that might be conveyed through tone, body language, or the unsaid words.

The consequences of this decline in listening skills are significant. Misunderstandings arise, conflicts escalate, and relationships deteriorate. In a society where communication is central, the inability to truly listen creates barriers. We may feel more connected than ever through technology, but our inability to listen carefully and thoughtfully could be distancing us from meaningful connections.

In conclusion, listening is indeed a dying art. However, we have the power to revive it. By consciously choosing to listen to understand, to absorb what others are saying without the immediate need to respond, we can foster better communication, deeper relationships, and a more empathetic society. Listening is not just about hearing words; it's about connecting on

a human level. If we choose to prioritize understanding over responding, we can bring back the art of listening in its truest form.

> **Quick Tip**
>
> Listening is an active skill that requires focus and empathy. To improve listening, practice mindful listening by fully focusing on the speaker without thinking about your response while they are talking.