English

Instructions

For the following questions answer them individually

Question 1

Choose the option that would fill in the blanks meaningfully in the sentence(s) below:

_____ the importance of 'horizontal stratification' _____ higher education is widely acknowledged, _____ attention has been applied to horizontal stratification _____ compulsory schooling.

A Whereas; with: too less; to

B While; within: far less; within

C While; without: further less; within

D While; on: far fewer; about

E Whereas; about: for less; of

Answer: B

Explanation:

From an initial reading, we can understand that the two parts of the sentence are contrasting each other. So the perfect fir for the first blank is "while".

Since in the first case the importance is widely acknowledged, in the second case it has to be the opposite, so the best fit for the third blank would be "far less".

In the second and fourth blank, we need an apt preposition, and the correct one would be 'within".

So the correct option is B.

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Question 2

Please study the paragraph given below:

In 1942, the French writer Albert Camus composed an essay, 'The Myth of Sisyphus'. It draws on the Greek fable of a man condemned to roll a rock up a mountain only to have it roll back down under its own weight, a _____ that lasts for eternity. Camus argues that this image _____ the human condition in a world where we can no longer make sense of events; but instead of committing suicide, we should _____ ourselves to this 'elusive feeling of absurdity' and bear it as best we can. In this sense, Sisyphus is the ideal hero.

Consider the following words:

1. surrender
2. choice
3. symbolises
4. quandary
5. attune
6. option
7. reconcile
8. depicts

Which of the following options is the most appropriate sequence that best fits the blanks in the above paragraph?

A 4, 2, 6

B 2, 3, 1

C 4, 5, 1

D 2, 5, 7

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E 4, 3, 7

Answer: E

Explanation:
In the first blank we are looking for a word that signifies a dilemma, quandary(4) is a word that goes well here as it means "state of perplexity or uncertainty over what to do in a difficult situation".
The second blank requires a word that goes with the essence of depicting an image, symbolizes(3) is the perfect fit for this blank as there is no option which has the word depict(8) in it.
The third blank requires a word that means to accept or come to terms with something, while attune(5) is a good choice, reconcile(7) is the best choice and is also available in the options.

Hence the answer is 437.

Question 3

Study the first sentence and then identify from among the options given the closest antonym of the highlighted word in the second sentence:

It's conventional wisdom that procreation between first cousins is unhealthy. But what are the actual genetic risks?

A tangible

B relative

C abstract

D hard

E unfounded

Answer: E

Explanation:
The highlighted word is conventional which here means common knowledge, known by all. The perfect antonym would be unfounded which means having no foundation or not based on truth.

Question 4

Carefully read the following paragraph:

Who could resist the idea of remembering everything they wanted to, without trying? Learning would be made easy, exams a _____ and you would never forget where you left your keys. And memory-related disorders like Alzheimer's would have met their match. So, it is of little surprise that scientists have turned their attention to ways of _____ human memory using techniques that _____, supplement or even mimic parts of the brain. The immediate goal is to treat memory disorders, but the idea of a memory _____ for everyday life is gaining ground.

Fill in the blanks in the above paragraph, with the best option from among the following:

A joy; augmenting; awaken; crutch

B routine; expanding; invigorate; crutch

C breeze; enhancing; stimulate; prosthesis

D routine; expanding; trigger; support

E breeze; exploring; simulate; aid

Answer: C

Explanation:
The first blank requires a word that conveys the idea of something which is easy to do. Joy is a word that conveys the expression, but we have a better choice which is a breeze (a thing that is easy to accomplish). Hence we have eliminated Options A, B and D

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The second blank requires a word that goes with the idea of increasing or improving, enhancing is a perfect fit.

So we can conclude that the correct option is C as the other two words stimulate (encourage or increase activity) and prosthesis (artificially created or modified body part) match for the respective blanks.

XAT Previous Papers

Question 5

Read the following statements and answer the question that follows:

1. They subjected the residues from sherds of the rhyta- vessels to radiocarbon dating to determine their ages and chromatography - mass spectrometry (GC-MS) - to identify their structure and isotopic composition and found that the vessels were used to store cheese.
2. In many Neolithic sites near the Adriatic Sea, researchers unearthed cone-shaped clay vessels, known as rhyta, with four legs on the bottom and a round opening on the side.
3. Fresh milk couldn't be kept for long without going bad; cheese, on the other hand, could be stored for months at a time, providing much-needed calories to early farmers between harvests.
4. Archaeologists who used to assume animals such as cows and goats were mainly used for meat early in their domestication history are thus forced to admit that humans might have been using animals for dairy quite early in their domestication history.
5. "If you kill one cow, you eat meat for about a week until it goes off; but by milking the animals, the farmer would be spreading the food gain from that animal over several months rather than just one week"

Rank the above five statements so as to make it a logical sequence:

A 2, 1, 5, 4, 3

B 4, 5, 2, 1, 3

C 4, 2, 1, 3, 5

D 2, 1, 3, 5, 4

E 4, 1, 2, 5, 3

Answer: D

Explanation:
2 introduces us to an archaeological discovery of clay vessels. 1 takes it forward by telling about the studies carried out on the finds which conclude that the vessels were used to store cheese. 3 explains why cheese was stored instead of milk. At the same time, 5 elaborates why cows were domesticated for milk rather than for meat. 4 states the changes in views of several archaeologists as a result of the discovery.

Hence the correct order of the sentences is 21354.

Question 6

Read the following statements and answer the question that follows:

1. An in-depth exploration of the Indian case and case studies of early adopters of mobile technology will provide spectrum managers a pragmatic and modern approach whereby they could utilize their resources efficiently and optimally.

2. Even as spectrum management regimes are moving from a command and control regime to a flexible use regime, new technological developments are suggesting that there are significant opportunities in managing large swathes of spectrum as a common property resource, in addition to flexible use.

3. Political legacies and market realities in different regimes pose unique challenges for spectrum managers who must negotiate a tricky path to the land promised by technological possibility.

4. On the other hand, supply of spectrum is restricted due to competing nature of uses and vested interests of incumbent holders.

5. The demand for spectrum has never been so acute as today's communication services extend beyond simple voice to complex data and video, augmented by evolving technologies such as peer-to-peer sharing, social networking, Fourth and Fifth Generation networks, Big Data, and cloud computing.

Rank the above five statements so as to make it a logical sequence:

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A 1, 2, 4, 5, 3

B 5, 2, 3, 1, 4

C 4, 5, 2, 3, 1

D 3, 4, 5, 2, 1

E 2, 5, 4, 3, 1

Answer: E

Explanation:
2 is introducing a scenario where, despite a shift in the regime of spectrum management, new technological developments are suggesting that there are significant opportunities in managing large swathes of the spectrum as a common property resource. 5 elaborates the opportunities mentioned earlier. 4 presents a potential problem to 5 due to the supply of spectrum being restricted. 3 elaborates the problem mentioned in 4. 1 provides a solution to the presented problem.

Hence the correct order of the sentences is 25431.

Instructions

Read the poem given below and answer the question that follows it:

Black lake, black boat, two black, cut-paper people.
Where do the black trees go that drink here?
Their shadows must cover Canada.

A little light is filtering from the water flowers
Their leaves do not wish us to hurry:
They are round and flat and full of dark advice.

Cold words shake from the oar.
The spirit of blackness is in us, it is in the fishes.
A snag is lifting a valedictory, pale hand;
Stars opening among the lilies.
Are you not blinded by such expressionless sirens?
This is the silence of abandoned souls.

Question 7

Which of the following options best explains the effect of the images in Line 1?

A The first line encapsulates the theme of the poem.

B The images are suffused with an overpowering sense of rebellion.

C The atmosphere indicates a cyclical nature of life and death.

D The black lake lacks regenerative potential; 'black boat' connotes the funerary boat; cut-paper people are unreal.

E The repeated use of black suggests evil.

Answer: D

Explanation:
The speaker tersely describes an ominous setting: "Black lake, black boat, two black, cut-paper people."
Though this line describes the setting of the poem, it does not convey the theme, nor does it imply an overpowering sense of rebellion or cyclical nature of life and death.
While it does suggest evil as a whole, each element of the first line conveys a distinct image.

Such an essence is is conveyed only in option D.

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Question 8

Which of the following options presents a convincing evaluation of the line, 'Stars opening among the lilies'?

A The stars are flowers in the sky and the flowers in the lake are stars in water.

B The ethereal light of the stars gets reflected among the lilies.

C The spirit of blackness does not hinder the appearance of beauty in nature which is symbolic of hope blossoming in the soul.

D The mirror images, the worlds above and overlap.

E Lilies purify the 'dark' into 'light' as symbolized in and by stars.

Answer: C

Explanation:
So far, the poem was conveying the image of engulfing blackness; suddenly, the speaker notices, "Stars open among the lilies".
The light that now appears along with the newly formed visible "lilies" stuns the speaker as it is not held back by the darkness around, but rather it blossoms hope.
In option C, this evaluation is well expressed.

Therefore, the correct answer is C.

Instructions

Read the passage given below and answer the questions that follow it:

Does having a mood disorder make you more creative? That's the most frequent question I hear about the relationship. But because we cannot control the instance of a mood disorder (that is, we can't turn it on and off, and measure that person's creativity under both conditions), the question should really be: Do individuals with a mood disorder exhibit greater creativity than those without? Studies that attempt to answer this question by comparing the creativity of individuals with a mood disorder against those without, have been well, mixed.

Studies that ask participants to complete surveys of creative personality, behavior or accomplishment, or to complete divergent thinking measures (where they are asked to generate lots of ideas) often find that individuals with mood disorders do not differ from those without. However, studies using "creative occupation" as an indicator of creativity (based on the assumption that those employed in these occupations are relatively more creative than others) have found that people with bipolar disorders are overrepresented in these occupations. These studies do not measure the creativity of participants directly, rather they use external records (such as censuses and medical registries) to tally the number of people with a history of mood disorders (compared with those without) who report being employed in a creative occupation at some time. These studies incorporate an enormous number of people and provide solid evidence that people who have sought treatment for mood disorders are engaged in creative occupations to a greater extent than those who have not. But can creative occupations serve as a proxy for creative ability?

The creative occupations considered in these studies are overwhelmingly in the arts, which frequently provide greater autonomy and less rigid structure than the average nine-to-five job. This makes these jobs more conducive to the success of individuals who struggle with performance consistency as the result of a mood disorder. The American psychiatrist Arnold Ludwig has suggested that the level of emotional expressiveness required to be successful in various occupations creates an occupational drift and demonstrated that the pattern of expressive occupations being associated with a greater incidence of psychopathology is a self-repeating pattern. For example, professions in the creative arts are associated with greater psychopathology than professions in the sciences whereas, within creative arts professions, architects exhibit a lower lifetime prevalence rate of psychopathology than visual artists and, within the visual arts, abstract artists exhibit lower rates of psychopathology than expressive artists. Therefore, it is possible that many people who suffer from mood disorders gravitate towards these types of professions, regardless of creative ability or inclination.

Question 9

Go through the following:

1.Mood disorders do not lead to creativity
2.The flexibility of creative occupations makes them more appealing to people with mood disorder
3.Mood swings in creative professions is less prevalent than in non-creative professions

Which of the following would undermine the passage's main argument?

A 2 & 3

B 1 & 2

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C 3 only

D 2 only

E 1, 2 & 3

Answer: C

Explanation:
The idea conveyed in the passage is that while people with mood swings generally do better in creative profiles as compared to nine to five jobs, hence there is the possibility of mood swings being more prevalent in creative jobs as compared to other ones.

There is no direct indication of mood swings leading to increased creativity (1) or the flexibility factor of creative jobs making it more appealing for the more creative people (2).
However, if mood swings in creative professions are less prevalent than in non-creative occupations (3), then it would undermine the idea of the passage.
Hence C is the only option that contradicts the passage's main argument.

Question 10

All of the following can be inferred from the passage except:

A Individuals with mood disorder often do better in creative job profiles than in regular nine-to-five jobs.

B In creative professions, people with mood disorder are more creative than those without mood disorder.

C Mood disorder is more prevalent among people in creative occupations than in non-creative occupations.

D An architect is more likely to have mood disorder than a botanist.

E An abstract painter is less likely to have mood disorder than an interpretive dance performer.

Answer: B

Explanation:
According to the passage, people with mood disorders do better in creative jobs as compared to nine to five jobs.
Options A, C, D&E all agree to this idea.

However, there is no evidence showing that within creative jobs people with mood disorders are more creative than those without.

Hence the correct option is B.

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Question 11

Which of the following will make the authors contention in the passage fallacious?

A Everyone in a mental asylum is potentially a great artist.

B Patients in mental asylums prefer time-bound repetitive jobs.

C Creative geniuses never end up in mental asylum.

D Those with a creative spark will land up in a mental asylum.

E Creativity is a form of bipolar disorder.

Answer: B

Explanation:
The author is trying to assert the idea that people who suffer from mood disorders may gravitate towards creative professions.

Option A goes with this idea.

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Option C may seem like the right choice, but the author does not believe that all creative people are bound to end up with mental health issues.
Option D is the direct contrast of Option C and goes somewhat in line with the author's ideas.
In option E, if creativity is a form of bipolar disorder, then it does not go against the author's beliefs.
But if patients in mental asylums prefer time-bound repetitive jobs, then the author's contention would be rendered fallacious because time-bound repetitive tasks are considered mundane and uncreative.
Hence the correct option is B.

Instructions

Lately it seems everyone's got an opinion about women's speech. Everybody has been getting his two cents in about vocal fry, up-speak, and women's allegedly over-liberal use of apologies. The ways women live and move in the world are subject to relentless scrutiny, their modes of speech are assessed against a (usually) masculine standard. This is increasingly true as women have entered previously male-dominated fields like industry and politics.

In his essay "On Speech and Public Release," Joshua Gunn highlights the field of public address as an important arena where social roles and norms are contested, reshaped, and upheld. Gunn argues that the field of public address is an important symbolic arena where we harbor an "[ideological] bias against the feminine voice," a bias, that is rooted in positive primal associations with masculinity (and the corresponding devaluation of femininity, the voice that constrains and nags—the mother, the droning Charlie Brown schoolteacher, the wife).

Gunn contends that masculine speech is the cultural standard. It's what we value and respect. The low pitch and assertive demeanor that characterize the adult male voice signify reason, control, and authority, suitable for the public domain. Women's voices are higher pitched, like those of immature boys, and their characteristic speech patterns have a distinctive cadence that exhibits a wider range of emotional expression. In Western cultures, this is bad because it comes across as uncontrolled. We associate uncontrolled speech - "the cry, the grunt, the scream, and the yawp" - with things that happen in the private, domestic spheres (both coded as feminine). Men are expected to repress passionate, emotional speech, Gunn explains, precisely because it threatens norms of masculine control and order.

The notion of control also relates to the cultural ideal of eloquence. Language ideologies in the U.S. are complex and highly prescriptive, but not formal or explicit. They are internalized by osmosis, from early observations of adult language use, criticism from teachers (i.e., telling little girls not to "be so bossy" and boys to "act like gentlemen"), and sanctions imposed by peers. These norms become most obvious when they are violated. When men fall off the "control and reason" wagon, they suffer for it. Gunn recalls Howard Dean's infamous 2004 "I Have a Scream" speech, in which Dean emitted a spontaneous high-pitched screech of joy after he rattled off a list of planned campaign stops. The rest, as they say, is history. Women face a different dilemma—how to please like a woman and impress like a man. Women in the public sphere have, historically, been expected to "perform" femininity and they usually do this by adopting a personal tone, giving anecdotal evidence, using domestic metaphors, and making emotional appeals to ideals of wifely virtue and motherhood.

Gunn arrives at the conclusion that "eloquence" is, essentially, code for values associated with masculinity, saying, "Performances of femininity are principally vocal and related, not to arguments, but to tone; not to appearance, but to speech; not to good reasons, but to sound. This implies that the ideology of sexism is much more insidious, much more deeply ingrained than many might suppose."

Question 12

Which of the following statements if true, is contrary to the ideas developed in the passage?

A Women in their communicative behavior are said to prefer a high-involvement style and men a high-considerate style.

B Women who use the lowest frequency of women's vocal traits have an unusually high status and are well educated professionals with middle class backgrounds.

C In certain hierarchically organized Indian political parties, women can participate in discussions as long as they appeal, persuade, and support others, and not initiate new ones.

D The linguistic ideology in vogue in ancient North India allowed only men of higher-castes and ruling dynasties to use Sanskrit; women and servants spoke Prakrit or Pali.

E Studies show that male followers of powerful women political leaders in Indian states imitate their leaders' cadence, rhetoric and rhythm.

Answer: E

Explanation:

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Throughout the passage, the underlying idea is that women are forced to adapt to masculine traits to gain public acceptance.

Here we are looking for an option in which the idea that women do not have to follow masculine traits or even better, men have to adapt characteristics of women to gain acceptance.

If the male followers of powerful women political leaders in India imitate their leaders' (women politicians') traits, then the whole idea of the passage is invalid.

Hence the option we are looking for is E.

Question 13

An American female politician might not be expected to exhibit the features of public discourse discussed in the passage while _____.

A addressing her colleagues

B chatting with intimate colleagues

C speaking to members of a congregation

D giving testimony

E conversing with members of her community

Answer: B

Explanation:
An American female politician is expected to exhibit features of public discourse while talking publicly or in a professional capacity. However, she is doesn't have to maintain this charade in private. So we are looking for an option in which the public is not watching her or hearing her interaction.
Chatting with an intimate colleague is a private event, and hence, she can be herself.

Therefore, the correct choice is B.

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Question 14

Which one of the following, if true, would make the core argument of the passage irrelevant?

A Men seek to gain upper hand in conversation as they consider themselves competitive, while women use them as a way to gain confirmation and support.

B When a wife tells her husband that she's unwell, he normally offers to take her to a doctor. Invariably, she is disappointed, as what she looks for is sympathy.

C Unlike men who use and prefer to hear direct imperatives, women prefer 'indirections.'

D Where a management decision seems unattractive, men will often resist it vocally, while women may appear to accede, but complain subsequently.

E Today, sharing of emotions and elaborations is more important than sharing information and being brief.

Answer: E

Explanation:
In the passage, it is discussed that women face a challenge in today's world as the expected standards are all set to masculine values. So if sharing of emotions and elaboration, both considered as feminine traits, is more important than sharing information and being brief, which are considered masculine traits, then the core argument of the passage that women are having trouble getting the world to accept their qualities as a standard would be irrelevant.

Therefore the option we are looking for is E.

Instructions

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Read the passage given below and answer the questions that follow it:

There are no Commandments in art and no easy axioms for art appreciation. "Do I like this?" is the question anyone should ask themselves at the moment of confrontation with the picture. But if "yes," why "yes"? and if "no," why "no"? The obvious direct emotional response is never simple, and ninety-nine times out of a hundred, the "yes" or "no" has nothing at all to do with the picture in its own right. "I don't understand this poem" and "I don't like this picture" are statements that tell us something about the speaker. That should be obvious, but in fact, such statements are offered as criticisms of art, as evidence against, not least because the ignorant, the lazy, or the plain confused are not likely to want to admit themselves as such. We hear a lot about the arrogance of the artist but nothing about the arrogance of the audience. The audience, who have given no thought to the medium or the method, will glance up, flick through, chatter over the opening chords, then snap their fingers and walk away like some monstrous Roman tyrant. This is not arrogance; of course, they can absorb in a few moments, and without any effort, the sum of the artist and the art.

Admire me is the sub-text of so much of our looking; the demand put on art that it should reflect the reality of the viewer. The true painting, in its stubborn independence, cannot do this, except coincidentally. Its reality is imaginative not mundane.

When the thick curtain of protection is taken away; protection of prejudice, protection of authority, protection of trivia, even the most familiar of paintings can begin to work its power. There are very few people who could manage an hour alone with the Mona Lisa. Our poor art-lover in his aesthetic laboratory has not succeeded in freeing himself from the protection of assumption. What he has found is that the painting objects to his lack of concentration; his failure to meet intensity with intensity. He still has not discovered anything about the painting, but the painting has discovered a lot about him. He is inadequate, and the painting has told him so.

When you say "This work is boring/ pointless/silly/obscure/élitist etc.," you might be right, because you are looking at a fad, or you might be wrong because the work falls so outside of the safety of your own experience that in order to keep your own world intact, you must deny the other world of the painting. This denial of imaginative experience happens at a deeper level than our affirmation of our daily world. Every day, in countless ways, you and I convince ourselves about ourselves. True art, when it happens to us, challenges the "I" that we are and you say, "This work has nothing to do with me."

Art is not a little bit of evolution that late-twentieth-century city dwellers can safely do without. Strictly, art does not belong to our evolutionary pattern at all. It has no biological necessity. Time taken up with it was time lost to hunting, gathering, mating, exploring, building, surviving, thriving. We say we have no time for art. If we say that art, all art. is no longer relevant to our lives, then we might at least risk the question "What has happened to our lives?" The usual question, "What has happened to art?" is too easy an escape route.

Question 15

A young man visits a critically acclaimed modern art exhibition in his city and finds that he doesn't like any of the exhibits. If he were to share his experience with the author of the passage, which of the following is most likely to be the author's response?

A "Your feelings about art are totally insignificant because they are definitely prejudiced."

B "Don't deny the other world of art to hide your inadequacies."

C "You are as arrogant as the artists who produced those modern art exhibits."

D "Modern art is, indeed, distasteful because of its abstract nature, and because it shows us up."

E "You didn't like modern art, that's fine, but maybe you will like classical art forms."

Answer: B

Explanation:
The author is of the view that the reason viewers are unable to appreciate art is because of their arrogance which makes them unworthy or inadequate of the art. The author has a condescension towards the people who are unable to appreciate art.

Of the options, in D&E, the idea is being supportive of the views of the young man. Whereas, in A&C, the tone is that of insult.
Only in B, we can find a tone of condescension.

Hence, the choice that most reflects this view of the author Option B.

Question 16

What according to the passage is the prerequisite to appreciate art?

A Prior knowledge of the art in question

B Participation with an open-mind

C Protection of assumption

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D Preconceived notions of how we would be affected

E Participation of the artist

Answer: B

Explanation:
In the passage, the author mentions 'Our poor art-lover in his aesthetic laboratory has not succeeded in freeing himself from the protection of assumption".

From this, it is clear that in order to truly appreciate art, one must be free of assumptions and should be open-minded.

Hence the correct option is B.

XAT Preparation Tips

Question 17

When the writer observes, 'This is not arrogance; of course, they can absorb in a few moments, and without any effort, the sum of the artist and the art', he is being _____.

A ironical

B sarcastic

C objective

D hyperbolic

E naive

Answer: B

Explanation:
The author is criticising the audience for their arrogance, so when he says 'This is not arrogance; of course, they can absorb in a few moments, and without any effort, the sum of the artist and the art' he is clearly being sarcastic.

Hence the correct answer is B.

Instructions

Read the passage given below and answer the questions that follow it:

Elevation has always existed but has just moved out of the realm of philosophy and religion and been recognized as a distinct emotional state and a subject for psychological study. Psychology has long focused on what goes wrong, but in the past decade there has been an explosion of interest in "positive psychology"—what makes us feel good and why. University of Virginia moral psychologist Jonathan Haidt, who coined the term elevation, writes, "Powerful moments of elevation sometimes seem to push a mental 'reset button,' wiping out feelings of cynicism and replacing them with feelings of hope, love, and optimism, and a sense of moral inspiration."

Haidt quotes first-century Greek philosopher Longinus on great oratory: "The effect of elevated language upon an audience is not persuasion but transport." Such feeling was once a part of our public discourse. After hearing Abraham Lincoln's second inaugural address, former slave Frederick Douglass said it was a "sacred effort." But uplifting rhetoric came to sound anachronistic, except as practiced by the occasional master like Martin Luther King Jr.

It was while looking through the letters of Thomas Jefferson that Haidt first found a description of elevation. Jefferson wrote of the physical sensation that comes from witnessing goodness in others: It is to "dilate [the] breast and elevate [the] sentiments ... and privately covenant to copy the fair example." Haidt took this description as a mandate.

Elevation can so often give us chills or a tingling feeling in the chest. This noticeable, physiological response is important. In fact, this physical reaction is what can tell us most surely that we have been moved. This reaction, and the prosocial inclinations it seems to inspire, has been linked with a specific hormone, oxytocin, emitted from Vagus nerve which works with oxytocin, the hormone of connection. The nerve's activities can only be studied indirectly.

Elevation is part of a family of self-transcending emotions. Some others are awe, that sense of the vastness of the universe and smallness of self that is often invoked by nature; another is admiration, that goose-bump-making thrill that comes from seeing exceptional skill in action. While there is very little lab work on the elevating emotions, there is quite a bit started as a survival strategy: Early humans needed to figure out when food was spoiled by contact with

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there disgust expanded to the social realm—people became repelled by the idea of contact with the defiled or by behaviors that seemed to belong to lower people. "Disgust is probably the most powerful emotion that separates your group from other groups." Haidt says disgust is the bottom floor of a vertical continuum of emotion; hit the up button, and you arrive at elevation. Another response to something extraordinary in another person can be envy, with all its downsides. Envy is unlikely, however, when the extraordinary aspect of another person is a moral virtue (such as acting in a just way, bravery and self-sacrifice, and caring for others).

Question 18

Which of the options below is false according to the passage?

A Elevated language is highly persuasive.

B Elevation results in a sense of moral inspiration of and purges us of negative emotions.

C Reactions to extraordinary external stimuli inevitably purge us of evil.

D Admiration is a more appropriate antonym of disgust than elevation.

E Elevation is admiration of virtue; admiration for skill is known as admiration: awe inheres in admiration and is generally caused by the majesty of nature.

Answer: C

Explanation:
From the passage, we understand that "Another response to something extraordinary in another person can be envy, with all its downsides". However, Option C suggests that an extraordinary stimuli will definitely rid us of all evil; this is false.
We have to keep in mind that we cannot make assumptions unless asked in the question.
Hence, we have to select an option such that the passage can justify the fallacy of the idea.

Therefore the correct answer is C.

Question 19

Which of the options will complete the statement given below meaningfully and appropriately, according to the passage?

Disgust is not a self-transcending emotion because it _____.

A is the antonym of elevation

B springs from love

C is linked to invocation of nature

D it creates 'us versus them' divide based on group identities

E is about experiencing a moment when the 'self' reigns supreme

Answer: D

Explanation:
Transcend is the exhilarating experience of something beyond normal or rather an experience of something higher.
Disgust is not the antonym of elevation, and neither does it spring from love.
There is no indication in the passage that disgust invokes nature, nor does it mention anything about a moment when self-reign prevails. While these characteristics of disgust may be true, we have to select an answer based on the passage.

Disgust is a negative emotion that creates the feeling of separation and the same is given in the passage.

So the correct answer is D.

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Question 20

Which of the options below correctly identifies the function of elevation?

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A It helps us in creating national identities.

B It helps leaders to attract followers.

C It helps us become religious.

D It helps to enforce moral and ethical values in a society.

E It helps transcendence to a higher plane.

Answer: E

Explanation:
From the passage, we get the phrase 'Elevation is part of a family of self-transcending emotions', transcending is the experience of something beyond natural or physical. The closest we have to this definition is Option E.

Instructions
For the following questions answer them individually

Question 21

Which of the statements below is least fallacious?

A Cheating in examinations is wrong because God will punish you.

B Mitigating risks often comes with costs.

C The snake in the temple likes milk because devotees offer it milk.

D Educated people do not oppose sale of hard drinks by governments. So drinking cannot be illegal.

E Marlon Brando was such a great actor because everyone liked him.

Answer: B

Explanation:
Let's examine each option.

A. Cheating in an examination is wrong not because God will punish us, rather because cheating is morally wrong and is so with or without the fear of punishment.
B. Mitigating risks may or may not come with a cost and the use of the word "often" keeps this sentence from being fallacious.
C. The snake may like milk irrespective of what the devotees offer.
D. A government which is liable to listen to the people cannot discriminate on the basis of educational qualification of the people.
E. Marlon Brando was a great actor irrespective of his fan following.

Hence the answer that is least fallacious is **B**.

Question 22

Which option does not reflect the relationship implicit in 'Emendation : Editor'?

A Injunction : Judge

B Examination : Doctor

C Discipline : Coach

D Illumination : Usher

E Renunciation : Saint

Answer: D

Explanation:

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Emendation is the process of correcting a judgement, which is an action performed by a judge.

In Option D we have illumination (to illuminate or light up) and Usher (a person who directs people to their designated seats at a wedding or in a cinema), the two words don't establish a relationship like the one in the example while all the other options do.

Hence the correct answer is D.

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Question 23

Read the following paragraph and answer the question that follows:

Empirical observation told us years ago that goats were slowly becoming the new dog, and according to a new study, they are truly qualified to be man's best friend. The Royal Society released heart-warming research showing that just like humans, goats have no desire to interact with people who come off as angry or upset, and that they're much more attracted to those with big smiles plastered across their faces. When 12 males and 8 females were released into a pen decorated with images of happy and angry humans, the scientists learned that goats can "distinguish between happy and angry images of the same person," and in general, they prefer their humans to be happy.

Which of the following statements is definitely true according to the passage?

A When they look at a smiling person, the goats are happy.

B When they look at a frowning person, goats are afraid of him.

C When they look at a straight-faced person, goats remain passive.

D When they look at a frowning person, the goats are sad.

E When they look at a smiling person, goats run towards him.

Answer: A

Explanation:
Let's consider two instances from the passage, "they're much more attracted to those with big smiles plastered across their faces" & "they prefer their humans to be happy".

We can infer from these that goats become happy when they are looking at a smiling person because naturally, they will be happy to see something they are attracted to.

Hence **A** is definitely true. But similar reactions based on emotions or situations cannot be clearly determined from the given passage.

Question 24

Read the following paragraph and answer the question that follows:

An accurate measure of drug efficacy would require comparing the response of patients taking it with that of patients taking placebos; the drug effect could then be calculated by subtracting the placebo response from the overall response, much as a deli-counter worker subtracts the weight of the container to determine how much lobster salad you're getting. In the last half of the 1950s, this calculus gave rise to a new way to evaluate drugs: the double-blind, placebo-controlled clinical trial, in which neither patient nor clinician knew who was getting the active drug and who the placebo.

Which of the options is a wrong answer to this Question How does a double-blind ensure a better trial of a new drug?

A It increases the overall response to the drug.

B The patient does not know whether he/she is getting a placebo.

C It reflects the calculus exemplified by the deli-counter episode.

D The clinician cannot pick and choose patients to whom placebos can be administered.

E It gives rise to an unbiased testing of drugs.

Answer: A

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Explanation:
From the passage, it is clear the that double-blind, placebo-controlled clinical trial is unbiased, gives no chance for the clinician to choose patients nor does the patient know if he is getting the drug or the placebo and moreover it reflects the calculus exemplified by the deli-counter episode. In no way does this trial increase the overall efficiency of the drug. So the correct answer is A.

Question 25

Read the following paragraph and answer the question that follows:

Alligators are freshwater reptiles. However, people have come face to face with them in mud in a salt marsh in Georgia. Finding alligators in the salt marsh is not a mystery or a miracle. At least 23 species of predator have been spotted living in surprising habitats. Predators such as alligators, otters, mountain lions, wolves and raptors are thriving in places they shouldn't, revealing some serious misunderstandings about their behaviour and how to protect them. Scientific literature divulges that these creatures are actually returning to places they once occupied. It gives us astonishing insights into the lives of animals and helps conservationists improve the old stomping grounds of these creatures.

Which of the following statements provides the most plausible explanation of the predators' behaviour?

A Predators prefer to occupy different habitats, depending on the season and prevailing weather.

B Predators migrate to a habitat different from where they were born.

C Predators are fully aware of where they were born.

D Predators have a genetic memory of their traditional stomping grounds.

E Predators have no awareness of where they were born.

Answer: D

Explanation:
From the sentence 'Scientific literature divulges that these creatures are actually **returning to places they once occupied**' it is understood that predators have a memory of their stomping grounds.

Hence the answer is D.

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Question 26

Study the text given below and answer the question that follows it:

Dense, dirty air laced with grease best describes the atmosphere of most Lagos streets. Drive from one corner of this great west African city to another and in no time you will find surfaces lightly dusted, like a soft sprinkling of icing on cakes. Under the half-moons of fingernails, thick grime settles. It's a scene taken as typically African: polluted, bedraggled, unhealthy. This has only ever been made possible by the exploitation of Africa's people. This week five west African countries, Nigeria included, announced plans to end the practice of European oil companies and traders exporting "African quality" diesel. "Dirty fuel" has earned the name because it is imported diesel with sulphur levels as high as 3,000 parts per million when the European maximum is 10ppm. To be clear, "African quality" fuel, is fuel not fit for European humans.

Which of the options is not necessarily the underlying assumption of the author in the paragraph above?

A European oil companies dump their fuel on African countries.

B Economic exploitation, until challenged runs smoothly.

C Racism makes it easy for Europeans to justify the exploitation of inferior races.

D Typically, African cities today are not fit for human habitation.

E African nations had accepted 'dirty fuel' as the norm.

Answer: C

Explanation:

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While all the other ideas are expressed in the passage, there is no mention of Europeans using racism to justify their exploitation. Hence the correct answer is C.

XAT Daily Current Affairs

Decision Making

Instructions

Read the following caselet and answer the questions that follow:

You are a Human Resource (HR) Manager in the HR Department of Vikash Educational Charitable Trust. You organize and support recruitment and training, provide secretarial support for disciplinary investigations and keep personnel records of staff. You report to Ms. Deelipa, one of the two Senior HR Managers who reports to the HR Director.

Question 27

For the post of Consultant Professor in the Trust, two internal candidates, Mr. Rana and Mr. Charan were interviewed. Mr. Charan was selected as he was considered to be academically gifted with impressive leadership skills, even though he had less experience than the other. Three days later, Mr. Rana came to your office complaining that the selection was unfair as he had more experience than Mr. Charan.

Which of the following is the best way to handle the issue raised by Rana?

A Tell Mr. Rana, that you empathize with him, but the process was fair, and details of the assessment could be shared with him.

B Tell Mr. Rana that if he is interested, he could write to the HR Director and you would act as per the directives received.

C Offer tea to Mr. Rana and say that you can understand why he is upset. Let him have a bit of a moan and help him get it out of his system.

D Tell Mr. Rana that the Institute finds the right person for the job, not the one who has been around the longest.

E Warn Mr. Rana that his complaint will be construed as misdemeanour and held against him in the next promotion cycle.

Answer: A

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Question 28

Ms. Deelipa has asked you to conduct a Non Teaching Staff Induction Training. You are to call for a tender from various agencies with specifications that include the contents, duration, experience, budget and other relevant information. You then need to shortlist five agencies from the list of 20 and make a presentation within two days.

Review the following responses:

1. Rate all 20 agencies on a scale of 1 to 5 on information available and select the top 5.
2. Select the five lowest bids based on the price quoted.
3. Seek selection criteria from Deelipa and the HR Director and shortlist the bidders accordingly.
4. Follow the advise of a person who has completed a similar task.

Select the best of the following responses in the descending order of effectiveness?

A 4, 1, 3

B 1, 3, 4

C 3, 2, 4

D 1, 2, 3

E 3, 1, 2

Answer: E

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Question 29

The Vikash Trust has recently been plagued by a high turnover of teaching assistants with many looking for higher salary and better facilities. You have been asked to design and run a campaign to attract and appoint 10 teaching assistants. One of your measures of success will be the retention of the new recruits. You have 4 weeks for the interview.

Review the following:

1. Shortlist apt candidates who reflect values of the Trust from among respondees to your wide advertisement campaign.
2.Design an ad that attracts candidates with values that matches the Trust's, release it at an appropriate time and re-validate the candidates' credentials at the time of shortlisting.
3. Repeat the process that was followed by the Trust last time.
4. Seek expert advice on drafting an attractive advertisement.

Select the best of the following responses in the descending order of effectiveness?

A 4,1,2

B 2,1,3

C 4,3,1

D 1,2,3

E 2,3,4

Answer: B

Question 30

The new induction training program has been a roaring success. All new induction courses for the next 12 months have been tightly scheduled. This morning, you receive a call from Mr. Surya, the Head of the Trust requesting you to train eight newly recruited teaching assistants before they start their job next month. You explain that all the slots are fully booked for the next 3 months, but he insists that the new teaching assistants be trained immediately, to hopefully reduce turnover among them. You speak to Deelipa, who wants you to deal with the issue on your own.

Review the following responses that you wish to communicate to Mr. Surya:

1. Inform him that once the schedules are drawn up, it is not possible to effect any change as the reputation of the Trust would be at stake.
2. Suggest that a new agency may be permitted to run induction sessions for these teaching assistants, as a special case.
3. Tell him that if some inductees dropout in the first month, at least some teaching assistants can be accommodated.
4. Tell him that since no space is available in the induction training sessions for three months, you, as the HR manager would conduct induction sessions for them after office hours.

Select the best of the following responses in the descending order of effectiveness.

A 2,1,3,4

B 3,2,1,4

C 3,2,4,1

D 2,4,3,1

E 2,3,1,4

Answer: D

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XAT Previous Papers

Instructions

Read the following caselet and answer the questions that follow:

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The Public Relations Department of an organization has spent only 4 crores of its allocated 16 crores on publicity. There are 2 months left in the financial year. Due to shortage of officers, the Assistant Director, Operations has been given an additional charge of publicity. Because of his other commitments, he is unable to find time to undertake tasks such as baseline study, ascertaining communication needs, testing proposed messages and media channels, deciding optimum periodicity, measuring impact, etc. He also argues spending the rest of the budget is unnecessary because their regular programs are already widely known. His boss, the Director, however, feels that only by utilizing the entire budget can a similar amount be demanded the next year. He also thinks that there is nothing like enough publicity.

Question 31

Which of these is the best course of action for the department?

A Repeat the advertising done so far 3 times over and thus exhaust the entire amount.

B Rely on the operational experience of the Director and the Assistant Director and start spending the optimal amount right away.

C Surrender the budget right away so it can be utilized by other departments.

D Hire a specialized external agency which will study the gaps and needs within a fortnight and follow it's recommendations.

E Request higher authorities to reallocate the remaining amount to other departments of the organization.

Answer: D

Question 32

Which of these new developments, if true, would most justify a larger utilization of the advertising budget?

A Advertising agencies have announced a 25% reduction in rates.

B An internal committee of the organization has made strong recommendations to improve service delivery.

C The organization has approved a new major scheme for immediate implementation.

D The findings of a baseline study on assessing communication needs are now available.

E A new Assistant Director has been posted to exclusively look after publicity.

Answer: C

Instructions

Read the following caselet and answer questions that follow:

Sanchit group of Hospitals seeks to improve the success rate and patient satisfaction rate by 100% in the next year. However, the management can't afford to send doctors for professional development outside the country nor afford purchasing more equipment. As an in-house measure, the managing board thought of having doctors with high patient satisfaction to mentor those with less. Most of the doctors found it an interference by the management, judgmental and an expression of distrust. There were, however, some isolated few who found it a novel way of learning from each other. The doctors felt the management should instead increase consultancy fees and spend more on recruiting more paramedics who could spend time with patients, rather than blame doctors and decided to call it quits. For the management, this would mean loss of patients.

Question 33

Consider the following actions:

1. **Conduct a survey of all stakeholders and ascertain their needs and suggestions.**
2. **Build consensus among doctors and paramedics on a possible way forward.**
3. **Prepare an action plan that details the road map along with financial implications.**
4. **Design differential service packages based on the affordability of the patients.**
5. **Run a brainstorming session among the leading doctors of the area.**

Which of the following sequence of actions is most appropriate for the hospital administration in achieving their goal?

A 5, 4, 2

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B 1, 5, 3

C 4, 2, 1

D 4, 5, 2

E 1, 2, 3

Answer: E

XAT Free Mock Test

Question 34

Which of the following decisions is most likely to satisfy all the stakeholders?

A Increase the income of doctors and paramedics, and the ambiance of the hospital.

B Give 30% discount on medicines purchased from the hospital store.

C Increase the income of doctors and the number of paramedics.

D Raise income of doctors and reduce the waiting time of patients.

E Allow doctors to choose patients based on income levels, thus profiting both patients and the organization.

Answer: A

Question 35

Given the current situation, which of the following is the most interactive and effective way to increase the learning among paramedics and doctors?

A Get doctors and paramedics with high satisfaction rates document their success stories for use of others.

B Encourage paramedics and doctors to pursue courses over MOOC platform, at their own cost, which shall be partially subsidized after successful completion.

C Ask doctors and paramedics with high satisfaction rate to give lectures to others before start of work.

D Implement professional development standards for staff linking it with an accountability framework.

E Create groups of paramedics and doctors, to meet everyday and discuss their insights and experience of the day.

Answer: E

Instructions

Read the following caselet and answer the questions that follow:

Thakur Raja, a young cabinet minister, glanced through the notes of his secretary regarding the recent controversies on 'Racket', the most popular game of the country. While International Racket Association (IRA) has agreed to implement Drug Testing Code (DTC), the Racket Club which controls the entire Racket related activities had some reservations regarding the initiative. A majority of the citizens eagerly awaited their country's participation and performance at the international competitions during the Champions Trophy. Due to the popularity of the game, 70% of the total revenue associated with the game originates from the country. Hence, the Racket Club has earned high bargaining power with the IRA and can influence decisions not aligned with its interests. Three of the most popular and senior players of the Club, including the captain, are against the imposition of DTC citing security reasons. A decision against the interests of these players might result in law and order problems throughout the country. Other players support the decision of their senior colleagues and if the Racket Club refuses, players may support the rebel Counter Racket Club, a new national level initiative. The Counter Racket Club can challenge the monopoly of the Racket Club, if it succeeds in attracting some popular players.

Raja was a great soccer player and has major reservations against racket. According to him, racket has negative influence on the country's youth and distracts them from productive work. He also considers drug testing as an essential

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games across the world. As the new cabinet minister for Youth and Sports, he needs to take some important decisions on this contentious issue.

Question 36

If Thakur Raja wants to create a lasting impact, the most reasonable option for him is to:

A Force the Racket Club to accept all regulations relating to drug testing.

B Enforce drug testing while providing adequate security to all players.

C Get popular Racket players to endorse Soccer.

D Ban Racket as a sport, citing its negative influence on youth.

E Align with Counter Racket Club and reinforce their initiatives.

Answer: B

Question 37

Identify the best argument for Raja to decide in favor of the IRA.

A Raja is interested in making Racket less popular in the country.

B Three of the top international teams are keen on implementing DTC.

C The next World cup is scheduled to be held in a country which has made DTC mandatory.

D Raja and the President of the Racket Club are political opponents and could use the present issue to settle their mutual scores.

E Raja can justify his decision citing his position as a cabinet minister.

Answer: C

Question 38

According to DTC, each athlete/sportsperson needs to submit their schedule for the next three months specifying an hour each day when they can be randomly tested for drugs. DTC also ensures the confidentiality of the submitted schedule by:

i. Limiting access of player-supplied information only to two senior officers.
ii. Allowing these officers to access the schedule of only those sports persons who are randomly selected for testing.
iii. Introducing similar security features for DTC database as is the case with financial institutions.

The top three popular players realize security is the only reason for them to get a favorable decision from Raja. Hence during discussions, they should focus on all options except:

A Recent report includes their country to be among the top five nations vulnerable to data security breach.

B DTC is unwilling to share details with security agencies of officers involved in background check.

C Any leak of their private schedules may result in huge public gathering and it will make the job of security agencies very difficult.

D Popular Racket players are on the hit list of terrorist organizations.

E It is difficult to provide adequate security coverage in large stadiums where Racket is played.

Answer: E

Instructions

Read the following caselet and answer the questions that follow:

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Mrs. Bhalla is the principal of 'Happy Public School'. While it is a private school, the trust is socially sensitive and as part of their "Spread Happiness Policy" provides quality education to many needy students from low income neighborhood for free. She received a strange complaint from some of the affluent parents regarding their discomfort with allowing poor children to study along with their kids. They were concerned more about their manners, habits and language than about schooling. They wanted the trust to either start a separate shift for such children or remove them from the school since they are supporting them. On the other hand, the parents of the poor children complained of bullying and teasing and shared their concern regarding the mental trauma their children undergo. While Mrs. Bhalla, by no means wants to yield to the demands of the affluent parents, she also cannot ignore them since some of them have been making substantial donations to the school.

Question 39

Which of the following is most likely to get the affluent parents to accept the school's policy?

A Accept the suggestion of affluent parents to start a separate shift for the poor students.

B Invite professionals to conduct workshop for the poorer children so that they learn basic manners, habits and language.

C Meet the two parent groups separately, understand their key concerns and seek solutions from both.

D Invite the founder of the school to clarify to all parents the school's policy.

E Share the fact, that the government instituted school ranking, places 25% weight to policies similar to the school's.

Answer: E

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Question 40

While Mrs. Bhalla understands the problems of overcrowded classrooms and classroom management, she foresees in them an opportunity to develop more sensitive and self-motivated learners.

Mrs. Bhalla is considering the following actions:

1. Take the student and teacher councils on board and seek their ideas to redress the challenge the school faces.
2. Brainstorm with teachers and students on a strategy to engage all learners in teams for meaningful learning and healthy relationships.
3. Encourage students for self-learning and teachers into more supervisory roles to ensure discipline.
4. Engage students in a process of periodic reflection so that they can get in touch with their thoughts, feelings and actions towards self and others.
5. Create achievement based student groups to encourage competition and ease classroom management.

Which of the following combination of actions would be most effective in developing sensitive and self-motivated learners?

A 1, 2, 3

B 1, 3, 5

C 2, 1, 5

D 5, 4, 3

E 1, 2, 4

Answer: E

Question 41

Which of the following options will empower students the most?

A Ensure no kid from poor income group is detained.

B Maximise students learning achievement.

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C Help students relate learning to their real life experiences.

D Ensure rich kids to get to know those on whom their money is spent.

E Encourage students to ask questions that teacher find difficult to answer.

Answer: C

Instructions

Read the following caselet and answer questions that follow:

Divya grew up in a business family in Hyderabad. As a Systems engineer she travelled extensively on business deals and later settled in her in-law's place in Warangal. Once during her visit to Thailand she got to taste some roll over ice cream. Interestingly, a few weeks later, she came across an advertisement from a reputed Bangalore based Rollover Handcrafted Ice Cream Company calling for expression of interest from potential franchises.

Warangal did not have any quality ice cream parlour. The company wanted the potential franchisees to invest Rs. 20 lacs and 700 square feet space. Profits were to be shared in 3:7 ratio between the company and the franchisee. Divya was excited, but was wondering if Rs. 20 lacs was too much to invest. Further, she did not have the entire amount and was thinking of taking a loan. She enquired with the Rollover franchisees and found that a franchisee in Hyderabad had sales revenue varying between 5 and 6 lacs rupees per month with a profit margin between 25-30%. Divya decided to go ahead.

Warangal had three main areas -Kazipet, Jangaon and Warangal. All areas were linked by good roads. Kazipet was a business area where most high end retail formats were located. It was also the education hub of the city. Jangaon, on the other hand, was a growing lower middle class business area and Warangal was mostly residential.

Divya favoured Kazipet. However, she soon encountered problems. Not only was it difficult to obtain space in Kazipet but property rentals touched 30-40 rupees per square feet per month as against Jangaon and Warangal where it was 15-20 rupees per square feet per month. Divya's friend, who lived in Jangaon, told her that a few branded outlets were opening in Jangaon and it appeared to be the fastest growing market in Warangal with the highest percentage of teenagers. But, Divya was not in favour of Jangaon. She hoped to target college going crowd of Kazipet. High real estate prices in Kazipet and lower profitability estimate in Jangaon market confused Divya.

Question 42

Which of the following options, if true, would most likely interest Divya to start a franchise?

A Doctors of the area do not consider Ice cream to be a major cause of obesity.

B A bank is ready to give her a quick loan.

C She can charge high prices for her ice creams without losing customers.

D Her friend who runs a restaurant recently in Kazipet is doing good business.

E In recent times, a couple of franchisees shut down within months of starting.

Answer: C

XAT Preparation Tips

Question 43

Which of the following is least likely to demotivate Divya?

A Investing a huge amount may not bring expected returns.

B The bank would insist on loan repayment on a monthly basis.

C The property rentals would soon go up in Kazipet.

D Unlike Hyderabad, people in Kazipet don't seem to like Rollover ice cream.

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E Rollover franchise in Hyderabad is making huge profits.

Answer: E

Question 44

What could be the most likely reason for Divya opting for Kazipet?

A Spiralling real-estate prices in Kazipet.

B No branded outlets is likely to come up in Jangaon in the near future.

C High percentage of teenagers in Kazipet attracted to Rollover ice cream.

D High density of population in both Warangal and Jangaon.

E She felt, college going crowd is excited about the latest in ice creams.

Answer: E

Question 45

Which is the most important decision criterion for Divya to consider in such a business situation?

A Attracting customers through big discounts in the initial phase of business.

B Consistent increase in the number of customers in the future.

C Range and variety of ice-cream flavours.

D Availability of space in premium locality.

E Availability of loan at low interest rate.

Answer: B

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Important Formulas for XAT Download PDF

Instructions

Read the following caselet and answer the questions that follow:

Due to increased competition, Electro Automobiles, the Indian subsidiary of Robert Automobile Company (RAC) reported lower sales and profits. RAC expects its new model Limo, developed especially for value conscious customers of India and China, would revive its fortunes. In order to prevent customers from buying competing products, RAC announced the launch of Limo six months ahead of schedule. Unrest in its Indian supplier resulted in delayed delivery of essential components to its main plant. Hence, Limo was launched on schedule only in China. Within a short span, Limo captured 30% of the Chinese market , which was 200% higher than expectation. Indian customers were becoming increasingly restless because they couldn't get a Limo in India. Electro's dealers were worried, customers might switch to other cars.

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Question 46

The indian subsidiary is concerned that the delay in launching the product will give undue advantage to some competitor. The organization was considering the following strategies to keep customers engaged with the company:

1. Ask the dealers to encourage their prospective customers to seek similar products from the competition, rather than wait for Limo's launch.
2. Suggest the dealers to accept booking for Limo, announcing the launch within six months of booking, while in reality plan to keep postponing launch indefinitely.
3. Run full page advertisements in the papers, every month, to keep the interest in the model from ebbing, with no mention of the launch date.
4. Import parts from outside India, and launch the product, at a 30% premium, planning a relaunch a few years later of the indianized version.
5. Go against its worldwide policy of non-interference in supplier plants, and announce a hefty bonus to the employees of the supplier with a hope to temporarily bring the plant to life.
6. Promise the supplier plant (that has some unrest) a higher margin share of about 5% compared to what was shared earlier, with an eye to stem the unrest.

Which of the following combination of responses above, will most likely keep the prospective customers engaged with the company and not jump to some competitor's product?

A 1, 2, 3

B 2, 3, 4

C 3, 2, 5

D 1, 5, 6

E 3, 4, 5

Answer: E

Question 47

Mr. Murugan from Chennai experienced the comfort of Limo during his visit to China. He was willing to deposit an approximate price of Limo to buy the first available unit from Mr. Ahmed, a dealer in Chennai. Electro Automobile is yet to announce the actual price, and the process for allocation of the vehicles.
Which of the following is the best option for Ahmed?

A Collect 50% of the entire amount Mr. Murugan is willing to deposit as advance and the remaining at the time of launch.

B Collect the entire amount Mr. Murugan is willing to deposit after clarifying that delivery and price is subject to the company policy.

C Collect the amount and transfer it to the account of Electro Automobiles, instead of keeping it in his personal account.

D Collect the amount from Mr. Murugan. Later when the delivery is delayed, blame it on RAC's problems.

E Not collect the amount, but suggest to Mr. Murugan to write to Electro Automobiles.

Answer: B

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Quant

Instructions
For the following questions answer them individually

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Question 48

A, B, C, D and E are five employees working in a company. In two successive years, each of them got hikes in his salary as follows:

A : p% and (p+1)%,
B : (p+2)% and (p-1)%,
C : (p+3)% and (p-2)%,
D : (p+4)% and (p-3)%,
E : (p+5)% and (p-4)%.

If all of them have the same salary at the end of two years, who got the least hike in his salary?

A E

B D

C C

D A

E B

Answer: A

Explanation:

Let the initial salary of A,B,C,D,E be a, b, c, d, e respectively and let the final salary of everyone be x

Now, $a * \left(1 - \frac{p}{100}\right) * \left(1 - \frac{p-1}{100}\right) = x$

$\Rightarrow a = \frac{x}{(1 - \frac{p}{100}) * (1 + \frac{p-1}{100})}$

$\Rightarrow a = \frac{x * 100 * 100}{(100-p) * (100+p-1)}$

$\rightarrow a = \frac{x * 100 * 100}{(p - 100) * (p - 101)}$

Similarly, $b = \frac{x}{(1 + \frac{p+2}{100}) * (1 + \frac{p-1}{100})}$

$\Rightarrow b = \frac{x * 100 * 100}{(p+102) * (p+99)}$

Similarly, $c = \frac{x}{(1 + \frac{p+3}{100}) * (1 + \frac{p-2}{100})}$

$\rightarrow c = \frac{x * 100 * 100}{(p + 103) * (p + 98)}$

Similarly, $d = \frac{x}{(1 + \frac{p+4}{100}) * (1 + \frac{p-3}{100})}$

$\Rightarrow d = \frac{x * 100 * 100}{(p-104) * (p+97)}$

Similarly, $e = \frac{x}{(1 + \frac{p+5}{100}) * (1 + \frac{p-4}{100})}$

$\rightarrow e = \frac{x * 100 * 100}{(p+105) * (p+96)}$

The numerators of the fractions are same, therefore the one with the smallest value of denominator will have the greatest value. If we compare the denominators, we can find out the fraction with the highest value. The person with the highest initial salary got the least raise, as we know that the final salary of all the candidates is same.

Thus, denominator of a, $a_{den} = (p + 100) * (p + 101) = p^2 + 201p + 100 * 101$

Similarly, $b_{den} = (p - 102) * (p + 99) = p^2 + 201p - 102 * 99$

$c_{den} = (p + 103) * (p + 98) = p^2 + 201p + 103 * 98$

$d_{den} = (p - 104) * (p + 97) = p^2 + 201p - 104 * 97$

$e_{den} = (p + 105) * (p + 96) = p^2 + 201p + 105 * 96$

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We see that we need to compare only the last terms of the denominators as the other terms are same.

Thus, last term of a, $a_{lt} = 100 * 101 = 100.5^2 - 0.5^2$

last term of b, $b_{lt} = 102 * 99 = 100.5^2 - 1.5^2$

last term of c, $c_{lt} = 103 * 98 = 100.5^2 - 2.5^2$

last term of d, $d_{lt} = 104 * 97 = 100.5^2 - 3.5^2$

last term of e, $d_{lt} = 105 * 96 = 100.5^2 - 4.5^2$

Thus, we can see that since denominator of e is the smallest, therefore E has the highest initial salary.

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Question 49

A firm pays its five clerks Rs. 15,000 each, three assistants Rs. 40,000 each and its accountant Rs. 66,000. Then the mean salary in the firm comprising of these nine employees exceeds its median salary by rupees

A 14000

B 14600

C 15200

D 15480

E 14720

Answer: A

Explanation:
There are 9 employees in the firm. Median of any set is the element which occurs in the middle of the set when the elements are positioned in increasing or decreasing order. The number of elements in this set = 5+3+1 = 9

Thus, the middle element will be in the position $\frac{9+1}{2}$ = 5th. Since we know that the clerks are paid the least so the clerk salaries would be in the beginning of the set if arranged in ascending order. Thus, the 5th element will be a clerk's salary as the number of clerks is 5.

Thus, median of the set = Rs 15,000.

To find the mean salary, we first need to find the sum total salary of the people involved.

Total salary = (Number of clerks*salary of 1 clerk) + (Number of assistants*salary of 1 assistant) + (Number of accountants*salary of 1 accountant)

$\rightarrow$ Total salary = (5*15,000)+(3*40,000)+(1*66,000)

$\Rightarrow$ Total salary = 75,000+1,20,000+66,000

$\rightarrow$ Total salary = 2,61,000

Mean salary = $\frac{\text{Total Salary}}{\text{Total number of employees}}$

$\Rightarrow$ Mean salary = $\frac{261000}{9}$

$\rightarrow$ Mean salary = Rs 29,000 /-

Thus, difference between mean and median salary = 29,000-15,000 = Rs 14,000

Question 50

Two numbers a and b are inversely proportional to each other. If a increases by 100%, then b decreases by:

A 200%

B 100%

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C 150%

D 80%

E 50%

Answer: E

Explanation:
Inverse proportionality is expressed as follows :

$a \propto \frac{1}{b}$

$\Rightarrow$ a*b = constant

When value of a changes, the value of b changes accordingly such that their product remains same.

Thus, new value of a $a^{'} = a \mid a = 2a$

Thus, the new value of b b can be solved by :

$a^{'} * b^{'} = a * b$

$\Rightarrow 2a * b^{'} = a * b$

$\rightarrow b^{'} = \frac{b}{2}$

Thus b decreases by 50%.

Question 51

If $\sqrt[3]{7^a \times 35^{b-1} \times 20^{c+2}}$ is a whole number then which one of the statements below is consistent with it?

A a = 2, b = 1, c = 1

B a = 1, b = 2, c = 2

C a = 2, b = 1, c = 2

D a = 3, b = 1, c = 1

E a = 3, b = 2, c = 1

Answer: E

Explanation:
In the given statement, the expression becomes a whole number only when the powers of all the prime numbers are also whole numbers.

Let us first simplify the expression a bit by expressing all terms in terms of prime numbers.

$\sqrt[3]{7^a \times 35^{b-1} \times 20^{c+2}}$

$\Rightarrow \sqrt[3]{7^a \times 5^{b-1} \times 7^{b+1} \times 2^{2(c+2)} \times 5^{c-2}}$

$\rightarrow \sqrt[3]{2^{2c+4} \times 5^{b+c+3} \times 7^{a+b-1}}$

$\Rightarrow 2^{\frac{2c+4}{3}} 5^{\frac{b+c+3}{3}} 7^{\frac{a+b-1}{3}}$

Now, from the given options, we can put in values of the variables and check the exponents of all the numbers.

Option A : a = 2, b = 1, c = 1 :

In this case, we can see that exponent of 5 ie $\frac{b+c+3}{3} = \frac{5}{3}$ is not a whole number.

Option B : a = 1, b = 2, c = 2

In this case, we can see that exponent of 2 ie $\frac{2c+4}{3} = \frac{8}{3}$ is not a whole number.

Option C : a = 2, b = 1, c = 2

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In this case, we can see that exponent of 2 ie $\frac{2c-4}{3} = \frac{8}{3}$ is not a whole number.

Option D : a = 3, b = 1, c = 1

In this case, we can see that exponent of 5 ie $\frac{b+c+3}{3} = \frac{5}{3}$ is not a whole number.

Option E : a = 3, b = 2, c = 1

In this case, we can see that all exponents are whole numbers.

Thus, option E is the correct option.

XAT Daily Current Affairs

Question 52

A gold ingot in the shape of a cylinder is melted and the resulting molten metal molded into a few identical conical ingots. If the height of each cone is half the height of the original cylinder and the area of the circular base of each cone is one fifth that of the circular base of the cylinder, then how many conical ingots can be made?

A 60

B 10

C 30

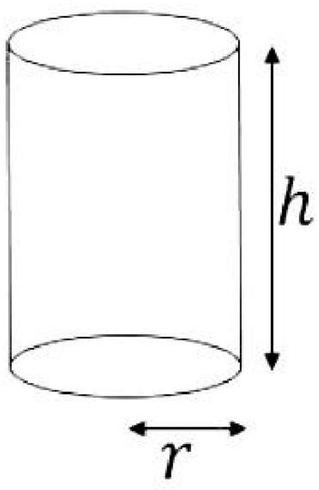
D 20

E 40

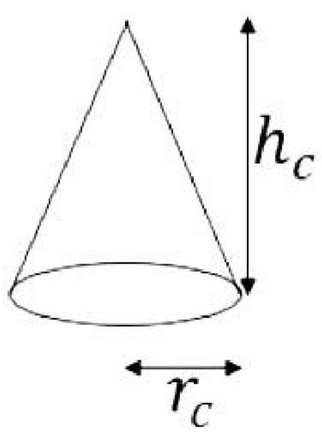
Answer: C

Explanation:

Let the radius of the cylinder be r and height be h (as shown).



Let the dimensions of the cone be r_c and h_c (as shown).



It is given that $h_c = \frac{h}{2}$

Area of base of cone $A_c = \pi \times r_c^2$

Area of base of cylinder $A = \pi \times r^2$

Given, $A_c = \frac{1}{5} \times A$

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$\rightarrow \pi \times r_c^2 = \frac{1}{5} \times \pi \times r^2$

$\rightarrow r_c^2 = \frac{1}{5} \times r^2$

$\Rightarrow \frac{r^2}{r_c^2} = 5$

Now we know that the volume of cylinder = total volume of cones

Let the number of cones be n.

So, volume of cylinder = n x volume of each cone

$\rightarrow V = n \times V_c$

$\rightarrow \pi \times r^2 \times h = n \times \frac{1}{3} \times \pi \times r_c^2 \times h_c$

$\Rightarrow r^2 \times h = n \times \frac{1}{3} \times r_c^2 \times h_c$

$\rightarrow \frac{r^2}{r_c^2} \times \frac{h}{h_c} \times 3 = n$

$\rightarrow 5 \times 2 \times 3 = n$

$\Rightarrow 30 = n$

Thus, 30 conical ingots can be made.

Question 53

Given that a and b are integers and that $5x + 2\sqrt{7}$ is a root of the polynomial $x^2 - ax + b + 2\sqrt{7}$ in x, what is the value of b?

A 5

B 2

C 9

D 7

E 14

Answer: A

Explanation:
Note: For this question, discrepancy is found in question/answer. Full Marks is being awarded to all candidates.

Question 54

An article is marked x% above the cost price. A discount of $\frac{2}{3}$x% is given on the marked price. If the profit is 4% of the cost price and the value of x lies between 25 and 50, then the value of 50% of x is?

A 12

B 16

C 13

D 15

E 20

Answer: D

Explanation:
Let CP of object be a.

It is given that SP = $\left(1 + \frac{4}{100}\right)$ x CP

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$\rightarrow$ SP = 1.04 x CP

It is given that MP = $(1 - \frac{x}{100})$ x CP

It is also given that SP = $(1 - \frac{2x}{100})$ x MP

$\rightarrow$ SP = $(1 - \frac{2x}{300})$ x $(1 + \frac{x}{100})$ x CP

$\Rightarrow (1 - \frac{4}{100})$ x CP = $(1 - \frac{2x}{300})$ x $(1 - \frac{x}{100})$ x CP

$\Rightarrow (1 + \frac{4}{100})$ = $(1 - \frac{2x}{300})$ x $(1 + \frac{x}{100})$

$\rightarrow \frac{104}{100}$ = $(1 - \frac{2x}{300})$ x $(1 + \frac{x}{100})$

$\rightarrow \frac{104}{100}$ = $(\frac{300 - 2x}{300})$ x $(\frac{x + 100}{100})$

$\Rightarrow \frac{104}{100} \times 300 \times 100$ = $(300 - 2x)$ x $(x - 100)$

$\rightarrow 31200$ = $(300 - 2x)$ x $(x + 100)$

Now, we look at the options.

Since the question says that $x \epsilon [25, 30]$ so 50% of x ie 0.5x cannot be less than 12.50 ie $\frac{25}{2}$ and cannot be more than 25 ie $\frac{50}{2}$

This eliminates option A.

Putting values of x given in the remaining options in the final expression, [here we need to be careful to use the value of x and not the value of 50% of x as given in the expression]

Look carefully in the remaining options : 16,13,15 as 0.5x ie 32,26,30 as possible values of x.

In the question since the discount rate offered is $\frac{2x}{3}$ %, then a safer choice would be to check for the option of 30 in the beginning. It is a safer choice because the percentage of discount that we get in the other options are not whole numbers.

NOTE : THIS IS JUST A SAFE CHOICE AND NEVER MARK AN ANSWER DIRECTLY ON THIS PRESUMPTION WITHOUT CHECKING IT.

Putting x=30 in the expression :

(300 - (2x30))x(30+100) = (300-60)x(100+30) = 240x130 = 24x13x100= 312x100 = 31200= LHS of expression.

Thus the value of x is 30.

Therefore value of 50% of x = 0.5x30 = 15

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XAT previous papers (download pdf)

Question 55

A computer is sold either for Rs.19200 cash or for Rs.4800 cash down payment together with five equal monthly installments. If the rate of interest charged is 12% per annum, then the amount of each installment (nearest to a rupee) is:

A Rs.2880

B Rs.2965

C Rs.2896

D Rs.2990

E Rs.3016

Answer: B

Explanation:

Amount on which interest will be charged = 19200 - 4800 = 14400

The total amount paid will be equal to the sum of all monthly instalments. Therefore, we have

$14400 * k^{5a} = I(k^{4a} + k^{3a} + k^{2a} - k^a + 1)$ .....(1)

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where, k = $1 + \frac{12}{100}$ & a = $\frac{1}{12}$

We know that, $k^{5a} - 1 = (k - 1)(k^{4a} + k^{3a} + k^{2a} + k^{a} + 1)$

=>$k^{4a} + k^{3a} + k^{2a} + k^{a} - 1 = \frac{k^{5a}}{k-1}^{1}$ ....(2)

Substituting in equation (1) we get

I = $14400 * k^{5a} * \left[\frac{k}{k^{5a}-1}^{1}\right]$ ....(3)

On substituting the values of k and a in equation (3) we get
I ≈ 2965

Hence, option B.

Question 56

When opening his fruit shop for the day a shopkeeper found that his stock of apples could be perfectly arranged in a complete triangular array: that is, every row with one apple more than the row immediately above, going all the way up ending with a single apple at the top.
During any sales transaction, apples are always picked from the uppermost row, and going below only when that row is exhausted. When one customer walked in the middle of the day she found an incomplete array in display having 126 apples totally. How many rows of apples (complete and incomplete) were seen by this customer? (Assume that the initial stock did not exceed 150 apples.)

A 15

B 14

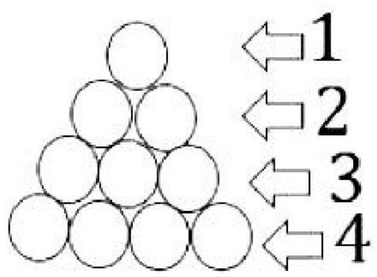
C 13

D 12

E 11

Answer: D

Explanation:
The stack of apples can be imagined as shown below. For every row, there is an increase of 1 apple from the previous row.



This means that the sum total of the apples present in the stack will be sum of AP given as : 1,2,3,4.... ie the sum of numbers from 1.

This is given by the formula S = $\frac{n \cdot (n+1)}{2}$

Since the initial number of apples was not more than 150, we find the maximum number of rows that was possible.

Let S be the total initial sum of apples in the cart.

We know that $S \leq 150$

$\Rightarrow \frac{n \cdot (n-1)}{2} \leq 150$

$\Rightarrow n \times (n+1) \leq 300$

$\Rightarrow n^2 - n \leq 300$

Since the biggest number with square less than 300 is 17, we try to see if 17 works in the expression by hit and trial method.

So, 17 x 18 = 306 > 300, therefore the maximum number of rows possible is not 17.

Since 306 is JUST over 300, let us check at 16.

So, 16 x 17 = 272 < 300, therefore the maximum number of rows possible is 16.

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Let us tabulate the total number of apples present in the cart based on the number of rows :

Number of Rows	Calculation	Total number of apples
16	16x17/2	136
15	15x16/2	120
14	14x15/2	105
13	13x14/2	91
12	12x13/2	78

Since the total number of apples from row 15 is less than 126 (which was found by the customer), we can safely say that the total number of rows of apples with the shopkeeper that day was 16.

Now, if 'n' rows of apples are sold, the total available apples can be calculated as : $\frac{16\times17}{2} - \frac{n\times(n+1)}{2}$

Let us tabulate the result obtained in this case :

Number of Rows	Calculation	Total number of apples
1	$136-\frac{1\times2}{2}$	135
2	$136-\frac{2\times3}{2}$	133
3	$136-\frac{3\times4}{2}$	130
4	$136-\frac{4\times5}{2}$	126
5	$136-\frac{5\times6}{2}$	121

From the table we can see that when the customer saw 126 apples, the apples in the top 4 rows had been sold.

Therefore, the number of rows = 16 - 4 = 12 rows.

Question 57

Let P be the point of intersection of the lines
3x + 4y = 2a and 7x + 2y = 2018
and Q the point of intersection of the lines
3x + 4y = 2018 and 5x + 3y = 1
If the line through P and Q has slope 2, the value of a is:

A 4035

B 1/2

C 3026

D 1

E 1009

Answer: C

Explanation:
On solving for x and y from the equations

3x + 4y = 2018 and 5x + 3y = 1

we get Q(-550,917)

Let, P(x,y)

So, $\frac{y-917}{x+550}$ = 2

=> y - 2x = 2017 ....(1)

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Considering the equations

3x + 4y = 2a .....(2)

7x + 2y = 2018 .....(3)

On subtracting equation (2) from (3) we have,

4x - 2y = 2018 - 2a

=> 2x - y = 1009 - a

=> y - 2x = a -1009 .....(4)

From equation (1) and (4)

2017 = a - 1009

=> a = 3026

Hence, option C.

XAT Previous Papers

Question 58

Let C be a circle of radius $\sqrt{20}$ cm. Let L1, L2 be the lines given by 2x − y −1 = 0 and x + 2y−18 = 0, respectively. Suppose that L1 passes through the center of C and that L2 is tangent to C at the point of intersection of L1 and L2. If (a,b) is the center of C, which of the following is a possible value of a + b?

A 11

B 17

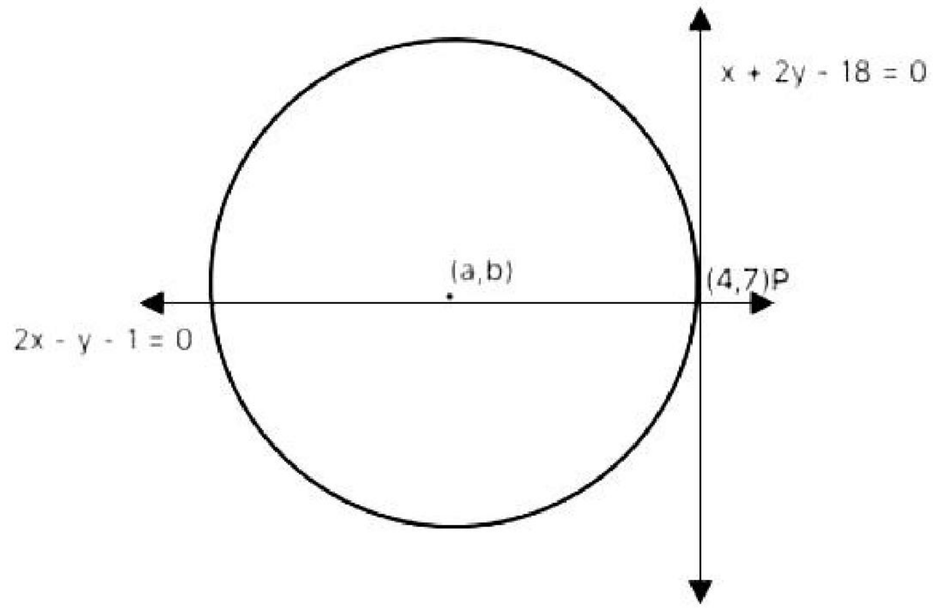
C 8

D 20

E 14

Answer: B

Explanation:



As mentioned in the question,

Lines L1 and L2 intersect at point P as shown in the figure.

On solving for x and y from equations

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$x + 2y - 18 = 0$

$2x - y - 1 = 0$

We get $x = 4$ and $y = 7$.

Given, radius = $\sqrt{20}$

Using the equation of a circle, we have

$(4 - a)^2 + (7 - b)^2 = 20$....(1)

The center of the circle will lie on the line: $2x - y - 1 = 0$

a,b will satisfy this equation.

So $2a-b-1=0$

$b=2a-1$

From equation 1...

$(4 - a)^2 + (7 - b)^2 = 20$

$(4 - a)^2 + (8 - 2a)^2 = 20$

$5(4 - a)^2 = 20$

a=6 or a=2

b=11 or b=3

The sum of the coordinates possible=6+11 or 2+3

i.e. 17 or 5

Option B is one of the solution.

Question 59

$\frac{log(97-56\sqrt{3})}{log\sqrt{7-4\sqrt{3}}}$ **equals which of the following?**

A None of the others

B -2

C -4

D -3

E -5

Answer: C

Explanation:

Simplify the expression a bit to remove the root sign in the denominator

$$\frac{1}{2} \times \frac{\log 97 - 56\sqrt{3}}{(\log 7 + 4\sqrt{3})}$$

$$\Rightarrow 2 \times \frac{\log 97 - 56\sqrt{3}}{\log 7 + 4\sqrt{3}}$$

To move further, let us see the root of the numerator.

Assume the root of the numberator to be $\sqrt{a} - \sqrt{b}$.

When we square it, we get $a + b - (2 \times \sqrt{a}\sqrt{b}) = a + b - 2\sqrt{ab}$

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comparing the value of terms under root with the terms in the numerator, we get

$\sqrt{ab} = 28\sqrt{3}$ and $a + b = 97$

From solving this, we get to know that $a - 7$ and $b - 4\sqrt{3}$

$$\log 7 - 4\sqrt{3}$$

Thus the expression can be written as $2 \times 2 \times \log 7 + 4\sqrt{3}$

$$\log 7 - 4\sqrt{3}$$
$$\Rightarrow 4 \times \log 7 + 4\sqrt{3}$$

Now, let us look at the reciprocal of the term in log in the denominator.

$$7 - 4\sqrt{3}$$
$$\frac{1}{7 + 4\sqrt{3}} = \frac{1}{7 + 4\sqrt{3}} \times 7 - 4\sqrt{3}$$

$$7 - 4\sqrt{3}$$
$$\rightarrow 7^2 - (4\sqrt{3})^2$$

$$7 - 4\sqrt{3}$$
$$\rightarrow 49 - 48 - 7 - 4\sqrt{3}$$

$$\log(7 - 4\sqrt{3}) \quad \log(7 - 4\sqrt{3}) \quad \log(7 - 4\sqrt{3})$$
$$\log(7 - 4\sqrt{3}) = \log(7 - 4\sqrt{3}) = \log(7 - 4\sqrt{3}) = -1$$

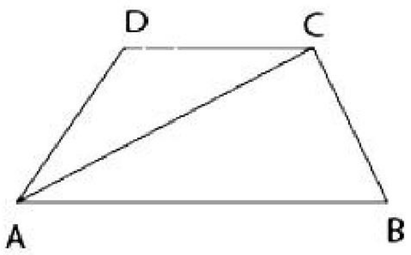
Thus the value of the expression can be further simplified as

$\Rightarrow 4 \times (-1) = -4$

Hence the correct answer is option C

Question 60

In the trapezium ABCD the sides AB and CD are parallel. The value of $\frac{sin\angle BAC}{sin\angle BAD}$ is



A $\frac{BC}{AD}$

B $\frac{AB}{CD}$

C $\frac{AC}{CD}$

D $\frac{AD}{AC}$

E $\frac{AC}{AD}$

Answer: D

Explanation:

Construct a perpendicular in the trapezium. Let its height be 'h'

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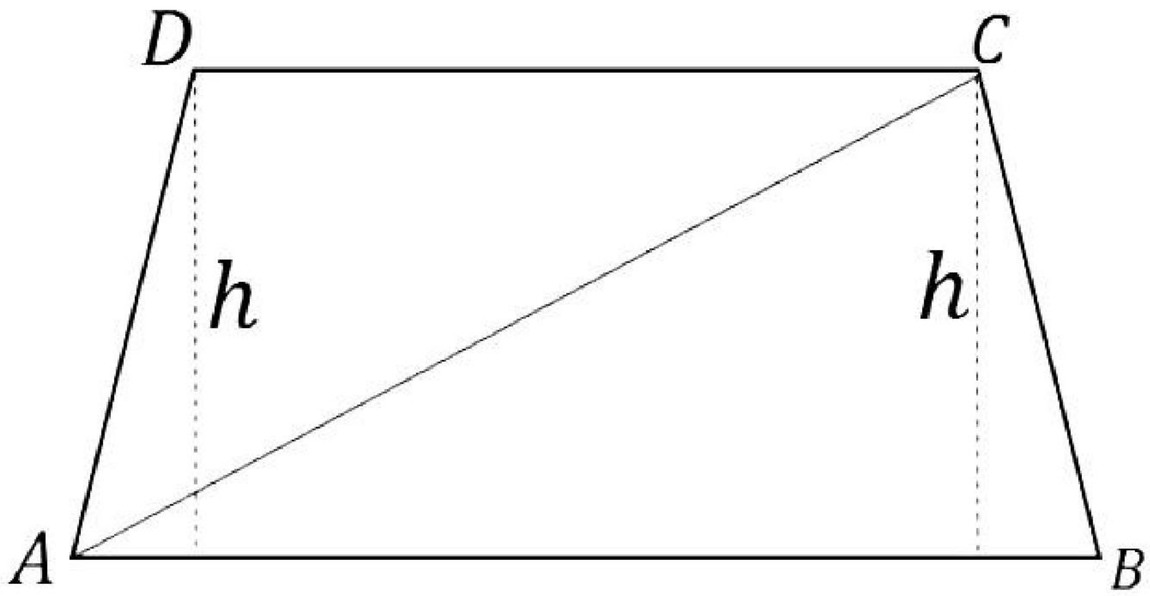

Now, $sin\angle BAC = \frac{h}{AC}$

and $sin\angle BAD = \frac{h}{AD}$

$$sin\angle BAC = \frac{\frac{h}{AC}}{\frac{h}{AD}} = \frac{AD}{AC}$$

Thus, $sin\angle BAD = \frac{AD}{AC}$

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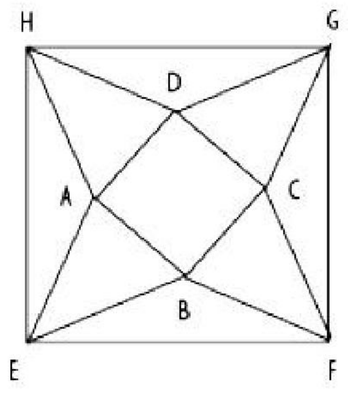
XAT Free Mock Test

Question 61

In the picture below, EFGH, ABCD are squares, and ABE, BCF, CDG, DAH are equilateral triangles. What is the ratio of the area of the square EFGH to that of ABCD?



A $\sqrt{3} - 2$

B $\sqrt{2} - \sqrt{3}$

C $1 - \sqrt{3}$

D $\sqrt{2} - 2$

E $3 + \sqrt{2}$

Answer: A

Explanation:

Let the sides of the smaller square be x units and the sides of the larger square be y units.

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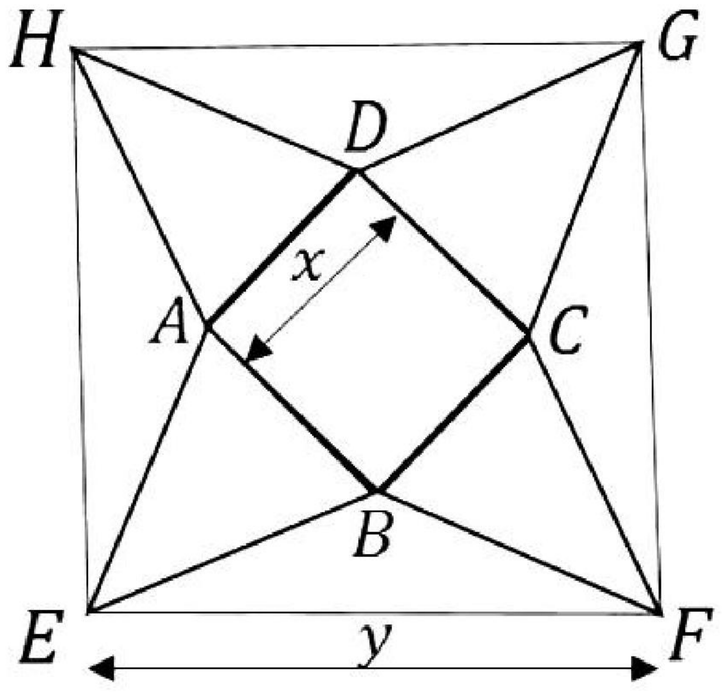
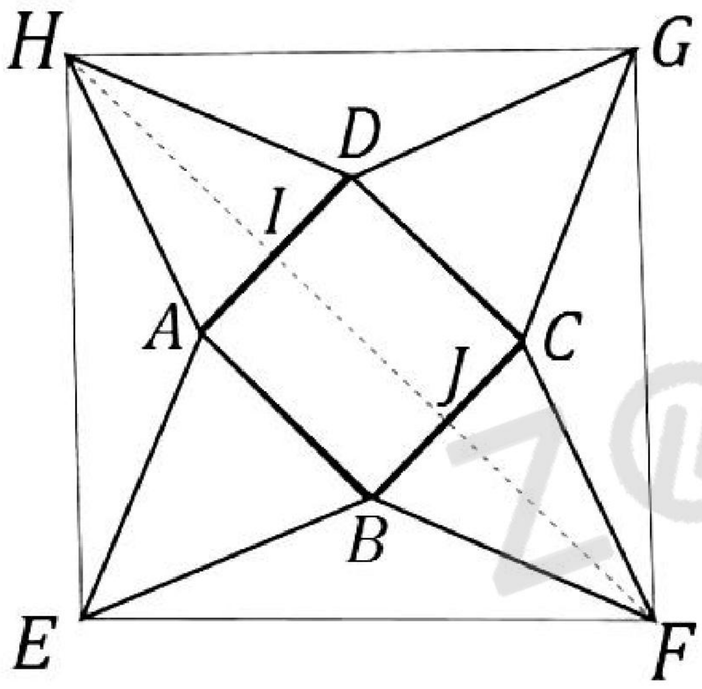


Construct diagonal HF on the larger square. Let the point of intersection of AD and diagonal be I and point of intersection of BC and diagonal be J.



We know that since EFGH is a square, the diagonal will bisect the angle. Therefore $\angle EHF = 45^o$

Observe $\triangle AEH$ and $\triangle DHG$:

AE=AH=DH=DG = x units and EH=HG= y units.

Thus by SSS property, $\triangle AEH \cong \triangle DHG$

Thus, we know that ∠AHE=∠DHG

Also, ∠AHE+∠DHG+∠AHD= 90^o (angle of a square)

$\rightarrow (2 \times \angle AHE) + 60^o = 90^o$ (angle of an equilateral triangle)

$\Rightarrow (2 \times \angle AHE) = 30^o$

$\Rightarrow \angle AHE = 15^o$

Since $\angle AHE = 15^o, \angle AHI = 45^o - 15^o = 30^o$

Since $30^o = \frac{60^o}{2}$ we can say that HF is the angle bisector of ∠AHD

Since $\triangle$AHD is an equilateral triangle, we know that the angle bisector, median and altitude will all be the same line ie HI in this case.

By symmetry, we know that JF will also be the angle bisector, median and altitude.

Also, length of altitude of equilateral triangle ie HI and JF = $\frac{\sqrt{3} \times x}{2}$

Length of diagonal HF = $\sqrt{2} \times y$

From the figure, we can express the length of diagonal HF as given :

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$$\sqrt{2} \times y = \frac{\sqrt{3} \times x}{2} + x + \frac{\sqrt{3} \times x}{2}$$

$$\Rightarrow \sqrt{2} \times y = (\sqrt{3} \times x) - x$$

$$\rightarrow \sqrt{2} \times y - x \times (\sqrt{3} + 1)$$

$$\rightarrow y - x \times \left(\frac{\sqrt{3} - 1}{\sqrt{2}}\right)$$

Ratio of areas asked = $\frac{y}{(x)^2} = \left(\frac{\sqrt{3} + 1}{\sqrt{2}}\right)^2 = \frac{4 + 2\sqrt{3}}{2} = 2 + \sqrt{3}$

Alternate Explanation:

Let AB=BC=CD=DA=x, then the area the area of square ABCD will be x^2

Since AHD, DGC, CFB, and BAE are equilateral triangles with side x, the sum of area of these traingles will be $4 \times \frac{\sqrt{3}}{4} \times x^2 = \sqrt{3}x^2$

We know that angle HAD=60, angle DAB=90, and angle BAE=60, thus angle HAE=360-(60+90+60)=150

Area of triangles HAE+HDG+GCF+FBE=4* area of triangle HAE

In HAE, AH=AE=x, and angle HAE=150, thus area will be $\frac{1}{2} \times x \times x \times \sin 150$

sin 150=sin(180-150)=sin 30=0.5

Thus area of 4 triangles will be 4*0.5*x*x*0.5=x^2

Thus, total area= $x^2 + \sqrt{3}\ x^2 - x^2 = x^2\ (2 + \sqrt{3})$

Thus area of EFGH/area of ABCD= $2 + \sqrt{3}$

Question 62

What is the maximum number of points that can be placed on a circular disk of radius 1 metre (some of the points could be placed on the bounding circle of the disk) such that no two points are at a distance of less than 1 metre from each other?

A 6

B 9

C 7

D 8

E 5

Answer: C

Explanation:

In order to accommodate maximum number of points on the circular disk, all the points should be placed on the boundary of the disk as any point if placed inside the boundary would be less than 1 metre apart from the centre of the disk. Also, all the points have to be exactly 1 metre apart from each other to place maximum number of points. Hence, a maximum of 6 points can be placed on the boundary of the disk (each adjacent points placed 60 degrees apart) and 1 point at the centre.

Hence, a total of 7 points can be placed on the disk.

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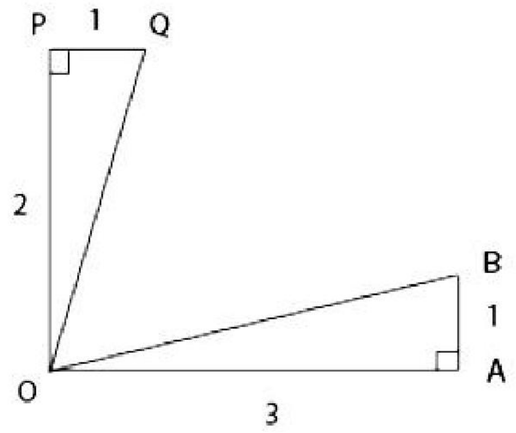
Question 63

The figure below shows two right angled triangles ΔOAB and ΔOQP with right angles at vertex A and P, respectively, having the common vertex O, The lengths of some of the sides are indicated in the figure. (Note that the figure is not drawn to scale.) AB and OP are parallel.
What is ∠QOB?



A $tan^{-1}(2/3)$

B 45°

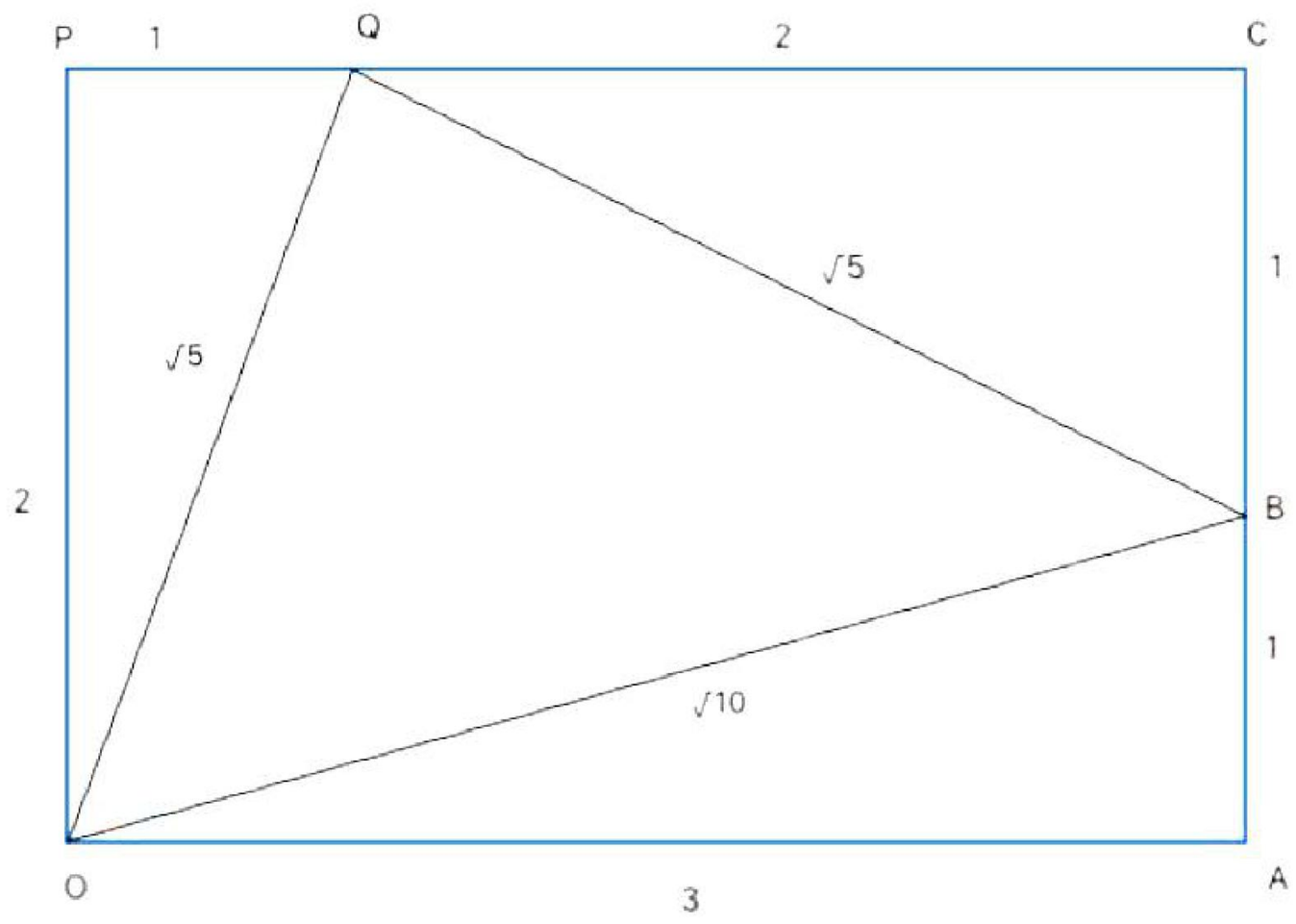
C 30°

D $tan^{-1}(3/2)$

E 60°

Answer: B

Explanation:



The figure can be redrawn as shown above.

∵ AB and OP are parallel, POAC is a rectangle.

In right △QCB, QB = $\sqrt{5}$

△QBO is an isosceles right angled triangle with ∠OQB = 90° (By Pythagoras theorem)

∴ ∠QOB = 45°

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Question 64

Consider the function f(x) = (x + 4)(x + 6)(x + 8) ⋯ (x + 98). The number of integers x for which f(x) < 0 is:

A 23

B 26

C 24

D 48

E 49

Answer: C

Explanation:

The critical points of the function are -4, -6, -8, ... , -98 (48 points).

For all integers less than -98 and greater than -4 f(x) > 0 always .

for x= -5, f(x) < 0

Similarly, for x= -9, -13, ..., -97 (This is an AP with common difference -4)

Hence, in total there are 24 such integers satisfying f(x)< 0.

Question 65

Let ABC be an isosceles triangle. Suppose that the sides AB and AC are equal and let the length of AB be x cm. Let b denote the angle ∠ABC and sin b = 3/5. If the area of the triangle ABC is M square cm, then which of the following is true about M?

A $M < \frac{x^2}{4}$

B $\frac{3x^2}{4} < M < x^2$

C $M \geq x^2$

D $\frac{x^2}{2} \leq M < \frac{3x^2}{4}$

E $\frac{x^2}{4} < M < \frac{x^2}{2}$

Answer: E

Explanation:

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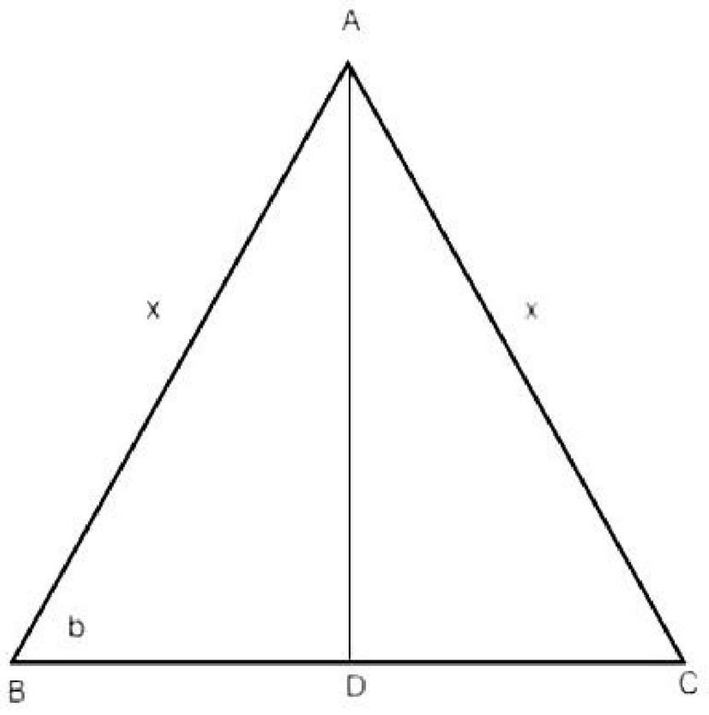

△ ABC can be represented as shown above where AD ⊥ BC

Given, Sin b = $\frac{3}{5}$

Hence, AD = $\frac{3x}{5}$ and BD = $\frac{1x}{5}$

Now, BC = 2 BD = $\frac{8x}{5}$

∴ area of △ ABC = $\frac{1}{2}$ * BC * AD = $\frac{1}{2}$ * $\frac{8x}{5}$ * $\frac{3x}{5}$ = $\frac{12x^2}{25}$

Only option E satisfies.

Hence, option E.

Question 66

If $x^2 + x + 1 - 0$, then $x^{2018} + x^{2019}$ equals which of the following:

A $x + 1$

B x

C $-x$

D None of the others

E $x - 1$

Answer: C

Explanation:
We know that,

$x^3 - 1 = (x - 1)(x^2 - x + 1)$

Since, $x^2 + x + 1 - 0$

$\therefore x^3 - 1 = 0$

=> $x^3 = 1$

Now, $x^{2018} - x^{2019}$

= $(x^3)^{672} * x^2 + (x^3)^{673}$

= $1^{672} * x^2 + 1^{673}$

= $x^2 + 1$

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= -x

Hence, option C.

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Question 67

We have two unknown positive integers m and n, whose product is less than 100.

There are two additional statement of facts available:
mn is divisible by six consecutive integers { j, j + 1,...,j + 5 }
m + n is a perfect square.

Which of the two statements above, alone or in combination shall be sufficient to determine the numbers m and n?

A Each statement alone is sufficient to answer the question.

B Both statements taken together are sufficient to answer the question, but neither statement alone is sufficient.

C Statement 2 alone is sufficient, but statement 1 alone is not sufficient to answer the question.

D Statements 1 and 2 together are not sufficient, and additional data is needed to answer the question.

E Statement 1 alone is sufficient, but statement 2 alone is not sufficient to answer the question.

Answer: B

Explanation:
Given, m and n are two positive integers having product less than 100

Statement 1:

mn is divisible by 6 consecutive integers. This means mn must be divisible by the LCM of these 6 integers its multiples.

Only numbers from 1 to 6 satisfy this with LCM 60. Any other set of 6 consecutive integers clearly exceeds 100 as its LCM.

Only such number satisfying the condition is 60.

60 can further be expressed as the product of two positive integers in the following ways:

1 x 60, 2 x 30, 3 x 20, 4 x 15, 5 x 12 and 6 x 10.

So, no unique values of m and n can be determined from the above.

Statement 2:

m + n is a perfect square.

From this statement alone too no unique set of solutions can be determined.

From Statements 1 and 2:

Only the pair 6 x 10 satisfies the condition.

Hence, both statements taken together are sufficient to answer the question, but neither statement alone is sufficient.

Question 68

A bag contains marbles of three colours-red, blue and green. There are 8 blue marbles in the bag.

There are two additional statement of facts available:
If we pull out marbles from the bag at random, to guarantee that we have at least 3 green marbles, we need to extract 17 marbles.
If we pull out marbles from the bag at random, to guarantee that we have at least 2 red marbles, we need to extract 19 marbles.

Which of the two statements above, alone or in combination shall be sufficient to answer the question "how many green marbles are there in the bag"?

A Statement 1 alone is sufficient, but statement 2 alone is not sufficient to answer the question.

B Statement 2 alone is sufficient, but statement 1 alone is not sufficient to answer the question.

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C Statements 1 and 2 together are not sufficient, and additional data is needed to answer the question.

D Each statement alone is sufficient to answer the question.

E Both statements taken together are sufficient to answer the question, but neither statement alone is sufficient.

Answer: B

Explanation:
From statement 1:

Red + Blue + Green = 17

Since, this ensures that there are at least 3 green marbles, so, remaining marbles must be red and blue.

∴ Red + Blue = 17 - 3 = 14

Blue = 14 - Red = 14 - 8 = 6

But, this doesn't give us the total number of green marbles. So, statement 1 alone is not sufficient.

From statement 2:

Red + Blue + Green = 19

Since, this ensures that there are at least 2 red marbles, so, remaining marbles must be blue and green

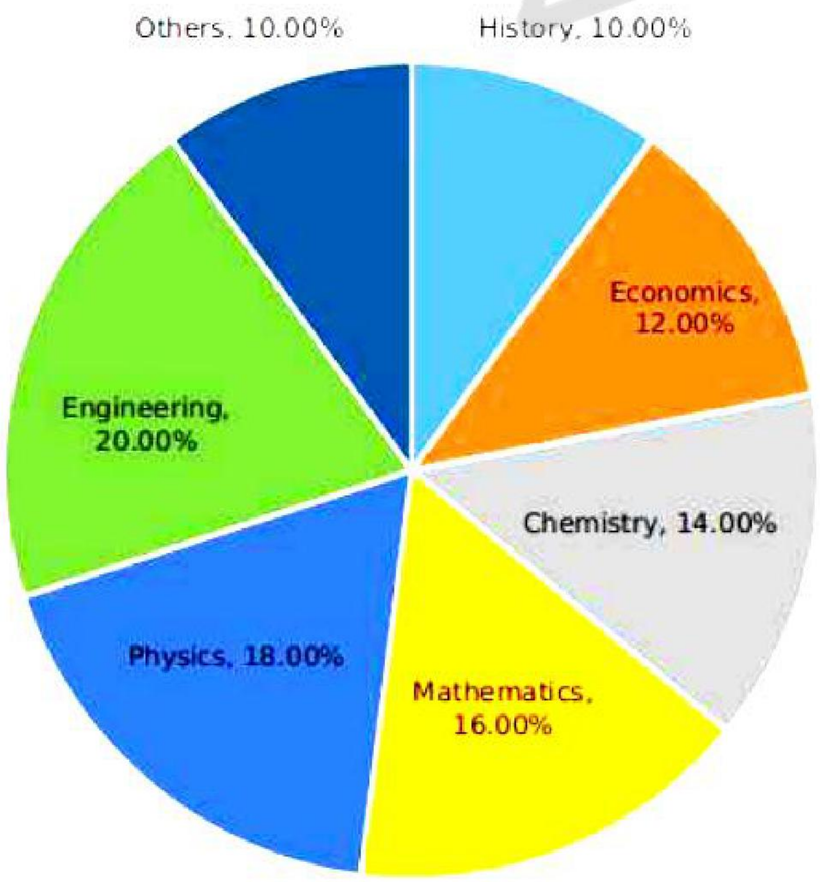
∴ Blue + Green = 19 - 2 = 17

Again, Green = 17 - Blue = 17 - 8 = 9.

Hence, statement 2 alone is sufficient to answer the question.

Instructions

The break-up of the students in a university by subject major is given in the polar pie-chart. The bar chart shows the number of students who major in physics by geographic location.



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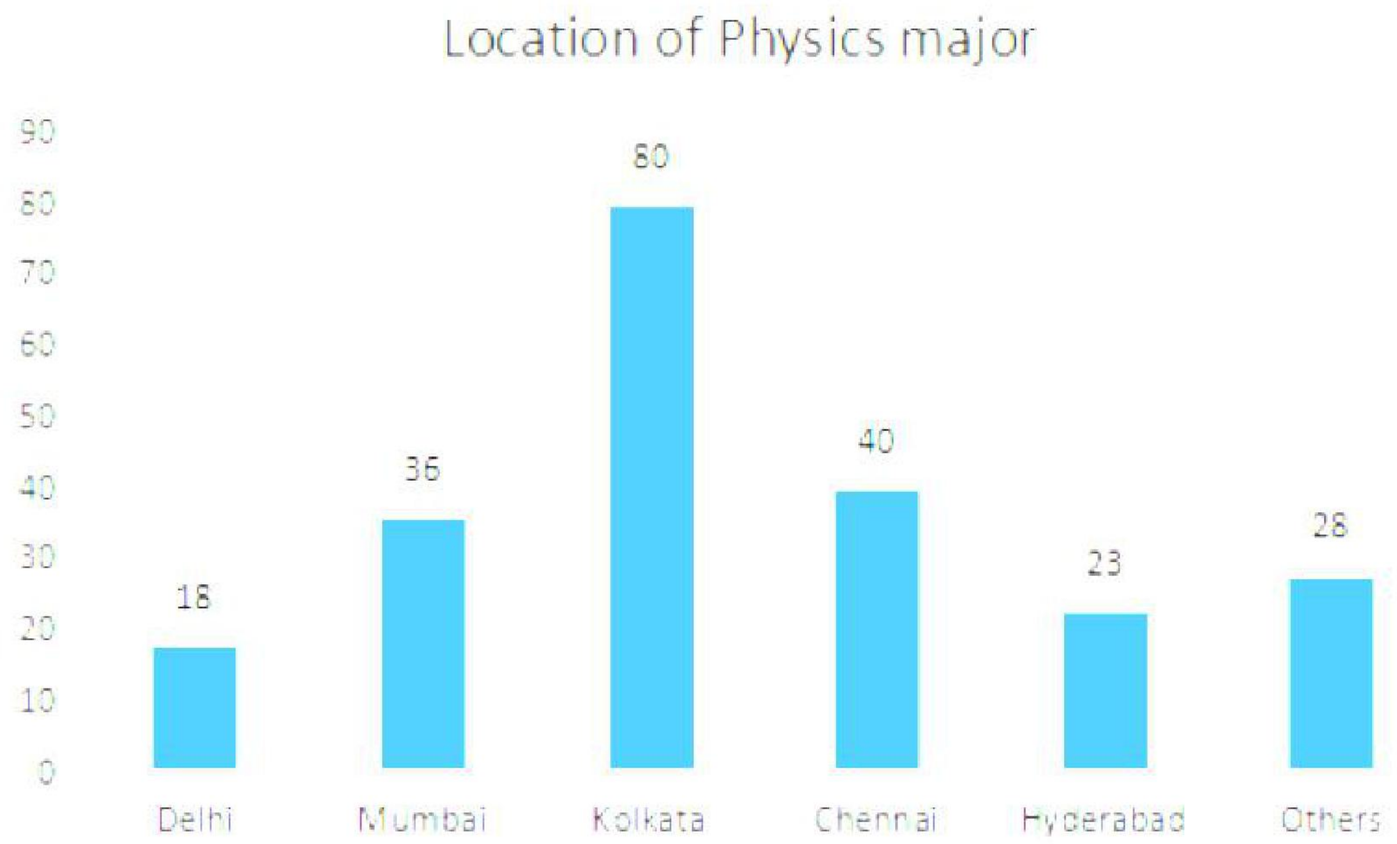

Question 69

How many students major in chemistry?

A 200

B 175

C 170

D 190

E 180

Answer: B

Explanation:

Total number of Physics major from all locations = 225

$\therefore$ Total number of students = $\frac{225}{0.18}$ = 1250

Number of students majoring in chemistry = 14 % * 1250 = 175

Hence, option B.

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XAT Preparation Tips

Question 70

If the proportion of physics majors who are from Delhi is the same as the proportion of engineering majors who are from Delhi, how many engineering majors are from Delhi?

A 22

B 26

C 18

D 20

E 24

Answer: D

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Explanation:

Total number of Physics major from all locations = 225

$\therefore$ Total number of students = $\frac{225}{0.18}$ = 1250

Number of engineering students = 20% * 1250 = 250

So, basis the given condition we have

$\frac{18}{225} = \frac{x}{250}$

=> x = 20

Hence, option D

(Note: This question has been presented as was in the actual paper and has been solved by the aid of visual inference)

Question 71

12% of all students are from Chennai. What is the largest possible percentage of economics students that can be from Chennai, rounded off to the nearest integer?

A 73%

B 77%

C 75%

D 71%

E 69%

Answer: A

Explanation:

Total number of Physics major from all locations = 225

$\therefore$ Total number of students = $\frac{225}{0.18}$ = 1250

Students from Chennai = 12% * 1250 = 150

Given, number of Physics majors from chennai = 40

$\therefore$ maximum possible number of economic students from chennai = 150 - 40 = 110

Maximum percentage of students = $\frac{110}{150}$ * 100 % = 73.33 %

Hence, option A.

Instructions

Given below is the time table for a trans-continental train that cuts across several time zones. All timings are in local time in the respective cities. The average speed of the train between any two cities is the same in both directions.

local time arrival	local time departure		City		local time arrival	local time departure
–	6:00 AM	↓	Zut		12:40 PM	–
7:45 AM	7:50 AM	↓	Yag	↑	10:50 AM	10:55 AM
2:45 PM	2:50 PM	↓	Vaq	↑	11:50 PM	11:55 PM
7:40 PM	7:45 PM	↓	Sab	↑	12:55 PM	1:00 PM
10:40 PM	–		Raz	↑	–	8:00 AM

Question 72

Which of the following pairs of cities are in the same time zone?

A Yag and Vaq

B Vaq and Sab

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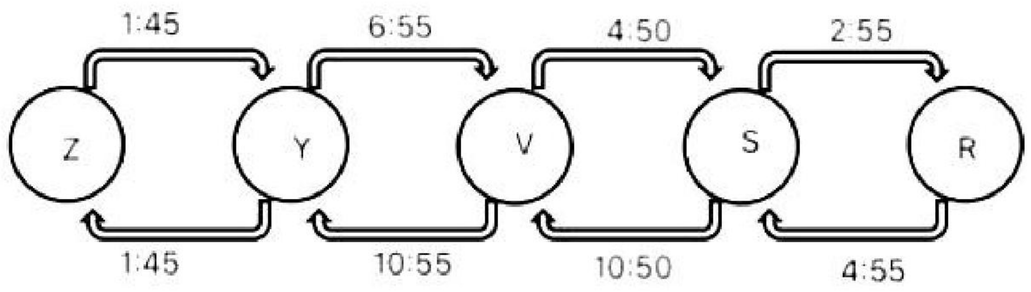
C Zut and Yag

D No pair of cities are in the same time zone.

E Sab and Raz

Answer: C

Explanation:



The above figure shows the time taken in hrs:min to travel between two consecutive cities both for upward and downward journeys.

The difference in time between two consecutive cities will be the average of the difference in time taken for upward and downward journeys.

So, the difference of time for different consecutive pairs can be found as below:

Z-Y:

For both up & down motions time difference is 0. Hence, Z & Y are in same time zone.

Y-V:

Time taken for travelling from Y to V is less than that of from V to Y with a difference of 4 hrs. Hence, Y is 2 hours ahead of V.

V-S:

Time taken for travelling from V to S is less than that of from S to V with a difference of 6 hrs. Hence, V is 3 hours ahead of S.

S-R:

Time taken for travelling from S to R is less than that of from R to S with a difference of 2 hrs. Hence, S is 1 hour ahead of R.

As shown above, only cities Zut and Yag are in same time-zone.

Hence, option C.

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Question 73

What is the total time taken in minutes by the train to go from Zut to Raz?

A 22 hours, 40 minutes

B 28 hours, 40 minutes

C 16 hours, 40 minutes

D 20 hours, 40 minutes

E 24 hours, 40 minutes

Answer: A

Explanation:

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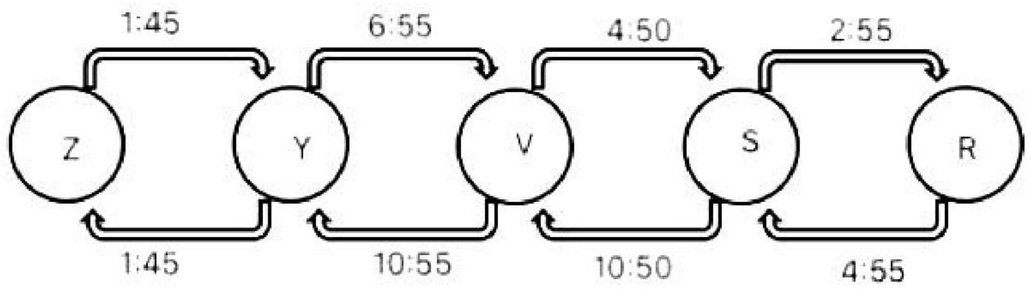

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Y-V:

Time taken for travelling from Y to V is less than that of from V to Y with a difference of 4 hrs. Hence, Y is 2 hours ahead of V.

V-S:

Time taken for travelling from V to S is less than that of from S to V with a difference of 6 hrs. Hence, V is 3 hours ahead of S.

S-R:

Time taken for travelling from S to R is less than that of from R to S with a difference of 2 hrs. Hence, S is 1 hour ahead of R.

Zut is 6 hours ahead of Rag. Also, the train departs from Zut at 6:00 am and arrives at Rag at 10:40 pm taking a total of 16 hrs 40 min. Hence, the total time taken to travel from Zut to Rag is 22 hrs 40 min.

Hence, option A.

Question 74

What time is it at Yag when it is 12:00 noon at Sab?

A 5:00 pm

B 12:00 noon

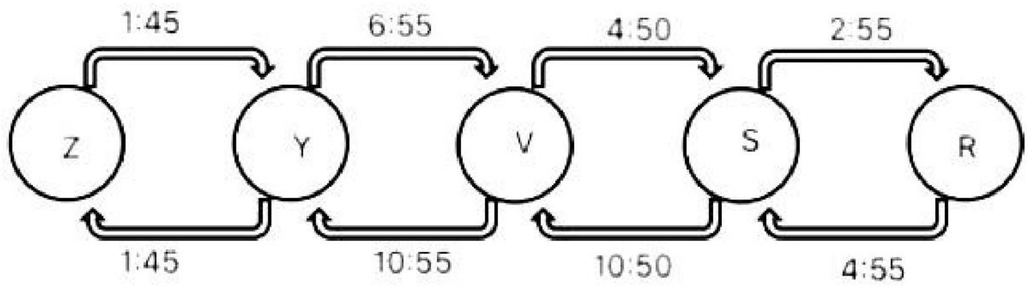
C 9:30 am

D 7:00 am

E 2:30 pm

Answer: A

Explanation:



The above figure shows the time taken in hrs:min to travel between two consecutive cities both for upwa

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Time taken for travelling from Y to V is less than that of from V to Y with a difference of 4 hrs. Hence, Y is 2 hours ahead of V.

V-S:

Time taken for travelling from V to S is less than that of from S to V with a difference of 6 hrs. Hence, V is 3 hours ahead of S.

S-R:

Time taken for travelling from S to R is less than that of from R to S with a difference of 2 hrs. Hence, S is 1 hour ahead of R.

It can be concluded that Yag is 5 hours ahead of Sab. Hence, it will be 5:00 Pm at Yag when it is 12 noon at Sab.

Hence, option A.

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General Knowledge

Instructions

For the following questions answer them individually

Question 75

Which of the following countries does not border the Mediterranean Sea?

A Portugal

B Greece

C Spain

D Italy

E France

Answer: A

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Question 76

The Mumbai Interbank Bid Rate (MIBID) and the Mumbai Interbank Offer Rate (MIBOR) are yardsticks that control which of the following financial markets?

A FOREX markets

B Commodities markets

C Derivatives market

D Insurance market

E Call Money market

Answer: E

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Question 77

Name the city which was the capital of the 'undivided' Assam state immediately after independence.

A Aizawl

B Agartala

C Kohima

D Imphal

E Shillong

Answer: E

Question 78

Name the European country that signed a pact with India in March 2018 to deepen the cooperation in the field of environment management. The deal also affirms a commitment to fight climate change.

A France

B UK

C Netherlands

D Portugal

E Spain

Answer: A

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XAT Daily Current Affairs

Question 79

Name the two countries with which India has inked agreements to enable the successful mission called 'Gaganyaan' that is slated for 2022.

A USA and China

B UK and USA

C France and Russia

D USA and France

E Russia and China

Answer: C

Question 80

The 'Kyoto Protocol' which was adopted in 1997 by several countries in Kyoto, Japan focusses on which of the following aspects?

A Climate Change

B Repatriation of criminals

C Anti-terrorism

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D Denuclearisation

E Free Trade Agreements

Answer: A

Question 81

Name the Russian leader whose name is synonymous with the two reforms of Glasnost and Perestroika.

A Yuri Andropov

B Leonid Brezhnev

C Konstantin Chernenko

D Boris Yeltsin

E Mikhail Gorbachev

Answer: E

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Question 82

Name the Indian saint who wrote 'Autobiography of a Yogi'.

A Satya Sai Baba

B Swami Abhedananda

C Sri Aurobindo

D Paramhansa Yogananda

E Hanuman Das Baba

Answer: D

Question 83

Sequence these four rivers in terms of their point of meeting the Bay of Bengal from north to south (i.e. from Kolkata down southwards to Kanyakumari).

A Mahanadi, Krishna, Godavari, Cauvery

B Mahanadi, Godavari, Krishna, Cauvery

C Krishna, Godavari, Mahanadi, Cauvery

D Godavari, Krishna, Mahanadi, Cauvery

E Mahanadi, Godavari, Cauvery, Krishna

Answer: B

Question 84

According to the World Bank, which country is the highest recipient of remittances?

A China

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B Mexico

C Philippines

D India

E Egypt

Answer: D

Question 85

Of the five members listed from the erstwhile royal families of Kerala, one was a nationally known painter and artist. In his name, every year the government of Kerala award people for their excellence in the field of art and culture. Name this painter.

A Marthanda Varma

B Chitra Thirunal

C Avittom Thirunal

D Sree Mulam Thirunal

E Raja Ravi Varma

Answer: E

Question 86

Of the five people listed below, four are Managing Directors and one is the Chairman of the State Bank of India (SBI) as of October 2018. Who among the five is the Chairman of SBI?

A Rajnish Kumar

B Arijit Basu

C PK Gupta

D Dinesh Kumar Khara

E Anshula Kant

Answer: A

Question 87

The prestigious Horlicks brand of GlaxoSmithKline has been recently brought over by another mega FMCG brand. Name the buyer company.

A Cavinkare

B Patanjali

C Nestle

D Dabur

E Hindustan Unilever

Answer: E

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XAT Free Mock Test

Question 88

Which of the following countries is not a member of Union of European Football Association (UEFA)?

A Georgia

B Kazakhstan

C Azerbaijan

D Turkey

E Uzbekistan

Answer: E

Question 89

Which of the mobile service providers is going to launch GigaFiber broadband?

A Airtel

B Idea

C Vodafone

D Jio

E BSNL

Answer: D

Question 90

What is the common name of the acidic combination of nitric acid and hydrochloric acid that can actually dissolve metals like gold and platinum?

A Aqua Pura

B Aqua Regia

C Aqua Fina

D Auro Dissolvo

E Aqua Aura

Answer: B

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XAT Decision Making Mock Tests

Question 91

Viacom18 is a popular entertainment network of India. Which of these channels does not belong to Viacom18?

A Colors

B Rishtey

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C MTV

D Nickelodeon

E Disney International

Answer: E

Question 92

Republic of Armenia is a UN member state but is not recognized by one of the UN member states. Identify the state.

A Russia

B Georgia

C Azerbaijan

D Pakistan

E Iran

Answer: D

Question 93

The name of this dance and the name of the community that performs this dance is the same. It is a Rajasthani folk dance and the intricate dance movements mimic the movement of snakes. Which dance are we talking about?

A Lambadi dance

B Kalbelia dance

C Chhau dance

D Phag dance

E Bihu dance

Answer: B

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Question 94

Which of the following countries is the largest source of imports to India as on 31st March 2018?

A Switzerland

B Pakistan

C China

D Saudi Arabia

E USA

Answer: C

Question 95

Which of the following is a winter game which is very similar to Ice Hockey and is often considered as t

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A Pato

B Bandy

C Tejo

D Arnis

E Bubkashi

Answer: B

Question 96

Which of the following liquids demonstrates a convex meniscus when confined within a glass tube?

A Water in an anomalous expansion state between 0-4° C

B Water at room temperature

C Olive oil

D Petroleum

E Mercury

Answer: E

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XAT Preparation Tips

Question 97

Arrange these historical events in the order of their occurrence:

1. Introduction of Ryotwari System in India
2. Vernacular Press Act
3. Permanent settlement of Bengal
4. Introduction of Rowlatt Act

A iii, i, ii, iv

B i, ii, iv, iii

C i, iii, ii, iv

D i, iii, iv, ii

E iii, ii, i, iv

Answer: A

Question 98

What is Article 356 of Indian Constitution?

A Provision of special status to the state of Manipur.

B Provision of special status to the state of J & K.

C Suspension of Financial autonomy to a state.

D Provision of special status to the state of Arunachal.

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