

**Directions of Test**

<b>Test Name</b>	2016 Bull CAT 18	<b>Total Questions</b>	100	<b>Total Time</b>	180 Mins
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Section Name	No. of Questions	Time limit	Marks per Question	Negative Marking
Verbal Ability	34	1:0(h:m)	3	1/3
DI & Reasoning	32	1:0(h:m)	3	1/3
Quantitative Ability	34	1:0(h:m)	3	1/3

**Section : Verbal Ability**

**DIRECTIONS for the question :** Read the passage and answer the question based on it.

**Question No. : 1**

Nobel Laureate Muhammad Yunus's three-decade-long journey with microfinance was laborious. But he most certainly did not encounter a crisis like the one he is facing now. It was only in December 2010 that the Bangladeshi — who shared the Nobel Peace Prize with the Grameen Bank in 2006 — first came across an utterly odd situation when a Norwegian television documentary accused him of diverting huge aid funds to a business concern. The news was widely reported in the local media, particularly those sections which were not appreciative of his model of microfinance for poverty alleviation. Dr. Yunus denied this and other allegations in the media that he developed many businesses using the Grameen brand name. The Norwegian government, too, came out in his defence. Amid a mounting debate for and against Dr. Yunus, Bangladesh's central bank on March 2 ordered his removal from the post of Managing Director on the ground that he had crossed the retirement age. Dr. Yunus defied the order but the High Court rejected his writ petitions challenging the legality of the central bank's action. Now his appeal is pending in the Supreme Court.

Meanwhile, Dhaka is facing a strong reaction from the West, particularly the United States. The U.S. has called for a dialogue and compromise between Dr. Yunus and the Hasina government for an "honourable solution." Whatever the criticism of the U.S. stand in Bangladesh's political and social circles, analysts believe that it is a clear disapproval of the government action against Dr. Yunus, although the Grameen Bank is neither an NGO nor a private bank. It was founded in 1983 under an ordinance and the government still holds a 25 per cent share in it. Dr. Yunus had been the Managing Director ever since the bank was founded. Despite the controversies, many analysts are of the opinion that the Hasina government may take the U.S. stand seriously but it will, for sure, find it difficult to come to an amicable solution since the Supreme Court verdict is awaited. However, the mainstream Bengali dailies have reported that a committee was formed to broker a compromise, an indication of a shift in the government stand.

The fact is the present government is not very appreciative of Dr. Yunus' contribution to poverty alleviation through the microfinance model, although Sheikh Hasina in her first tenure attended the world microcredit summit at the United Nations where he got the world body's support. The Prime Minister has accused him of treating the Grameen Bank as his "personal property" and claimed that the group is "sucking the blood of the poor." Many have even called the model a "villain." But Dr. Yunus has the support of many important sections, particularly from the world's powerful lobbies.

What can we infer about the West's attitude towards Prof. Yunus' involvement with the Grameen Bank?

- A) The West will not be able to protect the interests of the Grameen Bank.
- B) The West has remained dispassionate on the Grameen Bank and Prof. Yunus' involvement in it.
- C) The U.S is supportive of Professor Yunus' involvement with the Grameen Bank.
- D) The U.S is appreciative of the Hasina government's achievement in the Grameen Bank.

**Question No. : 2**

Who could be the author of the passage?

- A) A journalist based in Dhaka, who is closely following the case of the Grameen Bank.
- B) A corporate lobbyist in Dhaka, who has keen interest in the development of the bank.
- C) A politician closely watching the Bangladesh government's moves on the Grameen Bank.
- D) An economist discussing economic theories about Grameen Bank.

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**Question No. : 3**

Pick the word from the alternatives that is the most inappropriate meaning of panacea in the sentence provided below:

A host of studies have disagreed with the claim that microfinance is a panacea for poverty.

- A) Nostrum
- B) Elixir
- C) Antidote
- D) Panache

**Question No. : 4**

In case the allegations against Professor Yunus were found to be false, then his case can be regarded as one of:

- A) political victimization
- B) clumsy administration
- C) inept government analysis
- D) all of the above

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**DIRECTIONS for the question :** Read the passage and answer the question based on it.

**Question No. : 5**

Most people are in the pursuit of happiness. There are economists who think happiness is the best indicator of the health of a society. We know that money can make you happier, though after your basic needs are met, it doesn't make you that much happier. But one of the biggest questions is how to allocate our money, which is (for most of us) a limited resource. There's a very logical assumption that most people make when spending their money: that because a physical object will last longer, it will make us happier for a longer time than a one-off experience like a concert or vacation. According to recent research, it turns out that assumption is completely wrong. "One of the enemies of happiness is adaptation," says Dr. Thomas Gilovich, a psychology professor at Cornell University who has been studying the question of money and happiness for over two decades. "We buy things to make us happy, and we succeed. But only for a while. New things are exciting to us at first, but then we adapt to them." Gilovich's findings are the synthesis of psychological studies conducted by him and others into the Easterlin paradox, which found that money buys happiness, but only up to a point. How adaptation affects happiness, for instance, was measured in a study that asked people to self-report their happiness with major material and experiential purchases. Initially, their happiness with those purchases was ranked about the same. But over time, people's satisfaction with the things they bought went down, whereas their satisfaction with experiences they spent money on went up. It's counterintuitive that something like a physical object that you can keep for a long time doesn't keep you as happy as long as a once-and-done experience does. Ironically, the fact that a material thing is ever present works against it, making it easier to adapt to. It fades into the background and becomes part of the new normal. But while the happiness from material purchases diminishes over time, experiences become an ingrained part of our identity. "Our experiences are a bigger part of ourselves than our material goods," says Gilovich.

One study conducted by Gilovich even showed that if people have an experience they say negatively impacted their happiness, once they have the chance to talk about it, their assessment of that experience goes up. Gilovich attributes this to the fact that something that might have been stressful or scary in the past can become a funny story to tell at a party or be looked back on as an invaluable character-building experience. Another reason is that shared experiences connect us more to other people than shared consumption. You're much more likely to feel connected to someone you took a vacation with in Bogotá than someone who also happens to have bought a 4K TV. "We consume experiences directly with other people," says Gilovich. "And after they're gone, they're part of the stories that we tell to one another."

Gilovich's research has implications for individuals who want to maximize their happiness return on their financial investments, for employers who want to have a happier workforce, and policy-makers who want to have a happy citizenry. "By shifting the investments that societies make and the policies they pursue, they can steer large populations to the kinds of experiential pursuits that promote greater happiness," write Gilovich and his coauthor, Amit Kumar, in their recent article in the academic journal *Experimental Social Psychology*. If society takes their research to heart, it should mean not only a shift in how individuals spend their discretionary income, but also place an emphasis on employers giving paid vacation and governments taking care of recreational spaces. "As a society, shouldn't we be making experiences easier for people to have?" asks Gilovich.

Which, out of the following, is a statement Gilovich is likely to agree with:

- A) In conjunction to your experiences, material stuff remains separated from you and virtually, we are simply the sum total of our experiences
- B) In contrast to your material possessions, experiences remain separated from you and in effect, we are simply the sum total of our possessions
- C) In sharp contrast to your experiences, material stuff remains separated from you and in effect, we are simply the partial total of our experiences
- D) In contrast to your experiences, material stuff remains separated from you and in effect, we are simply the sum total of our experiences

**Question No. : 6**

According to Gilovich, which of the following would give you more happiness:

- I. Buying the latest iPhone.
- II. Going to art exhibitions.
- III. Buying a second-hand BMW or Mercedes.
- IV. Taking up outdoor activities.
- V. Learning a new skill, such as how to speak a foreign language.

- A) All of the above except I and II
- B) All of the above except I and III
- C) All of the above except I and V
- D) All of the above except II and III

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**Question No. : 7**

From the context of the passage, it can be inferred that the Easterlin paradox will agree with:

- I. Within a society, rich people tend to be much happier than poor people.
- II. Rich societies tend not to be happier than poor societies (or not by a huge amount).
- III. As countries get richer, they do not get happier.

- A) I & II
- B) II & III
- C) I & III
- D) All of the above

**Question No. : 8**

Go through the following statements:

- I. Adaptation to material things leads to their loss of their charm.
- II. Consumption of experiences is possible but not of material possessions.
- III. Negative experiences, over time, have the ability to lose impact as they convert into funny reminiscences or instructional experiences.

Which of the following statements agree with the central ideas presented in the passage?

- A) I & II
- B) II & III
- C) I & III
- D) All of the above

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**DIRECTIONS for the question :** Read the passage and answer the question based on it.

**Question No. : 9**

Segregation is a term that all Americans have heard and have their own definition of. What many Americans do not realize is that segregation is not just something that happened as soon as the Civil War ended. This separation of blacks and whites took time and a lot of effort by white southerners. C. Vann's 'The Strange Career of Jim Crow' says that the reason for segregation is the laws that were enforced during the late nineteenth century or "de jure." The article talks of how the "relaxation of the opposition" is a major cause for the Democrats being able to come back into power and the implementation of the eventual segregation laws such as Jim Crow laws. The division of the two races happens soon after the end of the Civil War. Churches and schools were probably some of the first places to be split. During the time, neither place was to be segregated by law. Both places became segregated by the choice of the public. This is an early example of how the blacks separated themselves from the Whites to start

life as free people. Vann Woodward also talks about the reactions of people in the late nineteenth century to the placement and enforcement of the Jim Crow laws. Of course the black communities were against any law restricting them from everyday rights and everyday convenience. Many whites also were not satisfied with the thought of Jim Crow Laws. The article quotes a Charleston editor saying, "We have no more need for a Jim Crow System this year than we had last year.

Joel Williamson's, 'The Separation of the Races', shows segregation being a social separation, or "de facto," and claims that it started at the end of the Civil War. The withdrawal of blacks is not because of hatred for the white man, but because of a need to leave their past behind them and move away from slavery and servitude. The excerpt shows that many people believe that "separation was also a way to avoid interracial violence". The withdrawal of blacks immediately following the Civil War gave whites the idea they had control over the situation. Even though blacks were not giving in, they were just looking for separation between them and the white man. Blacks started to push for equal rights in public areas. Whites started to withdraw themselves to avoid mixing with blacks. This withdrawal became a push to have the color line clearly drawn and to have laws set in place to prevent mixing of the races.

Edward L. Ayers's, 'The Promise of the New South: Life After Reconstruction', shows how extreme the battle for a proper place to ride on the train was and how railroads were the starting place for segregation, since the railroad companies were trying to separate the races with no legal right.

Suggest a suitable title for the passage

- A) Segregation: a common practice of life.   B) Interpretation of Jim Crow's laws.   C) Laws segregating races.  
D) The history of Segregation.

**Question No. : 10**

What is the author's tone?

- A) Laudatory, as he is keenly involved in what he writes.  
B) Dispassionate, as he cites various books and authors to write the passage.  
C) Tongue-in –cheek as he mixes reality & sarcasm.   D) Tongue lashing as he criticizes the loopholes in the system.

**Question No. : 11**

If the author were to continue the passage what could the author have written after the last paragraph?

- A) Why trains were turned into the first major place of tension after the civil war.  
B) A ruling which gave the railroad law to separate all the races but with equal accommodation.  
C) How Blacks and Whites learned to be civilized when they met each other.  
D) A discussion on how the new generation of Blacks did not respect the old ways of the South.

**Question No. : 12**

What were Jim Crow laws?

- A) They mandated de jure racial segregation in all public facilities, with a supposedly separate but equal status for black Americans.  
B) They mandated de facto racial segregation in all public facilities, with a supposedly separate but equal status for black Americans.  
C) The unfortunate enforcement of Jim Crow laws led to years of racial division and tension.  
D) They were about how the new generation of Blacks did not respect the old ways of the South.

**DIRECTIONS for the question:** Read the passage and answer the question based on it.

**Question No. : 13**

The most notable distinction between living and inanimate things is that the former maintain themselves by renewal. A stone when struck resists. If its resistance is greater than the force of the blow struck, it remains outwardly unchanged. Otherwise, it is shattered into smaller bits. Never does the stone attempt to react in such a way that it may maintain itself against the blow, much less so as to render the blow a contributing factor to its own continued action. While the living thing may easily be crushed by superior force, it none the less tries to turn the energies which act upon it into means of its own further existence. If it cannot do so, it does not just split into smaller pieces (at least in the higher forms of life), but loses its identity as a living thing.

As long as it endures, it struggles to use surrounding energies in its own behalf. It uses light, air, moisture, and the material of soil. To say that it uses them is to say that it turns them into means of its own conservation. As long as it is growing, the energy it expends in thus turning the environment to account is more than compensated for by the return it gets: it grows. Understanding the word "control" in this sense, it may be said that a living being is one that subjugates and controls for its own continued activity the energies that would otherwise use it up. Life is a self-renewing process through action upon the environment.

In all the higher forms this process cannot be kept up indefinitely. After a while they succumb; they die. The creature is not equal to the task of indefinite self-renewal. But continuity of the life process is not dependent upon the prolongation of the existence of any one individual. Reproduction of other forms of life goes on in continuous sequence. And though, as the geological record shows, not merely individuals but also species die out, the life process continues in increasingly complex forms. As some species die out, forms better adapted to utilize the obstacles against which they struggled in vain come into being. Continuity of life means continual readaptation of the environment to the needs of living organisms.

We have been speaking of life in its lowest terms—as a physical thing. But we use the word "Life" to denote the whole range of experience, individual and racial. When we see a book called the Life of Lincoln we do not expect to find within its covers a treatise on physiology. We look for an account of social antecedents; a description of early surroundings, of the conditions and occupation of the family; of the chief episodes in the development of character; of signal struggles and achievements; of the individual's hopes, tastes, joys and sufferings. In precisely similar fashion we speak of the life of a savage tribe, of the Athenian people, of the American nation. "Life" covers customs, institutions, beliefs, victories and defeats, recreations and occupations.

We employ the word "experience" in the same pregnant sense. And to it, as well as to life in the bare physiological sense, the principle of continuity through renewal applies. With the renewal of physical existence goes, in the case of human beings, the recreation of beliefs, ideals, hopes, happiness, misery, and practices. The continuity of any experience, through renewing of the social group, is a literal fact. Education, in its broadest sense, is the means of this social continuity of life. Every one of the constituent elements of a social group, in a modern city as in a savage tribe, is born immature, helpless, without language, beliefs, ideas, or social standards. Each individual, each unit who is the carrier of the life-experience of his group, in time passes away. Yet the life of the group goes on.

It can be inferred from the passage that the renewal of life is:

- A) infinite in higher beings, who continue to use the energy that is supplied to them by their surroundings
- B) finite and limited to a certain group in higher beings, and the species becomes extinct once this renewal ends
- C) infinite by virtue of processes such as reproduction and group experience, which ensure that the life continues even after the passing away of individual members of a group
- D) finite because of the fact it is dependent of the physical being of species, and once these physical existences disappear, life disappears too

**Question No. : 14**

The definition of life for a lower and a higher form of being is:

- A) completely synonymous
- B) completely antonymous
- C) fractionally related
- D) inter-related

**Question No. : 15**

The author uses the example of the book called the Life of Lincoln in order:

- A) to highlight what "life" means in the physiological sense
- B) to showcase the broad spectrum of experiences covered under the term "life"
- C) to highlight that "life" of an individual can be a good guide to understand social antecedents
- D) to understand the thought processes that govern the social interaction of the "higher being"

**Question No. : 16**

In the last paragraph of the passage, the word 'pregnant' is used to imply:

- A) the importance of reproduction for constituting life's experiences
- B) the loaded nature of the term "experience" and the broad spectrum of its implications
- C) the gravity of the term "experience" and what it signifies for "life" of the higher beings
- D) the subtle relationship between the life the physiological sense and life in the physical sense

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**DIRECTIONS for the question :** Read the passage and answer the question based on it.

**Question No. : 17**

"I may teach Dharma in brief, and again I may teach it in detail..... It is those who understand that are hard to find," Buddha once lamented, despairing over his disciples, notes the *AnguttaraNikaya*. His own insight into what life was all about and how it should be lived was absolutely clear, but how many would understand him fully, and how many would follow him truly? And if he could not really carry people with him, what would be the point of his missionary Endeavour at all? These doubts had assailed Buddha soon after he attained enlightenment, and they would continue to distress him till the end of his life.

Over the years Buddha did win a large number of followers, but his very success carried with it the seeds of corruption in the sangha, by attracting to it men who had no serious spiritual interest, but found that becoming a monk was an easy way to shed social and familial responsibilities and lead a carefree life. This was frankly admitted by monk Nagasena in *Milinda-Panha*. When King Menander asked him whether all those who joined the sangha were motivated by the high ideal of attaining nirvana, the monk replied, "Certainly not, Sire. Some have done so for.... [Noble] reasons, but some have left the world in terror of tyranny of kings, some have joined us to be safe from being robbed, some have come being harassed by debt, and some perhaps to gain a livelihood."

On the whole, however, Buddha was lucky in his disciples. Most of his early devotees, lay followers as well as monks and nuns, were earnest seekers of spiritual solace, genteel intellectuals from the cultured upper crust of urban society, Brahmins, Kshatriyas and wealthy merchants. The younger members of the newly prominent and socially insecure mercantile and artisan classes were particularly attracted to Buddha, as his middle path, which required discipline but not austerities, meshed well with the work ethic and lifestyle of traders and artisans. Besides, Buddhism was a very decorous religion, and this was no doubt a factor in its appeal to the elite.

Sanskrit texts often present Buddha as addressing his audience as *kulaputras*, sons of noble families. This probably was a common literary convention, but it was also, in this case, a statement of fact, for although Buddha welcomed men of all classes and castes equally into the sangha, his was essentially a religion of the upper classes. His ideal of voluntary poverty and renunciation of the material world would not have made much sense to the common people, who hardly had anything material to renounce and were already living in a state of (involuntary) poverty. Besides, Buddha mainly operated in towns and cities, and his approach was cerebral. "To the wise belongs dharma, not to the foolish," he asserted.

It can be deduced from the contents of the last paragraph of the passage that the author:

- A) is supportive of the way Buddha operated:    B) is critical of the way Buddha operated:  
C) is highlighting a pertinent aspect of the Buddha's functioning    D) is personally against the views of Buddha

**Question No. : 18**

According to monk Nagasena, people join the sangha:

- I. to avoid conflict  
II. for their safety  
III. to escape personal issues  
IV. to forge a new living for themselves

- A) I, II & III    B) I, II & IV    C) I, II, III & IV    D) II, III & IV

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**Question No. : 19**

According to the author of the passage, Buddhism appealed to the rich:

- A) because of its decorative mannerisms.    B) because of its dignified conduct.  
C) because of its ability to gel well with the lives of the rich.    D) both (2) and (3)

**Question No. : 20**

One of the central concerns of Buddha was:

- A) he was not being able to address the concerns of his followers    B) he was not able to attract the masses  
C) his disciples not being able to truly understand teachings

D) his disciples would continue to be foolish when he was no longer with them

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**DIRECTIONS for the question :** Read the passage and answer the question based on it.

**Question No. : 21**

Turner interpreted the solar eclipse of 1831 as a sign that God was signalling that his mission be carried out. Gathering followers and devising a strategy, Turner launched a revolt on August 22, 1831. Starting with the Travis home, in which he now lived, his troops attacked whites in various sections of Southampton County over the next two days. But they were overcome by the white police forces. Those taken captive were tried and 17 were hanged. Turner managed to avoid capture for some two months, but was finally brought in. He was tried and executed in the city of Jerusalem, the ironically named county seat of Southampton County. When his interrogators tried to coax a confession of wrongdoing from him, his only reply was, "Was not Jesus crucified?"

Turner's revolt, in which about 60 whites were killed, struck fear in the hearts of Southerners, not to mention retaliatory anger that resulted in the revenge killing of dozens of blacks. This was not the first major slave revolt, but it was the most extensive and costly in white lives. It intensified the anxieties about Northerners who lived in the South, especially blacks and those known to hold abolitionist sentiments. Civil authorities, in fact, instituted "black codes," which were laws prohibiting or carefully controlling black movement and activities.

Consequently, the black denominations that had recently formed and which saw a fertile field of evangelism in the millions of enslaved were essentially cut off from this group. The prospects for the growth of their ministries were thus limited to the small minority of blacks living in the North and the people they might encounter in overseas missions.

Northern white missionaries were similarly restricted. Southern white church leaders, on the other hand, stepped up their outreach to blacks and did bring large numbers into church membership. This partly seems to have been to counter the accusation from the North that the Southern churches were ignoring their Christian duty and abandoning millions of black souls to spiritual ignorance in order to protect the economic interests of the slavery system. Energetic efforts at slave evangelism were made, even though the gospel that was preached to them was geared to serve slavery. The typical scriptural text used for slave sermons was Ephesians 6:5: "Servants, be obedient to your masters . . . as unto Christ." However, the enslaved often were able to perceive a more affirming, non-submissive message of "good news" in the gospel they heard.

According to the information given in the passage:

- A) Northern Church leaders were more energetic than the Southern Church leaders in their effort to spread slave evangelism.
- B) Northern Church leaders never wanted to follow the lead of Southern Church leaders in the case of slave evangelism.
- C) Southern Church leaders were limited in their understanding of the bible and exhibited in the same in their communication with the slaves.
- D) Southern Church leaders, though assisted in the spread of slave evangelism, did follow surreptitious agenda of their own.

**Question No. : 22**

Turner's statement, "Was not Jesus crucified?" can be labelled as which one of the following?

- A) use of sarcastic wit
- B) use of wretched hyperbole
- C) use of metaphorical irony
- D) use of symbolic satire

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**Question No. : 23**

It can be inferred from the passage that the term "abolitionist sentiments" refers to:

- A) ending of slavery
- B) support of slavery
- C) promoting evangelism
- D) none of the above

**Question No. : 24**

The word 'evangelism' means:

- A) the zealous spreading of the Christian gospel.
- B) the passionate diffusion of pro-slavery endorsements
- C) the enthusiastic spreading of anti-slavery messages
- D) none of the above

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**DIRECTIONS for the question:** The four sentences (labelled 1,2,3 and 4) given in this question, when properly sequenced, form a coherent paragraph. Decide on the proper order for the sentence and key in this sequence of four numbers as your answer.

**Question No. : 25**

1. The overall Indian believability threshold is pretty low and Delhi is particularly rumour prone for two reasons.
2. The city's culture is geared towards rumour-mongering: from multiple arms of the government, countless scraps of information slip-slide their way on to the street, mutating into rumours.
3. First it is the seat of government and, therefore, the theatre of political and bureaucratic intrigue and second, of course, is its pot-pourri character.
4. Thus, the PM's crumbling knee becomes a case of cancer and health bulletins are issued by the day by those who claimed to be in the know.

A) 1324 B) C) D)

**DIRECTIONS for the question:** The four sentences (labelled 1,2,3 and 4) given in this question, when properly sequenced, form a coherent paragraph. Decide on the proper order for the sentence and key in this sequence of four numbers as your answer.

**Question No. : 26**

1. The Kalari tradition is struggling to survive in the land of its origin.
2. The palace guards are no bunch of extras in funny costumes, menacingly waving plastic swords.
3. The exclusive heritage of the warrior clans of North Kerala, this fading martial arts tradition is finding celluloid resurrection on the extravagant and surreal sets of the Bombay film industry and Hollywood's tryst with Kalaripayattu possibly couldn't have come at a better time.
4. They are real-life fighters trained in Kalaripayattu, Kerala's ancient martial art.

A) 2431 B) C) D)

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

**Question No. : 27**

1. The increasing demand for water and the limited availability of surface water resources has led to the rapid development of groundwater for water supply, irrigation and industrial uses.
2. The Agency has embarked on an effort to compile and disseminate isotope data from aquifers and rivers worldwide.
3. Groundwater management is a key issue for sustainable human development, especially in semi-arid and arid regions.
4. For rational planning, an adequate understanding of the aquifer properties is a pre-requisite to establishing sound development strategies.
5. These data are aimed at assisting decision-makers in adopting better practices for groundwater management.

A) 31425 B) C) D)

**DIRECTION for the question:** The six sentences (labelled 1,2,3,4,5 and 6) given in this question, when properly sequenced, form a coherent paragraph. Decide on the proper order for the sentence and key in this sequence of six numbers as your answer.

**Question No. : 28**

1. On the other hand, there is the necessity that these immature members be not merely physically preserved in adequate numbers, but that they be initiated into the interests, purposes, information, skill, and practices of the mature members: otherwise the group will cease its characteristic life.
2. Mere physical growing up, mere mastery of the bare necessities of subsistence will not suffice to reproduce the life of the group.
3. Even in a savage tribe, the achievements of adults are far beyond what the immature members would be capable of, if left to themselves.
4. The primary ineluctable facts of the birth and death of each one of the constituent members in a social group determine the necessity of education.
5. On one hand, there is the contrast between the immaturity of the new-born members of the group—its future sole representatives—and the maturity of the adult members who possess the knowledge and customs of the group.
6. With the growth of civilization, the gap between the original capacities of the immature and the standards and customs of the



elders increases.

A) 451362 B) C) D)

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**DIRECTIONS for the question:** Given below are sentences that form a paragraph, identify the sentence(s) or part(s) that is/are **incorrect** in terms of grammar and usage (including spelling, punctuation and logical consistency). Then, choose the **most appropriate** option.

**Question No. : 29**

- A. Most cave passages contain deposits of material that have been washed into the cave.
- B. This material, known as *cave fill*, varied from sand and clay to stratified gravel.
- C. The pebbles in these deposits often are highly polished or frosted and sometimes are as large as six inches in diameter.
- D. The reason the *Cave fills* are particularly noteworthy is because they contain
- E. material that reflect a geologic history and a record of past climates of the surrounding area.

A) B only B) B, D and E C) A and C only D) C and E only

**DIRECTION for the question:** Answer the question based on the information given in the passage.

**Question No. : 30**

The average cost of traditional medication for treatment of serious ailments (such as organ replacement for heart, liver or kidneys) for the elderly is approximately Rs. 500000. There is a new naturopathy treatment introduced by a private chain of hospitals that considerably improves the chances of improvement in condition for the elderly suffering from serious ailments. Though the program has a desirable impact from a health point of view, its prohibitive cost of Rs. 1000000 means that there is no justification for such a program.

Which of the following, if true, most seriously undermines the conclusion of the argument?

- A) The given naturopathy treatment has satisfactory results in the long term, though its short term gains still need to be established
- B) The set of elderly people who are exposed to stressful lifestyles have a higher rate of organ failure than those staying in the relaxed environments of old age homes
- C) In general, the rate of success for traditional medication in the case of serious ailments is lowered by the high chances of relapse, which also lead to cost escalation and a higher risk to life
- D) At times, there are chances that a line of treatment might cure you for a particular ailment but lead to the development of some other ailment, which might escalate both the cost of treatment as well as the risk involved

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**DIRECTION for the question:** Answer the question based on the information given in the passage.

**Question No. : 31**

A belief that has been held for long was that voraciousness was believed to cause treachery. A new research, noting that voraciousness and treachery are often observed to be preceded by antipathy, suggests that antipathy, and not voraciousness, may be the cause of treachery.

Which can be supported on the basis of the observations made by the new research?

- A) In cases where antipathy occurs but voraciousness does not, antipathy is usually followed by treachery
- B) In cases where antipathy occurs, followed by voraciousness, voraciousness is usually followed by treachery
- C) In cases where voraciousness occurs but antipathy does not, voraciousness is usually followed by treachery
- D) In cases where voraciousness occurs but treachery does not, voraciousness is usually preceded by antipathy

**DIRECTIONS for the question:** The question consists of four/five sentences on a topic. Select the option that indicates

grammatically **incorrect or inappropriate** sentence/s.

**Question No. : 32**

- A. That's where worlds of inquiry collide.
- B. I have taught all my professional life in journalism schools, and the rules that apply to investigative reporting, ethnography, lab science, and legal investigation simply differ.
- C. Nothing illustrates the divergence of method and standards as much as Goffman's destroying her notes.
- D. Only very occasionally would a journalist destroy notes to protect a source.
- E. I can't imagine the circumstances in which a lawyer or a police detective would have the right to destroy evidence in a legal proceeding.

A) A & C   B) A & B   C) C & D   D) C & E

**DIRECTIONS for the question:** Identify the most appropriate summary for the paragraph and write the key for most appropriate option.

**Question No. : 33**

The man of science knows, in one aspect, that the world is not merely what it appears to be to our senses; he knows that earth and water are really the play of forces that manifest themselves to us as earth and water—how, we can but partially apprehend. Likewise the man who has his spiritual eyes open knows that the ultimate truth about earth and water lies in our apprehension of the eternal will which works in time and takes shape in the forces we realise under those aspects. This is not mere knowledge, as science is, but it is a preception of the soul by the soul. This does not lead us to power, as knowledge does, but it gives us joy, which is the product of the union of kindred things. The man whose acquaintance with the world does not lead him deeper than science leads him, will never understand what it is that the man with the spiritual vision finds in these natural phenomena. The water does not merely cleanse his limbs, but it purifies his heart; for it touches his soul. The earth does not merely hold his body, but it gladdens his mind; for its contact is more than a physical contact—it is a living presence.

- 1. The man of science is driven by power alone and cannot understand the world
- 2. The man of science is blinded by knowledge and true knowledge lies in soul
- 3. The man of science is always trying to trump the man of soul but never manages to do so
- 4. The man of science, blinkered by his own knowledge, does not live in harmony with the world

A) 2   B)   C)   D)

**DIRECTIONS for the question:** Identify the most appropriate summary for the paragraph and write the key for most appropriate option.

**Question No. : 34**

The history of each science, be it mathematics or astronomy, botany, zoology or geology, shows us that it is not enough to have the intelligent observer, or even the interpretative thinker with his personally expressed doctrine. This must be clearly crystallised into a definite statement, method, proposition, "law" or theory, stated in colourless impersonal form before it is capable of acceptance and incorporation into the general body of science. But while astronomer and geologist and naturalist can and do describe both the observational results and their general conceptions in literary form, requiring from the ordinary reader but the patience to master a few unfamiliar terms and ideas, they also carry on their work by help of definite and orderly technical methods, descriptive and comparative, analytic and synthetic. These, as far as possible, have to be crystallised beyond their mere verbal statement into formulae, into tabular and graphic presentments, and thus not only acquire greater clearness of statement, but also become more and more active agencies of inquiry—in fact, become literal *thinking-machines*.

- 1. Each science requires its analytical method of observation in order to arrive at the correct set of conclusions
- 2. Each science needs parallel accompaniment of observation, interpretation and notation in order to achieve its desired objectives
- 3. Observation and interpretation are the driving forces for the delivery of a science as thinking machines
- 4. Subjects can only be converted into solidified thinking machines if they follow the right course of analysis

A) 2   B)   C)   D)

## Section : DI & Reasoning

**DIRECTIONS for the question:** Study the table/s given below and answer the question that follows.

### Question No. : 35

The table below shows data on milk production in various states in India, as compiled by the Association of Co-Operative Dairies. While compiling the data, some of the values were missing. All values are in 1000 litres.

State/UT	Cow Milk	Buffalo Milk	Goat Milk	Total
Andhra Pradesh		8710	1	12088
Bihar	3661	2805	177	6643
Gujarat	3848		241	9817
Karnataka	3715	1675	58	5448
Kerala	2582	27	107	2716
Maharashtra		3571	293	
Punjab	3074	6417	59	9550
Tamil Nadu	6189	779		6968
Uttar Pradesh		15549		22556
West Bengal	4303	223	146	4672
Others	16579	19869	2529	38977
All India	57770		4782	

What is India's total milk production (in thousand litres)?

- A) 117904 B) 127905 C) 137904 D) 137905

### Question No. : 36

Of the total cow milk production in India, approximately what percent is contributed by Maharashtra?

- A) 6 B) 7 C) 8 D) 9

### Question No. : 37

What approximately is Andhra Pradesh's contribution to the total milk production in India?

- A)  $\frac{1}{4}$ th of the total B)  $\frac{1}{5}$ th of the total C)  $\frac{1}{8}$ th of the total D)  $\frac{1}{10}$ th of the total

### Question No. : 38

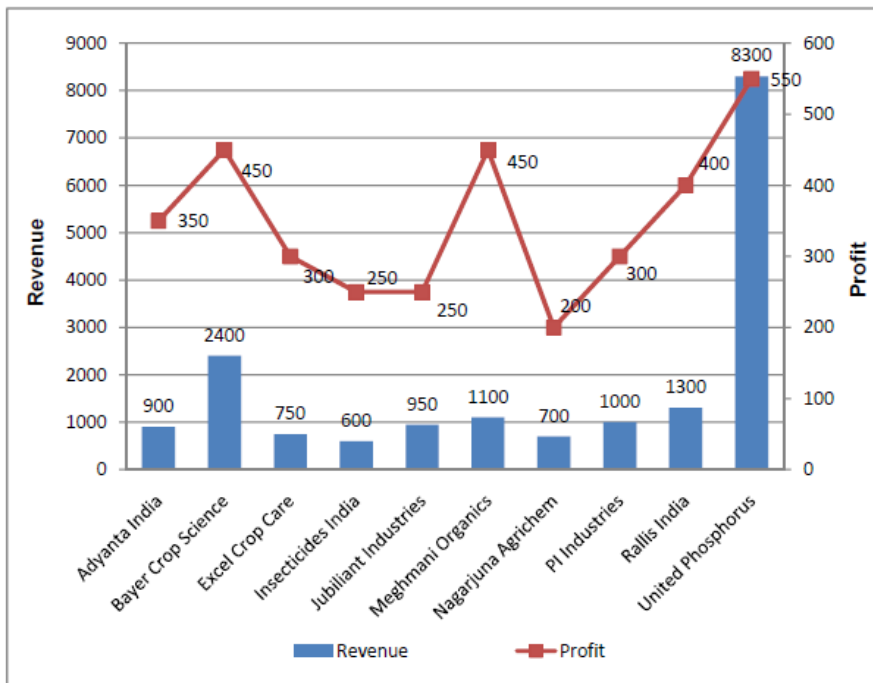
Which of the following is the closest ratio of Uttar Pradesh's contribution to the total goat milk production of India?

- A)  $\frac{2}{17}$  B)  $\frac{3}{17}$  C)  $\frac{4}{17}$  D)  $\frac{5}{17}$

**DIRECTIONS for the question:** Analyse the graph/s given below and answer the question that follows.

### Question No. : 39

The following graph shows the Revenues and Profits, in ₹ crores, of ten companies in the Agrochemical sector for the year 2012. Profit is calculated as the difference between Revenue and Expenses. Revenue is shown on the left hand side whereas Profit is shown on the right hand side.



The Employee Costs for the ten companies ranged from 3% to 14% of their respective Profits. If the Employee Costs for Advanta India, Insecticides India, Jubilant Industries and United Phosphorus were 14%, 3%, 8% and 8% of their respective Profits, what is the difference between the maximum and minimum average Employee Costs for the remaining six companies?

- A) ₹ 52.5 crores    B) ₹ 64.5 crores    C) ₹ 38.5 crores    D) ₹ 31.5 crores

**Question No. : 40**

The Raw Material Costs for Advanta India, Nagarjuna Agrichem, PI Industries and Rallis India were 25%, 64%, 50% and 55% of their respective Profits. Which of the following represents these four companies in ascending order of Raw Material Costs expressed as a percentage of their respective Expenses?

- A) Advanta India, Nagarjuna Agrichem, PI Industries, Rallis India  
 B) Rallis India, PI Industries, Advanta India, Nagarjuna Agrichem  
 C) Advanta India, PI Industries, Rallis India, Nagarjuna Agrichem  
 D) Nagarjuna Agrichem, PI Industries, Rallis India, Advanta India

**Question No. : 41**

Which of the following represents the companies in descending order of Profits expressed as a percentage of their respective Expenses?

- A) Bayer CropScience, Meghmani Organics, Excel Crop Care, Insecticides India  
 B) Insecticides India, Meghmani Organics, Excel Crop Care, Bayer CropScience  
 C) Insecticides India, Bayer CropScience, Meghmani Organics, Excel Crop Care  
 D) Meghmani Organics, Bayer CropScience, Insecticides India, Excel Crop Care

**Question No. : 42**

Which of the following companies had the highest value of Expenses expressed as a percentage of its Revenue?

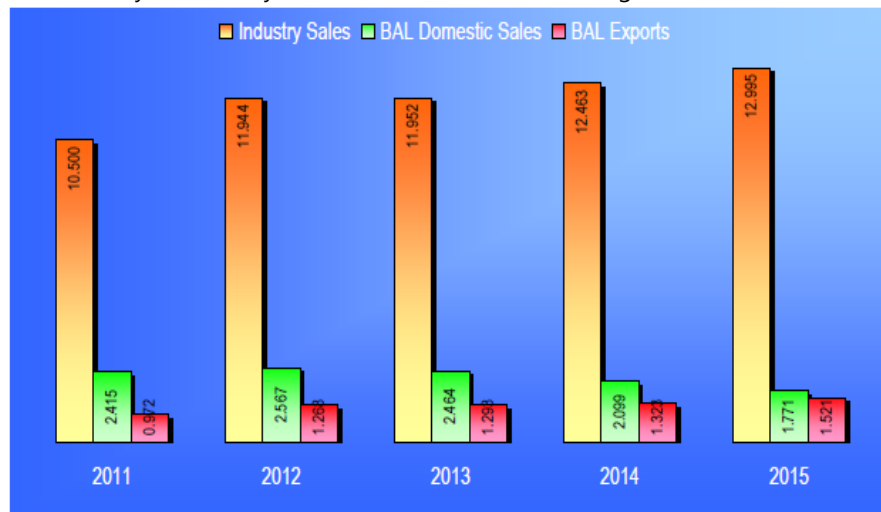
- A) Jubilant Industries    B) Nagarjuna Agrichem    C) PI Industries    D) Rallis India

**DIRECTIONS for the question:** Analyse the graph/s given below and answer the question that follows.

**Question No. : 43**

The bar chart below shows total Industry Sales of motorcycles and the breakup of the number of motorcycles sold by BAL in the

domestic and export markets during the period from 2011 to 2015. Industry Sales refers to the total number of motorcycles sold in the domestic and export market by all motorcycle manufacturers in India. All figures in millions of motorcycles.



In which year, from 2011 to 2015, was BAL’s market share of motorcycles the highest? (in numerical value)

- A) 2011 B) C) D)

**Question No. : 44**

As compared to the previous year, in how many years was the percentage increase in the number of motorcycles sold by BAL greater than the percentage increase in the number of motorcycles sold by the industry? (in numerical value)

- A) B) C) D)

**Question No. : 45**

BAL’s share of motorcycles sold in the export market in 2012 was 68.6% and in 2014 was 66.7%. What was the increase in the number of motorcycles sold by the industry in the domestic market from 2012 to 2014? (in numerical value to the nearest thousand)

- A) 135000 B) C) D)

**Question No. : 46**

From 2011 to 2015, the number of motorcycles sold by BAL in the export market formed 65.7%, 68.6%, 69.3%, 66.7% and 67.6% respectively of the number of motorcycles sold by the industry in the export market in that year. Which year saw the largest increase in the number of motorcycles sold by the industry in the export market? (in numerical value)

- A) 2012 B) C) D)

**DIRECTIONS for the question:** Study the table/s given below and answer the question that follows.

**Question No. : 47**

Forecasted GPS system in the different devices				
	2008	2009	2010	2011
PND	40000	60000	120000	350000
Smart phones	15000	90000	175000	340000
Wireless handhelds	5000	7000	10000	12000

India		America	
Smart phones	Total mobile phones	Smart phones	Total mobile phones

Q1-2005	800	2500	2000	7500
Q2-2005	1000	3200	2020	8100
Q3-2005	1050	5700	2500	8450
Q4-2005	1120	8200	2600	8500
Q1-2006	1150	10200	4500	8700
Q2-2006	1230	13500	4700	8800
Q3-2006	1280	15200	5200	9000
Q4-2006	1300	19200	5600	9150
Q1-2007	1350	22000	5600	9170
Q2-2007	1680	25000	6200	9350
Q3-2007	1890	28000	6500	11000
Q4-2007	2000	32000	7200	16000

What is the difference between the growth rates of PND Device in 2011 and 2009?

- A) 141% B) 157% C) 173% D) 310%

**Question No. : 48**

The Indian smartphone market is what percent less than American smartphone market in 2007?

- A) 138% B) 78.03% C) 72.8% D) 58.03%

**Question No. : 49**

Number of Indian smart phones sold in the 2006 is what percentage of the total Indian mobile phones in 2005?

- A) 35.3% B) 29.6% C) 25.3% D) 20.55%

**Question No. : 50**

In America, if the given values (for total mobile phones) of each quarter from Q3 - 2005 onwards is increased by 10% of the previous quarter number (considering the new values for each quarter) then the new value of Q3 - 2006 would be what percent more than the original value?

- A) 9.7% B) 13.4% C) 10.8% D) 16.5%

**DIRECTIONS for the question:** Read the information given below and answer the question that follows.

**Question No. : 51**

Reliable Construction Company is renowned for completing their projects on or before time. The company has won a contract of \$5.4 million for constructing a new plant for a major manufacturer. The contract stipulates a penalty of \$300,000 if Reliable Construction Company does not complete construction of the plant by the deadline of 47 weeks. The contract also provides for a bonus of \$150,000 if Reliable Construction Company can complete construction of the plant by 40 weeks. The foreman has drawn up an estimate of times for different activities. No activity can be started unless all of its immediate predecessors have been completed. However, multiple activities can be started simultaneously. The construction of the plant is completed when both the exterior and interior fixtures have been put up.

Activity	Description	Immediate Predecessors	Estimated Duration
A	Excavate	---	2 weeks
B	Lay the Foundation	A	4 weeks
C	Put up rough wall	B	10 weeks
D	Put up roof	C	6 weeks

E	Install exterior plumbing	C	4 weeks
F	Install interior plumbing	E	5 weeks
G	Put up exterior siding	D	7 weeks
H	Do exterior painting	E, G	9 weeks
I	Do electrical work	C	7 weeks
J	Put up wallboard	F, I	8 weeks
K	Install flooring	J	4 weeks
L	Do interior painting	J	5 weeks
M	Put up exterior fixtures	H	2 weeks
N	Put up interior fixtures	K, L	6 weeks

If all activities are executed exactly as per their estimated duration, what is the minimum time required to complete construction of the plant?

- A) 31 weeks   B) 40 weeks   C) 44 weeks   D) 79 weeks

**Question No. : 52**

An activity is considered a *critical bottleneck activity*, if a delay in its start time results in a delay in completing the project. Which of the following activities are not *critical bottleneck activities*?

- I. Put up roof                      II. Install Interior plumbing  
 III. Do exterior painting        IV. Install flooring  
 V. Put up interior fixtures

- A) II and V    B) I, II and IV    C) I, III and IV    D) III, IV and V

**Question No. : 53**

What is the earliest that work on the exterior painting can be started?

- A) 11 weeks    B) 20 weeks    C) 22 weeks    D) 29 weeks

**Question No. : 54**

What is the latest that work on putting up the wallboard can be started?

- A) 12 weeks    B) 20 weeks    C) 25 weeks    D) 33 weeks

**DIRECTIONS for the question:** Read the information given below and answer the question that follows.

**Question No. : 55**

Seven students, Aditya, Jayesh, Kapil, Pooja, Rahul, Sayali and Trishla have received interview calls from the IIMs and are preparing for their GD-PI process. These seven students are scheduled for mock interviews, in slots numbered 1 through 7, subject to the following conditions.

- Rahul will be interviewed in neither slot 1 nor in slot 2.
- Pooja will not be interviewed in any slot before before Rahul.
- The student interviewed in slot 7 is neither Aditya nor Sayali.
- Either Sayali or Trishla will be interviewed in a slot immediately after Pooja.
- Kapil will be interviewed in a slot either immediately before or immediately after Jayesh.

If Kapil is interviewed in slot 1, in how many different ways can the interviews be scheduled? (in numerical value)

- A) 9    B)    C)    D)

**Question No. : 56**

If Kapil is interviewed in slot 1, in which slot is Trishla interviewed? (in numerical value)

- A) 7 B) C) D)
- 

**Question No. : 57**

If Jayesh is interviewed in slot 3, which is the last slot in which Aditya can be interviewed? (in numerical value)

- A) 5 B) C) D)
- 

**Question No. : 58**

If Jayesh is interviewed in slot 7, in how many different ways can the seven interviewees be scheduled? (in numerical value)

- A) 4 B) C) D)
- 

**DIRECTIONS for the question:** Read the information given below and answer the question that follows.

**Question No. : 59**

A, B, C, D, E, F, G and H are sitting around a circular table facing the centre. Each one of them has a different profession viz. doctor, engineer, architect, pilot, banker, teacher, businessman and politician.

The politician sits third to right of G, C is an immediate neighbor of G. Architect sits second to right of C. B sits third to right of H. H is neither a politician nor an architect. Only one person sits between C and the teacher. A and F are immediate neighbors of each other. Neither A nor F is a politician. Doctor sits second to right of A. Two people sit between D and the engineer. D is not a Politician. Pilot is not an immediate neighbor of the politician. Banker sits second to left of A.

Who is amongst the following is a businessman?

- A) A B) H C) C D) F
- 

**DIRECTIONS for the question:** Read the information given below and answer the question that follows.

**Question No. : 60**

A, B, C, D, E, F, G and H are sitting around a circular table facing the centre. Each one of them has a different profession viz. doctor, engineer, architect, pilot, banker, teacher, businessman and politician.

The politician sits third to right of G, C is an immediate neighbor of G. Architect sits second to right of C. B sits third to right of H. H is neither a politician nor an architect. Only one person sits between C and the teacher. A and F are immediate neighbors of each other. Neither A nor F is a politician. Doctor sits second to right of A. Two people sit between D and the engineer. D is not a Politician. Pilot is not an immediate neighbor of the politician. Banker sits second to left of A.

What is the position of F with respect to the politician?

- A) Immediate right B) Third to the left C) Second to the right D) Fourth to the left
- 

**DIRECTIONS for the question:** Read the information given below and answer the question that follows.

**Question No. : 61**

A, B, C, D, E, F, G and H are sitting around a circular table facing the centre. Each one of them has a different profession viz. doctor, engineer, architect, pilot, banker, teacher, businessman and politician.

The politician sits third to right of G, C is an immediate neighbor of G. Architect sits second to right of C. B sits third to right of H. H is neither a politician nor an architect. Only one person sits between C and the teacher. A and F are immediate neighbors of each other. Neither A nor F is a politician. Doctor sits second to right of A. Two people sit between D and the engineer. D is not a



Politician. Pilot is not an immediate neighbor of the politician. Banker sits second to left of A.

Who sit(s) exactly between the teacher and the engineer?

- A) C and H   B) Only the politician   C) Only the doctor   D) C and B

**DIRECTIONS for the question:** Read the information given below and answer the question that follows.

**Question No. : 62**

A, B, C, D, E, F, G and H are sitting around a circular table facing the centre. Each one of them has a different profession viz. doctor, engineer, architect, pilot, banker, teacher, businessman and politician.

The politician sits third to right of G, C is an immediate neighbor of G. Architect sits second to right of C. B sits third to right of H. H is neither a politician nor an architect. Only one person sits between C and the teacher. A and F are immediate neighbors of each other. Neither A nor F is a politician. Doctor sits second to right of A. Two people sit between D and the engineer. D is not a Politician. Pilot is not an immediate neighbor of the politician. Banker sits second to left of A.

Which of the following is true with respect to the given seating arrangement?

- A) D is an immediate neighbor of G   B) G is a banker   C) The banker and the teacher are immediate neighbors of each other  
D) Doctor sits second to the right of the businessman

**DIRECTIONS for the question:** Read the information given below and answer the question that follows.

**Question No. : 63**

The Controller of Examinations has to schedule six subjects – Biology, Chemistry, English, Hindi, Mathematics and Physics – for the HSC examination, from Monday to Saturday. In scheduling these six subjects, he must ensure that –

- The Biology examination, which is scheduled after the Hindi examination, is scheduled on the day immediately after the Chemistry examination.
- The Physics examination, which is scheduled on the day immediately before or immediately after the English examination, is scheduled before the Mathematics examination.

In how many different ways can the six subjects be scheduled from Monday through Friday?

- A) 6   B) 10   C) 16   D) 24

**Question No. : 64**

If the Mathematics examination is scheduled before the Hindi examination, then the Biology examination is scheduled on which day of the week?

- A) Wednesday   B) Thursday   C) Friday   D) Saturday

**Question No. : 65**

If the Hindi examination is scheduled on Monday, on which day of the week can Chemistry not be scheduled?

- A) Tuesday   B) Wednesday   C) Thursday   D) Friday

**Question No. : 66**

If the Mathematics examination is scheduled on Saturday, which examination is scheduled on Monday?

- A) Chemistry   B) English   C) Hindi   D) Physics

**Section : Quantitative Ability**

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 67**



After Yudhishtir has lost all his wealth, kingdom and wife to Shakuni; Shakuni gives him a final chance. Shakuni has 5 coins. He knows that Yudhishtir has 3 coins left. Shakuni places his condition that both of them would toss all their coins simultaneously. The one who gets more heads wins. In his haste, Shakuni, a skilled gambler, forgot to take into account the possibility of a draw. Assuming all the coins are fair, what is the probability of a draw?

- A)  $\frac{3}{32}$  B)  $\frac{5}{32}$  C)  $\frac{7}{32}$  D)  $\frac{9}{32}$

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 68**



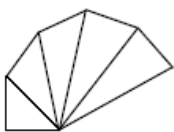
In the Strida Folding Cycle shown above, the triangular frame ABC, has a right angle at B, where  $AB = 36''$  and  $AC = 48''$ . The arms AC and AD of the frame are equal. Find out the wheel base of the cycle.

- A)  $12\sqrt{2}$  B)  $16\sqrt{2}$  C)  $18\sqrt{2}$  D)  $24\sqrt{2}$

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 69**

The arms of an isosceles right triangle are 1 cm each. With the hypotenuse as the base, another right triangle of height 1 cm is drawn. With the hypotenuse of the second triangle as the base, a third triangle of height 1 cm is drawn. This process is repeated as shown, till the 100<sup>th</sup> such triangle. What is the area of the 100<sup>th</sup> triangle? (write the answer option)



1.  $3\sqrt{11} / 2 \text{ cm}^2$       2.  $3\sqrt{2} \text{ cm}^2$       3.  $10 \text{ cm}^2$       4.  $5 \text{ cm}^2$
- A) 4    B)    C)    D)

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 70**



A drunkard puts two match boxes each containing 3 sticks in his pocket. Every time he needs a match he takes a match randomly from one or the other boxes. One day the drunkard opens a match box and finds it empty. What is the probability that the other match box contains 1 stick?

- A)  $\frac{1}{4}$    B)  $\frac{1}{16}$    C)  $\frac{5}{16}$    D)  $\frac{5}{32}$

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 71**

Two ladders of equal length are hinged at one end and stand as an inverted V, with their bottom ends 4 m apart. When a person climbs 3 m up one of the ladders, the rung he stands on is as far from the top of the ladder as it is from the bottom of the opposite ladder. Approximately, how long are the ladders?

- A) 7.5 m   B) 5 m   C) 10 m   D) 12 m

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

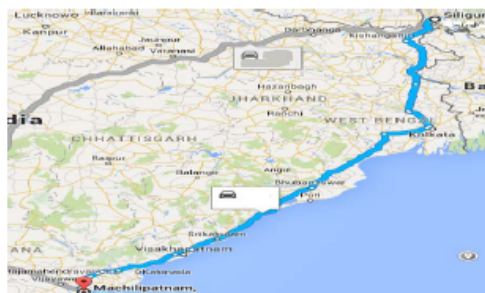
**Question No. : 72**

How many integers between 100 and 10,000 contain exactly two 9s? (in numerical value)

- A) 485   B)   C)   D)

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 73**



A person starts from Siliguri to Machilipatanam in his car. On first day he travels  $\frac{1}{3}$  of the distance. On day two he travels  $\frac{1}{4}$  of the remaining distance. On day three he covers  $\frac{1}{5}$  of the remaining distance. Driving for three days continuously he gets tired and covers  $\frac{1}{6}$  of the remaining distance. On fifth day he covers another  $\frac{1}{10}$  of the remaining distance. Getting too late and frustrated, on the final day he puts in his full energy covers 360 km and reaches Machilipatanam. How far has he travelled throughout his journey? (in km)

- A) 1200   B)   C)   D)

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 74**

Three friends Arun, Tarun and Varun run a race of 100 m. All of them run at constant speeds. Tarun beats Varun by 20 m and Varun beats Arun by 20 m. How many meters does Tarun beats Arun? (in numerical value)

- A) 36 B) C) D)
- 

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 75**

Amalgam organized a party to gel with his old pals right from the school to the senior college. While introducing themselves to the others, all of them shook hands with each other only once. If the total handshakes at the party were 10731, then how many people were there at the party? (in numerical value)

- A) 147 B) C) D)

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 76**

$100^2 - 99^2 + 98^2 - 97^2 + \dots - 1^2 =$  (in numerical value)

- A) 5050 B) C) D)
- 

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 77**

Chhota Chetan and Bada Waqil are traveling to an unknown hideout. When they start they find that they have equal amount of petrol in their tanks. Chhota Chetan's Porsche' can drive for 4 hrs while Bada Waqil's Ferrari can drive for 5 hrs in that much petrol. They start traveling together and after some time they find that the petrol in one car is four times that of the other car. For how much time have they traveled?

- A)  $2\frac{1}{4}$  B)  $3\frac{3}{4}$  C)  $4\frac{3}{4}$  D)  $5\frac{4}{5}$

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 78**

Road A and road B are two concentric circular roads. A man starts running at 12 km/hr from a point P on the outer road B along a path tangential to road A and takes 50 minutes to reach point Q on road B. If the radii of the two roads are integers, what is the diameter of road B? (ans in km)

- A) 26 B) C) D)
- 

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 79**

A bank gives an investor double the initial deposit in 5 years, interest being simple interest. Then the rate of interest is (in percentage)

- A) 20 B) C) D)

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 80**

The lane where I live has a P1- P2 parking (P1 for odd dates and P2 for even days). One of my cars has never been in use and is always kept in the parking in the lane. Everyday morning according to the date, odd or even, I change the position of the car in the appropriate parking lot P1 or P2. In the current year, starting 1<sup>st</sup> of January to 31<sup>st</sup> of December, for how many days I shall be relieved from doing this exercise? (in numerical value)

- A) 8   B)   C)   D)
- 

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 81**

Majnu and Laila live some distance apart on a straight road. They both take out their horses and start riding at the same time with the same constant speed towards each other's home. Their horses meet 5 km from Majnu's house. After a one hour of whispering sweet little nothings into each other's ears, they leave. In their hurry, they forget where their homes are, and continue towards the others' house. After reaching the houses, they realise their foolishness and then turn back towards their own houses. This time, they meet at a distance of 3 km from Laila's house. How far is Majnu's house from Laila's? (ans in km)

- A) 12   B)   C)   D)
- 

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 82**



ABC Freight Ltd. has a warehouse near the dockyard. Due to favourable business conditions the arrival of containers increased and as a result twelve containers had to be put outside the warehouse. Looking at future scenario of business, ABC decided to increase the warehouse space by 40 %. This not only accommodated the 12 containers, but also created space for an additional 12 containers. What is the new capacity of the warehouse? (in numerical value)

- A) 84   B)   C)   D)
- 

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 83**



During a day of snowfall a snow droplet slipped gradually leaf after leaf from the top of a cedar tree. The first time it fell it lost  $\frac{1}{4}$ th of its volume. After that every time it fell from a leaf it lost  $\frac{1}{5}$ ,  $\frac{1}{6}$ ,  $\frac{1}{7}$ ,... of the remaining volume each time. What percent of its original volume remained when it fell from the seventh leaf?

- A) 23%   B) 27%   C) 30%   D) 36%

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 84**



The government decides to provide employment to the adult population of a drought affected village for 180 days under the MGNREGA scheme. It is decided that man will get Rs. 180 per day and women will get Rs. 240 per day as compensation. Of the 3553 people,  $\frac{1}{9}$  of the men and  $\frac{1}{12}$ th of women turned up to work.

How much approximate money in all was spent by the government?

- A) 12 million   B) 13 million   C) 14 million   D) Data insufficient

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 85**



Some senior citizens were drinking *chai* at their regular Udipi hotel. One of them said that his grandson was about as many days old as his son's age was in weeks. He adds that his grandson's age expressed in months is the same as his own age in years. The

sum of the ages of the grandfather, father and son is 120. What is the age of the grandfather? (in numerical value)

- A) 72 B) C) D)

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 86**

If  $[\sqrt[n]{1}] + [\sqrt[n]{2}] + [\sqrt[n]{3}] + \dots + [\sqrt[n]{n}] = k$ , where  $[x]$  is the greatest integer value less than or equal to  $x$  and  $n = 1, 2, 3, \dots$ , which of the following is possible value of  $k$ ?

- A) 487 B) 118 C) 1527 D) 120

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 87**

A bookseller sells book at a discount of 20% on the marked price. Aditya bargains successfully and persuades him to give 1 book free on every 11 books brought, along with the discount. The bookseller still makes a profit of 10%. Find what % of the cost price is the marked price?

- A) 130 B) 140 C) 150 D) 160

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 88**

Ambubai, a fruit seller sells Kalmi mangoes during summer season at a per kg rate. In a particular season, after more than a week's sale, she finds that the sale of mangoes varies on different days. On a good day she sold as much as 90 kg of mangoes while on a bad day she managed to sell 50 kg. On an average day she sold 70 kg of mango. If in all she sold 530 kg of mangoes and if the per kg rate of mangoes is Rs.60, what is her earnings from bad days?

- A) 3000 B) 6000 C) 15000 D) 18000

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 89**

What is the remainder when  $2^2 + 2^3 + 2^4 + \dots + 2^{100}$  is divided by 17? (in numerical value)

- A) 11 B) C) D)

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 90**

Hanuman's income in 2015 was Rs.100,000 per month. He spends Rs. 8 out of every Rs. 9 that he earns. Ram Co, his employer, provides an inflation based increment every year. Inflation rates in 2016 and 2017 have been 10%. Hanuman's annual expenditure however goes up by 1 percentage point each year in these two years. By what percentage have his savings changed in 2017?

- A) 78% B) 7.8% C) 0.78% D) 0.078%

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 91**

What is the ten's digit of  $129^{131}$ ?

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

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 92**

Babubhai Tomatowalla sells tomatoes in his handcart in Shankar nagar moving from society to society. On an average, each tomato is 60% water. On a particular day he starts with 150 kg of tomato. He sells 60% of tomatoes and brings the rest back. When he weighs them he finds that the weight of tomatoes is 50 kg. What percentage of water has evaporated?

- A) 11.11% B) 27.77% C) 33.33% D) 36.66%

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 93**

Shola and Shabnam sell oranges in the fruit market. Shola sells oranges at the rate 5 for Rs.10 and Shabnam sells at the rate 3 for Rs.10. Suddenly Shola gets an urgent call from his Abba and he had to leave. He asks Shabnam to sell his oranges too. At that instant, the quantity of oranges is equal in both the baskets. So Shabnam mixes both the baskets and sells now at the rate 4 for Rs.10. At the end of the day, she honestly gives Shola half of the amount of whatever earned after Shola's departure. Later Shola realizes that he had earned more than what he would have earned had he not left. By what percentage, he has earned more over his original earnings?

- A) 11% B) 20% C) 25% D) 33%

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 94**

Jaggu-The Juggler is preparing for his evening jugglery class. He has to give a set of balls to each participant of the class. He first segregates the collection into sets of 3 balls, but one ball is left. After that, he tries to arrange the balls in groups of 5, 7 and 9. But in each case he is left with one ball. Frustrated, he finally makes groups of 11 balls and to his surprise no ball is left now. How many groups of 11 balls did Jaggu make? (in numerical value)

- A) 86 B) C) D)

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 95**

If  $x$  and  $y$  are positive integers satisfying  $17x + 8y = 3051$ , what is the sum of the maximum and minimum difference between values of  $x$  and  $y$ ?

- A) 331 B) 375 C) 394 D) 575

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 96**

A shopkeeper ordered 233 identical balls from a local wholesaler. The wholesaler transported them in 7 small bags and 18 big bags by a tempo. Due to mishandling the bags got damaged and all the balls got mixed. How many more balls did the big bags have than the smaller ones?

- A) 4 B) 5 C) 6 D) 11

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.



**Question No. : 97**

Raman Pasha purchased a bicycle for Rs.7000. Each year it depreciated by  $\frac{1}{7}$ <sup>th</sup> of its value. He sold the bicycle after four years at a profit of 20%. What was the approximate selling price of the bicycle?

- A) 4500 B) 3500 C) 5400 D) 4300

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 98**

Cheeku Nath, the chicken seller, observes that if 75 of the chickens are sold, the remaining chickens could be fed for 20 more days. But if 100 more chickens are added then the chicken feed will be finished 15 days earlier. What is the current stock of chickens with Cheeku?

- A) 150 B) 240 C) 300 D) 450

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 99**

In a four digit number the unit digit is four times the digit at thousandth place. The number formed by the thousandth and hundredth place is four times the digit at unit place. The difference between the digits at tens place and units place is equal to the difference between the digits at thousandth and hundredth place. What's the number?

- A) 1694 B) C) D)

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 100**

At a call centre, the manager observes that 4 operators can answer 120 calls in three quarters of an hour. Due to excess calling load, he has to hire more people. How many operators does he need to hire to answer 1530 calls in an hour?

- A) 37 B) 38 C) 39 D) 40

**QNo:- 1 ,Correct Answer:- C**

**Explanation:-**

Option 3 is the best answer.

The U.S has strongly criticised the Bangladesh government's attitude towards the Grameen Bank which amply shows the U.S's support for Prof. Yunus.

**QNo:- 2 ,Correct Answer:- A**

**Explanation:-**

Option 1 is the answer.

A corporate lobbyist presses for unreasonable demands. In this passage there is nothing unreasonable to press for hence the passage does not hold the interest of a corporate lobbyist. The passage does not deal with the discussion on economic theories, nor is there any involvement of a politician. A journalist captures the situation that Prof Yunus is facing in this passage.

**QNo:- 3 ,Correct Answer:- D**

**Explanation:-**

Nostrum, elixir & antidote are synonyms of panacea however 'Panache' means the quality of being able to do things in a

confident and elegant way that other people find attractive.

**QNo:- 4 ,Correct Answer:- A**

**Explanation:-**

In the given case, a specific person is being targeted by the government and such an approach can be labeled as political victimization. Sufficient information is not present in the passage to deduce options 2 and 3.

---

**QNo:- 5 ,Correct Answer:- D**

**Explanation:-**

Option 4 is the apt choice in this case. Option 1 makes the mistake of using 'in conjunction' for material stuff and experiences, whereas the passage is actually comparing them. Option 2 reverses the argument of Gilovich. Option 3 uses the word 'partial', whereas the sense implied by the passage is completely different.

**QNo:- 6 ,Correct Answer:- B**

**Explanation:-**

In the given passage, Gilovich supports the notion that experiences are far more important than buying stuff. Keeping that in mind, we can see that option 2 makes perfect sense. Statements I and III represent material activities and these won't give you the kind of happiness that is provided by experiences (which are given in statements II, III and V).

---

**QNo:- 7 ,Correct Answer:- D**

**Explanation:-**

Refer to the lines: Gilovich's findings are the synthesis of psychological studies conducted by him and others into the Easterlin paradox, which found that money buys happiness, but only up to a point. The key aspect in this case is that money does buy happiness but only up to a point. This would mean that rich people will be happier than the poor ones. Also, this would mean that as a society, richer ones would not be happier by a great amount than poor ones. This helps us derive statements I and II. Statement III is a direct derivative in this case.

**QNo:- 8 ,Correct Answer:- D**

**Explanation:-**

Statement I can be derived from the lines: "We buy things to make us happy, and we succeed. But only for a while. New things are exciting to us at first, but then we adapt to them."  
Statement II can be derived from the lines: Another reason is that shared experiences connect us more to other people than shared consumption. You're much more likely to feel connected to someone you took a vacation with in Bogotá than someone who also happens to have bought a 4K TV. "We consume experiences directly with other people," says Gilovich. "And after they're gone, they're part of the stories that we tell to one another."  
Statement III can be derived from the lines: One study conducted by Gilovich even showed that if people have an experience they say negatively impacted their happiness, once they have the chance to talk about it, their assessment of that experience goes up. Gilovich attributes this to the fact that something that might have been stressful or scary in the past can become a funny story to tell at a party or be looked back on as an invaluable character-building experience.

---

**QNo:- 9 ,Correct Answer:- D**

**Explanation:-**

Option D is the best answer.  
A common practice of life is too general.

*Jim Crow constitutes only a part of the passage.*

*'Races' is undefined in the Option C.*

*Most of the article is about the history of segregation and how it came into existence.*

**QNo:- 10 ,Correct Answer:- B**

**Explanation:-**

*Option 2 is the correct answer.*

*He does not appreciate segregation.*

*He does not mix reality & sarcasm.*

*He does not criticize loopholes.*

*However, he sounds indifferent towards the treatment of the concept of 'segregation' given by Americans.*

---

**QNo:- 11 ,Correct Answer:- A**

**Explanation:-**

*1st option is the correct answer.*

*The last sentence talks about how extreme the battle for a proper place to ride on train was.*

*Hence C & D are out of scope.*

*There is no information about all the races,so not B.*

**QNo:- 12 ,Correct Answer:- A**

**Explanation:-**

*Option 1 is the answer.*

*De jure is an expression that means "concerning law", as contrasted with de facto, which means "concerning fact"*

*Jim Crow laws mandated de jure racial segregation in all public facilities for Black Americans.*

*It was not a matter of fact segregation.*

*Hence option with de facto is ruled out.*

*Option C & D are out of scope.*

---

**QNo:- 13 ,Correct Answer:- C**

**Explanation:-**

*Option 3 is the best answer.*

*In the given case, it can be inferred from the passage that the renewal of life is carried forward by processes such as reproduction and 'experience' sharing in groups. These processes ensure that the principle of continuity through renewal exists in the world and this is how life propagates. This sentiment is best reflected by option 3.*

**QNo:- 14 ,Correct Answer:- C**

**Explanation:-**

*From the given paragraph, the definition of life for a lower and a higher form of being is only fractionally related to each other.*

*This is only so in the physical sense and in all other ways, the definition of life differentiates for the two.*

---

**QNo:- 15 ,Correct Answer:- B**

**Explanation:-**

Option 2 is the best answer.

The answer to this question can be found from the lines: *We have been speaking of life in its lowest terms—as a physical thing. But we use the word "Life" to denote the whole range of experience, individual and racial. When we see a book called the Life of Lincoln we do not expect to find within its covers a treatise on physiology.*

**QNo:- 16 ,Correct Answer:- B**

**Explanation:-**

The correct answer is option 2.

In the given case, the word 'pregnant' means 'rich in significance or implication'. In the given sentence, it is used to imply that "experience" is not a single term but it accounts for a vast range of human experiences. Keeping this in mind, we can see that option 2 is the best answer.

---

**QNo:- 17 ,Correct Answer:- C**

**Explanation:-** This is a close question and you can easily commit a mistake in the given case. Remember, the author of the passage, in the last paragraph, is highlighting an aspect of the way Buddha operated. He does not necessarily pass a negative or positive opinion about the same. Considering this, option 3 is the best answer in the given case.

**QNo:- 18 ,Correct Answer:- C**

**Explanation:-** Each of the above can be derived from the lines: *".....When King Menander asked him whether all those who joined the sangha were motivated by the high ideal of attaining nirvana, the monk replied, "Certainly not, Sire. Some have done so for.... [Noble] reasons, but some have left the world in terror of tyranny of kings, some have joined us to be safe from being robbed, some have come being harassed by debt, and some perhaps to gain a livelihood"..."*

---

**QNo:- 19 ,Correct Answer:- D**

**Explanation:-** The word decorous means: *characterized by propriety and dignity and good taste in manners and conduct. Refer to the lines: The younger members of the newly prominent and socially insecure mercantile and artisan classes were particularly attracted to Buddha, as his middle path, which required discipline but not austerities, meshed well with the work ethic and lifestyle of traders and artisans. Besides, Buddhism was a very decorous religion, and this was no doubt a factor in its appeal to the elite.*

We can see that option 4 is the best answer in the given case.

**QNo:- 20 ,Correct Answer:- C**

**Explanation:-** The answer to this question can be identified from the first paragraph of the passage: *His own insight into what life was all about and how it should be lived was absolutely clear, but how many would understand him fully, and how many would follow him truly? And if he could not really carry people with him, what would be the point of his missionary Endeavour at all? These doubts had assailed Buddha soon after he attained enlightenment, and they would continue to distress him till the end of his life.*

---

**QNo:- 21 ,Correct Answer:- D**

**Explanation:-** Refer to the lines: *Energetic efforts at slave evangelism were made, even though the gospel that was preached to them was geared to serve slavery. The typical scriptural text used for slave sermons was Ephesians 6:5: "Servants, be obedient to your masters . . . as unto Christ." However, the enslaved often were able to perceive a more affirming, non-submissive message of "good news" in the gospel they heard.*

**QNo:- 22 ,Correct Answer:- C**

**Explanation:-** Refer to the following lines: He was tried and executed in the city of Jerusalem, the ironically named county seat of Southampton County. When his interrogators tried to coax a confession of wrongdoing from him, his only reply was, "Was not Jesus crucified?"  
In the given case, Turner uses a metaphor to point to the irony of the situation.

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**QNo:- 23 ,Correct Answer:- A**

**Explanation:-** The meaning of the word abolitionist is: A reformer who favors abolishing slavery.  
Considering this and the context of the paragraph, we can see that option 1 is the correct answer.

**QNo:- 24 ,Correct Answer:- A**

**Explanation:-** The word evangelism refers to 'the spreading of the Christian gospel by public preaching or personal witness.'

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**QNo:- 25 ,Correct Answer:- 1324**

**Explanation:-**  
statement 1 introduces Delhi and also mentions 2 reasons.  
3 follows with the both reasons stated in the statement.  
Hence the 13 link is established.and option 4 concludes the paragraph.The correct sequence will be 1324

**QNo:- 26 ,Correct Answer:- 2431**

**Explanation:-**  
The palace guards in 2 is the opening sentence.The paragraph talks about palace guards  
'They' in 4 refers to the palace guards.  
Also 4 talks of kalaripayattu and 3 continues the idea. Hence the 243 is the link.

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**QNo:- 27 ,Correct Answer:- 31425**

**Explanation:-**  
Two pairs that help us find the answer:  
42: linked the element of planning and aquifers mentioned in 4, which is taken forward by statement 2.  
25: linked by the common reference to 'data'.  
Linking the above two, we need the pair 425' to be present in an answer option to establish the correct answer.

**QNo:- 28 ,Correct Answer:- 451362**

**Explanation:-**  
The first step to solve this question involves identifying the correct opening sentence of the question. In the given case, that sentence is statement 4. Statement 4 is followed by the pair 51 (which is an obvious mandatory pair which is present in all the answer options). The next deduction that needs to be made is the location of statement 3. We can see that 62 is another pair that talks about the common subject of the life of the group.

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**QNo:- 29 ,Correct Answer:- B**

**Explanation:-**

Option 2.

In B, it should be varies as the passage is written in the present tense.

In D, the reason and because cannot be used together. The reason .....that they contain.

In E, since material is singular, the verb usage should be reflects.

**QNo:- 30 ,Correct Answer:- C****Explanation:-**

In this case, we need an answer option that highlights how naturopathy treatment is in fact the better line of treatment in comparison to the traditional form. This is highlighted by option 3, which showcases how the cost of traditional form of treatment can actually be far greater than what is stated here. By virtue of relapses taking place, the traditional form of medication is far more expensive and riskier in nature.

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**QNo:- 31 ,Correct Answer:- A****Explanation:-**

The research suggests that disgust might be the source of treachery and not voraciousness. So in case, voraciousness does occur and antipathy does, there are chances that treachery might be caused by antipathy. This is the conclusion we are lead to.

**QNo:- 32 ,Correct Answer:- A****Explanation:-**

Statement A makes the mistake of missing the apostrophe. The correct sentence is: That's where worlds of inquiry collide. Statement C uses the plural verb 'illustrate' instead of the singular one 'illustrates'.

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**QNo:- 33 ,Correct Answer:- 2****Explanation:-**

In the given case, options 1,3 and 4 commit the common mistake of only focusing on the man of science. Option 2 provides the other side as well and is the only complete option in the given case.

**QNo:- 34 ,Correct Answer:- 2****Explanation:-**

Statement 2 is the correct answer.

In order to identify the correct answer for this question, you need to understand the central gist of the paragraph, which is essentially about one thing: it is not sufficient to for a science to only compose of observation and interpretation; it also needs a systematic process where this information is put across to others. Keeping this in mind, we see that only option 2 covers all the aspects.

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**QNo:- 35 ,Correct Answer:- B**

**Explanation:-** Cow milk production in Andhra Pradesh is  $12088 - 8710 - 1 = 3377$  thousand litres.

Buffalo milk production in Gujarat is  $9817 - 3848 - 241 = 5728$  thousand litres.

Goat milk production in Tamil Nadu is  $6968 - 6189 - 779 = 0$  litres.

Goat milk production in Uttar Pradesh is  $4782 - 1 - 177 - 241 - 58 - 107 - 293 - 59 - 0 - 146 - 2529 = 1171$  thousand litres.

Cow milk production in Uttar Pradesh is  $22556 - 15549 - 1171 = 5836$  thousand litres.

Cow milk production in Maharashtra is  $57770 - 3377 - 3661 - 3848 - 3715 - 2582 - 3074 - 6189 - 5836 - 4303 - 16579 =$

4606 thousand litres.

Total milk production in Maharashtra is  $4606 + 3571 + 293 = 8470$  thousand litres.

Total buffalo milk production in India is  $8710 + 2805 + 5728 + 1675 + 27 + 3571 + 6417 + 779 + 15549 + 223 + 19869 = 65353$  thousand litres.

The total milk production in India is  $57770 + 65353 + 4782 = 127905$  thousand litres.

We have the complete table as follows:

State/UT	Cow Milk	Buffalo Milk	Goat Milk	Total
Andhra Pradesh	3377	8710	1	12088
Bihar	3661	2805	177	6643
Gujarat	3848	5728	241	9817
Karnataka	3715	1675	58	5448
Kerala	2582	27	107	2716
Maharashtra	4606	3571	293	8470
Punjab	3074	6417	59	9550
Tamil Nadu	6189	779	0	6968
Uttar Pradesh	5836	15549	1171	22556
West Bengal	4303	223	146	4672
Others	16579	19869	2529	38977
All India	57770	65353	4782	127905

Total milk production in India is 127905 thousand litres.

**QNo:- 36 ,Correct Answer:- C**

**Explanation:-** Cow milk production in Andhra Pradesh is  $12088 - 8710 - 1 = 3377$  thousand litres.

Buffalo milk production in Gujarat is  $9817 - 3848 - 241 = 5728$  thousand litres.

Goat milk production in Tamil Nadu is  $6968 - 6189 - 779 = 0$  litres.

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Uttar Pradesh	5836	15549	1171	22556
West Bengal	4303	223	146	4672

Others	16579	19869	2529	38977
All India	57770	65353	4782	127905

Maharashtra's contribution to the total cow milk production in India is  $(4606 / 57770) \times 100 = 7.97\% \approx 8\%$ .

**QNo:- 37 ,Correct Answer:- D**

**Explanation:-** Cow milk production in Andhra Pradesh is  $12088 - 8710 - 1 = 3377$  thousand litres.

Buffalo milk production in Gujarat is  $9817 - 3848 - 241 = 5728$  thousand litres.

Goat milk production in Tamil Nadu is  $6968 - 6189 - 779 = 0$  litres.

Goat milk production in Uttar Pradesh is  $4782 - 1 - 177 - 241 - 58 - 107 - 293 - 59 - 0 - 146 - 2529 = 1171$  thousand litres.

Cow milk production in Uttar Pradesh is  $22556 - 15549 - 1171 = 5836$  thousand litres.

Cow milk production in Maharashtra is  $57770 - 3377 - 3661 - 3848 - 3715 - 2582 - 3074 - 6189 - 5836 - 4303 - 16579 = 4606$  thousand litres.

Total milk production in Maharashtra is  $4606 + 3571 + 293 = 8470$  thousand litres.

Total buffalo milk production in India is  $8710 + 2805 + 5728 + 1675 + 27 + 3571 + 6417 + 779 + 15549 + 223 + 19869 = 65353$  thousand litres.

The total milk production in India is  $57770 + 65353 + 4782 = 127905$  thousand litres.

We have the complete table as follows:

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Uttar Pradesh	5836	15549	1171	22556
West Bengal	4303	223	146	4672
Others	16579	19869	2529	38977
All India	57770	65353	4782	127905

Andhra Pradesh's contribution to the total milk production in India is  $(12088 / 127905) \times 100 = 9.45\% \approx 10\% \circ 1/10^{\text{th}}$ .

**QNo:- 38 ,Correct Answer:- C**

**Explanation:-** Cow milk production in Andhra Pradesh is  $12088 - 8710 - 1 = 3377$  thousand litres.

Buffalo milk production in Gujarat is  $9817 - 3848 - 241 = 5728$  thousand litres.

Goat milk production in Tamil Nadu is  $6968 - 6189 - 779 = 0$  litres.

Goat milk production in Uttar Pradesh is  $4782 - 1 - 177 - 241 - 58 - 107 - 293 - 59 - 0 - 146 - 2529 = 1171$  thousand litres.

Cow milk production in Uttar Pradesh is  $22556 - 15549 - 1171 = 5836$  thousand litres.

Cow milk production in Maharashtra is  $57770 - 3377 - 3661 - 3848 - 3715 - 2582 - 3074 - 6189 - 5836 - 4303 - 16579 = 4606$  thousand litres.

Total milk production in Maharashtra is  $4606 + 3571 + 293 = 8470$  thousand litres.

Total buffalo milk production in India is  $8710 + 2805 + 5728 + 1675 + 27 + 3571 + 6417 + 779 + 15549 + 223 + 19869 = 65353$  thousand litres.

The total milk production in India is  $57770 + 65353 + 4782 = 127905$  thousand litres.



We have the complete table as follows:

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Maharashtra	4606	3571	293	8470
Punjab	3074	6417	59	9550
Tamil Nadu	6189	779	0	6968
Uttar Pradesh	5836	15549	1171	22556
West Bengal	4303	223	146	4672
Others	16579	19869	2529	38977
All India	57770	65353	4782	127905

Uttar Pradesh's contribution to the total goat milk production of India is  $1171 / 4782 = 24.48\%$ . The closest answer choice is option 3 as  $4/17 = 23.52\%$ .

**QNo:- 39 ,Correct Answer:- C**

**Explanation:-**

The remaining six companies could all have the minimum Employee Costs as 3% of their respective Profits and the maximum Employee Costs could be 14% of their respective Profits.

The sum of profits for the remaining six companies is  $450 + 300 + 450 + 200 + 300 + 400 = ₹ 2100$  crores.

So, the minimum total Employee Costs is  $0.03 \times 2100 = ₹ 63$  crores and the maximum total Employee Costs is  $0.14 \times 2100 = ₹ 294$  crores.

The difference in these values is ₹ 231 crores.

Thus, the average will be  $231/6 = ₹ 38.5$  crores.

**QNo:- 40 ,Correct Answer:- C**

**Explanation:-**

The Profits of Advanta India were ₹ 350 crores and Raw Material Costs were 25% of ₹ 350 crores. The Expenses of Advanta India were  $900 - 350 = ₹ 550$  crores.

So, Advanta India's Raw Material Costs as a percentage of its Expenses were  $(0.25 \times 350) \times 100/550 = 15.9\%$ .

The Profits of Nagarjuna Agrichem were ₹ 200 crores and Raw Material Costs were 64% of ₹ 200 crores. The Expenses of Nagarjuna Agrichem were  $700 - 200 = ₹ 500$  crores. So, Nagarjuna Agrichem's Raw Material Costs as a percentage of its Expenses were  $(0.64 \times 200) \times 100/500 = 25.6\%$ .

The Profits of PI Industries were ₹ 300 crores and Raw Material Costs were 50% of ₹ 300 crores. The Expenses of PI Industries were  $1000 - 300 = ₹ 700$  crores. So, PI Industries' Raw Material Costs as a percentage of its Expenses were  $(0.5 \times 300) \times 100/700 = 21.42\%$ .

The Profits of Rallis India were ₹ 400 crores and Raw Material Costs were 55% of ₹ 400 crores. The Expenses of Rallis India were  $1300 - 400 = ₹ 900$  crores. So, Rallis India's Raw Material Costs as a percentage of its Expenses were  $(0.55 \times 400) \times 100/900 = 24.44\%$ .

Thus, the ascending order will be Advanta India, PI Industries, Rallis India, Nagarjuna Agrichem.

**QNo:- 41 ,Correct Answer:- B**

**Explanation:-**

The Profits of Bayer CropScience were ₹ 450 crores and its Expenses were  $2400 - 450 = ₹ 1950$  crores. So Bayer CropScience's Profits as a percentage of Expenses were  $450/1950 = 9 \times 100/39 = 23.07\%$ .

The Profits of Excel Crop Care were ₹ 300 crores and its Expenses were  $750 - 300 = ₹ 450$  crores. So Excel Crop care's Profits as a percentage of Expenses were  $300/450 = 2 \times 100/3 = 66.66\%$ .

The Profits of Insecticides India were ₹ 250 crores and its Expenses were  $600 - 250 = ₹ 350$  crores. So Insecticide India's Profits as a percentage of Expenses were  $250/350 = 5 \times 100/7 = 71.42\%$ .

The Profits of Meghmani Organics were ₹ 450 crores and its Expenses were  $1100 - 450 = ₹ 650$  crores. So Meghmani Organics' Profits as a percentage of Expenses were  $450/650 = 9 \times 100/13 = 69.23\%$ .

Thus, the descending order is Insecticides India, Meghmani Organics, Excel Crop Care, Bayer CropScience.

**QNo:- 42 ,Correct Answer:- A**

**Explanation:-**

The Revenue of Jubilant Industries was ₹ 950 crores and its Expenses were  $950 - 250 = ₹ 700$  crores. So, Jubilant Industries' Expenses as a percentage of its Revenue were  $700 \times 100/950 = 73.68\%$ .

The Revenue of Nagarjuna Agrichem was ₹ 700 crores and its Expenses were  $700 - 200 = ₹ 500$  crores. So, Nagarjuna Agrichem's Expenses as a percentage of its Revenue were  $500 \times 100/700 = 71.42\%$ .

The Revenue of PI Industries was ₹ 1000 crores and its Expenses were  $1000 - 300 = ₹ 700$  crores. So, PI Industries' Expenses as a percentage of its Revenue were  $700 \times 100/1000 = 70\%$ .

The Revenue of Rallis India was ₹ 1300 crores and its Expenses were  $1300 - 400 = ₹ 900$  crores. So, Rallis India's Expenses as a percentage of its Revenue were  $900 \times 100/1300 = 69.23\%$ .

Thus, Jubilant Industries had the highest amount of Expenses expressed as a percentage of its Revenue.

**QNo:- 43 ,Correct Answer:- 2011**

**Explanation:-**

In 2011, BAL sold a total of  $2.415 + 0.972 = 3.387$  million motorcycles, where as the industry sold 10.5 million motorcycles. So, BAL's market share in 2011 was  $3.387/10.5 = 32.25\%$ .

In 2012, BAL sold a total of  $2.567 + 1.268 = 3.835$  million motorcycles, where as the industry sold 11.944 million motorcycles. So, BAL's market share in 2012 was  $3.835/11.944 = 32.10\%$ .

In 2013, BAL sold a total of  $2.464 + 1.293 = 3.757$  million motorcycles, where as the industry sold 11.952 million motorcycles. So, BAL's market share in 2013 was  $3.757/11.952 = 31.43\%$ .

In 2014, BAL sold a total of  $2.099 + 1.323 = 3.422$  million motorcycles, where as the industry sold 12.463 million motorcycles. So, BAL's market share in 2014 was  $3.422/12.463 = 27.45\%$ .

In 2015, BAL sold a total of  $1.771 + 1.521 = 3.292$  million motorcycles, where as the industry sold 12.995 million motorcycles. So, BAL's market share in 2015 was  $3.292/12.995 = 25.33\%$ .

Thus, BAL's market share was the highest in 2011.

**QNo:- 44 ,Correct Answer:- 0**

**Explanation:-**

In 2011, BAL sold a total of  $2.415 + 0.972 = 3.387$  million motorcycles, where as the industry sold 10.5 million motorcycles.

In 2012, BAL sold a total of  $2.567 + 1.268 = 3.835$  million motorcycles, where as the industry sold 11.944 million motorcycles.

The percentage increase in the number of motorcycles sold by BAL in 2012 was  $(3.835 - 3.387)/3.387 = (-0.448)/3.387 = -13.22\%$ , while the percentage increase in the number of motorcycles sold by the industry in 2012 was  $(11.944 - 10.5)/10.5 = 1.444/10.5 = 13.75\%$ .

In 2013, BAL sold a total of  $2.464 + 1.293 = 3.757$  million motorcycles, where as the industry sold 11.952 million motorcycles. The percentage increase in the number of motorcycles sold by BAL in 2013 was  $(3.757 - 3.835)/3.835 = (-0.078)/3.835 = -2.03\%$ , while the percentage increase in the number of motorcycles sold by the industry in 2013 was  $(11.952 - 11.944)/11.944 = 0.008/11.944 = 0.06\%$ .

In 2014, BAL sold a total of  $2.099 + 1.323 = 3.422$  million motorcycles, where as the industry sold 12.463 million motorcycles. The percentage increase in the number of motorcycles sold by BAL in 2014 was  $(3.422 - 3.757)/3.757 = (-0.335)/3.757 = -8.91\%$ , while the percentage increase in the number of motorcycles sold by the industry in 2014 was  $(12.463 - 11.952)/11.952 = 0.511/11.952 = 4.27\%$ .

In 2015, BAL sold a total of  $1.771 + 1.521 = 3.292$  million motorcycles, where as the industry sold 12.995 million motorcycles. The percentage increase in the number of motorcycles sold by BAL in 2015 was  $(3.292 - 3.422)/3.422 = (-0.13)/3.422 = -3.79\%$ , while the percentage increase in the number of motorcycles sold by the industry in 2015 was  $(12.995 - 12.463)/12.463 = 0.532/12.463 = 4.26\%$ .

Thus, as compared to the previous year, in no year from 2012 to 2015, was the percentage increase in the number of motorcycles sold by BAL greater than the percentage increase in the number of motorcycles sold by the industry.

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**QNo:- 45 ,Correct Answer:-** 135000

**Explanation:-** In 2012, BAL sold 1.268 million motorcycles in the export market. Since this accounted for 68.6% of the number of motorcycles sold by the industry in the export market, we know that industry sales in the export market in 2012 were  $1.268/0.686 = 1.848$  million.

In 2014, BAL sold 1.323 million motorcycles in the export market. Since this accounted for 66.7% of the number of motorcycles sold by the industry in the export market, we know that industry sales in the export market in 2014 were  $1.323/0.667 = 1.983$  million.

Thus, the increase in the number of motorcycles sold by the industry in the export market from 2012 to 2014 is  $1.983 - 1.848 = 0.135$  million = 135,000 motorcycles.

**QNo:- 46 ,Correct Answer:-** 2012

**Explanation:-**

In 2011, BAL sold 0.972 million motorcycles in the export market. Since this accounted for 65.7% of the number of motorcycles sold by the industry in the export market, we know that industry sales in the export market in 2011 were  $0.972/0.657 = 1.479$  million.

In 2012, BAL sold 1.268 million motorcycles in the export market. Since this accounted for 68.6% of the number of motorcycles sold by the industry in the export market, we know that industry sales in the export market in 2012 were  $1.268/0.686 = 1.848$  million.

The increase in the number of motorcycles sold in 2012 is  $1.848 - 1.479 = 0.369$  million.

In 2013, BAL sold 1.293 million motorcycles in the export market. Since this accounted for 69.3% of the number of motorcycles sold by the industry in the export market, we know that industry sales in the export market in 2013 were  $1.293/0.693 = 1.865$  million.

The increase in the number of motorcycles sold in 2013 is  $1.865 - 1.848 = 0.017$  million.

In 2014, BAL sold 1.323 million motorcycles in the export market. Since this accounted for 66.7% of the number of motorcycles sold by the industry in the export market, we know that industry sales in the export market in 2014 were  $1.323/0.667 = 1.983$  million.

The increase in the number of motorcycles sold in 2014 is  $1.983 - 1.865 = 0.118$  million.

In 2015, BAL sold 1.521 million motorcycles in the export market. Since this accounted for 67.6% of the number of motorcycles sold by the industry in the export market, we know that industry sales in the export market in 2015 were  $1.521/0.676 = 2.25$  million.

The increase in the number of motorcycles sold in 2015 is  $2.25 - 1.983 = 0.267$  million.

Thus, the increase was the largest in 2012.

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**QNo:- 47 ,Correct Answer:-** A

**Explanation:-** The growth rate of PND Device in 2009 is  $(60000 - 40000)/40000 = 50\%$ .

The growth rate of PND Device in 2011 is  $(350000 - 120000)/120000 = 191\%$

The required difference is  $191 - 50 = 141$ .

**QNo:- 48 ,Correct Answer:- C**

**Explanation:-** The Sales of Smart mobiles in 2007 =  $1350 + 1680 + 1890 + 2000 = 6920$ .  
The Sales of American smart mobile in 2007 =  $5600 + 6200 + 6500 + 7200 = 25500$ .  
The required percentage =  $(25500 - 6920)/25500 = 72.8\%$

**QNo:- 49 ,Correct Answer:- C**

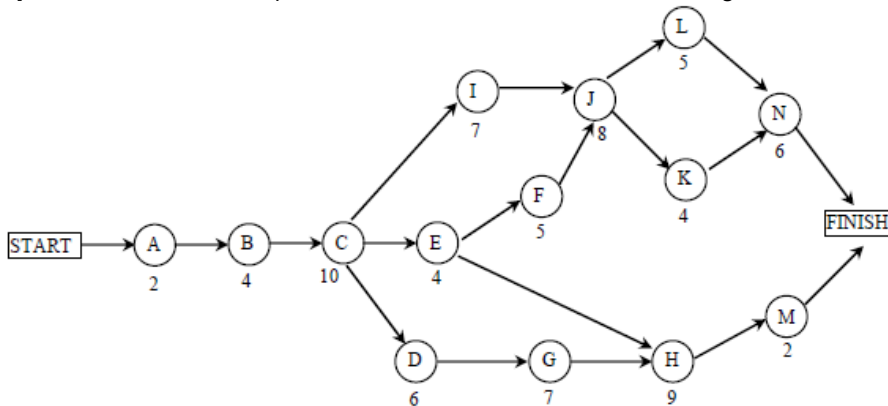
**Explanation:-** The Numbers of Indian smart phones sold in 2006 =  $1150 + 1230 + 1280 + 1300 = 4960$ .  
Total number of mobile sold in 2005 =  $2500 + 3200 + 5700 + 8200 = 19600$ .  
Hence the required percentage =  $4960/19600 = 25.3\%$

**QNo:- 50 ,Correct Answer:- C**

**Explanation:-** Q3-2005 =  $8450 + 810 = 9260$ , Q4-2005 =  $8500 + 926 = 9426$ , Q1-2006 =  $8700 + 942.6 = 9642.6$ ,  
Q2-2006 =  $8800 + 964.26 = 9764.26$ , Q3-2006 =  $9000 + 976.426 = 9976.426$ .  
Percentage change =  $(9976 - 9000)/9000 = 10.8\%$ .

**QNo:- 51 ,Correct Answer:- C**

**Explanation:-** We can represent all the activities on a network diagram as shown below.



Let us consider all paths leading from START to FINISH and the corresponding total durations.

Path A-B-C-D-G-H-M =  $2 + 4 + 10 + 6 + 7 + 9 + 2 = 40$  weeks.

Path A-B-C-E-H-M =  $2 + 4 + 10 + 4 + 9 + 2 = 31$  weeks.

Path A-B-C-E-F-J-K-N =  $2 + 4 + 10 + 4 + 5 + 8 + 4 + 6 = 43$  weeks.

Path A-B-C-E-F-J-L-N =  $2 + 4 + 10 + 4 + 5 + 8 + 5 + 6 = 44$  weeks.

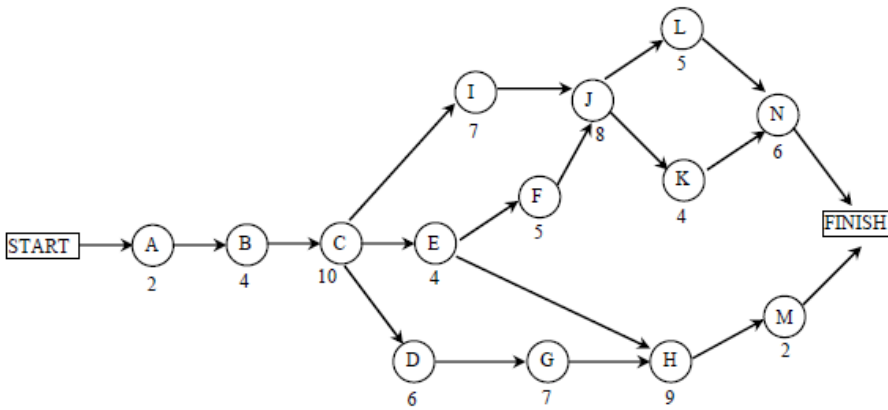
Path A-B-C-I-J-K-N =  $2 + 4 + 10 + 7 + 8 + 4 + 6 = 41$  weeks.

Path A-B-C-I-J-L-N =  $2 + 4 + 10 + 7 + 8 + 5 + 6 = 42$  weeks.

Since the total duration of the project cannot be less than the longest path, the minimum time required to complete construction of the plant is 44 weeks.

**QNo:- 52 ,Correct Answer:- C**

**Explanation:-** We can represent all the activities on a network diagram as shown below.



Let us consider all paths leading from START to FINISH and the corresponding total durations.

Path A-B-C-D-G-H-M = 2 + 4 + 10 + 6 + 7 + 9 + 2 = 40 weeks.

Path A-B-C-E-H-M = 2 + 4 + 10 + 4 + 9 + 2 = 31 weeks.

Path A-B-C-E-F-J-K-N = 2 + 4 + 10 + 4 + 5 + 8 + 4 + 6 = 43 weeks.

Path A-B-C-E-F-J-L-N = 2 + 4 + 10 + 4 + 5 + 8 + 5 + 6 = 44 weeks.

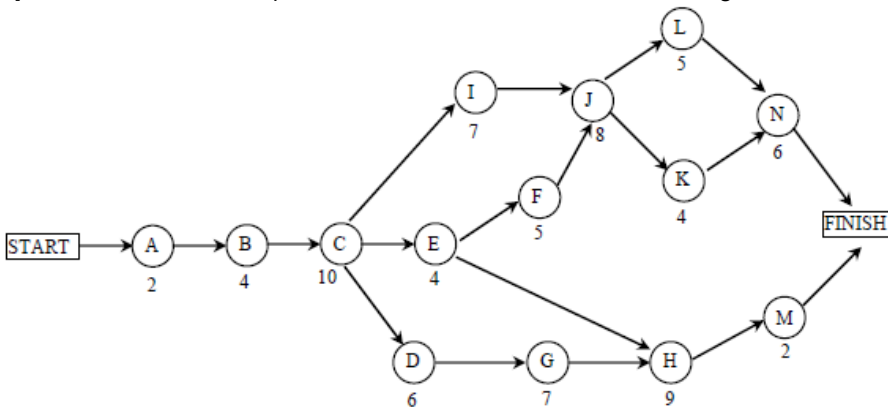
Path A-B-C-I-J-K-N = 2 + 4 + 10 + 7 + 8 + 4 + 6 = 41 weeks.

Path A-B-C-I-J-L-N = 2 + 4 + 10 + 7 + 8 + 5 + 6 = 42 weeks.

The activities on the longest path, if delayed, will result in a delay in completing the project. Activities II(F) and V(N) lie on this path and are critical bottleneck activities, where as activities I(D), III(H) and IV(K) do not lie on this path and are not critical bottleneck activities. Hence option 3.

**QNo:- 53 ,Correct Answer:- D**

**Explanation:-** We can represent all the activities on a network diagram as shown below.



Let us consider all paths leading from START to FINISH and the corresponding total durations.

Path A-B-C-D-G-H-M = 2 + 4 + 10 + 6 + 7 + 9 + 2 = 40 weeks.

Path A-B-C-E-H-M = 2 + 4 + 10 + 4 + 9 + 2 = 31 weeks.

Path A-B-C-E-F-J-K-N = 2 + 4 + 10 + 4 + 5 + 8 + 4 + 6 = 43 weeks.

Path A-B-C-E-F-J-L-N = 2 + 4 + 10 + 4 + 5 + 8 + 5 + 6 = 44 weeks.

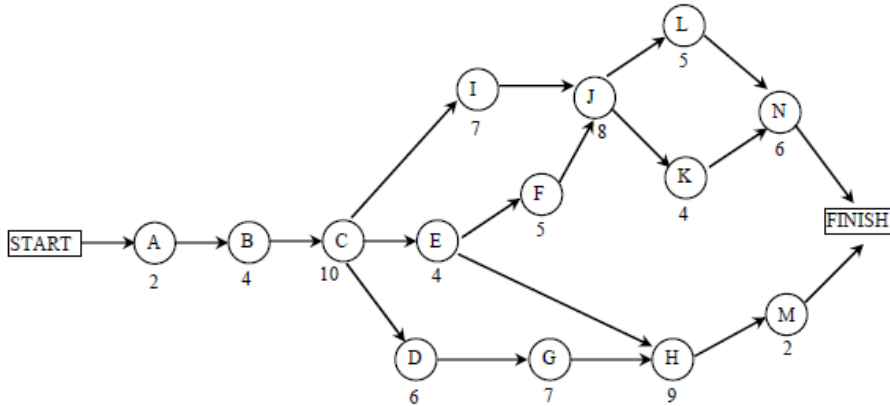
Path A-B-C-I-J-K-N = 2 + 4 + 10 + 7 + 8 + 4 + 6 = 41 weeks.

Path A-B-C-I-J-L-N = 2 + 4 + 10 + 7 + 8 + 5 + 6 = 42 weeks.

Exterior painting, i.e., activity H, cannot start unless activities E and G have been completed. But, for activities E and G to be completed, activities A, B, C and D should also have been completed. Activities A, B and C are completed in 2 + 4 + 10 = 16 weeks. After this, activities D and E can start simultaneously so that E and D are both completed in another 6 weeks and then G is completed in another 7 weeks. Thus, the earliest that work on the exterior painting can be started is 16 + 6 + 7 = 29 weeks

**QNo:- 54 ,Correct Answer:- C**

**Explanation:-** We can represent all the activities on a network diagram as shown below.



Let us consider all paths leading from START to FINISH and the corresponding total durations.

Path A-B-C-D-G-H-M = 2 + 4 + 10 + 6 + 7 + 9 + 2 = 40 weeks.

Path A-B-C-E-H-M = 2 + 4 + 10 + 4 + 9 + 2 = 31 weeks.

Path A-B-C-E-F-J-K-N = 2 + 4 + 10 + 4 + 5 + 8 + 4 + 6 = 43 weeks.

Path A-B-C-E-F-J-L-N = 2 + 4 + 10 + 4 + 5 + 8 + 5 + 6 = 44 weeks.

Path A-B-C-I-J-K-N = 2 + 4 + 10 + 7 + 8 + 4 + 6 = 41 weeks.

Path A-B-C-I-J-L-N = 2 + 4 + 10 + 7 + 8 + 5 + 6 = 42 weeks.

Putting up the wallboard, i.e., activity J, cannot be started unless activities F and I have been completed. For activities F and I to be completed, activities A, B, C and E should also have been completed. Activities A, B and C are completed in 2 + 4 + 10 = 16 weeks. After this, activities E and I can start simultaneously and activity F can be started immediately after activity E has been completed, so that E, I and F are both completed in another 4 + 5 = 9 weeks. Since all of these activities except activity I lie on the longest path, these cannot be delayed. Thus, the latest (and also the earliest) that work on putting up the wallboard can be started is 16 + 9 = 25 weeks.

**QNo:- 55 ,Correct Answer:- 9**

**Explanation:-** If Kapil is interviewed in slot 1, then Jayesh must be interviewed in slot 2. We know that Pooja is interviewed in a slot after Rahul and either Sayali or Trishla is interviewed in a slot immediately after Pooja. So, Rahul can be interviewed in slots 3, 4 or 5 and Pooja can be interviewed in slots 4, 5 or 6. Based on these, we can have the following possibilities for interviews in slots 1 through 7 respectively – KJRPSAT, KJRAPST, KJRSPT, KJRSAPT, KJARPST, KJARSPT, KJSRAPT, KJASRPT AND KJSARPT. Thus, there are 9 ways in which the interviews can be scheduled.

**QNo:- 56 ,Correct Answer:- 7**

**Explanation:-** If Kapil is interviewed in slot 1, then Jayesh must be interviewed in slot 2. We know that Pooja is interviewed in a slot after Rahul and either Sayali or Trishla is interviewed in a slot immediately after Pooja. So, Rahul can be interviewed in slots 3, 4 or 5 and Pooja can be interviewed in slots 4, 5 or 6. Based on these, we can have the following possibilities for interviews in slots 1 through 7 respectively – KJRPSAT, KJRAPST, KJRSPT, KJRSAPT, KJARPST, KJARSPT, KJSRAPT, KJASRPT AND KJSARPT. In all 9 possibilities, Trishla is interviewed in slot 7.

**QNo:- 57 ,Correct Answer:- 5**

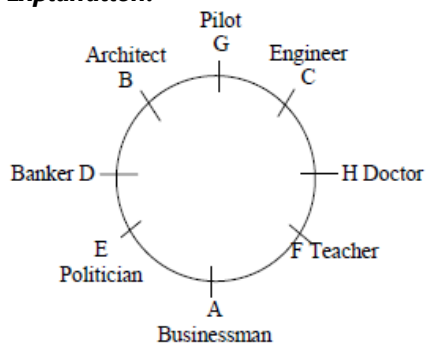
**Explanation:-** If Jayesh is interviewed in slot 3, then Kapil must be interviewed in slots 2 or 4. We know that Pooja is interviewed in a slot after Rahul and either Sayali or Trishla is interviewed in a slot immediately after Pooja. So, Rahul can be interviewed in slots 4 or 5 and Pooja can be interviewed in slots 5 or 6. Based on these, we can have the following possibilities for interviews in slots 1 through 7 respectively – AKJRPST, AKJRSPT, SKJRAPT, AKJSRPT, SKJARPT, SAJKRPT, ASJKRPT. Of these 7 possibilities, the last that Aditya can be interviewed is in slot 5.

**QNo:- 58 ,Correct Answer:- 4**

**Explanation:-** If Jayesh is interviewed in slot 7, then Kapil must be interviewed in slot 6. Since Rahul is not interviewed in slots 1 or 2, and Pooja is interviewed in a slot after Rahul, the earliest that Rahul and Pooja can be interviewed is in slots 3 and 4 respectively. Since either Sayali or Trishla is interviewed in the slot immediately after Pooja, we can conclude that Rahul and Pooja must be interviewed in slots 3 and 4 respectively. Based on these, we have the following possibilities for interviews in slots 1 through 7 – ATRPSKJ, TARPSKJ, SARPTKJ and ASRPTKJ. Thus there are 4 ways in which the interviews can be scheduled.

**QNo:- 59 ,Correct Answer:- A**

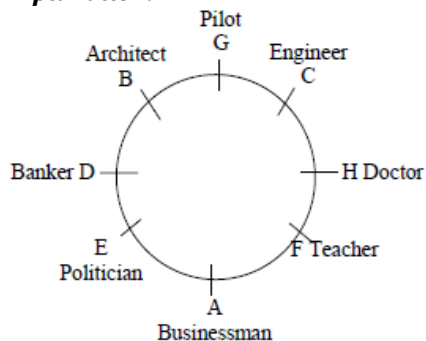
**Explanation:-**



A is a Businessman.

**QNo:- 60 ,Correct Answer:- C**

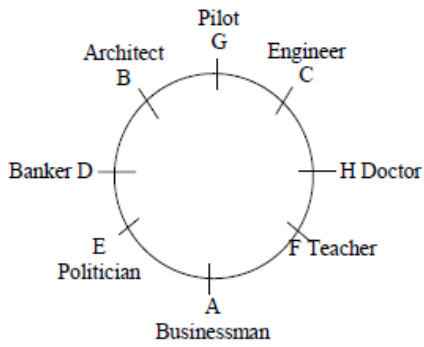
**Explanation:-**



F sits second to the right of politician.

**QNo:- 61 ,Correct Answer:- C**

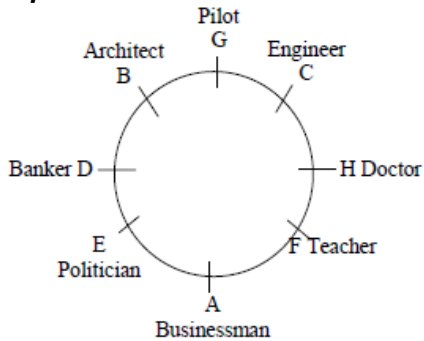
**Explanation:-**



Doctor (H) sits exactly between the Teacher (F) and the Engineer (C).

**QNo:- 62 ,Correct Answer:- D**

**Explanation:-**



Doctor (H) sits second to the right of Businessman (A).

**QNo:- 63 ,Correct Answer:- B**

**Explanation:-**

From the first clue, we know that Biology is scheduled on the day immediately after Chemistry, and both these subjects are scheduled on some days after Hindi. From the second clue, we know that Physics and English are scheduled on consecutive days in some order and Mathematics is scheduled for some day after both subjects. Based on these, we can consider the following possibilities for scheduling the six subjects.

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Hindi	Chemistry	Biology	English	Physics	Mathematics
Hindi	Chemistry	Biology	Physics	English	Mathematics
Hindi	Physics	English	Mathematics	Chemistry	Biology
Hindi	English	Physics	Mathematics	Chemistry	Biology
Hindi	Physics	English	Chemistry	Biology	Mathematics
Hindi	English	Physics	Chemistry	Biology	Mathematics
Physics	English	Mathematics	Hindi	Chemistry	Biology
English	Physics	Mathematics	Hindi	Chemistry	Biology
Physics	English	Hindi	Mathematics	Chemistry	Biology
English	Physics	Hindi	Mathematics	Chemistry	Biology

Thus there are 10 different ways in which the six subjects can be scheduled.



**QNo:- 64 ,Correct Answer:- D**

**Explanation:-**

From the first clue, we know that Biology is scheduled on the day immediately after Chemistry, and both these subjects are scheduled on some days after Hindi. From the second clue, we know that Physics and English are scheduled on consecutive days in some order and Mathematics is scheduled for some day after both subjects. Based on these, we can consider the following possibilities for scheduling the six subjects.

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Hindi	Chemistry	Biology	English	Physics	Mathematics
Hindi	Chemistry	Biology	Physics	English	Mathematics
Hindi	Physics	English	Mathematics	Chemistry	Biology
Hindi	English	Physics	Mathematics	Chemistry	Biology
Hindi	Physics	English	Chemistry	Biology	Mathematics
Hindi	English	Physics	Chemistry	Biology	Mathematics
Physics	English	Mathematics	Hindi	Chemistry	Biology
English	Physics	Mathematics	Hindi	Chemistry	Biology
Physics	English	Hindi	Mathematics	Chemistry	Biology
English	Physics	Hindi	Mathematics	Chemistry	Biology

If the Mathematics examination is scheduled before the Hindi examination, then the Biology examination is scheduled on Saturday.

**QNo:- 65 ,Correct Answer:- B**

**Explanation:-**

From the first clue, we know that Biology is scheduled on the day immediately after Chemistry, and both these subjects are scheduled on some days after Hindi. From the second clue, we know that Physics and English are scheduled on consecutive days in some order and Mathematics is scheduled for some day after both subjects. Based on these, we can consider the following possibilities for scheduling the six subjects.

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Hindi	Chemistry	Biology	English	Physics	Mathematics
Hindi	Chemistry	Biology	Physics	English	Mathematics
Hindi	Physics	English	Mathematics	Chemistry	Biology
Hindi	English	Physics	Mathematics	Chemistry	Biology
Hindi	Physics	English	Chemistry	Biology	Mathematics
Hindi	English	Physics	Chemistry	Biology	Mathematics
Physics	English	Mathematics	Hindi	Chemistry	Biology
English	Physics	Mathematics	Hindi	Chemistry	Biology
Physics	English	Hindi	Mathematics	Chemistry	Biology
English	Physics	Hindi	Mathematics	Chemistry	Biology

If the Hindi examination is scheduled on Monday, then the Chemistry examination can be scheduled on Tuesday, Thursday or Friday, but not on Wednesday.

**QNo:- 66 ,Correct Answer:- C**

**Explanation:-**

From the first clue, we know that Biology is scheduled on the day immediately after Chemistry, and both these subjects are scheduled on some days after Hindi. From the second clue, we know that Physics and English are scheduled on consecutive days in some order and Mathematics is scheduled for some day after both subjects. Based on these, we can consider the following possibilities for scheduling the six subjects.

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Hindi	Chemistry	Biology	English	Physics	Mathematics
Hindi	Chemistry	Biology	Physics	English	Mathematics
Hindi	Physics	English	Mathematics	Chemistry	Biology
Hindi	English	Physics	Mathematics	Chemistry	Biology
Hindi	Physics	English	Chemistry	Biology	Mathematics
Hindi	English	Physics	Chemistry	Biology	Mathematics
Physics	English	Mathematics	Hindi	Chemistry	Biology
English	Physics	Mathematics	Hindi	Chemistry	Biology
Physics	English	Hindi	Mathematics	Chemistry	Biology
English	Physics	Hindi	Mathematics	Chemistry	Biology

If the Mathematics examination is scheduled on Saturday, then the Hindi examination is scheduled on Monday.

**QNo:- 67 ,Correct Answer:- C**

**Explanation:-** Probability that Shakuni gets 5, 4, 3, 2, 1 and 0 heads is resp.  $\frac{1}{32}, \frac{5}{32}, \frac{10}{32}, \frac{10}{32}, \frac{5}{32}, \frac{1}{32}$ .

Probability that Yudhishtir gets 3, 2, 1 and 0 heads is resp.  $\frac{1}{8}, \frac{3}{8}, \frac{3}{8}, \frac{1}{8}$ .

Probability of a draw occurs when both of them get 3 heads each or 2 heads each or 1 heads each or no heads each =

$$\frac{10}{32} \times \frac{1}{8} + \frac{10}{32} \times \frac{3}{8} + \frac{5}{32} \times \frac{3}{8} + \frac{1}{32} \times \frac{1}{8} = \frac{56}{256} = \frac{7}{32}$$

**QNo:- 68 ,Correct Answer:- D**

**Explanation:-** In Right  $\triangle ABC$ ,  $BC^2 = AC^2 - AB^2 = 48^2 - 36^2 = 144 \times 7$

In Right  $\triangle BCD$ ,  $CD^2 = BC^2 + BD^2 = 144 \times 7 + 144 = 144 \times 8$

$$CD = 24\sqrt{2}$$

**QNo:- 69 ,Correct Answer:- 4**

**Explanation:-**

The hypotenuse of the 1<sup>st</sup> triangle is  $\sqrt{2}$ .

This is the base of the 2<sup>nd</sup> triangle.

So the hypotenuse of the second triangle is  $\sqrt{3}$  which is the base of the 3<sup>rd</sup> triangle, and so on.

So the base of the 100<sup>th</sup> triangle will be  $\sqrt{100} = 10$  and height = 1 cm (given). So the area of this triangle is  $\frac{1}{2} \times 1 \times 10 = 5 \text{ cm}^2$ .

**QNo:- 70 ,Correct Answer:- A**

**Explanation:-** Solution 1:

When the match he has drawn has 0 sticks in it, there can be 3, 2, 1, or 0 sticks in match two.

Thus out of four available choices only one satisfies the required situation.

Thus the probability that the other match has 2 sticks when the first match has 0 sticks will be  $\frac{1}{4}$ .

Solution 2:

Of sixteen results the probability that Match 1 has no stick and Match 2 has 1 stick is  $P(A \cap B) = 1/16$ .

The probability of Match 1 having zero sticks is  $P(A) = 1/4$ .

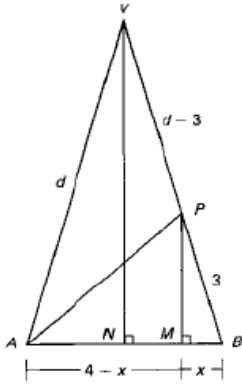
Therefore, from  $P(A \cap B) = P(A) \times P(B/A)$

Probability of 1 stick in Match 2 when Match 1 has zero stick

$$P(B/A) = P(A \cap B) / P(A) = (1/16) / (1/4) = 1/4$$

**QNo:- 71 ,Correct Answer:- A**

**Explanation:-**



This is not as easy as it might first appear.

Let the length of each ladder be  $d$ , and let  $BM$  be  $x$ , (see the diagram). Then  $VP = d - 3 = AP$ , and  $AM = 4 - x$ .

Using Pythagoras theorem:

$$\begin{aligned} AP^2 &= AM^2 + MP^2 \\ &= AM^2 + PB^2 - MB^2, \text{ so} \end{aligned}$$

$$(d - 3)^2 = (4 - x)^2 + 3^2 - x^2$$

$$d^2 - 6d - 16 + 8x = 0$$

But triangles  $PMB$  and  $VNB$  are similar, so:  $\frac{x}{2} = \frac{3}{d}$

$$\text{Giving: } x = \frac{6}{d}$$

Substituting for  $x$  in the above equation leads to the cubic:  $d^3 - 6d^2 - 16d + 48 = 0$

Writing the left-hand side in the form:  $f(d) = d[d(d - 6) - 16] + 48$

Enables  $f(d)$  to be evaluated for different values of  $d$  and so gives  $d = 7.2915m$  to 4 decimal places.

Hence, the correct answer is option A.

**QNo:- 72 ,Correct Answer:- 485**

**Explanation:-**

Consider 3-digit integers.

Suppose the 1<sup>st</sup> digit takes 8 values from 1 to 8 and the other two digits are 9 each.

We get 8 such numbers.

Now, suppose the integers starts with 9.

Then one of the other digits is a 9 and the other digit takes 9 values from 0 to 8.

Since these digits can be arranged in 2 different ways, there are  $2 \times 9 = 18$  such integers.

So, there are  $8 + 18 = 26$  three-digit integers which contain exactly two 9s.

Consider 4-digit integers.

The first digit can take 8 values from 1 to 8. Two of the remaining three digits are 9 each and the third digit can take 9 values from 0 to 8. These 3 digits can be arranged in 3 ways.

So, there are  $8 \times 3 \times 9 = 216$  such integers.

Suppose the 1<sup>st</sup> digit is 9. Then one of the remaining digits is a 9 and the other two digits can take 9 values from 0 to 8 each. These

3 digits can be arranged in 3 different ways.

So there are  $3 \times 9 \times 9 = 243$  such integers.

So there are  $216 + 243 = 459$  four-digit integers which contain exactly two 9s.

Thus there are  $26 + 459 = 485$  integers between 100 and 10000 which contain exactly two 9s.

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**QNo:- 73 ,Correct Answer:- 1200**

$$\frac{2}{3} \times \frac{3}{4} \times \frac{4}{5} \times \frac{5}{6} \times \frac{9}{10} \times x = 360$$

**Explanation:-**  $x = 1200$

**QNo:- 74 ,Correct Answer:- 36**

**Explanation:-** Lets say Tarun completes 100m in  $t$  time.

Varun completes 80 m in time  $t$ . Therefore he takes  $t + t/4$  time to complete his 100 m.

Arun completes 80 m in time  $t + t/4$ .

Therefore he takes  $t + t/4 + \frac{1}{4}(t + t/4) = \frac{25}{16}t$  time to complete his 100 m.

Therefore, in  $t$  time he must have covered  $100 \times \frac{16}{25} = 64$  m.

Thus Arun lagged 36m behind Tarun when Tarun finished his 100m.

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**QNo:- 75 ,Correct Answer:- 147**

**Explanation:-** If there were  $n + 1$  people then the number of handshakes happened must be  $n(n + 1)/2$ . Hence the number of people equals 147.

**QNo:- 76 ,Correct Answer:- 5050**

**Explanation:-** There are 50 pairs of  $n^2 - (n - 1)^2$  exist.

$$n^2 - (n - 1)^2 = n + (n - 1)$$

$$\text{Therefore } 100^2 - 99^2 + 98^2 - 97^2 + \dots - 1^2 = 100 + 99 + 98 + \dots + 2 + 1 = (100 \times 101)/2 = 5050$$

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**QNo:- 77 ,Correct Answer:- B**

**Explanation:-** Suppose that the amount of petrol in each of the cars in the beginning was  $L$ . Now, suppose that they drove for  $X$  hours.

In that case, the amount of petrol used by one car in  $X$  hours will be  $= L \times X/4$

The amount of petrol used by the other car will be  $= L \times X/5$

Therefore, the petrol left in one car  $= L - (L \times X/4)$

Petrol left in the other car  $= L - (L \times X/5)$

Now, according to the question,

$$L - (L \times X/5) = 4 \{L - (L \times X/4)\}$$

$$\Rightarrow X = 15/4 = 3 \frac{3}{4} \text{ hours.}$$

Therefore Chhota Chetan and Bada Waqil drove for  $3 \frac{3}{4}$  hours.

**QNo:- 78 ,Correct Answer:- 26**

**Explanation:-**

The length of PQ is  $12 \times (50/60) = 10$  km.



In the figure, if O is the centre, then  $OR \perp PQ \Rightarrow QR = 5$  km and  $\Delta ORQ$  is a right triangle. Since OR and OQ are radii of the two circular roads and take integer values, the only possibility is that the sides of  $\Delta ORQ$  are 5,12 and 13. So the diameter of the outer road is  $2 \times 13 = 26$  km.

**QNo:- 79 ,Correct Answer:- 20**

**Explanation:-**

Let Principal be Rs x.

As per the question, amount after 5 years is 2x.

Now, simple interest =  $2x - x = x$

We know,

$$\text{simple interest} = \frac{P \times r \times t}{100}$$

$$x = x \times 5 \times \frac{r}{100}$$

Therefore,  $r = 20\%$ .

**QNo:- 80 ,Correct Answer:- 8**

**Explanation:-** I would not have to do the exercise on all such first days of the month, whose preceding date is odd (i.e. 31<sup>st</sup> or 29<sup>th</sup> for a leap year).

Thus, days on which I would not have to do the exercise:

1<sup>st</sup> Jan

1<sup>st</sup> Feb

1<sup>st</sup> March

1<sup>st</sup> April

1<sup>st</sup> Jun

1<sup>st</sup> Aug

1<sup>st</sup> Sept.

1<sup>st</sup> Nov

Note: Since the current year is 2016, it has to be considered leap year.

**QNo:- 81 ,Correct Answer:- 12**

**Explanation:-** Let the distance between Majnu's house A and Laila's house B be d.

When Majnu and Laila meet for the first time, Majnu has travelled 5 km.

In that case, Laila has travelled  $(d - 5)$  km.

$$\Rightarrow \text{Speed of Majnu} / \text{Speed of Laila} = 5 / (d - 5) \dots\dots (1)$$

When Majnu and Laila meet for the second time, Majnu has travelled  $(d - 5) + 3$  km

Now, Laila has travelled  $(5 + d - 3)$

$$\Rightarrow \text{Speed of Majnu} / \text{Speed of Laila} = (d - 2) / (d + 2) \dots (2)$$

Equating (1) and (2)

$$5 / (d - 5) = (d - 2) / (d + 2)$$

$$d = 12 \text{ km.}$$

**QNo:- 82 ,Correct Answer:- 84**

**Explanation:-** 40 % of the current capacity = 24 containers

$\therefore$  The current capacity is 60.

$$\text{The new capacity} = 60 + 24 = 84$$

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**QNo:- 83 ,Correct Answer:- C**

**Explanation:-**  $3/4 \times 4/5 \times 5/6 \times 6/7 \times 7/8 \times 8/9 \times 9/10 \times V = 3/10 V = 30\%$  of the original volume

**QNo:- 84 ,Correct Answer:- B**

**Explanation:-** Let us assume that there are  $m$  male citizens

Then, the number of females will be  $(3553 - m)$

According to question,

$m/9$  people received Rs.180

And  $(3553 - m)/12$  received Rs.240

Thus, total money spent by the Government per day =  $(180 \times (m / 9)) + (240 \times (3553 - m) / 12) = 20 \times 3553 = 71060$

Hence total money spent =  $71060 \times 180 = 12.7m$  or approximately 13 million.

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**QNo:- 85 ,Correct Answer:- 72**

**Explanation:-** Let  $x$  be the old man's age in years.

Then the grandson must be  $x$  months old =  $x/12$  years =  $365 x/12$  days.

Thus his son is  $365 x/12$  weeks old =  $365 x / (12 \times 52)$  years

$$\text{Then, } x + x/12 + 365 x / (12 \times 52) = 120$$

$$1041 x = 624 \times 120$$

$$x = 72$$

So, the old man is 72 years old.

**QNo:- 86 ,Correct Answer:- A**

**Explanation:-**

$\sqrt[4]{1} = 1$ ,  $\sqrt[4]{16} = 2$ ,  $\sqrt[4]{81} = 3$  and so on. So all numbers from  $[\sqrt[4]{16}]$  to  $[\sqrt[4]{80}]$  will have value 2. Similarly all numbers from  $[\sqrt[4]{81}]$  to  $[\sqrt[4]{255}]$  will have value 3. Since we are calculating the sum of these values, the series is  $1 + 1 + 1 + \dots + 1(15 \text{ times}) + 2 + 2 + 2 + \dots + 2(65 \text{ times}) + 3 + 3 + 3 + \dots + 3(175 \text{ times})$  and so on. The first sum is 15. After that, the sum will be  $65 \times 2 = 130$ . So total =  $130 + 15 = 145$ . Now for the next 175 terms the value of each term is 3. If we take 114 terms out of these 175 terms then their total will be 342. So up to her the total is  $342 + 145 = 487$ . So 487 is a possible value when  $n = 194$ .

**Hence the answer is option A**

**QNo:- 87 ,Correct Answer:- C**

**Explanation:-** Lets say the marked price is  $x$   
then on selling 12 books he gets  $(0.8x) \times 12 = 9.6x$   
Lets say the cost price of each book is  $y$  then the total cost of 12 books is  $12y$   
Now he made 10% profit thus  $1.1 \times (12y) = 9.6x$   
 $12y = 8x$   
 $x = 3/2y = 1.5y$   
Thus  $x$  is 50% more than  $y$ , hence marked price is 150% of the cost price.

**QNo:- 88 ,Correct Answer:- D**

**Explanation:-** There can be five possible combinations:

$90 \times 0 + 70 \times 4 + 50 \times 5 = 530$   
 $90 \times 2 + 70 \times 0 + 50 \times 7 = 530$   
 $90 \times 1 + 70 \times 2 + 50 \times 6 = 530$   
 $90 \times 3 + 70 \times 3 + 50 \times 1 = 530$   
 $90 \times 4 + 70 \times 1 + 50 \times 2 = 530$

Of these first two are void as it is given that she did sell one of 90 or 70 or 50 on a day.  
The last two make exactly 7 days which is a week, while it is said that she had sold for just over a week.  
Thus,  $90 \times 1 + 70 \times 2 + 50 \times 6 = 530$  makes the most correct option.  
She has sold 300 ( $= 50 \times 6$ ) kg on bad days which totals to  $300 \times 60 = \text{Rs.}18000$ .

**QNo:- 89 ,Correct Answer:- 11**

**Explanation:-**

The given series has 99 terms and is a GP with first term 4 and common ratio 2.

The sum of this series is  $\frac{4(2^{99} - 1)}{(2 - 1)} = 4(2^{99} - 1)$ .

We know that  $2$ ,  $2^2$ ,  $2^3$  and  $2^4$  when divided by 17 will leave remainders of 2, 4, 8 and 16 respectively.

A remainder of 16 can be rewritten as  $-1$ .

The remainders will follow this cycle after every four terms. Now,  $2^{99} = (2^4)^{24} \times 2^3$ .

The corresponding remainder will be  $(-1)^{24} \times 8 = 8$ . Similarly, 4 and  $-1$  when divided by 17 will leave remainders 4 and  $-1$  respectively.

So the remainder is  $4(8 - 1) = 28$ .

Now, 28 when divided by 17 will leave remainder 11.

Thus the effective remainder is 11.

**QNo:- 90 ,Correct Answer:- C**

**Explanation:-** Currently, his savings are 100000/9  
Each year his salary increases by 10 %.  
In 2017 his salary becomes 121000.

Every year his expenses increase by 1%.  
Expenses in the year 2015 are 800/9 %  
Expenses in the year 2017 are  $(800/9 + 1 + 1) \% = 818/9 \%$   
Therefore, savings are  $82/9 \%$  of 121000 =  $82 \times 121000/900 = 99220/9$   
Difference in savings =  $100000/9 - 99220/9 = 780/9$   
% change =  $(780/9) \times 100/(100000/9) = 0.78\%$

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**QNo:- 91 ,Correct Answer:- C**

**Explanation:-**

$$129^{131} = (130 - 1)^{131}$$

Applying Binomial theorem

$$130^{131} + {}^{131}C_1(130^{130} \times -1) + \dots + (-1)^{131}.$$

The second last term will be 130 and the last term will be -1. Since all the remaining terms will have 0's at the end, the answer comes from the last 2 terms, i.e.,  $130 - 1 = 129$ . Since the value ends in 29, the ten's digit is 2.

**QNo:- 92 ,Correct Answer:- B**

**Explanation:-** He sold 90Kg of tomato (60% of 150 kg of tomato).  
Of the remaining 60 kg, 24 kg is the solid mass and 36 kg is water.  
Of the 50 kg left after evaporation, the solid mass remains 24 kg.  
This means that 10 kg of water out of 36 kg has evaporated.  
Percentage of water evaporated =  $10 \times 100/36 = 27.77\%$

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**QNo:- 93 ,Correct Answer:- C**

**Explanation:-** Let both Shola and Shabnam have  $x$  kg oranges when Shola left.  
Shola would have sold his  $x$  oranges for  $10x/5$ , but Shabnam sold them for  $10x/4$ .  
Therefore, Shola has a profit =  $10x/4 - 10x/5 = x/2$   
Profit % =  $(x/2) \times 100/(10x/5) = 25\%$

**QNo:- 94 ,Correct Answer:- 86**

**Explanation:-** Let Jaggu have  $x$  balls. Then  $(x - 1)$  is divisible by 3, 5, 7, and 9. Therefore,  $(x - 1)$  is a multiple of  $5 \times 7 \times 9 = 315$ .  
Thus  $x = 315 \times n + 1$  is divisible by 11.  
By trial and error, we notice that  $315 \times 3 + 1 = 946$  which is the least number of balls Jaggu could have.  
Hence the number of students must be  $946/11 = 86$

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**QNo:- 95 ,Correct Answer:- B**

**Explanation:-**

The first pair of values  $(x, y)$  satisfying  $17x + 8y$  is  $(3, 375)$ .  
After this, values of  $x$  will increase by 8 while the values of  $y$  will decrease by 17.  
Subsequent values of  $(x, y)$  are  $(11, 358)$ ,  $(19, 341)$ , ...,  $(179, 1)$ .  
The maximum difference between the values of  $x$  and  $y$  is  $375 - 3 = 372$ .  
For the minimum difference, the values of  $x$  and  $y$  should be as close as possible.  
Since values of  $x$  and  $y$  form APs, we have  $3 + 8(n - 1) - [375 - 17(n - 1)] = 25n - 397$  should be minimum.  
This is possible when  $n = 16$  so that  $25n - 397 = 3$ . Thus the sum of these differences is  $372 + 3 = 375$ .



**QNo:- 96 ,Correct Answer:- C**

**Explanation:-** Let  $x$  be the number of balls in a small bag, and  $y$  the number of balls in a large bag.

$$\therefore 7x + 18y = 233$$

Let  $y = x$

$$\therefore 25y = 233$$

or  $y = 9.32$

Since  $y$  must be an integer,  $y \geq 10$ .

Assume  $x = 1$

$$7 + 18y = 233$$

$$18y = 226$$

$$y = 12.555$$

Since  $y$  must be an integer,  $y \leq 12$ .

So the only possible values for  $y$  are 10, 11, and 12. Substituting each of these values in the original equation, the values of  $x$  are 7.57, 5, and 2.42 respectively.

Since  $x$  must be an integer, the solution is  $x = 5$  and  $y = 11$ .

So the small bags of balls contained five each, and the large bags contained eleven each.

Therefore, large bag contains six more balls than those of the small bag.

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**QNo:- 97 ,Correct Answer:- A**

**Explanation:-** We get a GP starting with Rs.7000 and a common ratio  $6/7$ .

The fifth term of this GP (i.e. the final depreciated price of the bicycle) will be 3778.42.

The SP is 120% of this =  $120 \times 3778.42/100 = 4534.11 \approx \text{Rs } 4500$

**QNo:- 98 ,Correct Answer:- C**

**Explanation:-** Suppose Cheeku has  $n$  number of chickens now.

Let  $d$  be the number of days for which the chicken feed is sufficient currently.

As the number of days chicken feed lasts is inversely proportional to the number of chickens.

The quantity of chicken feed will be equal to the product of number of days chicken feed lasts and the number of chickens =  $n \times d$

In case he sells 75 chickens the quantity of chicken feed will be  $(n - 75) \times (d + 20)$ .

As the total amount of chicken-feed does not change, therefore

$$(n - 75) \times (d + 20) = n \times d$$

In case he adds 100 chickens the quantity of chicken feed will be  $(n + 100) \times (d - 15)$

Therefore  $(n - 75) \times (d + 20) = n \times d$

Solving the two equations we get  $n = 300$ , so farmer Cheeku has 300 chickens.

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**QNo:- 99 ,Correct Answer:- 1694**

**Explanation:-** The unit digit is four times the digit at thousandth place. Therefore, the thousandth digit can be 1 or 2 and the units digit can be 4 or 8.

The number formed by the thousandth and hundredth place is four times the digit at unit place.

If the unit place is 4 the number is 16 and if the unit place is 8 the number is 32. But the thousandth digit can not be 3. Therefore, the unit digit is 4, the hundredth digit 6 and the thousandth digit 1 (16x4).

The difference between the digits at tens place and units place is equal to the difference between the digits at thousandth and hundredth place.

Therefore,  $1 \sim 6 = x \sim 4$ . Thus  $x = 9$ .  
Therefore, the number is 1694

**QNo:- 100 ,Correct Answer:- C**

<b>Explanation:-</b>	Operators	Hours	Calls
4	3/4	120	
4	1	160	
x	1	1530	

$$x = 1530 \times 4/160 = 38.25 \approx 39$$

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