

1. The statement says that the adequacy of the ingredients in a recipe can be known only after consuming the final product.

Option 1 already considers the ingredients to be adequate and does not rely on the final product. So, eliminate option 1.

Option 2 implies 'a child grows up to be similar to its parents' and is unrelated to the given statement.

Option 3 indicates a definite happy ending and contradicts the given statement which is uncertain about the outcome.

Option 4 links the behaviour of the man with the results he receive and is not relevant to the given statement.

Option 5 suggests that you cannot judge something until you have tried it and is analogous to the given statement.

Hence, the correct answer is **option 5**.

2. "Inspect" means 'to look closely and critically' and "vivisect" means 'the act of cutting into a living body'. Hence, inspection is examining from the outside and vivisecting is going into detail.

"Enquire" means 'to seek information by questioning' and "observe" means 'to see and notice'.

"Inquire" means 'to seek information by questioning' and "explore" means 'to inquire into in detail'.

"Investigate" meaning 'examine in detail' and "interrogate" means 'to examine by questioning'.

"Query" means 'a question' and "survey" means 'to ask many people a question or a series of questions to gather information'.

"Question" means 'a sentence used to find out information' and "respond" means 'to give as a reply'.

Only option 2 reflects similar relationship as the one established by the given pair.

Hence, the correct answer is **option 2**.

3. The poem says that the desired results are always found when looked deeper. Nothing has been said about the things found outside being deceptive. So, eliminate option 1.

The poem is more destination-oriented than being path-oriented. So, eliminate option 2.

Option 4 is specific to heart's pathways and can be eliminated.

Option 5 talks only about light and can be eliminated. So, eliminate option 5.

Hence, the correct answer is **option 3**.

4. The author's view presented in the passage is that the election seasons will come and go and no matter who wins or loses, the country will continue to survive.

Option 1 introduces the term "economic growth" which is not mentioned in the passage.

Option 2 mentions the about the "young" population and the passage does not say anything about the age of the population.

Option 3 is contrary to the view of the author as it says that the country is dependent on a credible Prime Minister while the author's view says the opposite.

The author's confidence in saying that the season will pass and the country will survive the uncertainties of the election period in this as well as the following decades indicates that the author has experienced the same scenario in the past. This vindicates option 4 as the correct answer.

Option 5 links the survival of the Prime Minister with the political texture of the country which is contrary to the author's view.

Hence, the correct answer is **option 4**.

5. The paragraph given elaborates on the concept of trust and says that trust is a measure with which people tend to evaluate each other's reactions. The last line elaborates on this idea by stating an example and says that by saying that we trust someone, we imply that we are rating that person's action high enough for us to respond with a cooperative intention. This is vindicated by option 2.

The beginning of the passage states that there is a degree of convergence in the definition of trust and option 1 with 'find out if he will cheat us' does not comply with this "convergence" part.

Option 3 talks in terms of third person while the passage talks about assessing others' actions and accordingly reacting.

Option 4 with "aggression" becomes too extreme on our part to judge the person based on his temper.

Option 5 with "attack" is illogical in the

context of the passage.

Hence, the correct answer is **option 2**.

6. Sentence 1 begins by the speaker stating the possibility of knowing someone named Smith. This is followed by sentence S in which the speaker talks about hearing about the death of Smith in a battle. P-Q form a link as P begins by contradicting the information that the speaker has of Smith and Q states the speculation of the speaker on this contradictory information and an inquiry that proved this information wrong. R with "isn't sufficient information" relates to 6 with "fair amount of evidence". Therefore, the sequence is 1SPQR6. Hence, the correct answer is **option 1**.

7. The first sentence of the passage introduces the word "symmetry" and throws some light on the need for an elaborate definition of the word. Hence, only sentence R could be the next probable sentence as it begins to define the word "symmetry". This is followed by sentence Q which puts forth a colloquial definition of symmetry. S-P ought to form a pair as S gives the definition of symmetry by Professor Herman Weyl and P gives an example to justify this definition. Therefore, the correct sequence is 1RQSP6.

Hence, the correct answer is **option 4**.

8. From the sentence, "In most of the Latin American countries, football is more popular sport than cricket", one cannot definitely conclude that in India, cricket is more popular than football. So, eliminate option 1.

Successful coaches of Indian club football tournaments hailing from Latin American countries does not ascertain their stint as a Latin American football coach. So, eliminate option 2.

Option 3 contradicts the information about the coaches of Indian football teams stated in the passage. So, eliminate option 3.

Option 4 with "European football coaches" is irrelevant as a conclusion. So, eliminate option 4.

Option 5 with "cannot be definitely concluded" is the most appropriate answer. Hence, the correct answer is **option 5**.

9. The correct pronunciation of the word "sobriquet" is 'soh-bruh-key'.

Hence, the correct answer is **option 1**.

10. None of the actions can be categorized under aggressive behaviours as one cannot be sure if they are an outcome of "aggression".

Option 2 encompasses only "crime". So, eliminate option 2.

Option 3 correctly describes the set of actions as being against the society norms.

Option 4 with "banned behaviours" and option 5 with "vetoed behaviours" do not describe every subject of the book.

Hence, the correct answer is **option 3**.

11. Option 1 can definitely be concluded from elaborate explanation of creation given by Agathos in response to Oinos's understanding of creation.

Option 2 can be concluded from the phrase "final overthrow of Earth" which indicates that during this conversation, Earth had ceased to exist.

Option 3 is incorrect according to the passage. In the passage, Oinos says that many philosophers were wrong in denominating their successful experiments as the creation of animalculae. This is because creation of animalculae is happens naturally.

Option 4 cannot be inferred because it is only given that philosophers tried to name their experiments as animalculae and nothing about their creation of natural laws has been mentioned.

Option 5 is mentioned verbatim in the last line of the passage.

Hence, the correct answer is **option 4**.

12. Making the offices and positions for marginalized sections available to those with greater savings no way implies that the all the marginalized sections are incapable of saving. So, eliminate option 1.

Statement II with "principle of fair opportunity" clearly indicates the equal exposure of the citizens to all opportunities. Statement II mentions principle of fair opportunity, hence it totally supports meritocracy. So, eliminate option 3.

In statement II, intelligence cannot be linked to obtaining a place in offices. So, eliminate option 4.

From statement I, the dependency of marginalized sections on subsidies cannot be inferred. So, eliminate option 5.

Hence, the correct answer is **option 2**.

13. The sentences "Nor do markets, by themselves, necessarily lead to economic efficiency..." and "Today, most academics

economists agree that markets, by themselves, do not lead to efficiency” indicate that there is a need for government intervention in the matter of economic efficiency. This vindicates option 1 as the correct answer.

Hence, the correct answer is **option 1**.

14. Option 1 is supported by “free flow of short-term capital...would produce not growth but instability...”

Option 2 is supported by the first three lines of the passage.

Option 3 is supported by the unclear information provided in the passage on the success of the economic policies of Asian countries. The last paragraph only talks about the effects of the economic policies of the Asian countries but what led to their success is not clear.

Option 4 is supported by the sentence “Nor do markets, by themselves...feature of development.” The statement suggests that it is the responsibility of the government to absorb new technology in order to close the knowledge gap and increase market efficiency.

Option 5 cannot be inferred because the passage says that the question is whether government can improve matters of economic efficiency which affected due to imperfect information. It cannot be inferred if the government intervention will cause the eradication of imperfect information completely.

Hence, the correct answer is **option 5**.

15. Paragraph I details upon the failure of markets and how it is the responsibility of the government to take matters in their hands. Paragraph II shifts the focus on the policies of Asian economies and how market based economic theories fail to explain the success of Asian economies. This relation is suitably mentioned in option 3.

Hence, the correct answer is **option 3**.

16. In the sentence, “Of course, that....which they aren’t.”, the author likens the static pins to target listeners. Static pins are similar in appearance and in this sentence the author says that unlike static pins the target listeners are not similar in every aspect. Therefore, only “comparable” qualifies as the synonym of “interchangeable”.

Hence, the correct answer is **option 5**.

17. Option 1 is the closest to the necessary condition of communication as is evident from the sentence “Communication between....overlap increases.”. The phrase “alter the images in both of our minds” in the previous sentence accounts for the “shared images” stated in option 1.

Hence, the correct answer is **option 1**.

18. The last paragraph says that Dumb Charade goes beyond the simplistic analogy of bowling and ping pong which implies that Dumb Charades overcomes the limitations of the two games.

There is no element of appeal involved in the Ping-Pong model. So, eliminate option 1. The passage clearly says that the listener doesn't know from where the message is coming from but the sender knows where it is going. So, eliminate option 2.

In option 3, both the limitations mentioned about Ping-Pong model has been overcome by the Dumb Charades model. The last paragraph says that Charades is a mutual game and is cooperative in nature. It is played within a team which is not the case in Ping-Pong model. Also, there are no fixed rules as the message passed from the sender is open to various interpretations, while in Ping-Pong, adjustment on both sides is essential.

Option 4 loses out as it says that Ping-Pong is passive. The constant interaction between the sender and the receiver in the game of Ping-Pong does not indicate passiveness.

Option 5 is illogical with respect to the question stem .

Hence, the correct answer is **option 3**.

19. In option 3, preparing for an MBA exam doesn't exemplify the action model from the passage, as in this there are no target listeners involved. So, eliminate option 3. Similarly, eliminate option 2.

In driving a car, the environment of the driver keeps on changing as he drives further and with this the “teammates” change too. Hence, it does not make a perfect transaction as mentioned in the passage. So, eliminate option 4.

Negotiation is a two-way interaction and cannot be categorized as an action only model. So, eliminate option 5.

Hence, the correct answer is **option 1**.

20. According to the passage, an approximation is knowing that we do not know. It says that everything we know is some kind of approximation as we learn things to be unlearned again or correct them.
Options 1 and 3 with refer to the set of things we learn and acknowledge the knowledge gained with it.
Option 2 with "I know that I do not know" rephrases the definition of approximation as stated in the sentence, "...because we know that we do not know all the laws as yet." from the passage.
Option 4 with "I know what I do not know." is being aware of things that we haven't learned and is not an approximation to complete truth.
Option 5 may or may not be an approximation to complete truth as it doesn't entirely contradict the definition stated in the passage. So, rule of this option. Hence, the correct answer is **option 4**.
21. Since the law "Mass of an object never seems to change" underwent a correction in future, it is definitely not a complete truth but an approximation. Hence, option 1 can be concluded.
The phrase "complete truth so far as we know" clearly suggests that both the statements are approximation to complete truth. Hence, option 2 can be concluded.
Statement I is a definite approximation. Statement II can be regarded as complete truth only when the object is moving at a high speed. Hence, option 4 can be concluded.
The last paragraph says that "philosophically, we are completely wrong with the approximate law."
Statement I is an approximate law as per the above explanation and hence is philosophically wrong. Hence, option 4 can be concluded.
While we can infer that the first statement is an experimental deduction, it cannot be inferred that the second statement is formed by the theoretical physicists.
Hence, the correct answer is **option 5**.
22. Big Bang being a popular theory clearly suggests that it was proposed by theoretical physicists only.
As there is no hint of the theory going through any experimentation, we can rule out option 1. Similarly, we eliminate option 3.
There is no mention of philosophers in the statement. So, eliminate option 4.
The complete truthfulness of Big Bang cannot be inferred from the sentence. So, eliminate option 5.
Hence, the correct answer is **option 2**.
23. According to the passage, "only what can be perceived exists" is an axiom. Hence, its certainty is erratic. Same applies for option 2. Hence, eliminate options 1 and 2.
The sentence "that one exists possessing consciousness, consciousness being the faculty of perceiving that which exists." contradicts options 3..
The sentence, "The universe exists independent of consciousness." contradicts option 5.
Option 4 is supported by the statement, "...consciousness being the faculty of perceiving that which exists."
Hence, the correct answer is **option 4**.
24. Option 5 is stated verbatim in the passage- "The law of casualtyby what it is."
Hence, the correct answer is **option 5**.
25. The sentence, "Existence is Identity, Consciousness is Identification." states the relationship between Identity and Identification.
Only option 2 reflects this relationship with Twitter being an Identity and perception of Twitter as Identification.
In rest of the options, "existence" and "perception" are independent of each other.
Hence, the correct answer is **option 2**.
26. The sentence suggests that in order to gain control of Nature, one must learn to abide by it.
This is best explained in option 5.
Hence, the correct answer is **option 5**.
27. This move will break the agreement to a larger extent and can be eliminated.
This move would be unfair for other customers and also by charging Rs130 Kamal would be violating the agreement. So, eliminate option 3.
This move will lead to violation of the agreement as Kamal cannot charge more than Rs 100 for agreed upon services as part of the contract. So, eliminate option 4.
Flexible shop timings does not ensure greater profits and thus this option can be eliminated.
Option 1 is the best option as introducing a new service would be a minimal violation as the other hairdressers were providing

only three services and charging Rs 130 for that service would not cause any violation as Rs 100 charge pertained to those three services only.

Hence, the correct answer is **option 1**.

28. The question clearly says that there should be no violation, hence even minimum violation has to be avoided.

Charging differential rates is a clear violation of the agreement and can be ruled out immediately.

Option 2 can be ruled out along the same lines as option 1 as charging lower is also a violation.

Option 3 is also a violation as providing service free of charge was not the part of the agreement.

Option 4 will not help Vimal in his attempt to retain his loyal customers. So, eliminate option 4.

Option 5 is the most suitable course of action as a privilege of this kind would definitely help him sustain the trust of his loyal customers. Also, there won't be any violation in terms of agreed upon rates.

Hence, the correct answer is **option 5**.

29. Option 1 is a rational move as approving the sale on a condition that ensures restoration of the green belt in the same locality will prove to be fair for everyone.

20 locals planting 20 trees is not going to compensate for the pollution control performed by green belt. So, eliminate option 2.

Option 3 is extreme and can very well be avoided as it does not ensure no harm to the environment.

So, eliminate option 3.

Option 4 is sidetracks the issue of the location of the green belt being in the midst of the city. So, eliminate option 4.

Option 5 is not only far-fetched but also erroneous.

Hence, the correct answer is **option 1**.

30. Deferring the implementation of green policy will not convince Chatterjee to completely eliminate the thought of this plan. Hence, this option bypasses the crux of the question. So, eliminate option 1.

Warnings or threats will only lead to a bitter and broken relation between Chatterjee and Ghosh, and pursuing either methods should be avoided. So, eliminate options 3 and 5.

Given the pivotal role of Ghosh in Chatterjee's victory, it would be

dishonorable for Ghosh to appeal to Chatterjee's sympathy. So, eliminate option 4.

Option 2 is an apt move as it is imperative for Chatterjee to realize that he is being influenced by Bhowmick's green policy and this attitude of his will only ruin his clean image that had garnered him votes. A friendly advice is what is needed in this situation.

Hence, the correct answer is **option 2**.

31. A random inspection is likely to miss out on the ones which do not offer comfort to their passengers. So, eliminate option 1.

Option 2 is unethical as it would render the taxi drivers unemployed. So, eliminate option 2.

Option 3 is skewed towards affluent lot and does not address the concern of the Mayor who wants comfort and safety of all passengers. So, eliminate option 3.

Charging extra in exchange for comfort is not a feasible solution as the Mayor wants the taxi owners to offer sufficient comfort without any increase in rates. Charging extra would cause discomfort to the customers and will not serve the purpose. So, eliminate option 5.

Option 4 is the best solution as individual feedback from passengers would help and improve the comfort level of passengers and also feedback affecting the renewal of taxi license would ensure active participation from all taxi drivers.

Hence, the correct answer is **option 4**.

32. According to the information provided, the customers may not be willing to pay more for safety which leaves open the possibility of charging more from them for comfort. If the taxi owners are allowed to charge more for comfort, they should be strictly supervised for the safety factor. This way, both the elements of concern of the Mayor are taken care of, along with cooperation from the taxi owners.

Only option 4 resonates this arrangement.

In option 1, safety and comfort are bifurcated into two segments one containing the owner and another containing the taxi driver, whereas the Mayor needs the cooperation of the taxi owners. Hence, eliminate option 1.

Option 2 does not take the safety factor into consideration. So, eliminate option 2.

Option 3 isn't lucrative enough to get the taxi owners on board with the Mayor's offer. So, eliminate option 3.

- Option 5 is ambiguous with its mention of traffic rules. So, eliminate option 5.
Hence, the correct answer is **option 4**.
- 33.** Discontinuing the scheme because a large number of researchers were leaving the organization is not a valid point as it does not account for the researchers still working in the organisation. Hence, one cannot assume the sole reason of A researcher's death while on duty is open to many interpretations and is not remotely related to the government's decision to discontinue the scheme. So, eliminate option 2.
2% is too low a statistic to factor in in the decision making process. So, eliminate option 4.
Option 3 is the only logical justification as the remuneration would not have put to proper use if the quality of the articles declined. Hence, the scheme is not improving the condition of the organisation substantially and needs to be discontinued. Hence, the correct answer is **option 3**.
- 34.** None of the arguments touches upon the quality of the publications of the researchers, which is the crux of the main argument raised in the passage and not merely the researchers and their income.
So, the correct answer is **option 5**.
- 35.** According to the passage, the role of an auditor is to verify accounts. Hence, we can infer that an auditor's role is confined to supervising the expenses of the organization. Therefore, auditors should not have a say in the extra benefits scheme of the organisation and in other decision making processes.
Hence, the correct answer is **option 4**.
- 36.** Options 1 and 3 show that the Police is paying off the debt of free sweets by mitigating the burglary taking place at Purushottam's shop. Hence, it implicitly indicates bribery and cannot be considered for convincing Ratan. So, eliminate options 1 and 3.
Option 2 is not a strong argument as it does not entirely rule out the possibility of the sweets being bribery. So, eliminate option 2.
Option 5 brings forth a competitive aspect of Purushottam's action which is uncalled for in the present scenario. So, eliminate option 5.
- Option 4 completely rules out the possibility of bribing the policemen as the same offering is sent to a school, an orphanage and a temple. Hence, the batch of sweets can be considered as a sweet gesture from Purushottam to people in general.
Hence, the correct answer is **option 4**.
- 37.** Option 1 is a strong argument as the sweets are close to expiry and there is no harm in consuming them immediately.
Option 2 is unethical on the part of Purushottam as he tries to put the entire responsibility on the shoulders of the customers. So, eliminate option 2.
Option 3 is unethical as offering sweets close to expiry at a low cost does not rule out the possibility of the customers falling sick due to its consumption. So, eliminate option 3.
Option 4 gives a concrete evidence in order to justify this practice and a clean history reduces the probability of negative consequences to a greater extent.
Option 5 is passive in nature and can be eliminated.
Hence, the correct answer is **option 2**.
- 38.** Since Purushottam has already given an explanation for charging lower price to the privileged customers, the data on their income will not impact his decision. So, eliminate option 1.
Option 2 questions the loyalty of his privileged customers which was the sole reason for Purushottam to follow this practice. Hence, it is a strong argument.
Options 3 and 4 seem incongruous with respect to the information provided in the passage. So, eliminate options 3 and 4.
Option 5 indicates betrayal on the part of his loyal customers and hence Purushottam should not provide them with concessional rates.
Hence, the correct answer is **option 3**.
- 39.** Option 1 is a harsh course of action and is likely to spoil the career of the three students.
Option 3 is unfair on the part of authorities to give high ratings to poorly performing candidates.
Option 4 is the most appropriate course of action as it gives a second chance to the three students and would not jeopardize their career.
The next best move would be giving them average ratings and a year to prove their

worth before firing them. Hence, 4 and 2 in a logical order is only presented by option 3.

Hence, the correct answer is **option 3**.

40. The trio's unhappiness has not been explicitly mentioned as one cannot be sure about the behaviour of Amelia towards the trio. So, eliminate option 1.

Option 2 is an implied bribery and is unethical on the part of Amelia. So, eliminate option 2.

Option 3 is unprofessional in nature and does not do anything to help solve the problem of Amelia's boss. So, eliminate option 3.

Option 4 will be selfish on the part of Amelia to look out for herself in such complicated situation.

Option 5 puts forth a viable solution for all the people involved.

Hence, the correct answer is **option 5**.

41. Option 1 does not take into consideration Nicky's side of story and releases Amelia from Nicky's responsibility. So, eliminate option 1.

Option 2 is not an appropriate course of action as sending Nicky for a training earmarked for top performing employees will encourage Nicky's ignorance towards her work responsibilities.

Option 3 is a logical step as it would put Nicky under the radar and compel her to focus on work only.

Option 4 will simply discourage Manoj and Benita from performing well at work and will indirectly affect the organisation.

Option 5 is a fair course of action.

Hence, the correct answer is **option 5**.

42. In this question, if even one person is satisfied then the project will be disregarded.

For project N, we can see that Yadav will be satisfied. Hence, options B, D, E are eliminated.

For project P, we can see that there is no recreation club, no ground floor flat, distance to office is greater than 15 km and the price is 65-80 Lacs. Therefore, all 6 people will be unsatisfied.

Hence, **option 3**.

43. In this question, if a project has more than 3 unsatisfied people then that project is disregarded.

In project R, we can see that Patel, Khan and Lingdo will be unsatisfied since there is no recreation club. This eliminates option 3 and 5

In project M, Bhatia, Yadav and Singh will be the only people unsatisfied on the criteria of Price. Therefore, this project is considered.

In project S, Bhatia will be the only person unsatisfied on the criteria of distance to mall. Therefore, this project is considered.

The only option with M and S both present is option 4.

Hence, **option 4**.

44. In this question, if more than 2 persons are not satisfied then the project is disregarded else it is considered.

In project P, Bhatia, Yadav and Singh will be unsatisfied on the criteria of price. Therefore, this project is disregarded.

This eliminates all the options except 1.

Hence, **option 1**.

45. Option 5 is the most unethical course of action as it encourages selling adulterated product to the consumers and harming their health.

Option 1 is a hasty course of action as the company should dig deep into the issue and find out the truth.

Of the three options, option 3 is the foremost step in finding the truth behind this accusation in a bid to clear company's name. Chronologically, option 2 should be the next step in order to be transparent with the customers to gain their trust. Finally, the company should ensure that such incidents don't repeat in future.

Hence, the correct sequence is 3,2,4.

Hence, the correct answer is **option 2**.

46. The question here asks for a definite wrong order and hence the sequence with an illogical order gives the answer to this question.

The sequence 6,1,4 is an improper sequence when arranged from ethical to unethical as the entire sequence appears absurd. Despite exploring the veracity of the report, selling the stock at a discounted rate before the spread of the news will completely mislead the innocent customers. Moreover, after selling them the stock, informing the customers about the controversy will not only rob them off their money but also break their trust in the

shopkeeper. Hence, the order is totally irrational.

Hence, the correct answer is **option 2**.

47. In this scenario, the real culprit is the food testing agency who willingly accepted the bribe and should be the one to receive the punishment. Hence, filing a case against the competitor or any other action against the competitor is uncalled for at this stage. So, eliminate option 2 and 4.

Option 1 would shift the focus from exposing the main culprit which should be the foremost step in this case. So, eliminate option 1.

Involving another food testing agency would unnecessarily confuse the consumers and does nothing to help the company bounce back. Hence, eliminate options 3.

Hence, the correct answer is **option 5**.

48.

Option	Possible Schedules by Months for Max. Profit												Profit
	J	F	M	A	M	J	J	A	S	O	N	D	
1	A	A	A	A	-	-	B	B	B	B	-	-	$80 + 100 = 180$
2	A	A	-	B	B	B	B	B	B	-	-	-	$40 + 150 = 190$
3	A	A	-	B	B	B	B	-	D	D	D	-	$40 + 100 + 60 = 200$
4	A	A	-	B	B	-	-	D	D	D	-	-	$40 + 50 + 60 = 150$
	A	A	-	B	B	-	-	E	E	E	E	-	$40 + 50 + 60 = 150$
	A	A	-	B	B	B	B	-	D	D	D	-	$40 + 100 + 60 = 200$
	A	A	-	B	B	B	B	-	E	E	E	E	$40 + 100 + 60 = 200$
5	A	A	-	B	B	B	B	-	D	D	D	-	$40 + 100 + 60 = 200$
	A	A	-	B	B	B	B	-	E	E	E	E	$40 + 100 + 60 = 200$

E cannot be cultivated from September to December as A cannot be cultivated in January then.

Also from the above table we can see that Geetha gets highest profit if she follows the condition given in option 3.

Hence, **option 3**.

49. Note: All calculated prices are per unit and in \$

Option C can be straightaway eliminated as total months required would be $2 + 3 + 4 + 4 = 13$ which will not be possible in a single year

Option	Profit (\$/unit)	Cost (\$/unit)
1	$40 + 50 + 60 = 150$	$20 + 5 + 5 = 30$
2	$50 + 60 + 40 = 150$	$5 + 15 + 35 = 55$
4	$45 + 60 + 40 = 145$	$25 + 15 + 35 = 75$
5	$40 + 50 + 60 = 150$	$20 + 5 + 15/5 = 40/30$

We can clearly see that option 1 satisfies the criteria of both maximum profit at minimum cost.

Hence, **option 1**.

50. The last number is 3^{100} and the Sum of the rest = S
 $= 1 + 3 + 3^2 + \dots + 3^{99}$... (i)
 Equation (i) forms a GP with $a = 1$; $r = 3$ and $n = 100$

$$\therefore S = \frac{1 \times (3^{100} - 1)}{3 - 1}$$

$$\therefore \text{Ratio} = \frac{2 \times 3^{100}}{(3^{100} - 1)} = \frac{2}{\left(1 - \frac{1}{3^{100}}\right)}$$

$1/3^{100}$ is close to zero and can be ignored.

\therefore Ratio = 2

Hence, **option 1**.

51. Let the six persons be ranked from 1 to 6 with rank 1 having obtained the highest marks

From the data,

Anita = 1; Biplove > Danish; Emily \neq 6 and Cheryl \leq 4

From Statement I: Cheryl = 4

Here, we cannot uniquely identify the person with least marks with only this information.

From Statement II: Emily = Feroz

We know that,

Emily \neq 6 which means Feroz \neq 6

\therefore Biplove > Danish, Biplove \neq 6

Cheryl \leq 4 i.e Cheryl \neq 6 and Anita = 1

\therefore The only person who can be last is Danish.

Hence, Statement II is sufficient to identify the person with the lowest marks

Hence, **option 2**.

52. Let there be a number of Apples and o number of Oranges.

$$\therefore \text{Total Selling Price} = 23a + 10b = 653$$

Since, there is a 3 in the unit's place of R.H.S, a should take such values such that we get a 3 in the unit's place. The values possible are 1, 11, 21, ...

When $a = 11$, $b = 40$ which violates the condition of $a > b$

When, $a = 21$, $b = 17$ which is in line with the condition of $a > b$

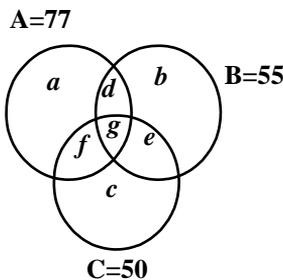
Now, the profit per apple is 15% and profit per orange is 25%

$$\therefore \text{Total Cost price} = 20a + 8b = \text{Rs.}556$$

$$\therefore \text{Profit percent} = \left(\frac{653 - 556}{556}\right) \times 100 = 17.4\%$$

Hence, **option 2**

53. Let the Venn diagram be as shown in the figure,



From the given data,

$$f + g = 25 \quad \dots \text{(i)}$$

$$d + g = 22 \quad \dots \text{(ii)}$$

$$\text{and, } g = e = 0 \quad \dots \text{(iii)}$$

Substituting (iii) in (i) and (ii), we get

$$f = 25; d = 22$$

Also,

$$a + f + g + d = 77$$

$$\therefore a = 30$$

$$b + d + e + g = 55$$

$$b + d = 55$$

$$\therefore b = 33$$

Now, it is said that 40 did not opt for rides A, B or both which means 40 opted for ride C only or did not opt for a ride.

\therefore Total number of visitors

$$= 40 + a + b + f + d = 40 + 30 + 33 + 25 + 22 = 150$$

Hence, **option 5**.

54. YZ is divided into 3 equal parts, let's say, a

$$\therefore 3a = 54$$

$$\therefore a = 18 \text{ cm.}$$

\therefore Side of the hexagon MNOPQR is 18 cm.

$$\therefore \text{Area of the hexagon} = \frac{3\sqrt{3}}{2} \times 18^2$$

$$= 486\sqrt{3}$$

Hence, **option 2**.

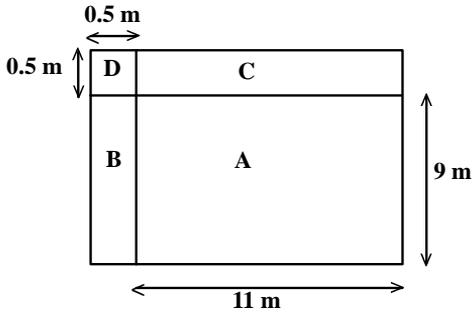
55. $AC = CD$ and $m\angle ADB = 20^\circ \Rightarrow m\angle CAD = 20^\circ$
 $m\angle ACB = (20 + 20)^\circ = 40^\circ \dots$ (Exterior angle theorem)

$$\text{So, } AC = AB \Rightarrow m\angle ABC = 40^\circ$$

$$\therefore m\angle BAD = 180 - 40 - 20 = 120^\circ$$

Hence, **option 4**.

56. Consider the diagram below:



Akhtar uses 9×11 tiles to cover area shown by A.

Consider area shown by B and C:

Akhtar will cut tiles with side 1 meter to make two pieces of the following dimension (1×0.5).

So he will have to use $20/2 = 10$ tiles.

Now to cover D, he will use a tile with side 0.5 meters.

Thus, the minimum cost of covering entire floor with tiles = $(99 + 10) \times 100 + 1 \times 30 = 10930$

Hence, **option 1**.

57. Time taken to walk to the office is 8 times the driving time.

i.e., $T_{\text{walk}} : T_{\text{drive}} = 8 : 1$

So, $S_{\text{walk}} : S_{\text{drive}} = 1 : 8$

Let Pradeep walks at x km/hr and take $8t$ hours to reach office.

So, when he drives at $8x$ km/hr, he takes t hours to reach the office.

Distance between office and home = $8xt$

$$\frac{8xt - 1}{x} = \frac{8xt}{8x} + \frac{1}{x}$$

Solving we get $xt = 2/7$

The distance between the temple and the office = $8xt - 1 = 8 \times (2/7) - 1 = 9/7$

Hence, **option 3**.

58. In the given clock, 10 and 5 are opposite to each other.

When the mirror shows 3 hours 42 minutes and 20 seconds, the hour hand is between 3 and 4, the minute hand is between 42 minute mark and 43 minute mark and the second hand is at 5.

So, hour hand must be between 6 and 7, the minute hand must be between 17 minute mark and 18 minute mark. Also, the

position of the second hand will be same at 5.

So, the actual time must be 6 hours 17 minutes and 20 seconds

So, after five minutes, the time will be 6 hours 27 minutes and 20 seconds.

Hence, **option 2**.

Alternatively:

The sum of the time visible in the mirror and the actual time should be equal to 10:00:00 hours.

$$10:00:00 - 03:42:20 = 06:17:20 \text{ hours}$$

Thus, actual time is 6 hours 17 minutes and 20 seconds.

So, after 5 minutes the time will be 6 hours 22 minutes and 20 seconds

Hence, **option 2**.

59. If the side of the isosceles triangle is 10 cm then we get the side of the square as 20 cm on unfolding it. Hence, the area of square = 400 cm^2 .

Hence, **option 1**.

60. Let 'a' be the side of the triangle.

So, the circumradius and inradius are

$$\frac{2}{3} \times \frac{\sqrt{3}}{2} a \text{ and } \frac{1}{3} \times \frac{\sqrt{3}}{2} a \text{ respectively}$$

By the given conditions,

Difference between the areas of two circles

$$= \pi \left[\left(\frac{2}{3} \times \frac{\sqrt{3}}{2} a \right)^2 - \left(\frac{1}{3} \times \frac{\sqrt{3}}{2} a \right)^2 \right]$$

$$= \pi \left(\frac{1}{3} \times \frac{\sqrt{3}}{2} a \right)^2 (3) = 2156.$$

$$\therefore \left(\frac{\sqrt{3}}{2} a \right)^2 = 2156 \times \frac{7}{22} \times 3 = 2058$$

$$\therefore a^2 = 2058 \times 4/3 = 2744.$$

\therefore Area of equilateral triangle

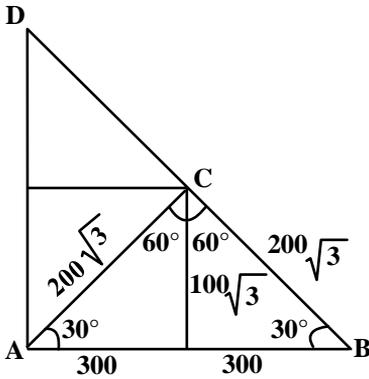
$$= \frac{\sqrt{3}}{4} \times a^2 = \frac{\sqrt{3}}{4} \times 2744 = 686\sqrt{3}$$

Hence, **option 1**.

61. From the given data,

$m\angle CAB = 30^\circ$; $m\angle CBA = 30^\circ$ and $AB = 600 \text{ m}$

$$\therefore BC = AC = 200\sqrt{3} \text{ m ... [By sine rule]}$$



Statement I: After changing the direction the object took 3 more minutes than it had taken before.

The object travels $200\sqrt{3}$ m from B to C @ 10 km/hr

Thus, in 3 minutes it can travel 500 m. Hence, the object travels a total of $500 + 200\sqrt{3}$ m from C.

Thus, we know the hypotenuse CD by which we can find out the angle.

Statement II: After changing directions, the object travels $200\sqrt{3}$ m.

Since, the object travels the same distance as before, this can only happen if the object stays on the course as before without changing any direction.

Thus, we can clearly see that the two angles from the statements are inconsistent with each other.

Hence, **option 4**.

62. From the given function ;

$$f(2) = 4 + f(1) = 5 = 2^2 + 1$$

$$f(3) = 6 + f(2) = 6 + 5 = 11 = 3^2 + 2$$

$$f(4) = 8 + f(3) = 8 + 11 = 19 = 4^2 + 3$$

Hence we can see that $f(x) = x^2 + (x - 1)$

$$\text{Hence } f(31) = 31^2 + 30 = 991.$$

Hence, **option 4**.

63. $2061_B = (1 + 6B + 2B^3)_{10}$

$$601B = (1 + 6B^2)_{10}$$

$$\therefore 2B^3 + 6B^2 + 6B + 2 = 432$$

$$B^3 + 3B^2 + 3B + 1 = 216$$

$$(B + 1)^3 = 216$$

$$B = 5$$

$$\therefore 1010_B = 130_{10}$$

Hence, **option 3**.

64. Let the total work required to fill the tank be 24 units.

\therefore The work done by an inlet pipe and an outlet pipe per hour is 3 units and 2 units respectively.

$$\therefore 6(3M - 2N) = 24$$

$$\therefore 3M - 2N = 4$$

Now When $N = 1, M = 2$.

Also When $N = 4, M = 4$

Similarly we get infinite values of N for which we get different values of M and the ratio $M : N$ is not unique.

Hence, **option 5**.

65. The investment by ABC = 100000

Let the total number of students be x.

\therefore The total investment by XYZ = $400x$.

The total revenue generated = $2000x$.

The total profit = Total revenue - Total investment

\therefore The total profit = $2000x - (100000 + 400x)$

The share of ABC is 60% of the profit and is greater than or equal to the total money invested by ABC.

$$\therefore (2000x - (100000 + 400x)) \times (3/5) \geq 100000$$

$$\therefore x \geq 166.66$$

\therefore The minimum number of students required is 167.

Hence, **option 5**.

66. The least no. of the form m^m divisible by 500 is 10^{10} .

$$\therefore a + b = 10.$$

$\therefore a \times b$ is minimum when $a = 9$ and $b = 1$ (or vice-versa)

Hence, the least possible value is 9.

Hence, **option 2**.

67. Let $AB = a$, $BC = b$, $BD = c$, $AC = d$ and $CD = e$ and let the speed of the persons be V .

From given information:

$$a + b + e = 70V \quad \dots (1)$$

$$a + c = 45V \quad \dots (2)$$

$$d + e = 30V \quad \dots (3)$$

$$d + b + c = 65V \quad \dots (4)$$

Adding (1) and (4) we get $(a + c) + (d + e) + 2b = 135V$

From (2) and (3); $45V + 30V + 2b = 135V$

$$b = 30V.$$

$$b/V = 30.$$

Hence, it takes 30 min to go from B to C

Hence **option 3**.

68. $abc - (a + b + c) = a(bc - 1) - b - c$.

It is clear that the expression would be maximum when b and c are negative and their modulus are maximum possible.

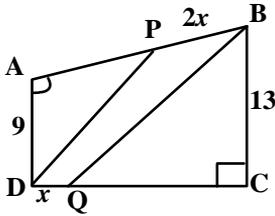
$\therefore b = -10, c = -9$.

Now a has to be positive and maximum possible. It has to be 8.

Hence the expression becomes equal to 731.

Hence, **option 3**.

69.



Let $DQ = x$ and $PB = 2x$.

From the diagram $A(\triangle BDP) = (1/2) \times AD \times PB = 1/2 \times 9 \times 2x$.

Also $A(\triangle BDQ) = (1/2) \times BC \times DQ = (1/2) \times 13 \times x$

$A(\square BPDQ) = A(\triangle BDQ) + A(\triangle BDP) = 1/2 \times 31 \times x = 150$

$\therefore x = 300 / 31$

$\therefore x$ can have integer values from 1 to 9.

Hence, there are 9 values of DQ.

Hence, **option 4**.

70. Let $a = x - 1, b = x$ and $c = x + 1$.

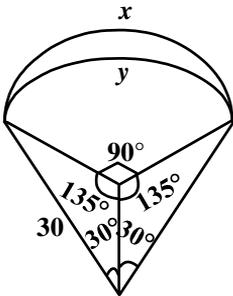
Substituting this in the expression we get the expression

$$= \frac{2x^2 + 1}{3x}$$

Only $x = \pm 1$ gives an integer.

Hence, **option 3**.

71.



From the diagram, we can say that Y makes an angle of 60° and X an angle of 90° .

For Y; $(1/6) \times 2\pi r = 10\pi$.

(r is radius of circle of which Y is a part).

$\therefore r = 30$.

From the diagram ;

The radius of other circle = $15\sqrt{2}$.

\therefore Length of X = $(1/4) \times 2 \times \pi \times 15\sqrt{2} = 15\pi/\sqrt{2}$.

Hence, **option 1**.

72. From the given chart by observation

2008, 2009 and 2012 have a maximum of two categories of students in the range of 20-30 lakhs.

2010 is the only year in which three categories of students(top 25, higher than median to 75th and 26th position to median salary are included).

Hence, **option 3**.

73. In the given chart the median salary is the junction of the second and third category from the bottom.

For 2009 the median salary is approximately 24 lakhs.

For 2008 the average salary is approximately 16 lakhs.

The median of 2009 is 50 % more than the average of 2008.

Hence, 2009 does not satisfy the given criterion.

Therefore, all four options 1, 3, 4 and 5 are eliminated.

Hence **option 2**.

74. None of the options is the correct answer.

75.

Year	Number of students without job offers	Median salary	Mean salary	Mean salary of job offered students
2008	9	14	16	18
2009	5	24	16	17
2010	20	22	19	23.75
2011	2	14	10	10.2
2012	2	20	15	15.3
2013	4	16	16	16.66
2014	15	31	17	20
2015	2	22	15	15.3

From the table it can be easily seen that the Mean salary after discarding the unemployed students is greater than the mean for years 2008, 2010 and 2013.

Hence, **option 1**.

76. Since, there is no information available on the population of the different areas neither of the statements can be concluded from the given data. Therefore, neither of the statements is correct.

Hence, **option 4**.

77. There is no data available on the number or distribution of customers buying from "Food Shops" in East India or West India, while the statement C talks about the ratio of customers which cannot be inferred.

Hence, **option 3**.

78. The two given tables provide information on the distribution percentage of the different types of shops in two different years. However there is no information is available on the total number of shops in the two different years. Hence, no comparison is not possible between the two years.

Options A, B, C and D talk about the increase or decrease in the number of shops with respect to each other. Hence, they cannot be definitely concluded.

Statement E talks about the distribution in the same year as well as the same region. Therefore, it can be concluded by comparing the percentage distribution.

Hence, **option 5**.