IBPS Clerk Mains Previous Year Paper 2022

Directions (1-7): Read the given passage to answer the following questions

The hydrological cycle is expected to _____ with global warming, which likely increases the intensity of extreme precipitation events and the risk of flooding. The changes, however, often differ from the theorized expectation of increases in water-holding capacity of the atmosphere in the warmer conditions, especially when water availability is limited. Results show an intensification of extreme precipitation and flood events over all climate regions which increases as water availability increases from dry to wet regions. Similarly, there is an increase in the intensification of extreme precipitation and flood with the seasonal cycle of water availability. The connection between extreme precipitation and flood intensity changes and spatial and seasonal water availability becomes stronger as events become less extreme. Extreme precipitation is expected to intensify with global warming over large parts of the globe as the concentration of atmospheric water vapor which supplies the water for precipitation increases in proportion to the saturation concentrations at a rate of about 6–7% per degree rise in temperature according to the thermodynamic Clausius–Clapeyron relationship. However, changes in atmospheric dynamics can weaken or reinforce the thermodynamic effect regionally and modify the extreme precipitation amplification.

Due to different interacting drivers of extreme precipitation changes, the changes are not **uniform** in space and vary by region. The scaling rate of extreme precipitation with land surface temperature is not accordingly constant. Even a negative scaling at higher temperatures has been observed in some places, which has been suggested to be a result of limited moisture availability or arid surface conditions. Recent studies have examined daily extreme precipitation changes in relation to water availability and found that 30-year averaged annual precipitation maxima aggregated over the dry and wet regions of the world is likely to increase. As rarer precipitation events are expected to be more influenced by climate change and scale with vertical moisture transport rather than horizontal moisture advection, it remains unresolved whether the relationships between extreme precipitation changes and water availability can also be detectable for rare flood-producing precipitation events. Understanding of the relationships between the climate change impact on extreme events and water availability is essential in the future-proofed planning for global change in different climate regimes to ensure a sustainable socioeconomic development at the regional scales.

Q1. What does the Clausius-Clapeyron relationship explain?

(a) It demonstrates how higher temperatures increase atmospheric pressure.

(b) It demonstrates how higher temperatures increase the amount of atmospheric water vapor for precipitation.

(c) It demonstrates how changes in ocean currents lead to changes in atmospheric moisture content.

(d) It demonstrates how changes in solar radiation lead to changes in atmospheric moisture content.

(e) None of these

(a) It decreases the intensity of extreme precipitation events and the risk of flooding.
(b) It increases the water-holding capacity of the atmosphere, leading to more frequent and intense precipitation events.
(c) It intensifies the hydrological cycle, leading to more intense extreme precipitation events and accelerate the risk of flooding.
(d) It has no effect on the hydrological cycle or extreme precipitation events.
(e) None of these

Q3. How have recent studies examined daily extreme precipitation changes in relation to water availability, and what have they found regarding 30-year averaged annual precipitation?
(a) They have found that the precipitation maxima in dry regions will decrease, while those in wet regions will increase
(b) They have found that the precipitation maxima in both dry and wet regions will increase
(c) They have found that the precipitation maxima in both dry and wet regions will decrease
(d) They have found no relationship between water availability and precipitation maxima in either dry or wet regions
(e) None of these

Q4. What is the significance of understanding the relationship between extreme events and water availability for future-proofed planning for global change?
(a) It is irrelevant to future planning, as the impact of global change is too unpredictable to plan for
(b) It is important for planning for global change only in wet regions, where extreme precipitation events and floods are more common
(c) It is important for planning for global change in all regions, as extreme precipitation have significant socio-economic impacts
(d) It is important for planning for global change only in dry regions, where water availability is more limited and extreme precipitation events are less common
(e) None of these

Q5. How do changes in atmospheric dynamics affect extreme precipitation amplification?
(a) Atmospheric dynamics can altercate the amplification of extreme precipitation
(b) Changes in atmospheric dynamics have no effect on extreme precipitation amplification
(c) Changes in atmospheric dynamics primarily amplify extreme precipitation globally
(d) Changes in atmospheric dynamics primarily weaken extreme precipitation globally.
(e) None of these

Q6. Which of the following is the antonym of 'uniform' as mentioned in the passage?
(a) reform
(b) tremble
(c) rigid
(d) diverse
(e) terminate

(b) intensify
(c) palliate
(d) assuage
(e) none of these

Directions (8-12): Six sentences are given in the passage, in which the third sentence is fixed and given in bold. Rearrange these sentences in a correct order to answer the following questions.

(P) In many circumstances, social connection is actually more helpful to your daily life than understanding the truth of a particular fact or idea.
(Q) If your model of reality is wildly different from the actual world, then you struggle to take effective actions each day.
(R) **However, truth and accuracy are not the only things that matter to the human mind, they also seem to have a deep desire to belong**.
(S) When we have to choose between the two, people often select friends and family over facts
(T) Humans need a reasonably accurate view of the world in order to survive
(U) False beliefs can be useful in a social sense even if they are not useful in a factual sense.

Q8. Which of the following sentence should be the fifth sentence after the rearrangement?
(a) P
(b) U
(c) T
(d) Q
(e) S

Q9. Which of the following sentence should be the first sentence after the rearrangement?
(a) P
(b) U
(c) T
(d) Q
(e) S

Q10. Which of the following sentence should be the fourth sentence after the rearrangement?
(a) P
(b) U
(c) T
(d) Q
(e) S

Q11. Which of the following sentence should be the sixth sentence after the rearrangement?
(a) P
(b) U
(c) T
(d) Q
(e) S

(b) U
(c) T
(d) Q
(e) S

Directions (13-17): In each sentence three blanks are given and with respect to that five words are given. Choose the rearrangement from the given options that will fit the blanks perfectly (in the same order).

Q13. Despite the _____ terrain and inclement weather, the _____ explorer persisted in his _____ to reach the summit of the mountain.
(i) timid
(ii)intrepid
(iii)precarious
(iv)restrained
(v) quest
(a) iv, ii, iii
(b) i, iii, iv
(c) iii, ii, v
(d) iv, iii, v
(e) ii, i, iv

Q14. The _____ speaker captivated the audience with her powerful _____ and cogent arguments, leaving them feeling both inspired and _____.
(i) rhetoric
(ii) plunging
(iii)intimidated
(iv) enlightened
(v) eloquent
(a) v, i, iv
(b) i, ii, v
(c) ii, iii, iv
(d) iv, iii, v
(e) iii, i, iv

Q15. As we confront the _____ challenges facing our planet, from climate change to political instability, it is _____that we work together across national and ideological divides to find common solutions and _____ a path toward a more sustainable future.
(i) trivial
(ii)forge
(iii)sparce
(iv)myriad
(v) essential

(d) iv, v, ii
(e) iii, i, iv

Q16. Despite the _____ nature of the current global economic landscape, it is imperative that we remain _____ in our commitment to sustainable development and strive to create a more _____ world for all.
(i) Delirium
(ii) equitable
(iii)impetuous
(iv) tumultuous
(v) steadfast
(a) iv, v, ii
(b) i, iii, v
(c) ii, iii, iv
(d) v, i, ii
(e) iii, i, iv

Q17. While it is true that the march of progress has brought many benefits to humanity, it is also important that we remain _____ of the potential unintended _____ of our actions and work to address them before they _____ of control.
(i) spiral out
(ii)consequences
(iii)cross out
(iv)cognizant
(v) acute
(a) iv, ii, i
(b) i, iii, v
(c) i, ii, v
(d) v, i, ii
(e) iii, i, iv

Directions (18-20): In each of the question a paragraph is given and based on the paragraph a blank is provided. Choose the best word from the given options that will fit into the blank.

Q18. Sitting in the sun, away from everyone who had done him harm in the past, he quietly listened to those who roamed by. He felt at peace in the moment, hoping it would last, but knowing the reprieve would soon come to an end. He closed his eyes, the sun beating down on face and he smiled. He smiled for the first time in as long as he could remember. The protagonist experiences _____ emotion.
(a) resentful
(b) content
(c) anxious
(d) despairing
(e) exasperated

taunting him day after day had started to play with his mind. He didn't understand why he couldn't even type a single word, just one to begin the process and build from there. And yet, he already knew that the eight hours he was prepared to sit in front of his computer today would end with the screen remaining blank. What might be a possible reason for the writer's ongoing struggle with writer's block?

(a) Perfectionism
(b) Inspiration
(c) Procrastination
(d) Overconfidence
(e) Exhaustion

Q20. If you can imagine a furry humanoid seven feet tall, with the face of an intelligent gorilla and the braincase of a man, you'll have a rough idea of what they looked like -- except for their teeth. The canines would have fitted better in the face of a tiger, and showed at the corners of their wide, thin-lipped mouths. The description gives the expression of _____.

(a) indignant
(b) jingoism
(c) apoplectic
(d) feeble
(e) ferocity

Directions (21-25): Read the given passage to answer the following questions

A long-held view of the history of the English colonies that became the United States has been that England's policy toward these colonies before 1763 was dictated by commercial interests and that a change to a more imperial policy, dominated by expansionist militarist objectives, generated the tensions that ultimately led to the American Revolution. In a recent study, Stephen Saunders Webb has presented a **formidable** challenge to this view. According to Webb, England already had a military imperial policy for more than a century before the American Revolution. He sees Charles II, the English monarch between 1660 and 1685, as the proper successor of the Tudor monarchs of the sixteenth century and of Oliver Cromwell, all of whom were bent on extending centralized executive power over England's possessions through the use of what Webb calls "garrison government." Garrison government allowed the colonists a legislative assembly, but real authority, in Webb's view, belonged to the colonial governor, who was appointed by the king and supported by the "garrison," that is, by the local contingent of English troops under the colonial governor's command.

According to Webb, the purpose of garrison government was to provide military support for a royal policy designed to limit the power of the upper classes in the American colonies. Webb argues that the colonial legislative assemblies represented the interests not of the common people but of the colonial upper classes, a coalition of merchants and nobility who favored self-rule and sought to elevate legislative authority at the expense of the executive. It was, according to Webb, the colonial governors who favored the small farmer, opposed the plantation system, and tried through taxation to break up large holdings of land. Backed by the military presence of the garrison, these governors tried to prevent the gentry and merchants, allied in the colonial assemblies, from transforming colonial America into a capitalistic oligarchy.

(a) The governors used military force to suppress the colonial assemblies and maintain control over legislative affairs in the colonies.
(b) The governors imposed heavy taxes in order to weaken the power and prevent the establishment of a capitalistic oligarch.
(c) The governors opposed the plantation system and break up large holdings of land by taxation to reduce the power of the colonial Americans.
(d) The governors distributed lands of capitalistic oligarchs among the common people.
(e) None of these

Q22. What was the purpose of garrison government, and how did it relate to the interests of the colonial upper classes in America?
(a) The purpose was to provide military support for a royal policy designed to increase the power of the colonial upper classes in America.
(b) It aimed to offer military assistance to a monarchic strategy intended to restrict the influence of the wealthy classes in the American colonies.
(c) It allowed the colonial upper classes to have more control over legislative affairs in America.
(d) The purpose was to establish a democratic system of government in the colonies.
(e) None of these

Q23. How does Webb view the role of colonial legislative assemblies in the American colonies?
(a) As a means of promoting self-rule among the common people
(b) As a way for the upper classes to elevate legislative authority over the executive
(c) As a tool of the plantation system to maintain control over land holdings
(d) As a way for the colonial governors to limit the power of the garrison
(e) None of these

Q24. What role did taxation play in the conflict between colonial governors and the colonial upper classes, according to Webb?
(a) Taxation was a means of supporting the plantation system in the colonies
(b) Taxation was a way for the colonial governors to maintain control over the colonial assemblies
(c) Taxation was a means of breaking up large land holdings and supporting small farmers
(d) Taxation played no role in the conflict between colonial governors and the colonial upper classes
(e) None of these

Q25. Which of the following words is the synonym of 'formidable' as highlighted in the given passage?
(a) dreadful
(b) daunting
(c) petrifying
(d) ominous
(e) All of these

expressed in the statement sentences

Q26.
(A) **The Russians were so used to victories that on receiving news of the defeat some would simply not believe it**
(B) **Some sought some extraordinary explanation of so strange an event**.
(I) At the time…..while…
(II)As some sought some…
(III)The Russian were so……yet
(a) only (I)
(b) Only (I) and (III)
(c) only (II)
(d) only (II) and (III)
(e) only (III)

Q27. (A) The government has introduced new policies to promote renewable energy.
(B) **Some critics have raised concerns about the effectiveness of these policies.**
(I) Despite the concerns raised by some critics,…
(II) Although the government has introduced new policies to promote renewable energy,…
(III) The government's introduction of new policies to promote renewable energy has been met with criticism from…
(a) Only (I) and (III)
(b) Only (II) and (III)
(c) only (I)
(d) only (II)
(e) Only (III)

Directions (28-30): In each question, four words are given in bold which may be wrongly placed also one of the highlighted words need to be changed. Choose the rearrangement from the given options which needed between these words and also the replacement required, if any.

Q28. Despite the **cognizance (A)** posed by cultural differences, **achieved (B)** communication in the workplace can be **effective (C)** through cultural **challenges (D)** training, active listening, and open-mindedness.
(a) BDCA, no replacement needed
(b) No rearrangement needed, B- withheld
(c) DCBA, A-competence
(d) ACDB, B-trained
(e) CADB, A- prioritized

(a) ACDB, A- publish
(b) BCAD, A-stirred
(c) No rearrangement needed, A-penetrable
(d) DCBA, D-revolutionized
(e) ADCB, B- incinerated

Q30. Healthcare professionals face complex **ethical** (A)dilemmas, such as balancing patient **autonomy** (B)with the **obligation** (C)to act in the patient's best interest, **deliberating** (D)cultural differences in medical decision-making, and managing conflicts of interest.
(a) CDAB, C- penetration
(b) ADCB, A-psychological
(c) No rearrangement needed, D-navigating
(d) CDBA, no replacement needed
(e) ACBD, B- righteous

Directions (31-35): In the following questions, a paragraph is divided into five parts with one of the parts been omitted. You must choose the most suitable alternative among the five options that should fill the omitted part making the paragraph grammatically correct and contextually meaningful. If none of the given alternatives is appropriate to fill the blank, choose option (E) i.e. "none of these" as your answer choice.

Q31. The rise of social media has transformed the way people interact (A)/ and share information with one another (B)/. It has also given rise to new forms of online harassment and bullying (C)/_____ (D)/. Some experts are calling for greater regulation of social media platforms (E).
(a) that have the potential to shape public opinion
(b) despite the benefits of increased connectivity
(c) including hate speech and cyberstalking
(d) while others argue that this would infringe on free speech
(e) None of these

Q32. The recent discovery of a new species of fish in a remote river (A)/ has sparked excitement among biologists and conservationists (B)/. It is estimated that fewer than 1,000 individuals of this species exist (C)/_____ (D)/. Efforts are underway to protect their habitat and prevent their extinction (E).
(a) making it one of the rarest fish in the world
(b) which could have important implications for medical research
(c) despite the challenges posed by the region's rugged terrain
(d) with the hope of creating a new ecotourism destination
(e) None of these

alternative sources of these critical minerals (E).
(a) which are essential components in EV batteries
(b) despite the higher costs associated with EVs
(c) with some experts warning of a potential shortage
(d) while others predict a rapid increase in production capacity
(e) None of these

Q34. The school board is considering a proposal to (A)/ implement a new grading system (B)/ that takes into account students' effort and participation (C)/_____ (D)/. This would provide a more comprehensive evaluation of student performance (E).
(a) in order to address concerns about grade inflation
(b) which could motivate students to engage more actively in class
(c) despite opposition from some teachers and parents
(d) with the aim of increasing transparency and fairness
(e) None of these

Q35. The government has announced plans to build a new highway connecting (A)/ the capital city to several major ports (B)/. The project is expected to create thousands of jobs (C)/_____ (D)/. However, environmentalists are concerned about the impact on local ecosystems (E).
(a) and boost economic growth in the region
(b) which will reduce traffic congestion
(c) that could potentially harm endangered species
(d) while improving access to international markets
(e) None of these

Directions (36-40): Two columns are given with few sentences/phrases in each which are grammatically correct and meaningful. Connect them in the best possible way without changing the intended meaning. Choose the best possible combination as your answer accordingly from the options to form a correct, coherent sentence.

Q36. COLUMN (I)
(A) Bulldozers and excavators were used to
(B) Company has abundant experienced staff
(C) The procedure for cleaning these drains begins with
COLUMN (II)
(D) to complete the project in given time frame
(E) past experiences show that the monsoon reaches Delhi
(F) flatten the illegally constructed buildings
(a) Only (A)-(D) and (C)-(F)
(b) Only (B)-(F)
(c) Both (A)-(F) and (B)-(D)
(d) Only (A)-(D)
(e) None of these

(B) The tractor-trolleys don't have registration numbers on them
(C) The park for the children has been encroached upon by locals
COLUMN (II)
(D) causing difficulty to them in playing
(E) which makes it harder to track them
(F) with heaps of rubble lying on both sides
(a) Only (B)-(E) and (C)-(D)
(b) Only (B)-(F)
(c) Both (B)-(D) and (C)-(F)
(d) Only (A)-(D)
(e) None of these

Q38. COLUMN (I)
(A) Curiosity over the candidates to be selected by the
(B) But I did not fall for this trap as I did not want
(C) Chief Minister had consented to be the chief guest and
COLUMN (II)
(D) because you want to keep it alive for every time
(E) the awardees belong to four southern States
(F) inaugurate the annual concerts of the Academy
(a) Only (B)-(E) and (C)-(D)
(b) Only (C)-(F)
(c) Both (B)-(D) and (C)-(F)
(d) Only (A)-(D)
(e) None of these

Q39. COLUMN (I)
(A) Around half-a-million workers directly involved in fishing
(B) The State have been following policies that would
(C) The Government of India announced a sudden ban
COLUMN (II)
(D) affect the current social and economic conditions in the State.
(E) activities in the marine and inland fisheries sector
(F) the community from its traditional means of earning
(a) Only (B)-(E) and (C)-(D)
(b) Only (C)-(F)
(c) Both (B)-(D) and (C)-(F)
(d) Only (A)-(E)
(e) None of these

(C) The issue has been debated in beach sports circles for several

COLUMN (II)

(D) be met through world trade and the Chicago futures market.

(E) that food stocks be run down in many countries

(F) and has been the backbone of food policy in India.

(a) Only (B)-(E) and (C)-(D)

(b) Only (A)-(F) and (B)- (E)

(c) Both (B)-(D) and (C)-(F)

(d) Only (A)-(E)

(e) None of these

Directions (41-42): Study the following information carefully and answer the questions given below:

S $ T means S is the wife of T

S # T means S is the son of T

S * T means S is the brother of T

S + T means S is the daughter of T

S ? T means S is the sister of T

Q41. If G * B + D $ E # C $ F then how is G related to F?

(a) Son

(b) Niece

(c) Granddaughter

(d) Grandson

(e) None of these

Q42. If R is the grandmother of V, then which of the following is true?

(a) V + U * S $ R # T * Q

(b) S + Q $ U * V + R $ T

(c) V + Q $ U * S + R $ T

(d) U * V $ Q # R $ T

(e) None of these

Directions (43-47): A number arrangement machine when given an input line of numbers, rearranges them following a particular rule in each step. The following is an example of input and its rearrangement.

Input: 8953 6954 5327 7785 4736 3952

Step I: 3952 4736 5327 6954 7785 8953

Step II: 2359 3467 2357 4569 5778 3589

Step III: 645 1242 635 2054 3556 1572

Step IV: 120 16 90 0 450 70

Step V: 0 16 70 90 120 450

Step V is the last step of the above rearrangement. Based on this, rearrange the given input and answer the questions based on it:

Input: 6385 9557 5738 3476 2454 8843

(c) Four
(d) Three
(e) Two

Q44. What is the difference between 3rd smallest number in step II and 2nd number from left end in step I?
(a) 12
(b) 9
(c) 102
(d) 21
(e) None of these

Q45. Which of the following will be step IV?
(a) 16 16 150 160 48 180
(b) 0 16 48 150 160 180
(c) 0 16 150 160 48 180
(d) None of these
(e) 16 32 160 72 110 90

Q46. How many steps are required to complete the rearrangement?
(a) Seven
(b) Six
(c) Four
(d) Five
(e) None of these

Q47. Which is the 4th number from right end in last step?
(a) 160
(b) 150
(c) 48
(d) 16
(e) None of these

Directions (48-52): Read the given information carefully and answer the questions related to it:
Eight persons A, B, D, K, L, S, T and N live (not necessarily in the same order as given) in two flats P and Q in a building of four floors where floors are numbered as 1 to 4 from bottom to top. Each person lives in one flat also they play different sports. Flat P is in west of flat Q.
K lives two floors above T and both live in different flats. The one who likes hockey does not live just above and just below of K's floor. The one who likes baseball live just north-east of the one who likes hockey. The one who likes cricket lives east of N whose floor is above K's floor. L and D live on same floor but below S's floor who does not like cricket. The one who likes archery lives north of the one who likes boxing. More than one floor gap between the floors of the one who likes snooker and the one who likes archery. D and B live in same flat. B lives just above the flat of the one who likes judo. A and the one who likes tennis lives on adjacent floors but not in different flats.

(c) The one who likes snooker lives in flat Q
(d) All are true
(e) One floor gap between D and the one who likes cricket

Q49. The one who likes boxing lives in flat __ on floor ___.
(a) Flat Q, floor 3
(b) Flat P, floor 2
(c) Flat Q, floor 1
(d) None of these
(e) Flat P, floor 3

Q50. Who among the following lives on the same floor of S?
(a) The one who lives south-east of L
(b) The one who lives in flat P on floor 3
(c) The one who likes tennis
(d) The one who lives on topmost floor
(e) The one who does not live in the same flat of A

Q51. Four of the following five are similar in a certain way and forms a group, who among the following is dissimilar to the group?
(a) B
(b) S
(c) D
(d) T
(e) K

Q52. Which of the following is/are correct combination?
(a) Floor 1 – A - Snooker
(b) Flat Q – L - Baseball
(c) Floor 3 – S – Judo
(d) Flat P – B - Cricket
(e) Both (c) and (d)

Directions (53-55): Maharashtra home minister Anil Deshmukh resigned on Monday, hours after the Bombay high court ordered a federal probe by CBI into allegations of extortion against him to extort Rs 100 crore from bars and restaurants. After resigning, Deshmukh took a flight to Delhi where he met Congress leader and prominent lawyer Abhishek Singhvi. He was also likely to meet Kapil Sibal, another top legal counsel, and discuss the merits of approaching the Supreme Court against the HC decision.

Q53. Which of the following can be hypothesized from the above statement?
(a) Mr. kapil Sibal and Abhishek Singhvi is a hotshot lawyer who had fight high profile cases and succeed in it.
(b) Supreme court will announce life imprisonment to Mr. Deshmukh after investigation by CBI.
(c) There will be political attack by opposition demanding to quit Chief Minister of Maharashtra.
(d) Both (B) and (C)
(e) Both (A) and (C)

(c) Opposition will get stronger and they will fight next election more aggressively in the state.
(d) Both (A) and (C)
(e) Both (B) and (C)

Q55. Which of the following can be concluded from the issue stated in the above statement?
(a) New Home minister will be of congress party and in reward Mr Kapil sibal of congress will fight case for Mr. Deshmukh.
(b) Ex Home Minister of Maharashtra has asked to collect Rs 100 crore from bar and restaurants.
(c) After judgement of state High Court, accused can approach Supreme Court.
(d) Both (B) and (C)
(e) Both (A) and (B)

Directions (56-58): Study the following information carefully and answer the questions given below.
"P@Q" means "P is greater than Q".
"P%Q" means "P is not greater than Q".
"P&Q" means "P is not less than Q".
"P$Q" means "P is neither greater nor less than Q".
"P#Q" means "P is less than Q".

Q56. Statement:
M@T$U%G#Z$N#X&Y$O
Conclusions:
I. M@N
II. Z@O
III. T%N
(a) Only III is true
(b) Both II and III are true
(c) Only I is true
(d) Either I or III is true
(e) None is true

Q57. Statements:
Z@I$M#G%X, G#U$R&C, T@H$X
Conclusions:
I. M@C
II. H@I
III. C&G
(a) Only II is true
(b) Both II and III are true
(c) Only I is true
(d) Either I or III is true
(e) None is true

I. R#D
II. N@H
III. E#O
(a) Only II is true
(b) Both II and III are true
(c) Only I is true
(d) Either I or III is true
(e) None is true

Directions (59-63): Study the following information carefully and answer the questions given below.

Eleven persons A, E, G, H, J, M, O, R, S, U and X sit around a hexagonal table but not necessarily in the same order. Six persons sit at the corners and face outside of the table while six persons sit at the middle of the sides and face inside of the table. One of the seats is vacant.

One person sits between M and X who sits in the middle of the table. M sits fifth to the left of R and sits adjacent to the vacant seat. U neither sits adjacent to X nor R. E sits third to the right of U. Only one person sits between U and H who neither sits opposite to X nor sits adjacent to X. The number of persons sitting between H and R is one more than the number of persons sitting between A and J when counted from the right of H and the left of A. Only two persons sit between S and A who sits adjacent to R. Only two persons sit between J and G.

Q59. Who among the following person sits second to the right of O?
(a) The one who sits second to the left of vacant seat
(b) E
(c) The one who sits immediate left of S
(d) A
(e) None of these

Q60. Who among the following pair of persons are immediate neighbours?
I. RG
II. OE
III. AU
(a) Only I
(b) Only I and III
(c) Only III
(d) Only I and II
(e) All I, II, and III

Q61. Which of the following statement(s) is/are true with respect to the final arrangement?
I. Three persons sit between E and G when counted from the left of G.
II. A sits third to the right of X.
III. O sits to the immediate right of U.
(a) Only I
(b) Only I and III
(c) Only III
(d) Only I and II
(e) All I, II, and III

(c) The one who sits opposite to U
(d) H
(e) The one who sits third to the right of O

Q63. Four of the following five are alike in a certain way as per the given arrangement and hence form a group, Find the one who doesn't belong to that group?
(a) O
(b) The one who sits immediate right of R
(c) E
(d) The one who sits third to the left of R
(e) H

Directions (64-68): Each question given below, consists of a question and two statements. You have to decide whether the data provided in the statements are sufficient to answer the question. Read the given statements and given answer.

Q64. In which direction is G with respect to C?
I. A is west of B. B is north of C. C is west of D. D is south of F. G is west of F and north of B.
II. B is north of A. C is east of A. D is south of C. F is west of D. G is north of F and west of A.
(a) If data in statement I alone is sufficient to answer
(b) If data in statement II alone is sufficient to answer
(c) If data either in statement I alone or in statement II alone is sufficient to answer
(d) If data neither in statement I alone nor in statement II alone is sufficient to answer
(e) If data in both statement I and II together are sufficient to answer

Q65. How many children are sitting in the row?
I. Five persons are sitting between A and B. G is sitting second to the left of B. N is sitting exactly in the middle of A and G.
II. Even number of persons are sitting in the row.
(a) If data in statement I alone is sufficient to answer
(b) If data in statement II alone is sufficient to answer
(c) If data either in statement I alone or in statement II alone is sufficient to answer
(d) If data neither in statement I alone nor in statement II alone is sufficient to answer
(e) If data in both statement I and II together are sufficient to answer

Q66. What is the relation of S with respect to K?
I. K is child of B's only sibling. T is brother of H's mother who is not P.
II. D is son-in-law of P whose son is B. H is mother-in-law of K's wife. S is elder to C.
(a) If data in statement I alone is sufficient to answer
(b) If data in statement II alone is sufficient to answer
(c) If data either in statement I alone or in statement II alone is sufficient to answer
(d) If data neither in statement I alone nor in statement II alone is sufficient to answer
(e) If data in both statement I and II together are sufficient to answer

II. H is placed two boxes above C and just below D. F is placed five boxes below D.
(a) If data in statement I alone is sufficient to answer
(b) If data in statement II alone is sufficient to answer
(c) If data either in statement I alone or in statement II alone is sufficient to answer
(d) If data neither in statement I alone nor in statement II alone is sufficient to answer
(e) If data in both statement I and II together are sufficient to answer

Q68. Eight persons sit around a circular table facing outside. How many persons sit between B and V?
I. Three persons sit between V and T. K is not the neighbor of T and V. R sits fifth to the left of K.
II. B sits third to the right of K. T sits opposite to K. one person sits between T and R. V sits immediate right of R.
(a) If data in statement I alone is sufficient to answer
(b) If data in statement II alone is sufficient to answer
(c) If data either in statement I alone or in statement II alone is sufficient to answer
(d) If data neither in statement I alone nor in statement II alone is sufficient to answer
(e) If data in both statement I and II together are sufficient to answer

Directions (69-73): Study the following information carefully and answer the below questions.
Seven persons – H, I, J, K, L, M and N attend the exam one by one starting from 9.30 AM to 2.15 PM. Each shift of the exam was scheduled for either 30 min or 45 min. There were two breaks of 15min each. Exam duration of the persons who attend the exam immediate before of after the break is not same. Also, both the breaks are not adjacent to each other. Each person likes different sports viz. – Football, Cricket, Hockey, Basketball, Softball, Rugby and Soccer. All the information is not necessary in the same order.
Only three persons attend the exam before the one who likes Soccer. J attends the exam immediately after the one who likes Soccer and J's exam ended at 12.45 PM. N attends the exam 90 minutes after the starting time of J's exam. The one who likes Cricket attends the exam two persons after L. The one who likes Cricket attends the exam before both breaks. Either L or the one who likes Softball attends the exam of 45 minutes. Neither J nor K likes Cricket. Two persons attend the exam between K and the one who likes Basketball. The number of persons attend the exam before K is the same as the number of persons attend the exam after the one who likes Softball. I attends the exam for 30 minutes. The one who likes Softball attends the exam 90 minutes after the starting time of M's exam who attend the exam of 45 minutes. The one who likes Rugby attends the exam 75 minutes before the starting time of I's exam. K doesn't like Football whose exam does not start immediately after the break.

Q69. Who among the following person likes Basketball?
(a) J
(b) N
(c) H
(d) K
(e) None of these

(c) Two
(d) One
(e) Either one or two

Q71. Who among the following person attends at 11.30AM-12:15PM?
(a) The one who likes Basketball
(b) None of these
(c) K
(d) The one who likes Rugby
(e) M

Q72. Who among the following person attend the exam just after 2nd break?
(a) I
(b) M
(c) J
(d) H
(e) The one who likes football

Q73. Four of the following five are similar in a certain pattern and related to a group, who among the following does not belong to the group?
(a) L
(b) I
(c) J
(d) N
(e) H

Directions (74-76): Study the following information carefully and answer the questions given below.
Mr. A started walking towards west for 8m from point B and reached point C. Then he takes two consecutive right turns and walks for 5m and 4m to reach point D and E respectively. From point E he walks 10m towards north to reach point F and then he turns to his right and walks for 4m to reach point G. Mr. B started walking towards south from point H for 10m and reached point I. Then he turns left and walks for 5m to reach point J. Then he turns left and walks for 15m to reach point K. Then, he turns towards west and walks for 15m to reach point L. Then finally he turns to his right and walks for 10m to reach point G.

Q74. What is the total distance covered by Mr. B?
(a) 50m
(b) 55m
(c) 45m
(d) 40m
(e) Can't be determined

(b) FG
(c) LK
(d) BZ
(e) None of these

Q76. If point A is the mid-point of point J and point K, then what is the direction of point C with respect to point A?
(a) South-west
(b) North-west
(c) North-east
(d) North
(e) West

Q77. Owner of Restaurant A has decided to decrease the price of Full Thali to attract the customers while the Owner of Restaurant B will keep the price unchanged. Both the owner has same motive to increase the customer base and increase their income.
Which of the following can be hypothesized from the above statement?
(I) All the Customer of Restaurant B will move to Restaurant A to avail the benefit of price slashed.
(II) Some of the customer will think quality of Restaurant A is not as good as Restaurant B.
(III) Infrastructure and kitchen of Restaurant B is more modern and spacious.
(a) Only I and II
(b) Only III
(c) Only II and III
(d) Only I and III
(e) None of them

Directions (78-80): In each of the questions below, some statements are given followed by some conclusions. You have to take the given statements to be true even if they seem to be at variance from commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.

Q78. Statements:
Some pen is pencil
All pencil is register
No register is book
Some book is paper
Conclusions:
I. Some pencil is book
II. All pen being paper is a possibility
III. Some pencil is paper
(a) If only conclusion I follows
(b) If only conclusion II follows
(c) If only conclusion III follows
(d) If either conclusion I or II follows
(e) If conclusions I and either conclusion II or III follows

Only a few metro is bus
All bus is tempo
Conclusions:
I. Some fan being Tempo is a possibility
II. All metro is bus
III. Some train is bus
(a) If only conclusion I follows
(b) If only conclusion II follows
(c) If only conclusion III follows
(d) If either conclusion I or II follows
(e) If conclusions I and either conclusion II or III follows

Q80. Statements:
All dell is lenovo
Some lenovo is HP
No HP is sony
Only a few sony is LG
Conclusions:
I. Some HP is LG
II. All Dell is sony
III. Some lenovo being LG is a possibility
(a) If only conclusion I follows
(b) If only conclusion II follows
(c) If only conclusion III follows
(d) If either conclusion I or II follows
(e) If conclusions I and either conclusion II or III follows

Directions (81-85): Read the given information carefully and answer the questions based on it:
Sixteen cubes named A to H are placed in the form of a 4x4 matrix. The cubes placed at four corners are of different colors i.e., green, blue, white and red. The information in not necessarily used in the same sequence as given.
Condition: Consecutive alphabetical named cubes are neither placed in same row nor in same column. Ex – A and C are not placed in the row and column of B.
∗ A is placed in north of F which is placed in the row of white cube.
∗ P is placed in immediate east of F and both are not painted with any color.
∗ Number of cubes placed above A is same as below K in same column.
∗ Green cube is placed in north-west of red cube.
∗ B is neither placed in the column of green cube nor in the row of K.
∗ B and N are placed in adjacent rows.
∗ N is not placed in the row of A.
∗ Number of cubes placed west of N is same as east of O which is placed immediate left of G.
∗ I is placed just south-west of O.
∗ H and B are placed in same column.
∗ M is placed below C in same column but not in adjacent rows.
∗ G is not placed in column of D.

(b) B
(c) M
(d) J
(e) C

Q82. Which of the following cube is placed just below of blue cube?
(a) Cube which is placed east of L
(b) Cube which is placed south of E
(c) Cube which is placed 3rd to the right of C
(d) Cube which is placed in the row of M
(e) Cube which is placed south-west of H

Q83. Which of the following statement(s) is/are true?
(a) H is placed below B
(b) L and O are in same row
(c) M and blue cube are in same column
(d) B is painted with red color
(e) All are true

Q84. If C is related to E, D is related to B, in the same manner, __ is related to ___.
(a) O-M
(b) J-P
(c) A-F
(d) G-L
(e) N-P

Q85. Which cube is placed south-west of J?
(a) L
(b) E
(c) M
(d) N
(e) All of the given

Directions (86-87): With an increased variability of monsoons and rapidly depleting groundwater tables, large parts of India are reeling under water stress and drought like situation. Here, one intervention that has been tried out in various States, and perhaps needs to be taken up on a bigger scale, is the construction of farm ponds, it can be cost-effective structures that transform rural livelihoods. They can help enhance water control, contribute to agriculture intensification and boost farm incomes.

Q86. Which of the following can diminish the importance farm ponds?
(a) Farm Ponds is cost effective and it transform rural livelihoods.
(b) It will help to enhance water control, agricultural reforms and can boost farmers' incomes.
(c) It can used as intermediate storage which may leads to evaporation loss.
(d) Both (a) & (b)
(e) Both (b) & (c)

(c) Construction of farm ponds hamper the agricultural modification & rural subsistence.
(d) Farm ponds can be a viable investment option
(e) None of these.

Directions (88-90): Study the following information carefully and answer the questions given below.

Seven persons are of different ages. U is older than W but younger than V and Q who is younger than V. T is older than R but younger than U and S who is younger than U. As many persons older than Q as younger than W. The age of the fourth oldest person is 60 years.

Q88. How many persons are younger than Q?
(a) Three
(b) Four
(c) More than Five
(d) Five
(e) Two

Q89. If the age of V is 80 years, then what may be the age of U?
(a) 50 years
(b) 65 years
(c) 81 years
(d) 45 years
(e) 49 years

Q90. What will be the age of T, if the age of T is twice that of R who is 1/4th of the age of S?
(a) 30 years
(b) 36 years
(c) 40 years
(d) 24 years
(e) 32 years

Q91. In which of the following series value of X is not satisfied properly?

Series I: 7 14 X 37 53 72
Series II: 48 X 26 53 213 1705
Series III: 8 15 X 35 48 63

Value of X is 24.
(a) only I and III
(b) only III
(c) only I
(d) only II
(e) None of these

Q92. If 'Z + 4 = X – 27', then which of the following is true about value of 'Z'?
I: Z is a perfect square
II: Z is an odd number
III: Z is an even number
(a) only I and II
(b) only III
(c) only I
(d) only II
(e) None of these

Q93. Find the value of P?
(a) 112
(b) 924
(c) 926
(d) 954
(e) 901

Q94. Given, $A^5 = 32$, $B^6 = 64$
Quantity I: Value of A
Quantity II: Value of B
(a) Quantity I > Quantity II
(b) Quantity I < Quantity II
(c) Quantity I ≥ Quantity II
(d) Quantity I ≤ Quantity II
(e) Quantity I = Quantity II or no relation

Directions (95-97): The following questions are accompanied by two statements (I) and statement (II). You have to determine which statements(s) is/are sufficient/necessary to answer the questions.

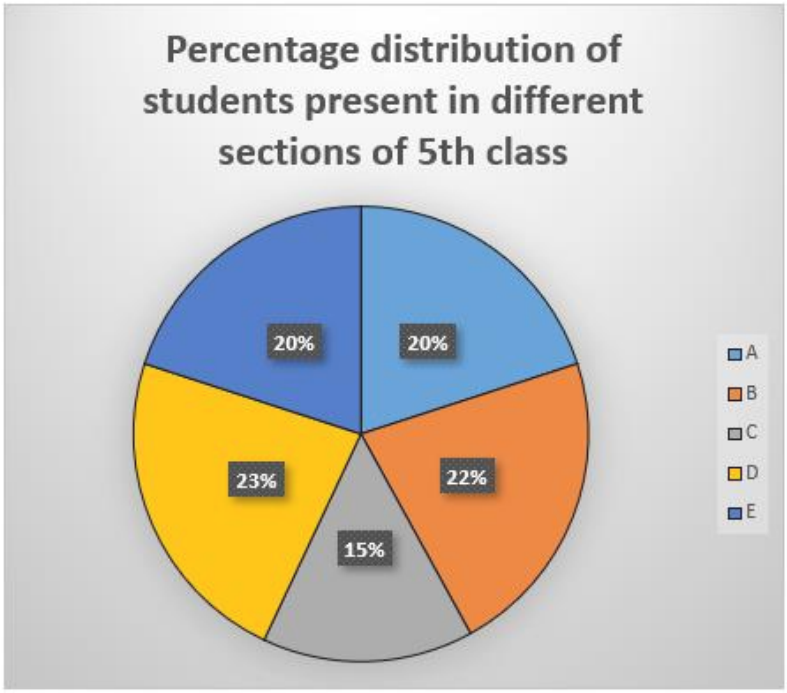
Q95. Ratio of present age of P and Q is 6: 7 and present age of S is five years more than R. Find the present age of R?
Statement I: Sum of the age of Q and R is 34 years.
Statement II: Sum of the age of P, Q, R and S is 71. Age of R is 6 years more than Q.
(a) Neither statement (I) nor statement (II) by itself is sufficient to answer the question.
(b) Statement (II) alone is sufficient to answer the question but statement (I) alone is not sufficient to answer the question.
(c) Either statement (I) or statement (II) by itself is sufficient to answer the question.
(d) Both the statements taken together are necessary to answer the questions, but neither of the statements alone is sufficient to answer the question.
(e) Statement (I) alone is sufficient to answer the question but statement (II) alone is not sufficient to answer the questions

Q96. The marked price of articles A and B are in the ratio of 4: 3. The discount percentage given on these two articles are 10% and 20% respectively. What is the cost price of A?
Statement I: Discount percentage given on article A would have been 20%, then cost price of article A is Rs.50 more than that of article B.

(b) Statement (II) alone is sufficient to answer the question but statement (I) alone is not sufficient to answer the question.
(c) Either statement (I) or statement (II) by itself is sufficient to answer the question.
(d) Both the statements taken together are necessary to answer the questions, but neither of the statements alone is sufficient to answer the question.
(e) Statement (I) alone is sufficient to answer the question but statement (II) alone is not sufficient to answer the questions

Q97. The average marks of Hindi, English, Mathematics and Science is 35 and maximum marks a student can obtain in each subject is 50. What is the marks obtained by the student in science?
Statement I: The ratio of average marks of Hindi and English together and Mathematics and science together is 2:1.
Statement II: The total marks of English, mathematics and Science is 2/3 of total maximum marks obtained in these 3 subjects.
(a) Neither statement (I) nor statement (II) by itself is sufficient to answer the question.
(b) Statement (II) alone is sufficient to answer the question but statement (I) alone is not sufficient to answer the question.
(c) Either statement (I) or statement (II) by itself is sufficient to answer the question.
(d) Both the statements taken together are necessary to answer the questions, but neither of the statements alone is sufficient to answer the question.
(e) Statement (I) alone is sufficient to answer the question but statement (II) alone is not sufficient to answer the questions

Directions (98-102): The pie chart given below shows the percentage distribution of students present in different sections of 5th class of a school on Monday (No section has full attendance). Read the pie chart carefully and answer the questions.



Note: 1. Difference between the number of students present in A and B is 4
2. In each of sections A, B, C, D and E the total number of students (Present + absent) is less than 51.

was 2.5. Find the absent girl students in section C is what percent of the total present students in section A?

(a) 11%
(b) 18%
(c) 15%
(d) 19%
(e) 21%

Q99. If five students who were present in section A were shifted to section E, then find is the sum of maximum and minimum possible total (present+ absent) students in section E?

(a) 96
(b) 98
(c) 91
(d) 99
(e) 81

Q100. Find the ratio of maximum possible value of absent student in section B to minimum possible value of absent students in section C?

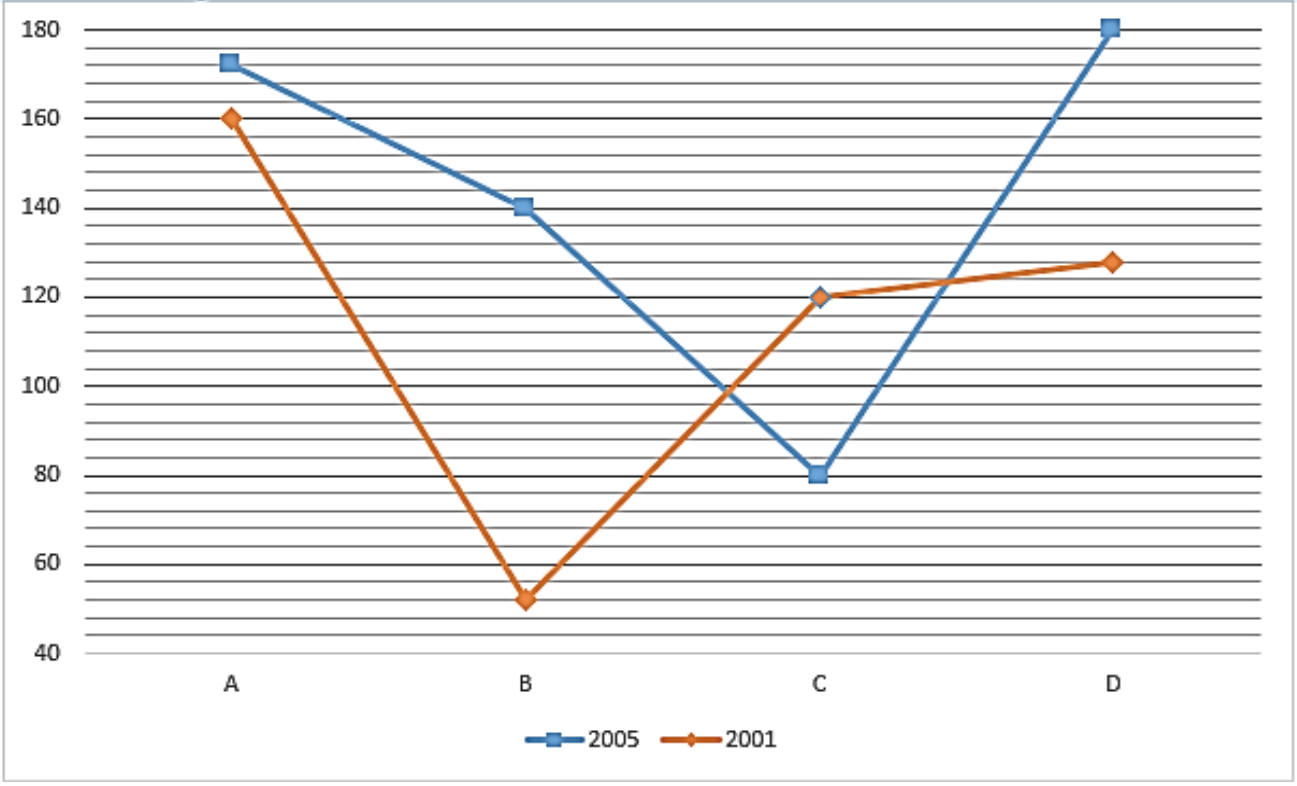
(a) 1:5
(b) 1:8
(c) 1:1
(d) 6:1
(e) 2:1

Q101. What is the difference between the maximum possible value of absent student in section D and maximum possible value of students (present + absent) in section E?

(a) 50
(b) 25
(c) 40
(d) 45
(e) 46

Q102. If the value of absent students in Section C is greater than 7 and the total students (Present + absent) in school C is a square number, then find the absent students in section C.

(a) 15
(b) 18
(c) 11
(d) 19
(e) 21



Q103. In gym B, percentage increase of people from 2001 to 2003 is X%, from 2003 to 2004 is 20% and from 2004 to 2005 is 25%, then find the (approximate) value of X.
(a) 47.5%
(b) 65.5%
(c) 79.5%
(d) 35.5%
(e) 70%

Q104. In gym B, equal number of people joined in 2002, 2003 and 2004 and from 2001 to 2005 only 5 people left the gym, then find the number of people who joined in 2002. No other people left or join in any year other than the given data.
(a) 15
(b) 18
(c) 11
(d) 31
(e) 21

Q105. In 2005, total number of males in gym A and D together is 130 and the total number of males in gym A is 3/4 of the total people in gym B. Find the total number of males in gym D in 2005 is what percentage of total number of people in gym C in 2005?
(a) 37.5%
(b) 35.5%
(c) 31.25%
(d) 33.7%
(e) 30%

2002 to total people in gym C in 2005.
(a) 5:3
(b) 7:4
(c) 7:2
(d) 3:5
(e) 7:6

Q107. In 2003, number of people joined gym A is 33.33% more than the previous year and total number of people in gym A in 2003 is 230. Find the number of people joined in 2002 in gym A is what percentage of the difference between number of people in gym C in 2001 to 2005?
(a) 50%
(b) 85%
(c) 80%
(d) 70%
(e) 75%

Directions (108-112): The table given below shows the data of total funds of four different companies and percentage of funds donated by each company to three different NGOs.

Companies	Total fund (Rs.)	% donated to NGO A	% donated to NGO B	% donated to NGO C
P	12000	32%		24%
Q		64%	16%	
R		33%		27%
S	13500		52%	

Note: 1. Sum of Percentage distribution in each company is 100%
2. Ratio between total funds of company P and R is 4:5.
3. Fund donated to NGO C by Q is Rs.2000

Q108. If the fund donated to NGO B by R distributed to orphan child and elder people in 1:2, then find the difference between the fund donated to elder people of NGO B and the total fund donated by Q.
(a) Rs.6000
(b) Rs.6100
(c) Rs.4000
(d) Rs.4800
(e) Rs.4500

Q109. The total fund of company Q is increased by X% and the sum of fund donated to all NGO's is increased to Rs.2000. Find the value of X.
(a) 25
(b) 15
(c) 20
(d) 10
(e) 16

were for child development, then find the ratio between fund used for child development from NGO B by company R to fund donated by company Q to NGO C.

(a) 12:5
(b) 17:4
(c) 17:2
(d) 5:17
(e) 7:6

Q111. If the fund donated by company S in NGO A and NGO C is in the ratio of 4:5, then find the fund donated to NGO C by company S was what percentage of total fund of company S?

(a) 37.5%
(b) 35.5%
(c) 26.66%
(d) 36.66%
(e) 20.66%

Q112. Company T has denoted 30% more fund than company R and company T donated 30% and 25% in NGO A and B respectively. Find the difference between fund donated to NGO C by company T and the fund donated by company Q to NGO A.

(a) Rs.2450
(b) Rs.2875
(c) Rs.2775
(d) Rs.2375
(e) Rs.2870

Q113. There are six consecutive odd numbers. Product of first and second numbers is 483. Find the average of all the numbers?

(a) 22
(b) 24
(c) 26
(d) 28
(e) 30

Q114.

Volume of a cylinder is 3696 cm^3 and the diameter of the cylinder is equal to the side of a square whose perimeter is 112 cm. Find the curved surface area of the cylinder? (in cm^2)

(a) 652
(b) 424
(c) 526
(d) 528
(e) 530

will be 0.5. Find the sum of age of A two years hence and present age of B?
(a) 45 years
(b) 48 years
(c) 46 years
(d) 38 years
(e) 40 years

Q116. The length of train B is half of the length of train A. They cross each other while running in opposite direction in 18 seconds. Speed of A is 54 km/hr. while speed of train B is 48 km/hr. If train A can crosses a platform in 39 sec, then find the length of the platform (in meter)?
(a) 222
(b) 224
(c) 226
(d) 245
(e) 230

Q117. A spend 25 % of her monthly salary on house rent. From the remaining, he spends 30% on food, 10% on grocery, 40% on miscellaneous. If the amount he saves is Rs.9150, then find the monthly salary of A (in Rs.).
(a) Rs.60000
(b) Rs.61000
(c) Rs.51000
(d) Rs.40000
(e) Rs.45000

Q118. The ratio of number of boys to girls in a class is 8:5 and the average age of the class is A years and the average age of girls is (A – 2) years. Find the average age of boys in the class (in years)?
(a) A+1.25
(b) A – 1.25
(c) A+2
(d) A-0.5
(e) A+0.5

Q119. Profit earned on an article when it is sold for Rs.672 is 25% more than the loss when it is sold for Rs.470.4. If a shopkeeper marked up the article by 50% above the cost price and sold it after allowing two successive discounts of 20% each, then find the selling price of the article?
(a) Rs.840
(b) Rs.537.6
(c) Rs.560
(d) Rs.401.6
(e) Rs.450.6

180 km distance with a speed of 50 km/hr and after that he takes a different route which increases his total distance by 15 km. Speed of car on extended route is 60 km/hr. It took him 90 minutes more while returning from the normal path. Find the distance between A and B?

(a) 322 km
(b) 354 km
(c) 324 km
(d) 356 km
(e) 315 km

Directions (121-125): Read the information given below and answer the following questions.

There are four persons A, B, C and D who manufactured and sold toys. The total number of toys manufactured by A is 120. Only M% of the total manufactured toys were sold by A. The total number of toys manufactured by C is 150 and the difference between total sold and unsold toys of C is 90. The toys sold by B is 75% of total number of toys manufactured by him. D sold 35% more toys than the toys sold by C and unsold number of toys of D is 2 less than that of B. Total number of toys manufactured by B and D together is 260.

Note: Manufactured toys are either sold or unsold.

Q121. If the number of unsold toys of A is 25% more than the number of sold toys by B, then find the value of M.

(a) 37.5%
(b) 35.5%
(c) 30%
(d) 35.7%
(e) 30.25%

Q122. Find the difference between the total number of toys sold by C and D together and the total unsold toys of B and D together?

(a) 222
(b) 224
(c) 226
(d) 254
(e) 244

Q123. If B sold a toy for Rs.20 each and C sold a toy for Rs.30 each, then find the total revenue generated by B and C together?

(a) Rs.6000
(b) Rs.4400
(c) Rs.4000
(d) Rs.4800
(e) Rs.5000

by them?
(a) 15%
(b) 5%
(c) 10%
(d) 25%
(e) 20%

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Q125. The average number of unsold toys of A, B, C and D is 29. Find the number of toys were sold by A.
(a) 77
(b) 74
(c) 72
(d) 70
(e) 76

Directions (126-128): Find the approximate value of question mark (?) in following questions,

Q126. $(7.98)^3 + (14.88)^2 - (12.01)^2 = ? - 1219.812 - 1749.98$
(a) 3643
(b) 3425
(c) 3416
(d) 3563
(e) 3521

Q127. $19.825 \times \sqrt{?} = 63.91\%$ of $399.98 + 11.95\%$ of 1200.01
(a) 300
(b) 500
(c) 420
(d) 350
(e) 400

Q128. $(?)^2 + 14.01\%$ of $1599.98 = 59.01 \times 12.025$
(a) 18
(b) 28
(c) 22
(d) 36
(e) 32

Q129. Tap A can fill a tank in 24 minutes and tap B can fill the same tank in 30 minutes, another tap C can empty the tank in 20 minutes. If tap A and tap B are opened together & after six minutes tap C is also opened, then find the total time taken to fill the remaining tank?
(a) 18 minutes
(b) 14 minutes
(c) 22 minutes
(d) 12 minutes
(e) 16 minutes

and replaced with water. In final mixture, milk is 37.5% of its initial quantity. Find X. (in liters)
(a) 12
(b) 10
(c) 20
(d) 18
(e) 16

Q131. A, B and C invested Rs. 5500, Rs. 4500 and Rs. 6000 in a business respectively. After one year, A decreased his investment by Rs 1000 and B increased his investment by Rs. 500. At the end of three years, the total profit of is Rs 9400, then find the profit share of C.
(a) Rs 4200
(b) Rs 3600
(c) Rs 3800
(d) Rs 4000
(e) Rs 3000

Directions (132-135): In each of the following questions, two equations (I) and (II) are given. Solve the equations and mark the correct option:

Q132.
I. $2x^2 + 11x + 12 = 0$
II. $8y^2 - 22y - 21 = 0$
(a) if x>y
(b) if x≥y
(c) if x<y
(d) if x ≤y
(e) if x = y or no relation can be established between x and y.

Q133.
I. $x^2 - 17x - 60 = 0$
II. $y^2 + 42y + 185 = 0$
(a) if x>y
(b) if x≥y
(c) if x<y
(d) if x ≤y
(e) if x = y or no relation can be established between x and y.

Q134.
I. $x^2 + 41x + 420 = 0$
II. $6y^2 - 11y - 10 = 0$
(a) if x>y
(b) if x≥y
(c) if x<y
(d) if x ≤y
(e) if x = y or no relation can be established between x and y.

II. $y^2 + 17y + 72 = 0$
(a) if x>y
(b) if x≥y
(c) if x<y
(d) if x ≤y
(e) if x = y or no relation can be established between x and y.

Q136. P and Q together do half of the work in 6 days. Efficiency of R is 1/4 more than that of P and efficiency of Q is 1/2 more than that of P. In how many days Q and R together can complete 3/4 of the work?
(a) $8\frac{2}{11}$ days
(b) $9\frac{2}{11}$ days
(c) $10\frac{2}{11}$ days
(d) $8\frac{1}{11}$ days
(e) $8\frac{3}{11}$ days

Q137. The ratio of investment of A to B and B to C are 5:6 and 3:7 respectively. Time for which A, B and C invested are in the ratio of 6:5:5 respectively. The profit share of A is Rs.1812. Find the profit share of C?
(a) Rs.4002
(b) Rs.4812
(c) Rs.4182
(d) Rs.4228
(e) Rs.4882

Q138. A bag contains 8 red balls and 6 green balls. If two balls picked out randomly without replacement then find the probability of none of the balls being green?
(a) 4/11
(b) 5/13
(c) 2/11
(d) 4/13
(e) 3/26

Q139. The difference between compound interest and simple interest after two years at the rate of 20% per annum on a sum of Rs. P is Rs.112. Find the value of P?
(a) Rs.2400
(b) Rs.4800
(c) Rs.700
(d) Rs.1400
(e) Rs.2800

(a) 700%
(b) 350%
(c) 70%
(d) 35%
(e) 200%

Solutions

S1. Ans.(b)
Sol. Refer to the first paragraph, "Extreme precipitation is expected to intensify with global warming over large parts of the globe as the concentration of atmospheric water vapor which supplies the water for precipitation increases in proportion to the saturation concentrations at a rate of about 6–7% per degree rise in temperature according to the thermodynamic Clausius–Clapeyron relationship"

S2. Ans.(c)
Sol. . Refer to the first paragraph, "The hydrological cycle is expected to intensify with global warming, which likely increases the intensity of extreme precipitation events and the risk of flooding."

S3. Ans.(b)
Sol. They have found that the precipitation maxima in both dry and wet regions will increase. Refer to the second paragraph of the passage, "Recent studies have examined daily extreme precipitation changes in relation to water availability and found that 30-year averaged annual precipitation maxima aggregated over the dry and wet regions of the world is likely to increase"

S4. Ans.(c)
Sol. Refer to the last paragraph, "Understanding of the relationships between the climate change impact on extreme events and water availability is essential in the future-proofed planning for global change in different climate regimes to ensure a sustainable socioeconomic development at the regional scales."

S5. Ans.(a)
Sol. Refer to the first paragraph of the given passage, "However, changes in atmospheric dynamics can weaken or reinforce the thermodynamic effect regionally and modify the extreme precipitation amplification."

S6. Ans.(d)
Sol. Reform: make changes in
Tremble: shake involuntarily, typically as a result of anxiety
Rigid: unable to bend or be forced out of shape; not flexible.
Diverse: showing a great deal of variety; very different.
Terminate: bring to an end

S7. Ans.(b)
Sol. Pacify: quell the anger, agitation, or excitement of.
Intensify: become or make more intense.
Palliate: make (a disease or its symptoms) less severe without removing the cause.
Assuage: make (an unpleasant feeling) less intense.

facts and family. The first sentence of the given arrangement is sentence (T) as it best describes the theme of the given passage. This is then further emphasized by sentence (Q). Sentence (R) is already placed as the third sentence. The next sentence in this rearrangement should be (P) which provides details about the fact given in sentence (R). sentences (U) and (S) are must be arranged in the same order as they depend on each other and gives the conclusion of the given passage. Thus the rearrangement should be TQRPUS.

S9. Ans.(c)

Sol. By going through the given sentences, we can understand that the passage is about priorities between facts and family. The first sentence of the given arrangement is sentence (T) as it best describes the theme of the given passage. This is then further emphasized by sentence (Q). Sentence (R) is already placed as the third sentence. The next sentence in this rearrangement should be (P) which provides details about the fact given in sentence (R). sentences (U) and (S) are must be arranged in the same order as they depend on each other and gives the conclusion of the given passage. Thus the rearrangement should be TQRPUS.

S10. Ans.(a)

Sol. By going through the given sentences, we can understand that the passage is about priorities between facts and family. The first sentence of the given arrangement is sentence (T) as it best describes the theme of the given passage. This is then further emphasized by sentence (Q). Sentence (R) is already placed as the third sentence. The next sentence in this rearrangement should be (P) which provides details about the fact given in sentence (R). sentences (U) and (S) are must be arranged in the same order as they depend on each other and gives the conclusion of the given passage. Thus the rearrangement should be TQRPUS.

S11. Ans.(e)

Sol. By going through the given sentences, we can understand that the passage is about priorities between facts and family. The first sentence of the given arrangement is sentence (T) as it best describes the theme of the given passage. This is then further emphasized by sentence (Q). Sentence (R) is already placed as the third sentence. The next sentence in this rearrangement should be (P) which provides details about the fact given in sentence (R). sentences (U) and (S) are must be arranged in the same order as they depend on each other and gives the conclusion of the given passage. Thus the rearrangement should be TQRPUS.

S12. Ans.(d)

Sol. By going through the given sentences, we can understand that the passage is about priorities between facts and family. The first sentence of the given arrangement is sentence (T) as it best describes the theme of the given passage. This is then further emphasized by sentence (Q). Sentence (R) is already placed as the third sentence. The next sentence in this rearrangement should be (P) which provides details about the fact given in sentence (R). sentences (U) and (S) are must be arranged in the same order as they depend on each other and gives the conclusion of the given passage. Thus the rearrangement should be TQRPUS.

S13. Ans.(c)

Sol. Timid: showing a lack of courage or confidence; easily frightened.
Intrepid: fearless; adventurous (often used for rhetorical or humorous effect).
Quest: a long or arduous search for something.
Precarious: not securely held or in position; dangerously likely to fall or collapse.
Restrained: characterized by reserve or moderation; unemotional or dispassionate.

Plunging: falling steeply.
Intimidated: frighten or overawe (someone)
Enlightened: give (someone) greater knowledge and understanding about a subject or situation.
Eloquent: fluent or persuasive in speaking or writing.

S15. Ans.(d)
Sol. Trivial: of little value or importance
Forge: create (something) strong, enduring, or successful
Sparce: thinly dispersed or scattered
Myriad: a countless or extremely great number of people or things.
Essential: absolutely necessary; extremely important.

S16. Ans.(a)
Sol. Delirium: a mental state in which you are confused, disoriented, and not able to think or remember clearly.
Equitable: fair and impartial
Impetuous: acting or done quickly and without thought or care.
Steadfast: resolutely or dutifully firm and unwavering.

S17. Ans.(a)
Sol. Spiral out: to continuously become worse, more, or less.
Consequences: a result or effect, typically one that is unwelcome or unpleasant.
Cross out: to draw a line through (something) to show that it is wrong
Cognizant: knowledge or awareness
Acute: having or showing a perceptive understanding or insight;

S18. Ans.(b)
Sol. The protagonist is feeling peaceful and content, and he is smiling because he is finally able to relax away from those who have hurt him in the past.
Resentful: feeling or expressing bitterness or indignation at having been treated unfairly.
Anxious: feeling or showing worry, nervousness, or unease
Despairing: showing the loss of all hope.
Exasperated: intensely irritated and frustrated

S19. Ans.(a)
Sol. Perfectionism. The paragraph suggests that the writer is struggling with writer's block despite being prepared to write for eight hours straight. The fact that the blank screen is "taunting" him and "playing with his mind" suggests that he may be struggling with perfectionism, where he is unable to start writing because he wants everything to be perfect from the start.

S20. Ans.(e)
Sol. the description gives an image of ferociousness.
Indignant: feeling or showing anger or annoyance at what is perceived as unfair treatment.
Jingoism: extreme patriotism, especially in the form of aggressive or warlike foreign policy.
Apoplectic: overcome with anger; furious.
Feeble: lacking physical strength, especially as a result of age or illness.
Ferocity: exhibiting or given to extreme fierceness and unrestrained violence and brutality

farmer, opposed the plantation system, and tried through taxation to break up large holdings of land. Backed by the military presence of the garrison, these governors tried to prevent the gentry and merchants, allied in the colonial assemblies, from transforming colonial America into a capitalistic oligarchy."

S22. Ans.(b)
Sol. Refer to the last paragraph, "According to Webb, the purpose of garrison government was to provide military support for a royal policy designed to limit the power of the upper classes in the American colonies"

S23. Ans.(b)
Sol. Refer to the second paragraph, ". Webb argues that the colonial legislative assemblies represented the interests not of the common people but of the colonial upper classes, a coalition of merchants and nobility who favored self-rule and sought to elevate legislative authority at the expense of the executive."

S24. Ans.(c)
Sol. According to Webb, taxation was a means of breaking up large land holdings and supporting small farmers, and was used by colonial governors to prevent the colonial upper classes from transforming colonial America into a capitalistic oligarchy.

S25. Ans.(e)
Sol. All the given words are the synonyms of 'formidable' which means inspiring fear or respect through being impressively large, powerful, intense, or capable.

S26. Ans.(a)
Sol. The sentence should be connected by using "at the time.....while..". The sentence thus will be, "At that time, the Russians were so used to victories that on receiving news of the defeat some would simply not believe it, while others sought some extraordinary explanation of so strange an event"

S27. Ans.(d)
Sol. The sentences/phrases will be connected using the options (II). Thus, the sentence will be, "Although the government has introduced new policies to promote renewable energy, some critics have raised concerns about the effectiveness of these policies"

S28. Ans.(c)
Sol. The sentence should be, "Despite the challenges posed by cultural differences, effective communication in the workplace can be achieved through cultural competence training, active listening, and open-mindedness."

S29. Ans.(d)
Sol. The sentence should be, "The ubiquitous nature of technology has revolutionized the way we approach learning, but concerns over screen time and digital distraction continue to raise questions about the long-term impact on education and intellectual development."

S30. Ans.(c)
Sol. the sentence should be, "Healthcare professionals face complex ethical dilemmas, such as balancing patient autonomy with the obligation to act in the patient's best interest, navigating cultural differences in medical decision-making, and managing conflicts of interest."

thus the part which is attached to it should also be in the continuation. Here, only sentence (c) is only part that provides the demerits while other options are describing else.

S32. Ans.(a)
Sol. Option (a) is the best solution for the given passage. The option that should be fit into the given blank should suggest that the type of the fish is the rarest one as the number is less than 1000.

S33. Ans.(a)
Sol. option (a) is the best solution for the given blank as it mentions that the required element for EV is rare earth is an essential component. Here no other option can fit into the given blank grammartically or logically.

S34. Ans.(b)
Sol. option (b) is the best solution for the given blank as it provides the effect new grading system. No other option can fit into the given blank grammatically or logically.

S35. Ans.(a)
Sol. option (a) is the best solution for the given blank as it is in continuation with the sentence. No other option can fit into the given blank grammatically or logically.

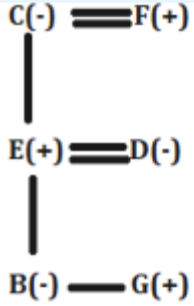
S36. Ans.(c)
Sol. Coherent sentences can be formed by joining (A)-(F) and (B)-(D). Therefore the sentences will be "Bulldozers and excavators were used to flatten the illegally constructed buildings" and "Company has abundant experienced staff to complete the project in given time frame"

S37. Ans.(a)
Sol. Coherent sentences can be formed by joining (B)-(E) and (C)-(D). Therefore the sentences will be "The tractor-trolleys don't have registration numbers on them which makes it harder to track them" and "The park for the children has been encroached upon by locals causing difficulty to them in playing"

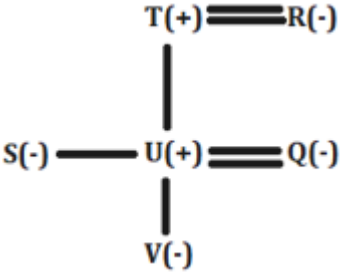
S38. Ans.(b)
Sol. Coherent sentence can be formed by joining (C)-(F). Therefore the sentence will be "Chief Minister had consented to be the chief guest and inaugurate the annual concerts of the Academy"

S39. Ans.(d)
Sol. Coherent sentence can be formed by joining (A)-(E). Therefore the sentence will be "Around half-a-million workers directly involved in fishing activities in the marine and inland fisheries sector "

S40. Ans.(b)
Sol. Coherent sentences can be formed by joining (A)-(F) and (B)-(E). Therefore the sentences will be "The public procurement system has been in place since the mid-1960s, and has been the backbone of food policy in India." And "Many economists from all around the world suggested that food stocks be run down in many countries"



S42. Ans.(c)
Sol.



S43. Ans.(e)
Sol. The rules followed in each step is given below:
Step I: Numbers are arranged in ascending order.
Step II: Digits are arranged in ascending order within the number.
Step III: First two digits are multiplied and last two digits are multiplied within the number and both resultants placed adjacent to each other and make a new number.
Step IV: All the digits are multiplied within the number.
Step V: Number are arranged in ascending order.
Input: 6385 9557 5738 3476 2454 8843
Step I: 2454 3476 5738 6385 8843 9557
Step II: 2445 3467 3578 3568 3488 5579
Step III: 820 1242 1556 1548 1264 2563
Step IV: 0 16 150 160 48 180
Step V: 0 16 48 150 160 180

S44. Ans.(a)
Sol. The rules followed in each step is given below:
Step I: Numbers are arranged in ascending order.
Step II: Digits are arranged in ascending order within the number.
Step III: First two digits are multiplied and last two digits are multiplied within the number and both resultants placed adjacent to each other and make a new number.
Step IV: All the digits are multiplied within the number.
Step V: Number are arranged in ascending order.
Input: 6385 9557 5738 3476 2454 8843
Step I: 2454 3476 5738 6385 8843 9557
Step II: 2445 3467 3578 3568 3488 5579
Step III: 820 1242 1556 1548 1264 2563
Step IV: 0 16 150 160 48 180
Step V: 0 16 48 150 160 180

Step I: Numbers are arranged in ascending order.
Step II: Digits are arranged in ascending order within the number.
Step III: First two digits are multiplied and last two digits are multiplied within the number and both resultants placed adjacent to each other and make a new number.
Step IV: All the digits are multiplied within the number.
Step V: Number are arranged in ascending order.
Input: 6385 9557 5738 3476 2454 8843
Step I: 2454 3476 5738 6385 8843 9557
Step II: 2445 3467 3578 3568 3488 5579
Step III: 820 1242 1556 1548 1264 2563
Step IV: 0 16 150 160 48 180
Step V: 0 16 48 150 160 180

S46. Ans.(d)
Sol. The rules followed in each step is given below:
Step I: Numbers are arranged in ascending order.
Step II: Digits are arranged in ascending order within the number.
Step III: First two digits are multiplied and last two digits are multiplied within the number and both resultants placed adjacent to each other and make a new number.
Step IV: All the digits are multiplied within the number.
Step V: Number are arranged in ascending order.
Input: 6385 9557 5738 3476 2454 8843
Step I: 2454 3476 5738 6385 8843 9557
Step II: 2445 3467 3578 3568 3488 5579
Step III: 820 1242 1556 1548 1264 2563
Step IV: 0 16 150 160 48 180
Step V: 0 16 48 150 160 180

S47. Ans.(c)
Sol. The rules followed in each step is given below:
Step I: Numbers are arranged in ascending order.
Step II: Digits are arranged in ascending order within the number.
Step III: First two digits are multiplied and last two digits are multiplied within the number and both resultants placed adjacent to each other and make a new number.
Step IV: All the digits are multiplied within the number.
Step V: Number are arranged in ascending order.
Input: 6385 9557 5738 3476 2454 8843
Step I: 2454 3476 5738 6385 8843 9557
Step II: 2445 3467 3578 3568 3488 5579
Step III: 820 1242 1556 1548 1264 2563
Step IV: 0 16 150 160 48 180
Step V: 0 16 48 150 160 180

S48. Ans.(d)
Sol.

Floor	Flat P	Flat Q
4	N – archery	B – cricket
3	K – boxing	S – judo
2	L – tennis	D – baseball
1	A – hockey	T – snooker

Floor	Flat P	Flat Q
4	N – archery	B – cricket
3	K – boxing	S – judo
2	L – tennis	D – baseball
1	A – hockey	T – snooker

S50. Ans.(b)
Sol.

Floor	Flat P	Flat Q
4	N – archery	B – cricket
3	K – boxing	S – judo
2	L – tennis	D – baseball
1	A – hockey	T – snooker

S51. Ans.(e)
Sol.

Floor	Flat P	Flat Q
4	N – archery	B – cricket
3	K – boxing	S – judo
2	L – tennis	D – baseball
1	A – hockey	T – snooker

S52. Ans.(c)
Sol.

Floor	Flat P	Flat Q
4	N – archery	B – cricket
3	K – boxing	S – judo
2	L – tennis	D – baseball
1	A – hockey	T – snooker

S53. Ans.(e)
Sol. Mr. Deshmukh has approached to Mr. Kapil and Abhishek considering them to prominent lawyer and definitely they had got success in many cases.
As investigation by CBI has not been done and they have not presented their report whether Mr. Deshmukh is guilty or not so we cannot assume punishment for Mr. Deshmukh.
It's a good chance for opposition to attack ruling party and surely, they will demand for resignation of CM too.

S54. Ans.(e)
Sol. "Repercussion" means result. Chief minister will not be giving resignation as there was allegation against Home Minister and its probe has been ordered. Home Minister has already resigned to make the situation normal. Any party will not terminate their kingdom so easily.
If protest has been planned by opposition, there may be chances of some violent activities due to which Law and order may disturb.
This matter is a great weapon for opposition and surely, they will come aggressively and attack ruling party on this matter.

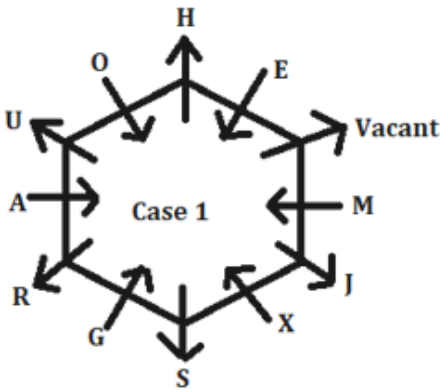
Minister will be of Congress Party.
Till now it's an allegation against Mr. Desmukh but judgement has not been given.
Yes, it is correct that after judgement of state High Court, accused can approach Supreme Court as Mr. Deshmukh is also planning to approach Supreme Court after High Court order of CBI Enquiry.

S56. Ans.(e)
Sol. M@T$U%G#Z$N#X&Y$O -- M > T = U ≤ G < Z = N < X ≥ Y = O
I. M@N- M > N = False
II. Z@O - Z > O = False
III. T%N – T ≤ N = False

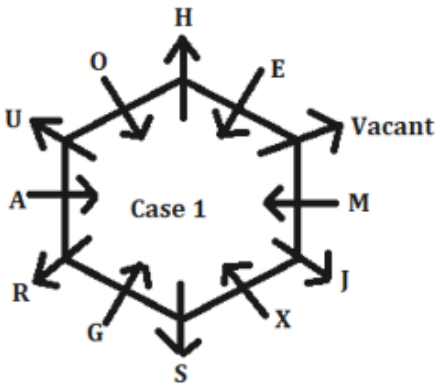
S57. Ans.(a)
Sol. Z@I$M#G%X, G#U$R&C, T@H$X -- Z>I=M<G≤X, G<U=R≥C, T>H=X
I. M@C – M > C = False
II. H@I – H > I = True
III. C&G – C ≥ G = False

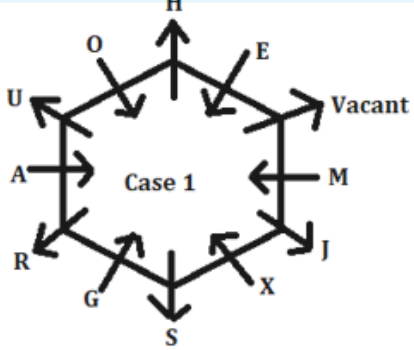
S58. Ans.(b)
Sol. D@I$U#N$R&G@E$H#O -- D>I=U<N=R≥G>E=H<O
I. R#D – R<D = False
II. N@H – N>H = True
III. E#O - E<O = True

S59. Ans.(d)
Sol.

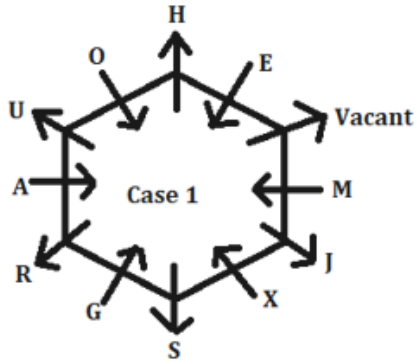


S60. Ans.(b)
Sol.

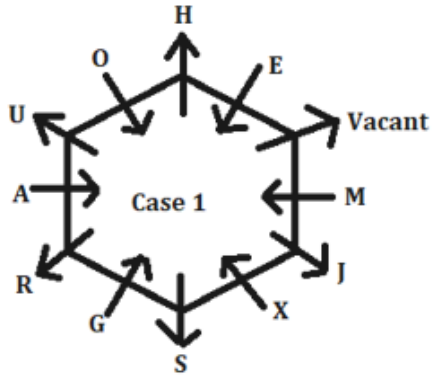




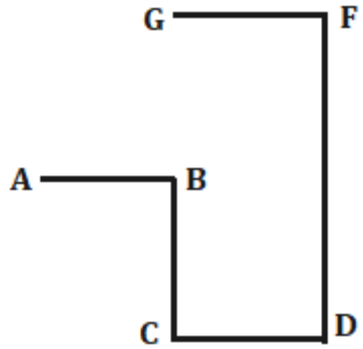
S62. Ans.(c)
Sol.

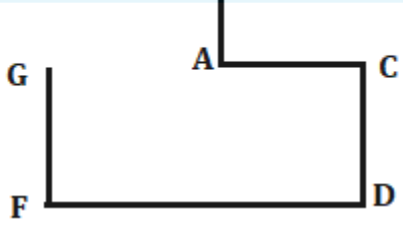


S63. Ans.(e)
Sol.



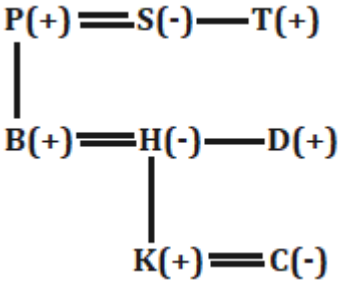
S64. Ans.(c)
Sol. From I, G is in north of C.





S65. Ans.(d)
Sol. Both statements even together are not sufficient to answer.

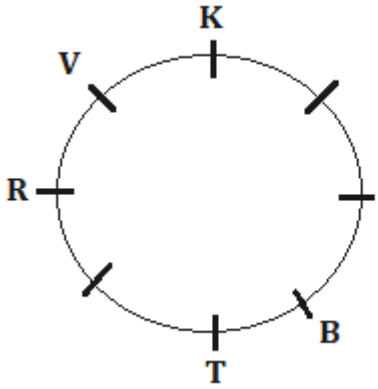
S66. Ans.(e)
Sol. From statement I and II together, S is grandmother of K.



S67. Ans.(d)
Sol. Both statements even together are not sufficient to answer because number of boxes placed above D is undefined.

Boxes
D
H
G
C
B
F
A

S68. Ans.(b)
Sol. Three persons sit between B and V.



Persons	Shift	Colors
L	9:30AM-10:00AM	Rugby
K	10:00AM-10:45AM	Hockey
I	10:45AM-11:15AM	Cricket
Break	11:15AM-11:30AM	Break
M	11:30AM-12:15PM	Soccer
J	12:15PM-12:45PM	Basketball
Break	12:45PM-1:00PM	Break
H	1:00PM-1:45PM	Softball
N	1:45PM-2:15PM	Football

S70. Ans.(d)
Sol.

Persons	Shift	Colors
L	9:30AM-10:00AM	Rugby
K	10:00AM-10:45AM	Hockey
I	10:45AM-11:15AM	Cricket
Break	11:15AM-11:30AM	Break
M	11:30AM-12:15PM	Soccer
J	12:15PM-12:45PM	Basketball
Break	12:45PM-1:00PM	Break
H	1:00PM-1:45PM	Softball
N	1:45PM-2:15PM	Football

S71. Ans.(e)
Sol.

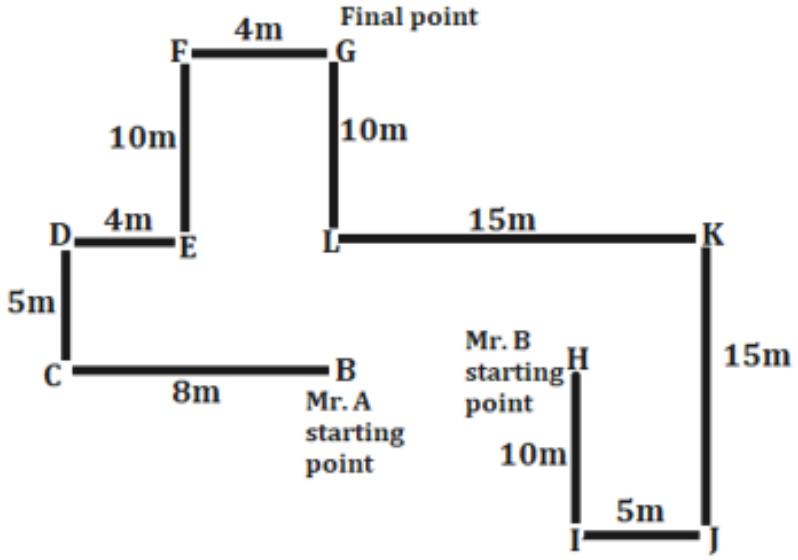
Persons	Shift	Colors
L	9:30AM-10:00AM	Rugby
K	10:00AM-10:45AM	Hockey
I	10:45AM-11:15AM	Cricket
Break	11:15AM-11:30AM	Break
M	11:30AM-12:15PM	Soccer
J	12:15PM-12:45PM	Basketball
Break	12:45PM-1:00PM	Break
H	1:00PM-1:45PM	Softball
N	1:45PM-2:15PM	Football

S72. Ans.(d)
Sol.

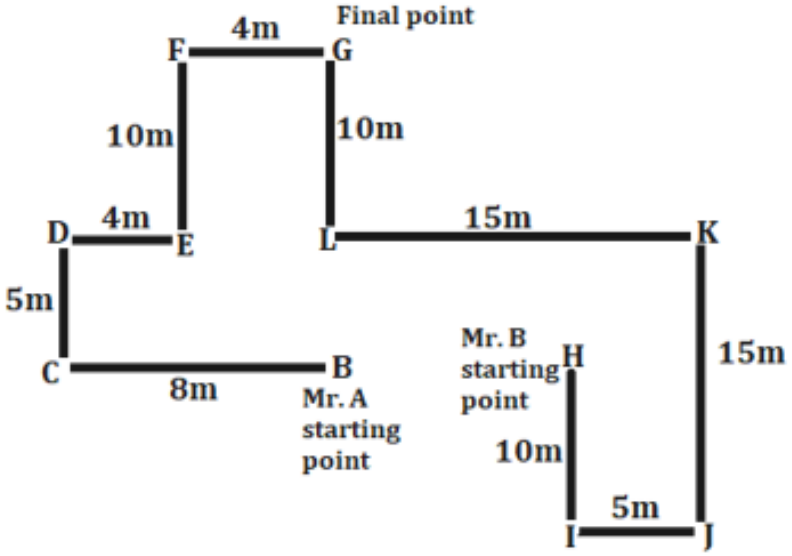
Persons	Shift	Colors
L	9:30AM-10:00AM	Rugby
K	10:00AM-10:45AM	Hockey
I	10:45AM-11:15AM	Cricket
Break	11:15AM-11:30AM	Break
M	11:30AM-12:15PM	Soccer
J	12:15PM-12:45PM	Basketball
Break	12:45PM-1:00PM	Break
H	1:00PM-1:45PM	Softball
N	1:45PM-2:15PM	Football

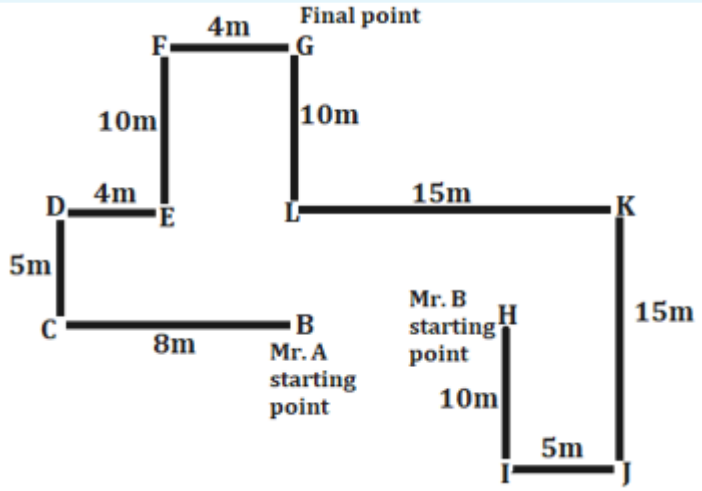
Persons	Shift	Colors
L	9:30AM-10:00AM	Rugby
K	10:00AM-10:45AM	Hockey
I	10:45AM-11:15AM	Cricket
Break	11:15AM-11:30AM	Break
M	11:30AM-12:15PM	Soccer
J	12:15PM-12:45PM	Basketball
Break	12:45PM-1:00PM	Break
H	1:00PM-1:45PM	Softball
N	1:45PM-2:15PM	Football

S74. Ans.(b)
Sol.



S75. Ans.(c)
Sol.





S77. Ans.(c)

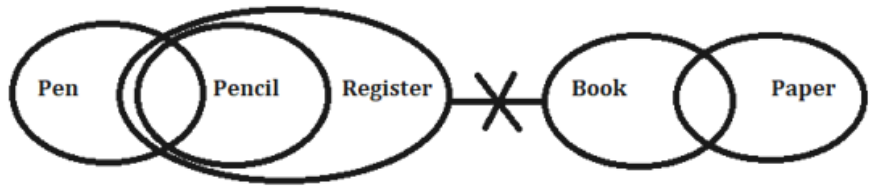
Sol. Statement (I)-False-Reason: We can assume, some of the customers may shift to Restaurant A but in statement, it is said "All the Customer". So, this assumption is wrong.

Statement (II)-True-Reason: As price of Restaurant A has been slashed so, some of the customers may think as price is low, quality will be down.

Statement (III)-True-Reason: It can be assumed, to maintain the competition world Restaurant A has slashed their price but as infrastructure and kitchen is modern and spacious, so to maintain the cost Restaurant B ahs not decreased their price.

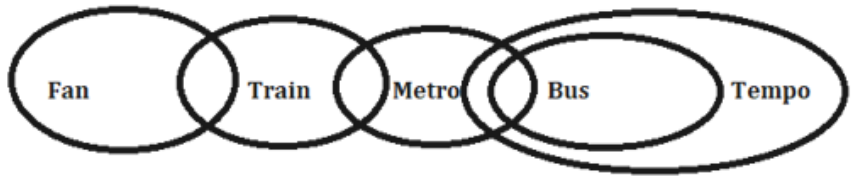
S78. Ans.(b)

Sol.



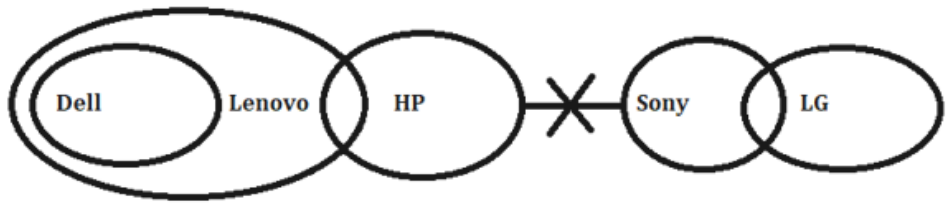
S79. Ans.(a)

Sol.



S80. Ans.(c)

Sol.



Green Blue

C	O	G	J
I	A	L	D
E	K	N	H
M	F	P	B

White Red

S82. Ans.(a)

Sol.

Green Blue

C	O	G	J
I	A	L	D
E	K	N	H
M	F	P	B

White Red

S83. Ans.(d)

Sol.

Green Blue

C	O	G	J
I	A	L	D
E	K	N	H
M	F	P	B

White Red

S84. Ans.(c)

Sol.

Green Blue

C	O	G	J
I	A	L	D
E	K	N	H
M	F	P	B

White Red

Green			Blue
C	O	G	J
I	A	L	D
E	K	N	H
M	F	P	B
White			Red

S86. Ans.(c)
Sol. Option (a) & (b) supports the importance of farm ponds. Only (c) weakens its significance. It is clearly mentioning farm pond is cost effective and can boost farmers' income.

S87. Ans.(c)
Sol. The problem of lower water level has attracted the attention of the country. Farm pond can help in water control. As it is cost effective and beneficial for rural livelihoods, so it can be a viable investment option. Only option (c) is false in context of the statement.

S88. Ans.(d)
Sol.

V > Q > U > S > T > W > R
60

S89. Ans.(b)
Sol.

V > Q > U > S > T > W > R
60

S90. Ans.(a)
Sol.

V > Q > U > S > T > W > R
60

S91. Ans.(d)
Sol.
Series I: Put X=24
Pattern of the series

7 14 **X=24** 37 53 72
7 10 13 16 19
3 3 3 3

So, 24 is satisfying series I.
Series II:
Pattern of the series

48 **25** 26 53 213 1705
$\times .5 + 1$ $\times 1 + 1$ $\times 2 + 1$ $\times 4 + 1$ $\times 8 + 1$

So, X =24 is not satisfying series II.

7 9 11 13 15

So, X =24 is satisfying series III.

S92. Ans.(a)

Sol.

Pattern of the series:

18 10 12 27 **X=112** **P=901**

$\times 0.5 + 1$ $\times 1 + 2$ $\times 2 + 3$ $\times 4 + 4$ $\times 8 + 5$

Z+4 = X-27

Z = 112 – 27 – 4 = 81

S93. Ans.(e)

Sol. P = 901

S94. Ans.(c)

Sol.

Quantity I: Value of A

$A^5 = 32$

A = 2

Quantity II: Value of B

$B^6 = 64$

B= ± 2

Quantity I ≥ Quantity II

S95. Ans.(b)

Sol.

Let the present age of P and Q be 6x and 7x respectively.

And, present age of R and S be r years and s years respectively.

ATQ,

$s = 5 + r$ ....(i)

Statement I: $7x + r = 34$ ...(ii)

Statement II: $6x + 7x + r + s = 71$ ....(iii)

$r = 6 + q = 6 + 7x$ ....(iv)

Statement II alone can solve the question.

S96. Ans.(a)

Sol.

Let the marked price of articles A and B be Rs. 400x and Rs. 300x respectively.

Selling price of A = 90% of 400x=360x

Selling price of B = 80% of 300x = 240x

Statement I:

Let cost price of articles A and B be Rs. a and Rs. b respectively.

Selling price of A = 80% of 400x=320x

a = b +50

$3x \times \frac{4}{5} - 2x = 40$

$x = 100$

We cannot find the cost price of the article A.

S97. Ans.(a)

Sol.

Let marks obtained in Hindi, English, mathematics and science be H, E, M and S respectively.

H + E + M + S = 35 × 4 = 140

Maximum marks = 50× 4 = 200

Statement I:

(H+E) :(M+S) =2:1

Statement II:

E+M+S=100

H = 40

Neither statement **(I)** nor statement **(II)** by itself is sufficient to answer the question.

S98. Ans.(c)

Sol.

Let the total number of present students be 100x.

ATQ,

$100x\left(\frac{22}{100} - \frac{20}{100}\right) = 4$

$x = 2$

Total number of present students = 200

Total number of present students in A

20% of 200= 40

Similarly,

Sections	Present students
A	40
B	44
C	30
D	46
E	40

Total number of absent students in C = $30 \times \frac{1}{3} = 10$

Absent girls in C = $10 \times \frac{3}{5} = 6$

Required Percentage = $\frac{6}{40} \times 100 = 15\%$

S99. Ans.(a)

Sol.

Let the total number of present students be 100x.

ATQ,

$100x\left(\frac{22}{100} - \frac{20}{100}\right) = 4$

20% of 200= 40
Similarly,

Sections	Present students
A	40
B	44
C	30
D	46
E	40

After shifting
Students in E = 40+5 =45
Minimum possible total (present+ absent) students in section E = 46
Maximum possible total (present+ absent) students in section E =50
Required sum = 46 +50 = 96

S100. Ans.(d)
Sol.
Let the total number of present students be 100x.
ATQ,
$100x\left(\frac{22}{100}-\frac{20}{100}\right)=4$
$x=2$
Total number of present students = 200
Total number of present students in A
20% of 200= 40
Similarly,

Sections	Present students
A	40
B	44
C	30
D	46
E	40

Maximum possible value of absent student in section B = 50 – 44 = 6
Minimum possible value of absent student in section C = 1
Required ratio = 6:1

S101. Ans.(e)
Sol.
Let the total number of present students be 100x.
ATQ,
$100x\left(\frac{22}{100}-\frac{20}{100}\right)=4$
$x=2$
Total number of present students = 200

Sections	Present students
A	40
B	44
C	30
D	46
E	40

Maximum possible value of absent student in section D = 4

Maximum possible value of students (present + absent) in section E = 50

Required difference = 50 – 4 = 46

S102. Ans.(d)

Sol.

Let the total number of present students be 100x.

ATQ,

$100x\left(\frac{22}{100}-\frac{20}{100}\right)=4$

$x=2$

Total number of present students = 200

Total number of present students in A

20% of 200= 40

Similarly,

Sections	Present students
A	40
B	44
C	30
D	46
E	40

Present students in C = 30

Square between (30 to 50) = 36 and 49

Value of absent students in Section C is greater than 7

So, total number of students (present and absent) = 49

Absent students in C = 49 – 30 = 19

S103. Ans.(c)

Sol.

$52\times\left(\frac{100+X}{100}\right)\times\frac{120}{100}\times\frac{125}{100}=140$

$X=79.48\%\approx 79.5\%$

Let the people joined in each year is x.
52+3x – 5 = 140
31 = x

S105. Ans.(c)
Sol.
Male in gym A = $\frac{3}{4} \times 140 = 105$
Male in gym D = 130 – 105 = 25
Required answer = $\frac{25}{80} \times 100 = 31.25\%$

S106. Ans.(d)
Sol.
Female in gym D = $\frac{3}{4} \times 128 = 96$
Male in gym D = $\frac{1}{4} \times 128 = 32$
Required ratio = $\frac{25}{100} \times 96 + \frac{75}{100} \times 32 : 80 = (24 + 24): 80 = 3: 5$

S107. Ans.(e)
Sol.
Number of people in gym A in 2001 = 160
Number of people in gym A in 2003 = 230
Number of new people joined in 2002 and 2003 = 230 – 160 = 70
ATQ,
Let number of new people joined in 2003 and 2002 is x and y respectively.
x = $\frac{4}{3} \times y$
$\frac{x}{y} = \frac{4}{3}$
Number of people joined in 2002 = $\frac{3}{7} \times 70 = 30$
Required percentage = $\frac{30}{120-80} \times 100 = 75\%$

S108. Ans.(a)
Sol.
Total funds donated by Q = $\frac{100}{100-64-16} \times 2000 = Rs.10000$
Total funds donated by R = $\frac{5}{4} \times 12000 = Rs.15000$
Company P,
Total fund = Rs.12000
Fund donated to NGO A = $\frac{32}{100} \times 12000 = Rs.3840$
Fund donated to NGO B = $\frac{100-32-24}{100} \times 12000 = Rs.5280$
Fund donated to NGO C = $\frac{24}{100} \times 12000 = Rs.2880$

		(Rs.)	NGO B (Rs.)	NGO C (Rs.)
P	12000	3840	5280	2880
Q	10000	6400	1600	2000
R	15000	4950	6000	4050
S	13500		7020	

Fund donated to elder people = $\frac{2}{3} \times 6000 = Rs.4000$

Required difference = 10000 – 4000 =Rs.6000

S109. Ans.(c)

Sol.

Total funds donated by Q = $\frac{100}{100-64-16} \times 2000 = Rs.10000$

Total funds donated by R = $\frac{5}{4} \times 12000 = Rs.15000$

Company P,

Total fund = Rs.12000

Fund donated to NGO A = $\frac{32}{100} \times 12000 = Rs.3840$

Fund donated to NGO B = $\frac{100-32-24}{100} \times 12000 = Rs.5280$

Fund donated to NGO C = $\frac{24}{100} \times 12000 = Rs.2880$

Similarly,

Companies	Total fund (Rs.)	Fund donated to NGO A (Rs.)	Fund donated to NGO B (Rs.)	Fund donated to NGO C (Rs.)
P	12000	3840	5280	2880
Q	10000	6400	1600	2000
R	15000	4950	6000	4050
S	13500		7020	

ATQ,

$10000 \times \left(\frac{X+100}{100}\right) = 10000 + 2000$

$100 + X = 120$

$X = 20$

S110. Ans.(a)

Sol.

Total funds donated by Q = $\frac{100}{100-64-16} \times 2000 = Rs.10000$

Total funds donated by R = $\frac{5}{4} \times 12000 = Rs.15000$

Company P,

Total fund = Rs.12000

Fund donated to NGO A = $\frac{32}{100} \times 12000 = Rs.3840$

Fund donated to NGO B = $\frac{100-32-24}{100} \times 12000 = Rs.5280$

Companies	Total fund (Rs.)	Fund donated to NGO A (Rs.)	Fund donated to NGO B (Rs.)	Fund donated to NGO C (Rs.)
P	12000	3840	5280	2880
Q	10000	6400	1600	2000
R	15000	4950	6000	4050
S	13500		7020	

Required ratio = $\frac{80}{100} \times 6000 : 2000 = 12 : 5$

S111. Ans.(c)

Sol.

Total funds donated by Q = $\frac{100}{100-64-16} \times 2000 = Rs.10000$

Total funds donated by R = $\frac{5}{4} \times 12000 = Rs.15000$

Company P,

Total fund = Rs.12000

Fund donated to NGO A = $\frac{32}{100} \times 12000 = Rs.3840$

Fund donated to NGO B = $\frac{100-32-24}{100} \times 12000 = Rs.5280$

Fund donated to NGO C = $\frac{24}{100} \times 12000 = Rs.2880$

Similarly,

Companies	Total fund (Rs.)	Fund donated to NGO A (Rs.)	Fund donated to NGO B (Rs.)	Fund donated to NGO C (Rs.)
P	12000	3840	5280	2880
Q	10000	6400	1600	2000
R	15000	4950	6000	4050
S	13500		7020	

Required percentage = $\frac{\frac{5}{9} \times (13500-7020)}{13500} \times 100\% = 26.66\%$

S112. Ans.(d)

Sol.

Total funds donated by Q = $\frac{100}{100-64-16} \times 2000 = Rs.10000$

Total funds donated by R = $\frac{5}{4} \times 12000 = Rs.15000$

Company P,

Total fund = Rs.12000

Fund donated to NGO A = $\frac{32}{100} \times 12000 = Rs.3840$

Fund donated to NGO B = $\frac{100-32-24}{100} \times 12000 = Rs.5280$

Fund donated to NGO C = $\frac{24}{100} \times 12000 = Rs.2880$

		(Rs.)	NGO B (Rs.)	NGO C (Rs.)
P	12000	3840	5280	2880
Q	10000	6400	1600	2000
R	15000	4950	6000	4050
S	13500		7020	

Total fund donated by company T = 130% of 15000= 19500

Required answer = $\frac{100-30-25}{100} \times 19500 - 6400 = 8775 - 6400 = Rs.2375$

S113. Ans.(c)

Sol.

Let the six consecutive odd numbers be y, (y+2), (y+4), (y + 6), (y +8) and (y+10) respectively.

ATQ,

$y \times (y+2) = 483$

$y^2 + 2y - 483 = 0$

$y = -23, 21$

Required average = $\frac{6y+30}{6} = y + 5$

$21 + 5 = 26$

S114. Ans.(d)

Sol.

Let the diameter of the cylinder be 2r cm and height of the cylinder be h cm.

Perimeter of square = 112 cm

$4 \times 2r = 112\ cm$

$r = 14\ cm$

Volume of cylinder = $\frac{22}{7} \times 14 \times 14 \times h = 3696$

$h = 6\ cm$

Required curved surface area = $\frac{22}{7} \times 2 \times 14 \times 6 = 528\ cm^2$

S115. Ans.(a)

Sol.

ATQ,

Let the present age of A and B is '6x+4' years and 'x+4' years respectively.

$\frac{6x+4+6}{x+4+6} = \frac{8}{3}$

$x = 5$

Required sum = 6x+4 +2+ x+4 = 7x+10 = 45 years

Let the length of train A and train B be 2x meters and x meters respectively.
Length of the platform = P
ATQ,
$(54+48)\times\frac{5}{18}=\frac{2x+x}{18}$
$x=170$ meter
$54\times\frac{5}{18}=\frac{P+170\times2}{39}$
$P=245\ meter$

S117. Ans.(b)
Sol.
Let the monthly salary of A be 100x.
Amount spend on house rent = 25% of 100x = 25x
The amount he saves =100x – 25x –$75x\times\left(\frac{30+10+40}{100}\right)=100x-25x-60x=15x$
Monthly salary of A = $\frac{9150}{15x}\times100x=Rs.61000$

S118. Ans.(a)
Sol.
Let the number of boys and girls be 8x and 5x respectively.
ATQ,
Average age of boys = $\frac{(5x+8x)\times A-5x(A-2)}{8x}=A+1.25$

S119. Ans.(b)
Sol.
Let the cost price of the article is Rs.100x
ATQ,
672 – 100x = $\frac{125}{100}\times(100x-470.4)$
$2688-400x=500x-2352$
$x=5.6$
Marked price = $100\times5.6\times\frac{150}{100}=Rs.840$
Selling price = $840\times\frac{80}{100}\times\frac{80}{100}=Rs.537.6$

S120. Ans.(e)
Sol.
Let the distance is D km.
ATQ,
$\left(\frac{180}{30}+\frac{D-180+15}{60}\right)-\left(\frac{D}{45}\right)=\frac{90}{60}$
$6-2.75+\frac{D}{60}-\frac{D}{45}=\frac{3}{2}$
$D=315\ km$

Total number of toys manufactured by A =120
Total number of toys manufactured by C =150
Total number of toys sold by C $=\frac{150+90}{2} = 120$
Total number of unsold toys of C =150 – 120 = 30
Total number of toys sold by D =135% of 120=162
Let total number of toys manufactured by B = 4x
Total number of toys sold by B =3x
Total number of unsold toys of B =x
Total number of unsold toys of D = x – 2
ATQ,
4x+162+ x – 2 = 260
5x = 100
x = 20

Persons	Manufactured	Sold	Unsold
A	120	M% of 120	(100 – M)% of 120
B	80	60	20
C	150	120	30
D	180	162	18

Unsold toys of A = 125% of 60 = 75
Sold toys by A = 120 – 75 = 45
M% of 120=45
M = 37.5%

S122. Ans.(e)
Sol.
Total number of toys manufactured by A =120
Total number of toys manufactured by C =150
Total number of toys sold by C $=\frac{150+90}{2} = 120$
Total number of unsold toys of C =150 – 120 = 30
Total number of toys sold by D =135% of 120=162
Let total number of toys manufactured by B = 4x
Total number of toys sold by B =3x
Total number of unsold toys of B =x
Total number of unsold toys of D = x – 2
ATQ,
4x+162+ x – 2 = 260
5x = 100
x = 20

Persons	Manufactured	Sold	Unsold
A	120	M% of 120	(100 – M)% of 120
B	80	60	20
C	150	120	30
D	180	162	18

Required difference = (120+162) – (20 + 18) = 244

Sol.

Total number of toys manufactured by A =120
Total number of toys manufactured by C =150
Total number of toys sold by C $=\frac{150+90}{2} = 120$
Total number of unsold toys of C =150 – 120 = 30
Total number of toys sold by D =135% of 120=162
Let total number of toys manufactured by B = 4x
Total number of toys sold by B =3x
Total number of unsold toys of B =x
Total number of unsold toys of D = x – 2
ATQ,
4x+162+ x – 2 = 260
5x = 100
x = 20

Persons	Manufactured	Sold	Unsold
A	120	M% of 120	(100 – M)% of 120
B	80	60	20
C	150	120	30
D	180	162	18

Required answer = $60 \times 20 + 120 \times 30 = 1200 + 3600 = Rs.4800$

S124. Ans.(a)

Sol.

Total number of toys manufactured by A =120
Total number of toys manufactured by C =150
Total number of toys sold by C $=\frac{150+90}{2} = 120$
Total number of unsold toys of C =150 – 120 = 30
Total number of toys sold by D =135% of 120=162
Let total number of toys manufactured by B = 4x
Total number of toys sold by B =3x
Total number of unsold toys of B =x
Total number of unsold toys of D = x – 2
ATQ,
4x+162+ x – 2 = 260
5x = 100
x = 20

Persons	Manufactured	Sold	Unsold
A	120	M% of 120	(100 – M)% of 120
B	80	60	20
C	150	120	30
D	180	162	18

Required percentage = $\frac{30+18}{330} \times 100 = 14.54 \approx 15\%$

Sol.

Total number of toys manufactured by A =120

Total number of toys manufactured by C =150

Total number of toys sold by C $=\frac{150+90}{2} = 120$

Total number of unsold toys of C =150 – 120 = 30

Total number of toys sold by D =135% of 120=162

Let total number of toys manufactured by B = 4x

Total number of toys sold by B =3x

Total number of unsold toys of B =x

Total number of unsold toys of D = x – 2

ATQ,

4x+162+ x – 2 = 260

5x = 100

x = 20

Persons	Manufactured	Sold	Unsold
A	120	M% of 120	(100 – M)% of 120
B	80	60	20
C	150	120	30
D	180	162	18

Unsold toys of A = $29 \times 4 - 20 - 30 - 18 = 48$

Sold toys by A = 120 – 48 = 72

S126. Ans.(d)

Sol.

$(8)^3 + (15)^2 - (12)^2 = ? - 1220 - 1750$

$512 + 225 - 144 = ? - 2970$

? = 3563

S127. Ans.(e)

Sol.

$20 \times \sqrt{?} = \frac{64}{100} \times 400 + \frac{12}{100} \times 1200$

$20 \times \sqrt{?} = 256 + 144$

$\sqrt{?} = \frac{400}{20} = 20$

? = 400

S128. Ans.(c)

Sol.

$(?)^2 + \frac{14}{100} \times 1600 = 59 \times 12$

$(?)^2 + 224 = 708$

$(?)^2 = 484$

? = 22

Let total capacity of tank = 120 units (LCM of 24, 30 & 20)

Efficiency of tap A = $\frac{120}{24} = 5\ units/min$

Efficiency of tap B = $\frac{120}{30} = 4\ units/min$

Efficiency of tap C = $\frac{120}{20} = 6$ units/min

ATQ,

Tank filled by tap A & tap B in 6 minutes= (5+4)× 6=54 units

Remaining capacity of tank = 120 – 54 = 66 units

Required time = $\frac{66}{(5+4-6)}$ = 22 minutes.

S130. Ans.(c)

Sol.

let initial quantity of milk in mixture be 'a' lit.

Initial quantity of water = (40 – a) lit.

Part of mixture replaced = $\frac{10}{40} = \frac{1}{4}$

Part of mixture remained before replacement = $1 - \frac{1}{4} = \frac{3}{4}$

ATQ,

$$\frac{\frac{3}{4}a}{\frac{3}{4}(40-a)+10} = \frac{9}{7}$$

$$\frac{3a}{4} \times 7 = 9\left(\frac{3}{4}(40-a)+10\right)$$

$12a = 360$

a = 30 lit. (initial quantity of milk)

Initial quantity of water = 40 – 30 = 10 lit.

Quantity of milk in final mixture= $\frac{37.5}{100} \times 30 = 11.25\ lit.$

Quantity of water in final mixture = 40 – 11.25 = 28.75 lit.

Quantity of milk in mixture after 1st replacement = $\frac{9}{16} \times 40 = 22.5\ lit.$

Quantity of water in mixture after 1st replacement = 40 – 22.5 = 17.5 lit.

Since only water is added

$$\frac{22.5 - X \times \frac{9}{16}}{17.5 - X \times \frac{7}{16} + X} = \frac{11.25}{28.75} = \frac{9}{23}$$

X = 20 lit

S131. Ans.(b)

Sol.

Profit sharing ratio of A, B and C respectively

A	:	B	:	C
5500 × 12 + 4500× 24 =		4500 × 12 + 5000× 24 =		6000 × 36 =
29	:	29	:	36

Profit share of C = 9400 × $\frac{36}{94}$ = Rs 3600

Sol.

I. $2x^2 + 11x + 12 = 0$

$2x^2+8x+3x+12=0$

$x= -4, -\frac{3}{2}$

II. $8y^2 -22y - 21 =0$

$8y^2+6y-28y-21 =0$

$y = \frac{7}{2}, -\frac{3}{4}$

So, $x < y$

S133. Ans.(a)

Sol.

I. $x^2 - 17x - 60 = 0$

$x^2-20x+3x-60=0$

$x= - 3, 20$

II. $y^2 +42y + 185 =0$

$y^2+37y+5y+185 =0$

$y = -5, - 37$

So, $x > y$

S134. Ans.(c)

Sol.

I. $x^2 + 41x + 420 =0$

$x^2+21x+20x+420=0$

$x= -20, - 21$

II. $6y^2 -11y - 10 =0$

$6y^2-15y+4y-10 =0$

$y = \frac{5}{2}, -\frac{2}{3}$

so, $x < y$

S135. Ans.(a)

Sol.

I. $5x^2 - 36 = 12^2$

$5x^2 = 144 + 36$

$5x^2 = 180$

$x^2 = 36$

$x = \pm 6$

II. $y^2 + 17y + 72 = 0$

$y^2 + 9y+ 8y + 72 = 0$

$y = -8, -9$

$x > y$

Let the efficiency of P, Q & R be p, q and r respectively.

$r = \frac{5}{4}p,\ q = \frac{3}{2}p$

Ratio of efficiency of P, Q and R = 4:6:5= 4x:6x:5x

Required days = $\frac{(4x+6x)\times 12\times\frac{8}{4}}{(6x+5x)} = 8\frac{2}{11}\ days$

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S137. Ans.(d)

Sol.

Ratio of investment of A, B and C = 5:6:14

ATQ,

$5\times 6 : 6\times 5 : 14\times 5 = 3:3:7$

Profit share of C = $\frac{1812}{3}\times 7 = Rs.4228$

S138. Ans.(d)

Sol.

Required probability = $({}^{8}C_2 \div {}^{14}C_2) = \frac{8\times 7}{14\times 13} = \frac{4}{13}$

S139. Ans.(e)

Sol.

ATQ

$112 = \frac{PR^2}{100\times 100}$

$112 = \frac{P\times 20\times 20}{100\times 100}$

$P = Rs.2800$

S140. Ans.(a)

Sol.

Let the speed of stream and speed of boat in still water is y km/hr and x km/hr respectively.

$x - y = \frac{60\times P}{44}$.....(i)

$x + y = \frac{10\times 2P}{11}$.....(ii)

Solving (i) & (ii)

$x = \frac{35P}{22}, y = \frac{5P}{22}$

Required percentage = $\frac{\frac{35P}{22}}{\frac{5P}{22}}\times 100\% = 700\%$