ANSWERS & EXPLANATION

APTITUDE TEST–Test (4293) – 2024

1 (a)

Assumption 1 is correct: The given assumption is based on the lines "*IoT security is vital for enterprises, as it includes a wide range of techniques, strategies, protocols, and actions that aim to mitigate the increasing IoT vulnerabilities of modern businesses*." These lines show that if IoT is not secured then it may make modern businesses vulnerable to cyber-attacks which can have serious economic implications. Hence, this assumption is correct as per the passage.

Assumption 2 is incorrect: The given assumption is based on the lines "*Due to the unconventional manufacturing of IoT devices and the vast amount of data they handle, there's a constant threat of cyber-attacks.*" These lines show that IoT is under constant threat due to unconventional manufacturing of IOT devices, and the huge data they handle. This does not mean that their data handling capacities are not good. So, to assume that enhancing data handling capacities is a way to secure IoTs is not correct as per the passage.

2 (a)

Option (a) is correct: The given option is based on the following lines "*Due to the unconventional manufacturing of IoT devices and the vast amount of data they handle, there's a constant threat of cyber-attacks*" and "*IoT security vital for enterprises, as it includes a wide range of techniques, strategies, protocols, and actions that aim to mitigate the increasing IoT vulnerabilities of modern businesses. For those deploying IoT systems, hardware security and authentication are critical measures*." It shows that IoT needs to be secured considering its vulnerability to cyber-attacks. Also, they are vulnerable due to their large scale manufacturing and the concomitant impact on modern businesses. Hence, their security is crucial and must be taken seriously. So, it is the most rational inference of the passage.

Option (b) is incorrect: This option mentions India, which is not discussed in the passage. So, this option is beyond the scope of the passage.

Option (c) is incorrect: The given option seems to be correct, but it is not because the passage is not pessimistic about the future based on IoT. The author just lays down the challenges associated with this technology. So, this option is not the best rational inference.

Option (d) is incorrect: The given option is about the implementation of IoT being easy. However, the passage is about security challenges in the context of IoT. Whether the implementation of IoT is easy or not is not discussed in the passage. This option statement is very general in nature, while the passage is very much focused on the security aspect of IoTs. Hence, this option is not the most rational inference of the passage.

3 (b)

Option (a) is incorrect: The passage is not about India and how Big Tech companies are affecting India's digital sovereignty. So, this option is beyond the scope of the passage.

Option (b) is correct: The given statement captures the essence of the passage. The passage is about historical colonization and how the present big tech colonizes the world using data as seen in the lines "*Colonialism has never been only about the relentless exploitation of resources for economic gain. ... When Big Tech and their social divisions deploy datafication to do social good, here, too, economic, and moral ideals feed each other but differently.*" These lines show that only the form of colonization has changed from using violence and force to using technology, but the mindset of exploitation is the same. So, this is the best-implied meaning of the passage.

Option (c) is incorrect: Big Tech does data colonization as seen in the lines "***When Big Tech** and their social divisions **deploy datafication to do social good**, here, too, economic, and moral ideals feed each other but differently*". However, it is used in Global North as well as South, as seen in the lines - *"A colonial rationality now applied within both **Global North and Global South, that underlies their business model**."* Moreover, the option states that big data is being used, but it is not discussed in the passage.

Option (d) is incorrect: Consider the lines - "*When Big Tech and their social divisions deploy datafication to do social good, here, too, economic, and moral ideals feed each other but differently. **For, helping vulnerable people (something unobjectionable) becomes itself a site of exploitation.**"* The main idea in the passage is how big tech uses data as a tool for colonization, not as a helping hand towards the people. This mindset is visible in option (b) which is the correct answer.

4 (a)

Note: This question is about invalid assumptions.

Assumption 1 is incorrect: Refer to the lines - "***Modern education is to an extent a process of learning from real life** and the pulsating, dynamic society around us*". These lines only state that modern education is learnt from real life and dynamic society to a certain degree. So, we cannot conclusively say that classroom based theoretical education is not modern. So, the given assumption cannot be called valid.

Assumption 2 is correct: The given assumption is correct as it is based on the following lines from the passage "*Truly speaking despite all attempts in the direction of equality of opportunity, the result is not satisfactory.*" This line clearly means that despite all attempts, education has not been able to become truly egalitarian. So, this assumption is correct.

5 (d)

Let the capacity of tank be 1 unit

Portion of tank filled in 1 min = $1/200 + 1/240 = 1/40(1/5+ 1/6) = 11/1200$ units

Portion of the tank filled in 150 min = $11/1200 \times 150 = 11/8$

Water leaked in 150 min = 150×3 litre = 450 litre = 3/8 of the tank.

So, Capacity of tank = $8/3 \times 450 = 1200$ litre.

Hence, option (d) is the right answer.

6 (d)

There are 24 laptops, 72 tablets and 60 smartphones. So, a total of 156 electronic items.

Total number of items that each school gets = 156/n

This is minimum when n is maximum. Hence, we need to find the maximum possible value of n, such that 24/n, 72/n and 60/n are integers.

So, n = H.C.F (24, 72, 60) = 12

Therefore, number of items that each school gets = 156/12 = 13

Hence, option (d) is the right answer.

7 (d)

As discussed above, the maximum marks that can be obtained in this condition is 130. For a single wrong answer, marks will get reduced by 5.

No student obtained negative marks. So, the marks obtained may be 0, 5, 10, ..., 130; i.e. 27 possible marks.

So, 27 students can appear for the exam and each of them may get a different score.

Hence, option (d) is the right answer.

8 (c)

Let the requirement for the entire village per day be x kiloliters.

(Note: 1 kilo liter = 1000 liter)

SO, Volume of the tank = 50x

Also, Volume of the tank = 40(x + 20) = 40x + 800   {Since, 20 kilo liters = 20000 liters}

∴ 50x = 40x + 800

Or x = 80 kilo liters

Let after plugging water would have lasted for n days.

So, $50 \times 80 = n (80 + 5)$

Or $n = (50 \times 80)/85$

Or $n = 47(1/17)$ days

So, the tank would have got emptied on the 48th day.

Hence, option (c) is the right answer.

9 (b)

From statement 1:

Cost of n pens and n pencils $= 7n + 5n = 12n$

So, if Animesh purchased equal number of pens and pencils (say n of each), he must have paid Rs. 12n.

Since $65 \neq 12n$, as n is an integer.

So, he did not buy equal number of pens and pencils.

Hence, statement 1 alone is sufficient.

From statement 2:

Had he bought 3 pencils and 4 pens more, he would have paid Rs. 108.

So, the actual amount paid by him $= 108 – [(3 \times 5) + (4 \times 7)] = $ Rs. 65.

This is now the same situation as in statement 1, and hence statement 2 alone is also sufficient.

Hence, option (b) is the right answer.

10 (a)

The number of ways of going from Aligarh to Ranchi (via Balia and Patna) is equal to the product of the number of ways of going from Aligarh to Balia, Balia to Patna, and Patna to Ranchi.

So, $n(n + 3)(n + 8) = 336 = 4 \times 7 \times 12$

$\therefore n = 4$

The number of ways of going from Aligarh to Patna $= n(n+3) = 4 \times 7 = 28$

So, option (a) is the right answer.

11 (d)

The average income is Rs. 10000 per month for 9 months and Rs. 20000 per month for 3 months.

As Rs. 10000 is maintained for a greater time-period, the average income per month for the entire year must be between Rs. 10000 and Rs. 15000.

Hence, option (d) is the right answer.

12 (a)

At the beginning, both the boys walk away from each other. After one hour, first boy reaches home and his distance from school is 5 km. This distance does not change after 2 pm.

The second boy walks at the speed of 6 km per hour for the entire 1 hour 10 min.

Distance covered by second boy in 1 hour 10 min = 7 km.

So, Total distance between the boys at 2:10 pm = 7 + 5 = 12 km.

So, option (a) is the right answer.

13 (c)

Let the customers of A and B in 2021 be 100 each.

In 2022, A lost 10% of its customers to B, but gained 20% customers from B.

So, customers of A = 100 + 20 - 10 = 110

And customers of B = 200 – 110 = 90

Over the period from 2021 to 2022, the combined customer base of these two supermarkets increased by 40%.

So, Total customers of A and B in 2022 = 140% of 200 = $1.4 \times 200 = 280$

So, New customers in 2022 = 280 - 200 = 80

In 2022, the customer base of 'A' constituted 50% of the total customers for the two competitors.

So, out of 280, share of A is 50%, i.e., 50% of 280 = 140

So, new customers that choose A = 140 – 110 = 30

And new customers that choose B = 140 – 90 = 50

∴ Out of the 80 new customers, 50 inclined towards B.
Required percentage = (50/80) × 100 = 62.5%
Hence, option (c) is the right answer.

Explanation for Questions 14 to 16:

Box F is placed two boxes above the box that contains Khakhra (i.e. there is one box between them), but is not placed at the topmost position. So, box F must be either at 2nd position from the top or at 3rd position from the top. Box F neither contains Noodles, nor is placed adjacent to the box that contains Noodles.

Case 1	Case 2
-	Noodles
F	-
-	F
Khakhra	-
Noodles	Khakhra

Box B is placed below the box that contains Noodles, but not just below it. So, Case 1 can be eliminated, as no place is left below the box that contains Noodles.
The number of boxes placed above box B is the same as the number of boxes placed below box C. There are again 2 possibilities:

Case 2a	Case 2b
Noodles	Noodles (C)
C	-
F	F
B	-
Khakhra	Khakhra (B)

Box C does not contain Noodles. So, Case 2b can be eliminated.
The box that contains Burger is placed above the box that contains Namkeen, but not just above it.
So, Final arrangement:

Case 2b
Noodles (A/D)
Burger (C)
Jalebi (F)
Namkeen (B)
Khakhra (A/D)

14 (d)

Either box A or D contains noodles. So, it can't be determined with certainty.

15 (a)

There are two boxes above the box that contains Jalebi.

16 (d)

Except (Burger, C) all others are not correctly matched. So, option (d) is the odd one out.

17 (a)

Based on the given information, we can draw the following table.

PANKAJ	KIRAN	RAMESH	SURESH	TINA	UDAY
White	Black	Black	White	Black	White
Old	Old	Old	New	Old	New
Gift	No gift	Gift	Gift	No gift	No gift

Hence, it is clear that Kiran and Tina are the two people who have not taken any gift and are also wearing black.

Hence, option (a) is the right answer.

18 (a)

Let's draw the time shown by the watch.

So, it is clear that it was around 3:30.

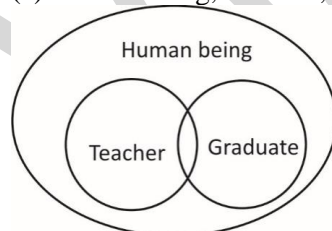Hence, option (a) is the right answer.

19 (b)
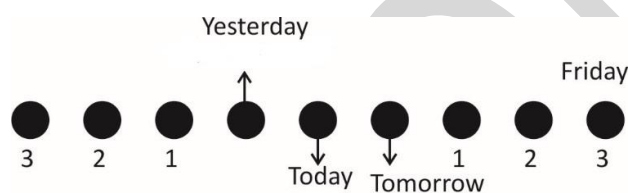
From the above figure, it's clear that the required answer is Thursday.

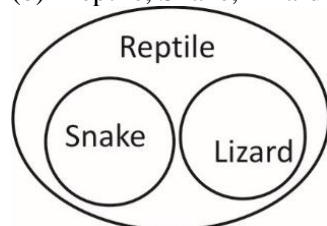Hence, option (b) is the right answer.

20 (b)

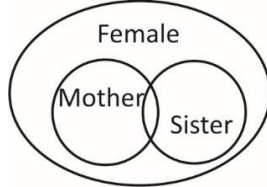Let's draw the Venn diagram of each option one by one.

(a) Human being, Teacher, Graduate

(b) Reptile, Snake, Lizard

(c) Female, Mother, Sister

Hence, option (b) is the right answer.

21 (a)

From the given information, it is clear that T, U, Q and S are adjacent to the face with alphabet R.
Hence, face with alphabet P must be opposite to the face with alphabet R.
Hence, option (a) is the right answer.

22 (b)

Inference 1 is not correct: The passage does not mention that mitigation strategies should be provided to developing countries by the developed nations. Rather, the passage recommends that MDB needs to be reformed to help developing countries mitigate climate change. **Hence, statement 1 is not correct.**
Inference 2 is correct: It is mentioned in the passage, *"MDBs are often seen as bureaucratic and risk averse, which deters the private sector from being more involved in assisting with financing".* From this line, it can be inferred that MDB's are not keen on taking risks. **Hence, statement 2 is correct.**

23 (a)

Statement 1 is correct: It is mentioned in the passage *"...the expert group called for bringing private sector engagement to the centre of MDB operations".* **Hence, statement 1 is correct.**
Statement 2 is correct: The passage says, *"To mitigate coordination failures, the expert group has called for greater involvement of national governments to develop a home-grown unified vision of goals, policies, investments and financing."* **Hence, statement 2 is correct.**
Statement 3 is not correct: In the passage, there is no direct reference to the agenda of providing increased financial support to developing countries by the developed countries. **Hence, statement 3 is not correct.**

24 (a)

Option (a) is correct: The passage mentions the Global Tax Evasion Report 2024 which calls for taxing billionaires globally. This would help in checking tax evasion. The passage says that *"This would both address evasion and "generate nearly $250 billion from less than 3,000 individuals".* This implies that the amount raised by taxing billionaires would be substantial. **Hence, option (a) is correct.**
Option (b) is not correct: The passage mentions tax evasion as the reason why billionaires enjoy lower tax. However, there is no mention of inadequate policy implementation or corrupt bureaucracy as a reason for lower tax rates for billionaires. **Hence, option (b) is not correct.**
Option (c) is not correct: The central theme of the passage is to check tax evasion by billionaires by offering lower tax rates. This would help in the collection of $250 billion from billionaires. The tax havens are mentioned in the context of the places having stored undeclared income. Scrutinizing them to check tax evasion can be one of the logical suggestions, however, the same is not mentioned in the passage. **Hence, option (c) is not correct.**
Option (d) is not correct: The passage mentions the need for taxing the wealth of rich individuals and that their undeclared money is stashed in tax havens. There is no direct connection established between tax havens thriving due to the undeclared money of billionaires being stored there. Moreover, tax havens are not the main focus of the passage. **Hence, option (d) is not correct.**

25 (c)

Option (a) is not correct: According to the passage, the protein rhodopsin is responsible for vision in humans and microalgae use it in place of chlorophyll to survive in the oceans. The same phenomenon is not taking place in both ecosystems, even though the same biochemical is used. It can be assumed that the biochemical rhodopsin is being utilised by humans and microalgae differently and hence as far as the information in the passage is concerned, it is not the 'same' phenomenon that is occurring on land and water. Even if it was, we could not have generalized it based on just one example. **Hence, option (a) is not correct.**

Option (b) is not correct: The passage mentions the adaptation of the microalgae to the changing environment and how it has adapted to the effects of global warming. The passage does not talk about climate mitigation, or whether biochemicals like rhodopsin may prove helpful in such a cause.

Option (c) is correct: Consider the line, *"As climate change reduces the availability of nutrients in the sea, marine microalgae or eukaryotic phytoplankton fire up a protein called rhodopsin".* This implies that microalgae are adopting to changing external environment. It is further mentioned in the passage, *"Estimates suggested they may absorb as much light as chlorophyll-based photosynthesis in the sea, which also captures light to generate energy and food".* These lines imply that rhodopsin replaces chlorophyll in microalgae to facilitate food production. This way, the passage revolves around the theme of adaptability to changing external conditions. **Hence, option (c) is correct.**

Option (d) is not correct: The passage revolves around the theme of adaptability by taking the case of microalgae and discussing the process of their survival in the absence of chlorophyll. The passage does not mention the effects of adaptability on productivity. The passage only narrates how adaptability can help in survival in a changing environment. **Hence, option (d) is not correct.**

26 (d)

Average age of the family 5 years ago (3 members) = 27 years
Sum of the ages of the 3 older members now= (27 + 5) × 3 = 96 years
Average age of the family now (4 members) = 25 years
Sum of the ages of the 4 numbers of the family now = 25 ×4 = 100 years
So, Age of child = 100 – 96 = 4 years
Hence, option (d) is the right answer.

27 (a)

Total volume of the 3 small cubes = $6^3 + 8^3 + 1^3 = 216 + 512 + 1 = 729$ inch^3
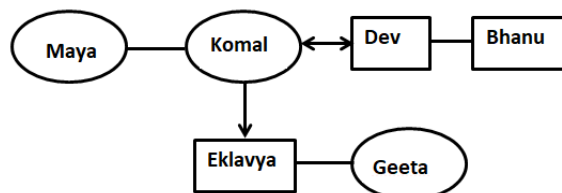Volume of the new cube formed = Total volume of the three smaller cubes = 729 inch^3
Side of the new large cube = $(729)^{1/3} = 9$ inch
Total surface area of the cube of side 9 inch = $6 \times (side)^2 = 6 \times 9 \times 9 = 486$ inch^2
Hence, option (a) is the right answer.

28 (a)

Based on the information given in the question, the following family tree can be drawn.


From the chart given above, it is clear that they are uncle and nephew.
Hence, option (a) is the right answer.

Explanation for Questions 29 & 30:

T is seated 2nd to the left of the person who likes White. The individual who likes White sits opposite to U and is seated at the middle of a side. R has a preference for Red and is not an immediate neighbor of T or the person who likes White. So, we get:

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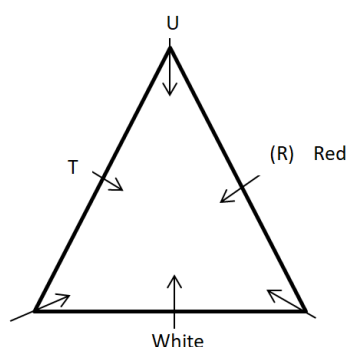
Q is positioned 2nd to the left of P, who occupies one of the corners of the table. The individual who likes Violet sits immediately to the left of the person who likes Black, but is not seated opposite to P. Q does not have a liking for Blue.

So, the final arrangement will be:

Violet
U

Black
T

(R) Red

(Q)
Green

White
(S)

(P)
Blue
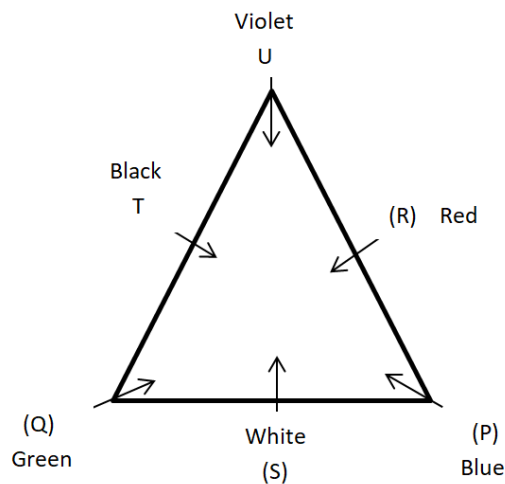
29 (b)

S likes White colour.

30 (a)

U sits at the corner.

31 (b)

Given matrix:

	C_1	C_2	C_3
$R_1 \rightarrow$	2	8	80
$R_2 \rightarrow$	4	24	624
$R_3 \rightarrow$	6	48	?

Let's consider row R_1,

$R_1 \longrightarrow 2 \longrightarrow (2)^2 + 2 \times 2 \longrightarrow (8)^2 + 8 \times 2$

$2 \longrightarrow 8 \longrightarrow 80$

Applying same concept in R_2,

$R_2 \longrightarrow 4 \longrightarrow (4)^2 + 4 \times 2 \longrightarrow (24)^2 + 24 \times 2$

$4 \qquad 24 \qquad 624$

Similarly, in R_3,

$R_3 \longrightarrow 6 \longrightarrow (6)^2 + 6 \times 2 \longrightarrow (48)^2 + 48 \times 2$

$6 \qquad 48 \qquad \boxed{2400}$

Hence, option (b) is the right answer.

32 (c)

There are 105 boxes of pens, 140 boxes of pencils and 175 boxes of erasers.

While transporting the boxes, he makes all the trips with maximum load permissible.

So, maximum load permissible = HCF (105, 140, and 175) = 35

Thus, he can make 3 trips with boxes of pens, 4 trips with boxes of pencils and 5 trips with boxes of erasers; in each trip carrying 35 boxes of the same color.

Hence, option (c) is the right answer.

33 (a)

Option (a) is a correct inference. The last line of the passage implicitly indicates that right skill oriented policy making can help emerging markets like India to gain. Further, it is mentioned that new sectors would be formed (in digital space). India can gain from these emerging trends if the right policy measures are duly taken.

Option (b) is incorrect: It is clearly mentioned that digital technologies would reduce employment in some old, typically low and medium-skill sectors. It does not mean other sectors of economy have not been impacted at all.

Option (c) is incorrect: The passage only talks about reduction in employment in some old, typically low and medium-skill sectors. It would be an exaggeration to say that there would be large scale job losses.

Option (d) is incorrect with reference to the passage. Author points out that there is a POTENTIAL for emerging markets like India to reap benefits from digital technologies. It would be premature to say that India has already benefited.

34 (d)

Statement 1 is not correct: The passage says, *"This is because such visas can provide a gateway for people to enter their preferred countries, **particularly in Europe".*** This does not imply that the practice of visa shopping is limited to Europe, even though it may be mainly applicable for that region. **Hence, statement 1 is not correct.**

Statement 2 is not correct: The passage mentions visa shopping only in the context of visiting those countries. There is no mention of job seekers in particular resorting to visa shopping to visit multiple countries. **Hence, statement 2 is not correct.**

35 (b)

Option (a) is not correct: The statement is correct in the context of the passage, but it does not reflect the best crux of the passage. The passage explains the reason for people purchasing visas of those countries that they may not be visiting during the granted period. Option (b) does a better job in summarizing it. **Hence, option (a) is not correct.**

Option (b) is correct: The passage narrates why people purchase visas of countries they are not planning to visit in the given duration. This helps people enter countries of their choice even if they don't have visas. Further, the passage says, *"This is to increase the chances of obtaining visas for countries of their choice in the future, given how the application process often takes a long time or has chances of rejection".* It can be implied that such visas provide people with a gateway to their preferred countries. **Hence, option (b) is correct.**

Option (c) is not correct: Through visa shopping, people can enter the European countries of their choice. However, the passage does not mention that visa shopping is becoming an easy route to enter the European Union. On the other hand, the passage highlights the difficulty in processing visa applications in the lines, *"This is to increase the chances of obtaining visas for countries of their choice in the future, given how the application process often takes a long time or has chances of rejection."* Also, European Union has not been explicitly mentioned in the passage. **Hence, option (c) is not correct.**

Option (d) is not correct: Visa shopping helps aspiring people get a visa for the countries of their choice, or it increases the chances of getting a visa for countries they want to visit in the future. There is no mention of such visas helping people getting a residence permit in the target country. **Hence, option (d) is not correct.**

36 (c)

Let the number of red balls = R
Number of yellow balls = Y
Number of orange balls = O
According to the question,
R + Y + O = 1000
From Statement -1:
R = (2/3) (Y + O)
Or R = (2/3) (1000 - R)   (Since, R + Y + O = 1000)
Or 3R = 2(1000 - R)
Or 5R = 2000
Or R = 400
Statement 1 alone is not sufficient, as the relationship between Y and O is not known.
From Statement -2:
Y = (3/7) (R + O)
Or Y = (3/7) (1000 - Y)   (Since, R + Y + O = 1000)
Or 7Y = 3(1000 - Y)
Or 10Y = 3000
Or Y = 300
Statement 2 alone is also not sufficient, as the relationship between R and O is not known.
Now using both the statements, we get:
R = 400 and Y = 300
So, O = 1000 - (400 + 300) = 300
Hence, red balls are the maximum number-wise.
Hence, option (c) is the right answer.

37 (d)

Let Rudra, Ananya and Chetan be R, A and C respectively.

Person	Days	Efficiency	Total work
R+ A	24	5	
A + C	40	3	120
R + C	30	4	

So, Efficiency-wise, 2(A+R+C) = 5 + 3 + 4 = 12
Or (A+R+C) = 6
C = (A+R+C) – (R + A) = 6 – 5 = 1
R = (A+R+C) – (A + C) = 6 – 3 = 3
A = (A+R+C) – (C + R) = 6 – 4 = 2
So, the number of days in which Rudra can complete the same work = 120/3 = 40 days
Similarly, the number of days in which Ananya can complete the same work = 120/2 = 60 days
Similarly, the number of days in which Chetan can complete the same work = 120/1 = 120 days
Hence, it is clear that option (d) is the right answer.

38 (c)

Let d be the distance between T and C.
Time taken by them to meet = d/{(d/42) + (d/56)} = (42 × 56)/(42 + 56) = 24 minutes
Since, they started at 7:30 a.m., they would meet at 7:30 a.m. + 24 minutes, i.e. at 7:54 a.m.
Hence, option (c) is the right answer.

39 (b)

Let us assume rate of interest to be r.
From statement 1:
Or P [{1 + (r + 3)/100}^{2} – (1 + r/100)^2] = 1302

Or $20000[(103 + r)^2 – (100 + r)^2]/100^2 = 1302$

Or $2[(103 + r + 100 + r)(103 + r – 100 – r) = 1302$

Or $3(203 + 2r) = 651$

Or $(203 + 2r) = 217$

Or $2r = 217 - 203$

Or $2r = 14$

Or $r = 7\%$

From statement 2,

$\{P (1 + r/100)^2 – P\} – \{P (2r)/100\} = 98$

Or $(1 + r/100)^2 – 1 - (2r/100) = 98/20000$

Or $1 + (2r/100) + (r^2/10000) – 1 – (2r/100) = 49/10000$

Or $r^2 = 49$

Or $r = 7\%$

Hence, option (b) is the right answer.

40 (c)

The greatest number that can be formed by the given digits = 86520

The smallest number that can be formed by the given digits = 20568

The difference between these two numbers will be more than the difference between any other numbers formed by these digits.

So, the difference between any two such numbers has to be less than 86520-20568 = 65952

In no case 66952 can be the difference between any two five digit numbers formed by using the digits 2, 5, 6, 0 and 8

Hence, option (c) is the right answer.

41 (c)

Let four number be a, b, c and d

$[(a + b + c + d)/4] = 20$

Or $a + b + c + d = 80$ ---------(l)

According to the question,

$(a + d)/2 = (b + c)/2$

Or $a + d = b + c$ --------------------(ll)

From equation (l) and (ll), we get:

$2(a +d) = 80$

Or $a + d = 40 = b + c$

Hence, statements (a) and (b) are false and statement (c) is true.

42 (b)

Time taken by Anuj to run 36 km = $(18/9) + (18/15) = 3.2$ hours.

Time taken by Vishal to run 36 km = $36/12 = 3$ hours

So, it is clear that Vishal will win the race. He will win the race by $\{3.2 – 3\} = 0.2$ hours

Distance covered by Anuj in 0.2 hours = $0.2 \times 15 = 3$ km

∴ Vishal will win the race by 3 km.

So, option (b) is the right answer.

43 (c)

Ramayan is moved from 9th to 18th position, i.e. its position increases by nine places (when seen from the right). Hence the place of Ramcharitmanas will also increase by 9 (when seen from the left).

New place of Ramcharitmanas from the left = 9 + 9 = 18

Hence, option (c) is the right answer.

Alternate Method:

Total books in the row = Position of Ramayan from the right (after interchange) + Position of Ramcharitmanas from the left (before interchange) - 1 = 18 + 9 - 1 = 26

New position of Ramcharitmanas from the left = 26 - 9 + 1 = 18

Hence, option (c) is the right answer.

44 (b)

Option (a) is not correct: The passage says, *"Indeterminate perception is pure unverbalized experience. It is a conscious but not a self-conscious state in the sense that there can be no direct awareness of it".* It implies that indeterminate perception is not a self-aware state. **Hence, option (a) is not correct.**

Option (b) is correct: It is the most rational message conveyed by the author. The passage revolves around the central theme of perception being the first and foremost method of learning. It is the means to acquire knowledge. The passage says, *"Perception (pratyak–a) is the first and the foundational method of knowing.* It is the direct and immediate mode of knowing". The passage further says, *"The word pratyak–a is used for both the method of knowing and the resultant knowledge".* It narrates the central arguments further. The passage further says – "*It may also be regarded as the final test of the truth of all knowledge in so far as perceptual verification is the **most handy and reliable mode of confirmation**.*" **Hence, option (b) is correct.**

Option (c) is not correct: The passage says, *"In determinate perception, an object is known related to its qualifications".* This implies that the given statement is correct. However, it's not the most rational message conveyed by the author. Determinate perception is only one type of perception, which makes this option only partially correct. **Hence, option (c) is not correct.**

Option (d) is not correct: The passage says, *"It may also be regarded as the final test of the truth of all knowledge in so far as perceptual verification is the most handy and reliable mode of confirmation".* It is correct in the context of the passage. However, it does not reflect the most rational message conveyed by the author, as the passage focuses on the theme of acquisition of knowledge through perception as well. Both of these aspects are covered in option (b). **Hence, option (d) is not correct.**

45 (a)

Option (a) is correct: This is the central theme of the passage. The passage says, *"It is argued that in this period of globalization, it is the growing competition between firms and countries that make it essential for firms to organize production suiting the changing market conditions".* This means that due to globalization, there is an increased competition among countries and firms which drives innovation in the industrial process. **Hence, option (a) is correct.**

Option (b) is not correct: Monitoring systems for production are part of the innovation in industrial processes. The passage says, **"*Modern industrial production needs expensive equipment and continuous monitoring of employees through monitoring or surveillance systems".* However, it does not say that monitoring systems are a prerequisite for modern industrial production. Also, the passage says – "*Over the last decades, there has been a shift to what is often called 'flexible production' and 'decentralization of work'.*", which denotes a shift away from strict monitoring. **Hence, option (b) is not correct.**

Option (c) is not correct: According to the passage, decentralization of work is a reaction to the changing working conditions, which in turn depends on the growing competition among firms triggered by globalization. Decentralization of work is a part of the innovation process driven by globalization. The passage does not state it is necessary, as there could be other solutions to a given problem. Also, there's no indication in the passage as to why it should be considered "evil". **Hence, option (c) is not correct.**

Option (d) is not correct: The passage mentions the increase in competition among firms due to globalization. However, there is no mention of the impact of globalization on their productivity. **Hence, option (d) is not correct.**

46 (a)

Assumption 1 is correct: The given assumption is based on the following lines *"Countries are not starting on this journey from the same place, **many (not all) do not have access to the funds** they need to rapidly transition to a healthier and more prosperous energy future ... longer in **many parts of the developing world.*** These lines show that many developing countries face the issue of funding, but not necessarily all. So, this assumption is correct as per the passage.

Assumption 2 is incorrect: The given assumption is not in sync with the context of the passage. The passage mentions how COVID-19 have had an impact on the transition to cleaner energy, but only in context of some developing countries and not developed ones, as seen in the lines "*... many do not have access to the funds they need to rapidly transition to a healthier and more prosperous energy future **and the damaging effects of the COVID-19 crisis are lasting longer in many parts of the developing world**.*"

47 (a)

Option (a) is correct: The core theme of the passage is how despite the availability of money, there is a lack of funding for clean energy projects in the developing world. This is visible in the lines "..., *many do not have access to the funds they need to rapidly transition to a healthier and more prosperous energy future and the damaging effects of the COVID-19 crisis are lasting longer in many parts of the developing world. **There is no shortage of money** worldwide**, but it is not finding its way to the countries**, sectors, and projects where it is most needed."* Also, this option reiterates that the distribution of money is crucial for clean energy projects in the developing world.

Option (b) is incorrect: The main theme of the passage is how despite the availability of money, there is a lack of funding for clean energy projects. The context of consensus or lack of it, as mentioned in the option is not a part of the passage. So, this option is beyond the scope of the passage and is therefore not correct.

Option (c) is incorrect: The line, "In many emerging and developing economies, emissions are heading upwards while clean energy investments are faltering, creating a dangerous fault line in the global efforts to reach climate and sustainable energy goals" indicates that inadequate investments in the clean energy sector amidst rising emissions is posing an obstacle to the achievement of sustainable energy goals. However, there is no mention of the funding dimension in this option statement, which is rather the main focus of the passage.

Option (d) is incorrect: The given option could be a logical solution to the problem of clean energy funding, but it is not the best crux of the passage. The passage is themed around the irony of inadequate funding for clean energy projects in developing countries, despite the availability of money. The passage does not specifically suggest that developed countries fund developing countries, rather it mentions that governments need to give a mandate of funding to international public finance institutions, which consequently should do the funding. Therefore, this option, though logically correct is not the best crux of the passage.

48 (a)

Let the rates of interest for 1st, 2nd and 3rd year be 4x%, 5x% and 10x% respectively.
Now, 20000 [1 + (4x/100)] [1 + (5x/100)] [1 + (10x/100)] = 45000
Or (100 + 4x) (100 + 5x) (100 + 10x) = 225 × 100 × 100
Or 4 × 5 × 10 × (25 + x) (20 + x) (10 + x) = 225 × 100 × 100
Or (25 + x) (20 + x) (10 + x) = 225 × 50
Or (25 + x) (20 + x) (10 + x) = 30 × 25 × 15
Or x = 5
So, the rate of interest for the third year = 10x% = 50%.
Hence, option (a) is the right answer.

49 (b)

The number of diagonals = $^mC_2$ – m = 54
Or [m!/{2! (m – 2)!}] - m = 54
Or [m (m - 1)/2] – m = 54
Or m^2 – 3m = 108
Or m^2 – 3m – 108 = 0
Or (m – 12) (m + 9) = 0
So, m = 12
Hence, option (b) is the right answer.

50 (d)

Total number of flashlights = 20
Number of defective flashlight = 20 × (2/5) = 8
Number of working flashlights = 20 – 8 = 12
Three flashlights can be selected from 20 flashlights in $^{20}C_3$ ways.
Number of ways of drawing 3 flashlights from 8 defective flashlights is $^8C_3$.
So, the probability that all the three flashlights are defective = $^8C_3$/$^{20}C_3$ = [8!/{3!(8 – 3)!}] / [20!/{3!(20 – 3)!}] = 14/285
The probability that at least one flash light is good = 1 – Probability that no flashlight is good = 1 – (14/285) = 271/285
Hence, option (d) is the right answer.

51 (a)

Given, $f(x) = (6^x + 6^{-x})/2$
Then, $f(x + y) = (6^{x+y} + 6^{-(x+y)})/2$
And, $f(x - y) = (6^{x-y} + 6^{-(x-y)})/2$
So, $2f(x + y) \times f(x - y) = 2[(6^{x+y} + 6^{-(x+y)})/2][(6^{x-y} + 6^{-(x-y)})/2]$
Or $2f(x + y) \times f(x - y) = [6^{x+y} \times 6^{x-y} + 6^{x+y} \times 6^{-(x-y)} + 6^{-(x+y)} \times 6^{(x-y)} + 6^{-(x+y)} \times 6^{-(x-y)}]/2$
Or $2f(x + y) \times f(x - y) = (6^{2x} + 6^{2y} + 6^{-2y} + 6^{-2x})/2$
Or $2f(x + y) \times f(x - y) = [(6^{2x} + 6^{-2x})/2] + [(6^{2y} + 6^{-2y})/2]$
Or $2f(x + y) \times f(x - y) = f(2x) + f(2y)$
Hence, option (a) is the right answer.

52 (d)

According to the question,
CP = 90/100 SP
Or CP/SP = 9/10
Profit percent = $1/9 \times 100 = 11.11$ %
Hence, option (d) is the right answer.

53 (d)

As per the question,
Raj < Sanjay < Kumar …………(i)
Manoj is the tallest …………(ii)
Sanjay < Amit < Kumar ……………..(iii)
From (i), (ii) and (iii), we get:
Manoj > Kumar > Amit > Sanjay > Raj
Hence, option (d) is the right answer.

54 (a)

Let the speed of the boat in still water and the speed of the water current be x kmph and y kmph respectively, and the distance be 'd' km.
From statement I,
The time taken by the boat to cover a certain distance downstream is half the time taken by it to cover the same distance upstream.
So, $\{d/(x + y)\} = (1/2)\{d/(x - y)\}$

Or $2/(x + y) = 1/(x - y)$

Or $2x - 2y = x + y$

Or $x = 3y$

So, the speed of boat in still water is three times the speed of water current.

Statement II gives the upstream speed of the boat as 10 m/s.
So, Upstream speed = $x - y = 10$
Or $3y - y = 10$
Or $2y = 10$
Or $y = 5$ m/s
So, $x = 3y = 15$ m/s
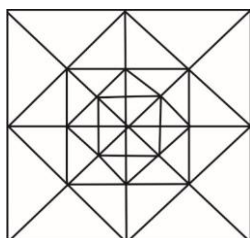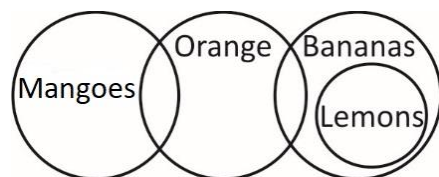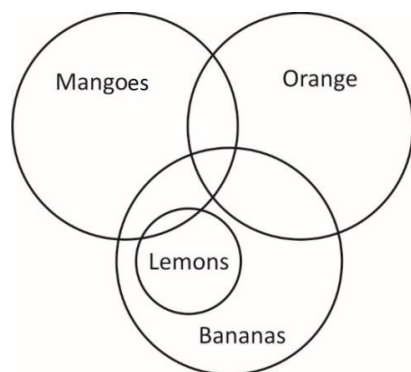Hence, option (a) is the right answer.

55 (c)

Given figure:

There are 5 squares in the innermost square figure.
There are 5 such figures.
So, total number of squares in the given figure = 5×5 = 25
Hence, option (c) is the right answer.

56 (d)

Combining all the given statements, we can draw the following possible Venn diagrams:

Or

Therefore, from the above Venn diagram we see that either conclusion I or III follows.
Hence, option (d) is the right answer.

57 (c)

No information is known about the price of the commodity in 2011. So, nothing can be concluded in respect of options (a) and (b).
Clearly, there is steep increase in graph from the year 1990 to 2000. Thus, the price of the commodity in the year 2000 was definitely more than the average price of the commodity during the years 1990 to 2000.
Hence, option (c) is the right answer.

58 (b)

In 1st figure: (48 + 24) – (35 + 15) = 22
Similarly in 2nd figure: (39 + 19) – (22 + 17) = 58 – 39 = 19 (Required missing number)
Hence, option (b) is the right answer.

59 (d)

We will predict the required number/s by going through each statement:
As the hundreds digit of the three digit number leaves a remainder 2 when divided by 4. Hence, the hundreds digit of that number can either be 2 or 6.
To be divisible by 5, the units digit should be either 0 or 5. Thus the possible numbers should be of the form:
2_0, 2_5, 6_0 or 6_5
Now, the tens digit of the number is even. So, the tens digit can be: 0, 2, 4, 6, 8. However, we have to keep in mind that the number is divisible by 3, i.e. the sum of all its three digits must be divisible by 3.
The possible three digit numbers that satisfy all the three conditions are: 240, 225, 285, 600, 660 and 645.
Thus, there are 6 numbers in all.
Hence, option (d) is the correct answer.

60 (d)

Initial speed of train = 63 km/hr
Time taken = 100 minutes
As we know that Distance = speed × time

Distance = 63 × 100/60 = 105 km.

It is given that the new time will be 80 minutes.

So, required speed = 105 /(80/60) = 78.75 km/hr

Hence, option (d) is the right answer.

Alternate Method:

As distance is constant, speed should increase in the same proportion as the time is getting reduced.

As the time is getting reduced from 100 minutes to 80 minutes, i.e. a reduction of 20%, the speed must increase by 25%.

So new speed = 125% of 63 km/hr = 78.75 km/hr

Hence, option (d) is the right answer.

61 (b)

Average of 6 numbers = a

Thus, the sum of six numbers = 6a..................(i)

Now, out of 6 numbers there are 3 numbers at even positions and 3 at odd positions.

Average of numbers occurring at even places = b.

So, sum of numbers at even positions = 3b............(ii)

Similarly, average of numbers occurring at odd places = c

So, sum of numbers at odd positions = 3c. ....(iii)

From (i), (ii) and (iii), we get:

6a = 3b + 3c

Thus, 2a = (b + c)

Hence, option (b) is the right answer.

62 (c)

Given series: ABFE, BDOD, CFIC, ……….

Writing the respective position numbers of the alphabets in the given series:

```
A  B  F  E ,  B  D  O  D   C  F  I  C  , .......
|  |  |  |    |  |  |  |    |  |  |  |
1  2  6  5    2  4  15 4    3  6  9  3
```

In each term, the position number of 2nd alphabet is just double that of the 1st alphabet.

The last alphabet is decreasing by 1 in each term. So, the pattern is E, D, C, B, … as far as the last alphabet is concerned.

And, position number of 3rd alphabet = concatenated position number of 1st two alphabets × position number of 4th alphabet

Observing the pattern in first term:

Position number of 3rd letter = 12(AB) × 5(E) = 60 → 6 + 0 = 6 → F

Applying the same pattern in second term:

Position number of 3rd letter = 24(BD) × 4(D) = 96 → 9 + 6 = 15 → O

Similarly, applying the same pattern in third term:

Position number of 3rd letter = 36(CF) × 3(C) = 108 → 1 + 0 + 8 = 9 → I

Similarly, we can get the next term.

Position number of 3rd letter = 48(DH) × 2(B) = 96 → 9 + 6 = 15 → O
So, the next term would be 'DHOB'.
Hence, option (c) is the right answer.

63 (c)

Given pattern: RHA : ISZ :: XCF : ?
Writing the letters of the English alphabet and their opposite letters, we get:

We can see that the letters in ISZ are opposite to those in RHA. So, a similar pattern has to be followed in the second set of the analogy too.
So, the missing term is 'CXU'.
Hence, option (c) is the right answer.

64 (d)

Given:
sut la nom – Allow me food ………..(i)
la ko tid – Food is good ……….(ii)
rub on sut – Give me sword ……….(iii)
ko tin row – Good news come …………….(iv)
From equations (i) and (ii),
la – food
From equations (ii) and (iv),
ko – good
From equation (ii),
tid – is
Hence, code for 'is' is 'tid'.
So, option (d) is the right answer.

65 (c)

It can be deduced that these words are related to the plant growth cycle. So, the meaningful order is:
Sprout (5) → Seeding (6) → Vegetative (2) → Budding (4) → Flowering (3) → Ripening (1)
Hence, option (c) is the right answer.

66 (c)

Option (a) is incorrect: The passage mentions the need for self-introspection and practical mindedness in order to understand the philosophy of life. However, the given option presents 'difficulty in achieving success' as a consequence of the failure in understanding the philosophy of life, which is incorrect. The relationship between understanding the philosophy of life and becoming successful has not been discussed in the passage. So, this option is not correct.
Option (b) is incorrect: The given inference is not correct as it is not the main theme of the passage. The question of whether understanding the philosophy of life is easy or difficult is not covered in the passage. Also, the claim that only great personalities who meditate and are practical can understand it, is not correct because it is not mentioned or implied in the passage. The lines "*What's the philosophy of life"? This is a question that has been **pondered upon by great personalities** of the world, of all ages",* only means that great personalities at all times across the world have sought answers to this question. This is not to say that they are experts in understanding the philosophy of life.

Option (c) is correct: The passage is about what the philosophy of life is and what needs to be done to understand it. It is seen in the lines "*To figure it out, **you need to understand what you want out of life (personal goals)***", "*The first thing you need to do, dear folks, is to **introspect yourselves**" and "The second important point to bear in mind is that your philosophy of life should be **practical**.*" These lines validate the inference mentioned in the option. Hence, this is the most logical inference.

Option (d) is incorrect: The passage stresses the need for introspection and meditation (for which privacy is essential) in order to understand the philosophy of life. However, there is another aspect being talked about which is the need for developing a realistic philosophy of life, which is not mentioned in this statement. Also, the tone of the passage is positive or neutral, while this statement is rather negative in tone.

67 (a)

Inference 1 is correct: The passage through the lines, "*And conditions at traditional holiday destinations in high summer **are becoming increasingly unpleasant** if not downright hazardous. As the effects **of climate change** become increasingly severe, there's genuine concern that **traditional destinations will become too hot in summer to remain appealing to visitors**" states that traditional destinations have become unpleasant due to climate change. The decreasing recreational appeal of traditional destinations implies that new destinations may be explored in the future. Hence, this implication is correct as per the passage.

Inference 2 is incorrect: Consider the following line - "*And conditions at traditional **holiday destinations in high summer** are becoming **increasingly unpleasant** if not downright hazardous.*" This line only shows that due to climate change traditional destinations have become unpleasant. However, to state categorically that holidaying would be difficult without addressing climate change is not based on sufficient evidence and sounds far-fetched. Such a predicament is not mentioned in the passage and hence is incorrect.

68 (c)

Option (a) is incorrect: The given option is very narrow as compared to the central theme of the passage. This option suggests people to plan their holiday destinations keeping in mind the climate of the place. However, the passage talks about climate change and how it impacts the tourism sector, and vice-versa. Therefore, it must adapt to the changing climate. The given option seems correct, but it is not the main inference when compared with option (c).

Option (b) is incorrect: The given option is not correct because it mentions COVID-19 as the most important factor affecting the tourism sector. But the passage is about the impact of climate change on the leisure travel and tourism sector, and not that of the pandemic. 'COVID-19' as a disrupting factor is mentioned only in a limited context in the line "*Holidays are making a comeback after several years of disruption caused by the COVID-19 pandemic.*" Hence, this option is not the correct inference.

Option (c) is correct: The given option reflects the main idea of the passage. It is reflected in the lines - "*But this resurgence in travel is concerning. The **tourism sector alone is responsible for an estimated 8%–10% of global greenhouse gas emissions**. ... As **the effects of climate change become increasingly severe, there's genuine concern that traditional destinations will become too hot in summer** to remain appealing to visitors*". These lines validate the idea put forward by the given option. Climate change impacts tourism sector negatively and tourism in turn leads to more emission of GHGs.

Option (d) is incorrect: The given option is not correct because it states that people should promote responsible tourism, which is a sustainable way forward, but not an inference. The concept of 'responsible tourism' is not discussed in the passage and hence is out of its scope. The passage is about how climate change and the tourism sector affect each other.

69 (d)

Inference 1 is incorrect: The given inference is not correct because it states that remedies will prevent future injustices, which is not necessarily correct. Remedies may heal historical injustices but there is no guarantee that future injustices would also be prevented, as it is not mentioned in the passage. So, this inference is not correct.

Inference 2 is incorrect: The nature of violations of human rights, as it exists in the present, is not discussed in the passage. So, we cannot infer that the nature of present human rights violations is different from historical injustices. Hence, this inference is not correct as per the passage.

70 (d)

> **Option (a) is incorrect:** The passage is about historical injustices and their reparations. However, the option mentions the context of denial of historical injustices which is not covered in the passage. The passage is not about denying or accepting them. Hence, this is not the best crux of the passage.
>
> **Option (b) is incorrect**: The relationship between providing justice today and settlement of historical injustice is not mentioned in the passage. Hence, to state that without settling them, providing justice today would be difficult or impossible is not correct.
>
> **Option (c) is incorrect**: The given option is based on the lines "*The notion of reparations is close to the current idea of restorative justice as a potentially transformative social action.*" It just states that restorative justice is about social action. The passage does not mention whose responsibility such a justice is (though it suggests that legislatures may be better suited for this job). Hence, to state that it is the responsibility of all would not be correct.
>
> **Option (d) is correct:** The lines "*The **proliferation of such demands** may represent a global tribute to the strength of human rights doctrine and its moral claim on the international community. The **notion of reparations** is close to the current idea of restorative justice as a potentially transformative social action*" show that there is an increasing demand for the redressal of historical injustices. Hence, this is the best crux of the passage.

71 (d)

> **Statement 1 is not correct:** The passage mentions countries and regions that will face stunting problems among children. The passage mentions regions of Sub-Saharan Africa, South Asia, Eastern Asia and Pacific region, the Middle East and North Africa. So, this issue is widespread. However, we cannot infer from this information that this is a problem that is faced by poor and rich countries alike. The passage just mentions the regions, not specific countries in those regions. Only two countries are named - Pakistan and the Democratic Republic of Congo (DRC), that too in the perspective of facing hunger issues. The passage further says that, "*The findings also underlined the link between extreme poverty and stunting.*", suggesting that stunting is more of an issue for poor countries than the rich ones. **Hence, statement 1 is not correct.**
>
> **Statement 2 is not correct:** The passage says, "*Pakistan and the Democratic Republic of Congo (DRC) stand among the top four countries expected to face the highest levels of stunting*". So, Asian countries may also be at the top positions in the list. **Hence, statement 2 is not correct.**

72 (a)

> Clearly, the expenditure on petrol is constant which can be calculated by the multiplying the two values, i.e. consumption and price per litre for any particular block which is shown below:
>
> 1st block → 60 × 40 = Rs. 2400
>
> 2nd block → 48 × 50 = Rs. 2400
>
> 3rd block → 40 × 60 = Rs. 2400
>
> 4th block → 32 × 75 = Rs. 2400
>
> Thus, the expenditure on petrol is Rs. 2400 per month.
>
> So, if the price of petrol goes up to Rs. 80/litre then,
>
> Consumption = 2400/80 = 30 litres
>
> Hence, option (a) is the correct answer.

73 (d)

> In the first hour, he travels 10 km.
>
> According to the question, in second hour he would travel 5 km.
>
> Hence, distance covered by him is reducing in G.P. Here, a = 10, r = ½
>
> ∴ Maximum distance that he can travel = 10/{1 - (1/2)} = 20 km
>
> Hence, he can never get to be 25 km away from Shyam's house.

Hence, option (d) is the right answer.

74 (a)

Given relationship: $Q > P \geq U > S = V \leq T < R$

Conclusion I: $S < R$

This conclusion follows.

Conclusion II: $P > T$

No relationship can be established between them.

Thus, conclusion II does not follow.

Therefore, only conclusion I follows.

Hence, option (a) is the right answer.

75 (b)

Let the height of papaya tree when it was planted be X cm.

Height after n years, $H = P \times [1 + (R/100)]^n$

Given that: H = 540 cm, n = 2 years, P = X, R = 20%

So, $540 = X \times (1 + 20/100)^2$

Or $540 = X \times (120/100)^2$

Or $540 = X \times (6/5) \times (6/5)$

Or $X = (540 \times 5 \times 5)/(6 \times 6)$

Or X = 375 cm

Hence, option (b) is the right answer.

76 (d)

Based on the information given we have the following diagram:

Option (d) is true because after Ramesh and Suresh took a left turn and right turn respectively, they continue walking in their respective directions.

77 (b)

Option (a) is incorrect: The passage mentions that there are concerns about the threat to privacy posed by new digital technologies as seen in the lines, "*In recent years, there has been growing concern about the **threat to privacy posed by new technologies**, such as big data and artificial intelligence.*" This does not mean that merely deploying such technologies violates the right to privacy as mentioned in this option. If these technologies are misused, then one can say that a violation has happened. However, the given option is not correct because mere deployment is not a violation. Hence, this is not the most rational inference.

Option (b) is correct: The given passage is about the threat to privacy from the misuse of digital technologies deployed by corporations. When privacy is respected, an individual expresses him/herself freely as seen in the lines "*Corporations can use these technologies to collect and analyse vast amounts of personal information, **which can then be used to target individuals** with .... **When individuals have their privacy respected, they are free to make their own choices** about their lives and to pursue their interests without fear of government or corporations.*"

Option (c) is incorrect: Though government has been mentioned in the last line, the main theme of the passage is how digital technologies can be misused by corporations to violate the right to privacy. Hence, this option is not the most rational inference.

Option (d) is incorrect: The given option mentions the growth of digital technologies and states that individual privacy acts as a hindrance to it. However, the passage is about how digital technologies can be misused by corporations to extract personal data. Also, the context of the growth of digital economy and issues inherent in it have not been discussed in the passage. Moreover, this option statement is rather pessimistic in tone, while the passage is not. Hence, this option is not correct.

78 (b)

Option (a) is incorrect: The statement is based on the lines "*Renewable energy technologies, such as solar and wind power, have **become more efficient and cost-effective**, **reducing our reliance on fossil fuels**.*" These lines mean that new technologies have reduced dependence on fossil fuels as they are more cost-efficient. However, the statement mentions efficiency and cost-effectiveness as the reasons for reliance on technologies for climate change mitigation, which is not what is mentioned in the passage. So, this option is not the most rational inference.

Option (b) is correct: The passage is about how technology causes climate change acting as an evil as visible in the lines, *"Energy-intensive processes, transportation, and deforestation, often enabled by technology, **have contributed to rising carbon dioxide levels**",* and now how technology is a necessity to combat climate change as seen in the lines, "*Conversely, technology offers vital tools to combat climate change. **Renewable energy technologies, such as solar and wind power**, have become more efficient and cost-effective, reducing our reliance on fossil fuels. **Innovations in energy storage, electric vehicles, and sustainable agriculture offer pathways to a lower-carbon future**"* So, in the context of climate change, technology can be considered as a necessary evil. Therefore, this option is the most rational inference.

Option (c) is incorrect: The main theme of the passage is how technology aided climate change, and how it will help in addressing the impact of climate change in the future. However, the option is very narrow in context as it is based on the line, "*Furthermore, **technology aids in climate monitoring and data collection**, providing valuable insights into climate patterns and trends.*" It only mentions climate monitoring and data collection as helpful tools in understanding climate patterns, which is not the central theme of the passage. So, this is not the most rational inference.

Option (d) is incorrect: The given option seems to be correct, but it is not, because it only partially covers the main theme of the passage. It only mentions technologies for the future (which have been mentioned just as examples to showcase the good side of technology) and misses how technology contributes to climate change. The context of the lines, "*The industrial and **technological** advancements of the past century have been a **significant driver of greenhouse gas emissions**. Energy-intensive processes, transportation, and deforestation, often **enabled by technology**, have **contributed to rising carbon dioxide levels**"* is missing in the option. Hence, this option is not the most rational inference.

79 (d)

Inference 1 is incorrect: The passage is about migration in general and not rural-to-urban migration in particular, or that between nations. Also, the passage does not state that migration happens for innovation and economic growth. These are consequences of skilled migration as seen in the line "*Skilled immigrants can contribute to innovation and economic growth.*" Therefore, this inference is not based on the information given in the passage and is not correct.

Inference 2 is incorrect: The passage is about the benefits and issues of migration. However, the given statement mentions migration as the solution to the fundamental issues of manufacturing, services, and agriculture. The passage does not mention any issue of manufacturing and services per se and, it does not present migration as the potential solution for them. Hen ce, this inference is not correct as per the passage.

80 (d)

Option (a) is incorrect: The passage is about migration in general, its benefits and issues and policies needed to address them. However, the given option is specific to skilled labour. Therefore, this option does not capture the main theme of the passage. Also, the author does not say that we need to counter rural-to-urban migration of skilled labour. So, this is not the best option.

Option (b) is incorrect: The passage is about migration in general, its benefits and issues and policies needed to address them. However, this statement states the employment potential of migration, which is not specifically discussed in the passage. Hence, this option is beyond the scope of the passage.

Option (c) is incorrect: A zero-sum game means that the loss of one is the benefit of the other. This option is about the different sectors and discusses migrations as beneficial for some and disadvantageous for others. However, the passage is about migration in general and does not analyse its relative impacts across different sectors. It discusses the contributions towards and issues pertaining to migration in the context of different sectors.

Option (d) is correct: According to the passage, there are benefits as well as challenges (double-edged sword-like nature) associated with migration. In order to address these challenges and optimise benefits, appropriate policies and strategies are required. The following line, *"To **harness its benefits and mitigate its challenges**, **comprehensive policies and strategies are needed,** addressing the unique demands of agriculture, manufacturing, and services while fostering inclusivity and economic growth"*, validates the given option.