ANSWERS & EXPLANATION

APTITUDE TEST–Test (4297) – 2024

1 (d)

According to the question,
R > Q > S > P
Let 4 even consecutive numbers be:
R = 8, Q = 6, S = 4, P = 2
Let's check each statement one by one.
(i) (P + S) ≥ (R + Q)
or (2 + 4) ≥ (6 + 8)
or 6 ≥ 14
Thus, statement (i) is wrong.
(ii) (R − S) > (Q + P)
or (8 − 4) > (6 + 2)
or 4 > 8
Thus, statement (ii) is also wrong.
(iii) (P + R) ≤ (Q + S)
or (2 + 8) ≤ (6 + 4)
or 10 ≤ 10
However, if R = 80, Q = 6, S = 4, P = 2, then this inequality would not hold.
Thus, statement (iii) is also wrong.
Hence, option (d) is the right answer.

2 (c)

Option (a) is incorrect: The main theme of the passage is how the introduction of robots by companies threatens human jobs and earnings. We cannot say whether or not this competition will continue in future. So, this is not the correct option.

Option (b) is incorrect: The context of the socialist model and its comparison to the capitalist model is not a part of the passage. Hence, this option is beyond the scope of the passage and is not correct.

Option (c) is correct: The core theme of the passage is how the capitalist system works with innovations like robots, but takes away the jobs of the workers. The following lines "*As firms introduce new-generation robots into the workplace and, more broadly, new technologies associated with I4.0 then they need to include current workers who will be affected by such technologies in this introduction to allay at least some of the fears that they have*", show that firms need to consider the concerns of their employees despite the introduction of robots. This reflects compassionate capitalism. So, this is the best crux of the passage.

Option (d) is incorrect: The given option does not reflect the core theme of the passage. Also, this would be an extreme step. Therefore, this answer option is incorrect.

3 (b)

Option (a) is incorrect: The core theme of the passage is the craze of materialistic things among youngsters as the reason for crime in society. However, this option includes ethical socialization as an antidote to crime, which is not discussed in the passage. The passage nowhere discusses that crime would not happen after ethical socialization of children. So, this is not the best crux of the passage.

Option (b) is correct: The whole passage is on how the race for material things among youth could breed crime in society. The following lines "*Their **aspirations are often beyond the means of their parents.** Youngsters want to spend more money than their friends. Thus, the cycle of crime begins*", reflect that if the youth is obsessively inclined towards material things, it can be dangerous for society. So, this is the best crux of the passage.

Option (c) is incorrect: This option focuses on the role of the parents. However, the passage does not focus on the role of the parents. It only mentions that children may spend more than the means of their parents. So, the role of parents is not the central theme of the passage or the crux of the passage. This makes option (d) incorrect too.

4 (a)

Option (a) is correct: The option is based on the following lines "*There are several questions that you must ask as your children immerse themselves in this connected world. First, are the **relationships that they build online healthy or harmful**? and, do they foster your children's long-term positive development?*"

Option (b) is incorrect: The modes of engagement have changed for children. However, this option states that parents need not adapt which is not correct as per the passage. Without adapting it would be difficult to guide the children across digital modes of interactions. So, this is not the correct inference from the passage.

Option (c) is incorrect: The passage talks about relationships in the virtual world, and not about opportunities offered by it. So, this option is beyond the scope of the passage.

Option (d) is incorrect: The passage, at the end, states that parents should focus on core questions for their children in the context of building relationships online. However, this does not mean that young people need not learn the value of relationships in offline mode of engagement. Therefore, this answer option is incorrect.

5 (a)

Assumption 1 is incorrect. The given assumption is not correct because of the lines "*Corruption bypasses democratic mechanisms to the extent that Mark Warren has defined corruption as a violation of democratic inclusion.*"

Assumption 2 is correct. The lines "*Corruption bypasses the laws and rules ...For this reason, **the role of citizens** is better understood in terms of social accountability, ... asking for appropriate countermeasures*", validate the assumption given. Corruption may bypass law; however, citizens' participation would help put a check on it. So, this assumption is correct as per the passage.

6 (b)

Option (a) is incorrect. Consider the line - "*Citizen participation about anti-corruption efforts encompasses dynamics and approaches that may differ from citizen participation in other public processes, given that the **State may not always provide citizens** with the same access to space and information about fighting corruption.*" This context is very limited, so the inference based on this information is narrow and pales in comparison to the one given in option (b).

Option (b) is correct. The lines "*Corruption **bypasses the laws and rules** that were democratically established and **excludes those who do not participate in corrupt exchanges** (e.g., services that are meant to be public are allocated to those who bribe or based on clientelism). **For this reason**, **the role of citizens is better understood in terms of social accountability, where the citizens oppose corruption** by keeping it in check, ... and asking for appropriate countermeasures.*" prove the assertion made in the option. So, this option is the most rational inference of the passage.

Option (c) is incorrect. We cannot infer from the passage that people's indifference is the "best" breeding ground for corruption. Also, the context of bureaucracy-criminal nexus has not been discussed in the passage. Hence, this option is not correct as per the passage.

Option (d) is incorrect because option (a) is incorrect.

7 (d)

On the basis of the given statements, the following Venn diagram can be drawn:
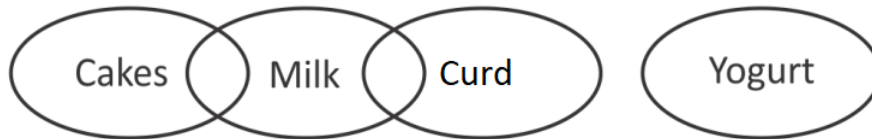
Conclusions II and III form a complementary pair. Hence, either II or III follows.
Hence, option (d) is the right answer.

8 (a)

3 boys can be arranged in a row in 3! = 6 ways.
Boy1 ---- Boy2 ----- Boy3
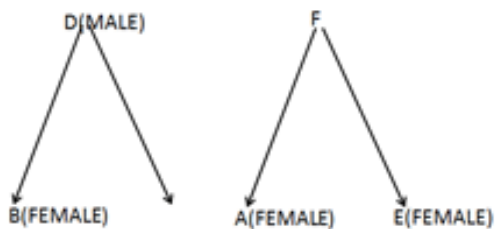The two girls can either be seated between Boy1 and Boy2 or between Boy2 and Boy3.
Number of ways of seating the girls = 2 (ways of seating 2 girls) × 2 (ways of selecting the position of girls) = 4.
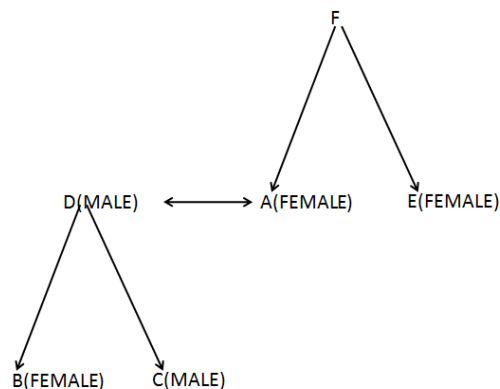Total number of arrangements possible = 6 × 4 = 24
Hence, option (a) is the right answer.

9 (d)

From statements 2 and 3 we get:

From statement 4, it is known that B is daughter of A, and B is also a child of D. So, D and A are a couple. The picture becomes:

From statement 1, F must be a male.
Both the statements (a) and (b) are correct.
Hence, option (d) is the right answer.

10 (c)

Total number of pens in the bag = 12
Three pens can be drawn from 12 pens in $^{12}C_3$ ways.
We can draw a blue pen out of 3 blue pens in $^3C_1$ ways.
Similarly, a green pen can be drawn in $^4C_1$ ways.
And a red pen can be drawn in $^5C_1$ ways.
The required probability = $(^3C_1 \times {}^4C_1 \times {}^5C_1)/ {}^{12}C_3$
= 3/11
So, option (c) is the right answer.

11 (d)

The total selling price of the tablets = Rs. 25200
Profit% = 20%
So, the total cost price of the tablets = 25200/1.2 = Rs. 21000
The total cost of tablets A = 420 x 10 = Rs. 4200
∴ The total cost of tablets B = 21000 - 4200 = Rs. 16800
∴ The quantity of tablet B = 16800/12 = 1400 strips
Hence, option (d) is the right answer.

12 (a)

Total soldiers = 4000 ; Shifted soldiers = 800
Remaining soldiers = 4000 – 800 = 3200
Total number of days from 1st January to 30th January = 30 days
So, remaining days = 190 – 30 = 160 days
Let us assume that the remaining food will last for 'X' days for the remaining soldiers.
Then, $(3200 \times X) = (4000 \times 160)$
Or $X = (4000 \times 160)/3200$
Or $X = 200$ days
Hence, option (a) is the right answer.

13 (a)

Option (a) is correct: The passage revolves around the central theme of how education equips people with the knowledge and understanding to address the complex challenges of climate change. The passage says, "*Response strategies for climate change will require a central role of education. Education helps people understand and address the impact of global warming, encourage change in their attitudes and behaviour and help them adapt to climate change-related trends*". The passage further says, "*The education and capacity building has also attracted the attention of policymakers, environmental activists, multilateral organizations and stimulated diplomatic activities across the world*". It underscores the need for education for a collective effort to address climate change challenges. Hence, option (a) is correct.
Option (b) is not correct: The passage mentions aspects related to education and capacity development for climate change mitigation and its effective management. However, it does not mention that educating about climate change will lessen the need for technological solutions. Hence, option (b) is not correct.
Option (c) is not correct: The passage does acknowledge education's ability to encourage change in attitudes and behaviours, but it doesn't guarantee an immediate or universal shift. The passage says, "*Education helps people understand and address the impact of global warming, encourage change in their attitudes and behaviour and help them adapt to climate change-related trends*". It does not imply that change in attitude and behaviour will be immediate. Hence, option (c) is not correct.
Option (d) is not correct: The passage says, "*The education and capacity building has also attracted the attention of policymakers, environmental activists, multilateral organizations and stimulated diplomatic activities across the world*". It does not imply that education about climate change is a priority over other solutions related to climate change. Hence, option (d) is not correct.

14 (a)

Inference 1 is correct. Refer to the lines: "*Education provides an opportunity for school administrators to create an environment for education .... This will only enrich their political contribution as adults.*" So, this inference is correct as per the passage.
Inference 2 is incorrect. The context of the privatization of schools is not a part of the passage and is beyond the scope of the passage. Hence, this inference is not correct.

15 (d)

Option (a) is incorrect. The given option is not correct because the passage only mentions education being a great equalizer. Regarding political polarizer, the line "*Although political polarization is not new it is increasing*" only mentions it but no relation has been established with regards to education.

Option (b) is incorrect. The context of political science classes is very narrow and nowhere mentioned in the passage as such. The role envisioned for school administrators is much wider – "*Education provides an opportunity for school administrators to create an environment for education which succeeds in creating educated and engaged students who are aware of politics at the national and local levels and can use the classroom format to develop their critical thinking and problem-solving skills.*" Also, private schools have not been discussed in the passage explicitly. So, this is not the correct statement.

Option (c) is incorrect. The given option is not correct because the passage nowhere mentions that education is the only source of awareness of politics at the national and local levels. There could be other sources of generating political awareness. Hence, this option is not correct.

Option (d) is correct. The given option is based on the following line - "*If we don't prioritize educational equity, it will be those less fortunate in society that will continue to suffer disproportionately.*" This line shows the importance of education for less fortunate people in society.

16 (d)

Assumption 1 is incorrect: The context of survival in a social group based on a strong sense of identity is not discussed anywhere in the passage. So, this assumption is not correct.

Assumption 2 is incorrect: Culture and identity are complex concepts, but how cultural interactions across groups complicate the development of identities or how it may give rise to people having confused personalities has not been discussed in the passage.

17 (a)

Option (a) is correct: The passage is on culture and identity. They both are complex and interrelated concepts. It is seen in the lines "***Culture is a defining feature of a person's identity***, *contributing to how they see themselves and the groups with which they identify. ...* ***Like culture, the notion of identity is complex*** *with people's identity or identities becoming more complex over time as they interact with different groups.*" So, this is the best crux of the passage.

Option (b) is incorrect: Identity development is not specific to one culture as per the following lines *"Like culture, the notion of identity is complex with people's identity or identities becoming more complex over time as they interact with different groups."* So, this is not the correct crux of the passage.

Option (c) is incorrect: The given statement is rather absurd. So, this is not the best crux of the passage.

Option (d) is incorrect: The given option seems to be based on the line - "***Identity adapts due to many factors including mass media***, *popular culture and increased opportunities for social interaction facilitated by new technologies.*" However, these lines do not reflect the core theme of the passage. Mass media and technology are mentioned as factors of identity adaptations, not as something influenced by culture. So, this is not the correct crux of the passage.

18 (c)

Let the number of officers in the L.I.C. office be x.
Then, number of workers in the L.I.C. office = (400 – x)
So, $20000 \times x + 4000 \times (400 - x) = 400 \times 5000$
Or $20000x + 1600000 - 4000x = 2000000$
Or $16000x = 2000000 - 1600000$
Or $16000x = 400000$
Or $x = 400000/16000 = 25$
Thus, the number of officers in the L.I.C. office is 25.
Hence, option (c) is the right answer.

19 (d)

Let's take the L.C.M. of 5, 3 and 7.
L.C.M. of 5, 3, 7 = 105
According to the question, every time 2 saplings were left.
Thus, Aniket had 107 saplings at least.
Hence, option (d) is the right answer.
Alternate method:
Let's see the options.
We see that 107 is the only one, which if divided by 5, 3, 7, leaves a remainder of 2.
Hence, option (d) is the right answer.

20 (c)

Time = Distance/Speed
Distance = 140 km. Let speed of car be X km/hr
Time taken by car = 140/X hours
Time taken by train = 140/{110X/100}
According to the question,
Stoppage time = Time taken by car - Time taken by train
Or 10 min = (140/X) – [140/(110X/100)]
Or 10/60 hr. = (140/X) – (140/1.1X)
Or 1/6 = 14/1.1X
Or 1.1X = 14 × 6 = 84
Or X = 84/1.1 km/hr
Now, Speed of train = 1.1X = 84 km/hr.
Hence, option (c) is the right answer.

21 (c)

Total age of Mr. and Mrs. Sharma at their wedding = 28 × 2 = 56 years.
Assume that the son was born after x years.
Total age of Mr and Mrs. Sharma when the son was born = (56 + 2x) years.
Average age of Mr. and Mrs. Sharma before the birth of their son = (56+2x)/2.
Average age of the family after the birth of their son = (56+2x)/3.
As per the question,
(56+2x)/2 - (56+2x)/3 = 10
or, 56 +2x = 60
or x = 2.
Son was born 2 years after marriage.
Total age of Mr. and Mrs. Sharma = 28 × 2 + 2 × 2 = 60.
Since the ratio of their ages is given as 8:7
Age of Mr. Sharma = (8 × 60)/15 = 32 years.
Hence, option (c) is the right answer.

22 (b)

According to the question:
Students who scored more than 100 marks = 22%
And students who scored more than 200 = 6%
Hence, students who scored between 100 and 200 = 22 – 6 = 16%
Now, students who scored less than 30 = 12%
Students who scored between 30 and 100 = 100 – (22 + 12) = 66% = 990
So, Total number of students = 990 × (100/66) = 1500
Students who scored between 100 and 200 = 16% = (16/100) × 1500 = 240
Hence, option (b) is the right answer.

23 (a)

Given that:

Similarly,

Hence, option (a) is the right answer.

24 (a)

Selling Price of each pair of shoes after discount = 5500 – 10% of 5500 = 5500 – 550 = Rs. 4950

Total bill amount = 4950×2 = Rs. 9900

Final amount after Rs. 100 discount = Rs. 9800.

So, each friend paid Rs 4900 each for the pair of shoes.

Saving of each friend = MP – Final SP = 5500 – 4900 = Rs. 600

So, percentage saving = 600/5500 $\times$ 100 = 10.9%

Hence, option (a) is the right answer.

25 (c)

Option (a) is incorrect: The passage is about the evolving interpretations of empathy. However, this option focuses on solving the issues of the sufferer based on the understanding of empathy which is not the main theme of the passage. This context of solving issues of the sufferer is not covered in the passage. So, this does not best reflect the crux of the passage.

Option (b) is incorrect: The given option focuses that society must accept different interpretations of empathy which is not the core theme of the passage. The passage is about the evolving interpretations of empathy. It is nowhere indicated that society is not open to different interpretations of empathy. Also, the concept of morality has not been discussed in the passage. Hence, this is not the crux of the passage.

Option (c) is correct: The given option captures the essence of the passage which is the evolving interpretation of the term empathy. The following lines show that interpretations have evolved and are varied: "*In a new book, **The Other Side of Empathy**, author **Jade E. Davis argues that we should be sceptical of the recent cultural focus on empathy** and its accompanying strategies and methods.*" These lines show that author Jade presents empathy from different perspective. So, its interpretations are not limited to only one view.

Option (d) is incorrect: The passage is on the evolving interpretations of empathy. To state that the concept is not understood would not be correct. The passage describes how the author has given a new interpretation of empathy. Also, to say that the value of empathy will never be understood is rather an extreme statement. So, this is not the best crux of the passage.

26 (a)

Option (a) is correct: The passage is about how the current economic growth model is impacting the environment, which is not sustainable in the long term. This is visible in the lines "***The present economic system is destroying our natural resources and thereby eroding the prosperity of future generations.***" These lines show that if the current exploitation of resources is continued then it will impact the future generations, and hence there is a need to change the current model of economic development. These arguments are comprehensively captured in this answer option.

Option (b) is incorrect: The given option only focuses on one aspect of the passage which is the energy and material resources; environmental aspects are not discussed. Therefore, it cannot be the crux of the passage.

Option (c) is incorrect: The stated claim that the race for green future markets has picked up momentum is not correct because the passage does not state any such momentum. The passage only mentions that a green economy is the need of the hour. Whether or not it has picked up momentum is not covered in the passage. So, this is not the best crux of the passage.

27 (a)

Assumption 1 is correct: The given assumption is correct as it is based on the lines: "… *a **Sahitya Akademi award is an encouragement to keep pursuing the craft**; writers can expect to see a rise in sales … Writers also have the opportunity to be **translated into other regional languages, and into English too***." These lines clearly prove that this award helps in cross-cultural interactions through books.

Assumption 2 is incorrect: The author talks about the nine books of poems, six novels, five short stories, three essays and one literary study in different languages. This means the language diversity is acknowledged and rewarded by Sahitya Akademi. Therefore, it would be incorrect to say that awards like Sahitya Akademi do not value the different languages and dialects of the country. Therefore, this answer option is incorrect.

28 (b)

Inference 1 is incorrect: That the given inference is correct cannot be concluded from the passage. For example, the passage says, "*In India, people live in the largest cities than in small towns when compared to China. Nearly 6 per cent of the urban population lives in the largest cities in India, which is double compared to China.*" The author compares the sub-sections of urban population in India and China. From the given information, we cannot gauge anything about the relative degree of urbanisation. Therefore, this answer option is beyond the scope of the passage.

Inference 2 is correct: The given inference is correct as it can be inferred from the following lines - "*Most modern cities in India are undergoing haphazard growth, and because of this, the effects of living in huge cities **have not been fully anticipated**. The social, economic, and psychological consequences of industrialisation and urbanisation **have not been fully considered** ...*" These lines clearly imply that it is the lack of systematic policy approach which is resulting in haphazard urbanization. Therefore, this answer option is correct.

29 (c)

Option (a) is incorrect: The central theme of the passage is about the poor urbanization model/policy. The context of the role of urbanization in rapid economic growth is not covered in the passage. Therefore, it does not reflect the best crux of the passage.

Option (b) is incorrect: The passage mostly covers the pattern and consequences of urbanisation. The context of villages has not been discussed in the passage.

Option (c) is correct: The passage covers the lack of structured policy in Indian urbanization. The following lines "*Most modern cities in India are undergoing haphazard growth, and because of this, the effects of living in huge cities have not been fully anticipated*" show that there is a lack of coherent policy approach. This shows that the current trend of urbanization is not sustainable and needs to be changed. So, this is the best crux of the passage.

Option (d) is incorrect: To state that industrialization and urbanization go together is not covered in the passage. Also, it is not the central theme which is about the lack of a systematic approach to urbanization.

30 (b)

Let Rs. x be the fare to Baroda from Alwar and y be the fare to Chitarkoot from Alwar.
Now, according to the question we get:
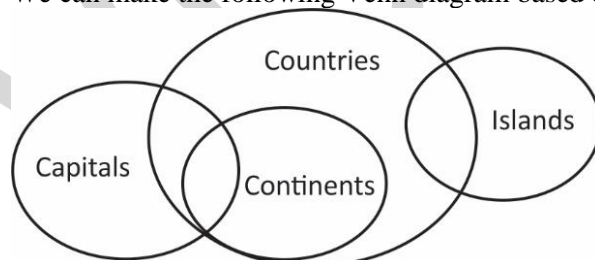$2x + 3y = 77$ ….(i) and
$3x + 2y = 73$ ….(ii)
Multiplying (i) by 3 and (ii) by 2 and subtracting, we get $5y = 85$ or $y = 17$.
Putting $y = 17$ in (i), we get, $x = 13$
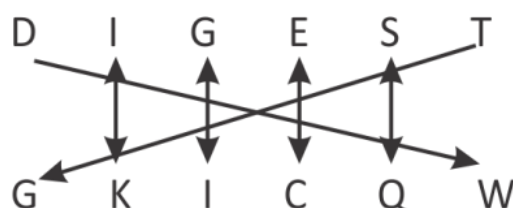Hence, option (b) is the correct answer.

31 (b)
We can make the following Venn diagram based on the given statements:

From the diagram we can infer that some Countries are Continents and some Countries are Capitals.
Hence, option (b) is the correct answer.

32 (c)

T → G (Opposite letter pair)
I + 2 → K
G + 2 → I
E - 2 → C
S - 2 → Q
D → W (Opposite letter pair)
Similarly,
C → X (Opposite letter pair)
I + 2 → K
C + 2 → E
N - 2 → L
I - 2 → G
P → K (Opposite letter pair)
Hence, option (c) is the right answer.

33 (a)

In each row, 2nd element = (1st element/3rd element) × 3
In 1st row,
2nd element = (96÷6) × 3 = 48
In 2nd row,
2nd element = (48÷12) × 3 = 12
In 3rd row,
2nd element = (72÷12) × 3 = 18
Hence, option (a) is the right answer.

34 (b)

Let Rati's age be x years.
Her mother's age = (83 - x),
According to the question,
(83 - x) + 6 = (x + 6) × 15/4
Or 83 − x + 6 = (15x/4) + 45/2
Or (15x/4) + x = 89 − 45/2
Or 19x/4 = 133/2
Or x = (4 × 133)/(19 × 2) = 14
Hence, the ratio of their ages 9 years ago = (x − 9) / (83 − x − 9) = (14 − 9)/(83 − 14 − 9) = 1/12, i.e. 1 : 12
Hence, option (b) is the right answer.

35 (d)

We are given that average of five numbers = x
∴ Sum of these five numbers = 5x
Also, it is given that average of three numbers from above mentioned 5 numbers = y
∴ Sum of these three numbers = 3y
Value of remaining two numbers is 'a' and 'b' respectively
Hence, a + b = 5x – 3y ……. (i)
Difference between a and b is 1. Hence, either (a - b) = 1 or (b − a) = 1
Case 1: if (a − b) = 1, then a = 1 + b
Putting this value of a in equation (i), we get
or (1 + b) + b = 5x – 3y
or 5x - 3y - 2b = 1
Case 2: if (b − a) = 1, then b = 1 + a
Putting the value of b in equation (i), we get
a + (1 + a) = 5x – 3y
or 5x – 3y – 2a = 1
Hence, option (d) is the correct answer.

36 (a)
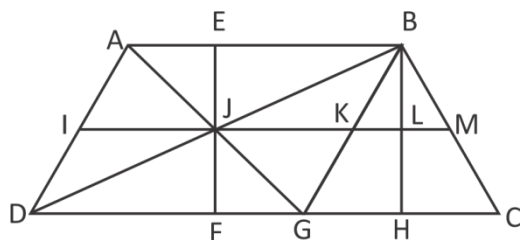
The triangles in the given figure are: BGC, BGH, BCH, BKL, BML, DBG, DJG, DJF, FJG, JKG, BJK, BJG, DIJ, DAJ, AIJ, AJB, AJE, BJE, ABG, ADG, DBC, DBH, ABD, BJL, BJM

Thus, there are 25 triangles in the given figure.

Hence, option (a) is the right answer.

37 (b)

Due to a leak in the bottom of the tank, it gets emptied in 8 hours.

Hence, Part emptied by the leak in 1 hour = 1/8

Suppose tank is filled by tap when there is no leak, in A hours.

Hence, part filled by tap in 1 hour = 1/A

Part emptied by (leak + tap) in 1 hour = 1/12

Hence, $(1/8) – (1/A) = 1/12$

or $1/A = 1/8 – 1/12 = 1/24$

So, Part filled by tap in 1 hour = $1/A = 1/24$

Hence, tap fills the tank in 24 hours (if there is no leak).

Rate of flow through tap is 6 litres per minute.

Hence, tank's capacity = $24 \times 60 \times 6 = 8640$ litres

Hence, option (b) is the correct answer.

38 (d)

An acute angle is one that measures less than 90˚. An obtuse angle is one that measures between 90˚ and 180˚. A reflex angle is an angle that measures between 180˚ and 360˚.

P = Q + R and P > 180°

We can get sum of two angles greater than 180°, when one of the angle is obtuse and the other is acute or both angles are obtuse or one angle is reflex and the other is acute.

However, sum of two right angles = 90° + 90° = 180°, which is equal to 180°, not greater than 180°.

Therefore, both angles (i.e. Q and R) cannot be right angles.

Hence, option (d) is definitely NOT true.

39 (a)

Option (a) is correct: The passage is about committing mistakes, sometimes repeatedly with optimism. This shows that humans keep on committing mistakes. The following lines - "*As human beings, we go in cycles from one milestone to the next. Starting over is at the core of our existence. ... There is no denying that lessons from the past have advanced our species, but it may be the renewed cells talking, a voice inside us responding to a familiar risk with 'it could be different this time'*", show that even after making the mistakes we often start over again to make more mistakes. So, this is the best inference of the passage.

Option (b) is incorrect: The central theme of the passage is that irrespective of what we do, we commit mistakes due to various reasons. Consider the lines – "*There is no denying that lessons from the past have advanced our species, but it may be the renewed cells talking, a voice inside us responding to a familiar risk with 'it could be different this time'. It might be the optimist in us talking but we can sometimes convince ourselves that under different circumstances even an identical situation could have a different outcome.*" So, this is not the correct inference of the passage.

Option (c) is incorrect: The context of reflection of ignorance due to the repetition of mistakes is not the central theme of the passage. Rather, the very idea of ignorance is not discussed in the passage. Hence, this is not the main inference of the passage.

Option (d) is incorrect: As per the passage, humans are optimistic despite making multiple mistakes. However, the given option states that an optimistic attitude helps humans prevent the repetition of

mistakes, which is contrary to what is mentioned in the passage. Prevention of the repetition of mistakes is not a part of the passage. The author primarily talks about how committing mistakes, and even repeating the same mistake is intrinsic to human beings. So, this option is not the best inference.

40 (c)

Statement 1 is correct: The passage portrays the negative consequences of irregularity and lack of punctuality. These include disrupted teamwork, reduced efficiency, inconvenienced customers, and a damaged organizational image. The passage says, "*Look around yourself and you may come across people who get up late in the morning and are unable to send their children to school on time. They may also not be able to provide their family members with proper meals and have disorganised homes due to their irregular behaviour and lack of punctuality. Such people are frequently absent from work*". This suggests that professionalism and adherence to expected work conduct are essential for maintaining a smooth-running environment at the workplace. Hence, statement 1 is correct.

Statement 2 is correct: The passage emphasizes how unprofessional behaviour ripples outward, affecting colleagues, customers, and the overall reputation of the organization. The passage says, "*You may have witnessed the inconvenience caused to the public wanting to pay bills when counter clerks are either late or not found at their seats in banks, post offices, and telephone and electricity offices*". The passage further says, "*The irresponsible behaviour of such people spoils the discipline of the work environment, sets bad examples, causes inconvenience to the public and lowers the image of the organization*". This implies that individuals hold a degree of responsibility for the collective success and image of their workplace, and their actions can have far-reaching consequences. Hence, statement 2 is correct.

41 (a)

Number of ways Tapu Sena can form a committee consisting of 1 man and 4 women = $^4C_1$ x $^5C_4$ = {4! / 1! (4-1)!} $\times$ {5!/4! (5-4)!}
= 4 x 5
= 20 ways
Hence, option (a) is the right answer.

42 (b)

Area of a rectangular park = length x breadth
Or 160 = 16 x breadth
Or breadth = 160/16 = 10 cm
New area of the rectangular park = 160 x 4/3 = 640/3 cm^2
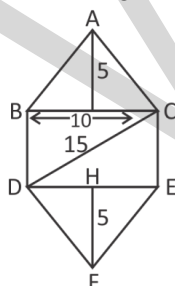New length = New area/Original breadth = (640/3) ÷ 10 = 64/3 cm
New perimeter of the rectangular park = 2 (New length + breadth)
= 2{(64/3) + 10} = 2(64 + 30)/3 = 2 x 94/3 = 188/3 = 62.67 cm
Hence, option (b) is the right answer.

43 (c)

Given diagram:

Area of triangle ABC = ½ x h x b = ½ x 5 x 10 = 25 m^2
Area of triangle DEF = ½ x h x b = ½ x 5 x 10 = 25 m^2
In triangle DCE, we can apply Pythagoras theorem.
$(DC)^2 = (CE)^2 + (DE)^2$
Or $(15)^2 = (CE)^2 + (10)^2$
Or $(CE)^2 = 225 – 100 = 125$
Or CE = 5√5 m

Then area of triangle DCE = ½ x h x b = ½ x 10 x 5√5 = 25√5 m²
Similarly, area of triangle BCD = 25√5 m²
Therefore, total area of the field ABDFEC = area of BCD + area of DCE + area of ABC + area of DEF
= 25√5 + 25√5 +25 + 25 = 50√5 + 50 = 50(√5 + 1) m²
Hence, option (c) is the right answer.

44 (a)

Cost of transport by Ship (per ton), A = cost incurred via ship/volume transported by ship = (15% x 40)/(8% x 15) = 5
Cost of transport by Air flight (per ton), B = cost incurred via air flight/volume transported by air flight = (9% x 40)/(9% x 15) = 8/3 ≈ 2.66
Cost of transport by Rail (per ton), C = cost incurred via rail/volume transported by rail = (10% x 40)/(15% x 15) = 16/9 ≈ 1.7
Cost of transport by Road (per ton), D = cost incurred via road/volume transported by road = (6% x 40)/(23% x 15) = 16/23 ≈ 0.695
So, A > B > C > D
Hence, option (a) is the right answer.

45 (b)

S. No.	Stream	Boys		Girls		Total
		Hostellers	Non- Hostellers	Hostellers	Non-Hostellers	
1.	Science	44	48	35	33	160
2.	Art	66	72	68	43	249
3.	Commerce	40	38	60	23	161
4.	Hindi	50	48	30	22	150
	Total	200	206	193	121	720

Total students = 720
Number of students that passed = 720 x 60% = 720 x (60/100) = 432
Number of students that passed in science stream = 160
Number of students that passed in other streams (other than science) = 432 – 160 = 272
Number of students in other streams (other than science) = 720 – 160 = 560
Required percent = (272/560) x 100 = 48(4/7)%
Hence, option (b) is the right answer.

46 (c)

If 97865A4B is divisible by 6, then it must be divisible by both 2 and 3.
B must be even number like 0, 2, 4, 6, 8, but A can be any number from 0 to 9.
Sum of the digits of 97865A4B = 9 + 7 + 8 + 6 + 5 + A + 4 + B = 39 + A + B
If we put A's max value, i.e. 9, then we get 48 + B
So, B should be a number that is divisible by both 3 and 2. So, B = 6.
So, the maximum possible value of A + B = 9 + 6 = 15
Hence, option (c) is the right answer.

47 (c)

According to the information given in the question,
Shark > Monkey ………..(i)
Rabbit ≤ Cat ……………………….(ii)
Monkey > Rabbit ………………………..(iii)
From equations (i) and (iii), we get:
Shark > Monkey > Rabbit ≤ Cat
Thus, Rabbit is the slowest of all the animals.
Hence, option (c) is the right answer.

48 (c)

Inference 1 is correct: The given inference is based on the following lines "*To safeguard democracy from the encroachment of corruption requires a multifaceted approach, including robust legal frameworks, independent oversight, **people participation and a collective commitment to ethical***

governance." These lines clearly prove that it's the collective responsibility (of both government and citizens) to counter corruption.

Inference 2 is correct: Various democratic principles like transparency and accountability are compromised by corruption. Therefore, weakened principles lead to corruption, as seen in the lines "*In a democracy, the power vested in elected officials is meant to reflect the people's desires, guided by* ***principles of transparency and accountability. Corruption disrupts this delicate balance****, as public resources are syphoned away for personal gain, undermining the potential for equitable development.*"
So, this inference is correct.

49 (c)

Statement 1 is correct: The assumption acknowledges that individuals and groups are not static entities with pre-determined identities. Instead, they are constantly evolving and shaping each other through their interactions and relationships. The passage says, ***"Identities are not inherited but fashioned both by the individual and the group through their relationship with others. For the individual the social roles that s/he plays imparts identity".*** It can be inferred that the passage emphasizes the dynamic interplay between individual choices and social expectations in constructing roles and identities. **Hence, statement 1 is correct.**

Statement 2 is correct: The passage highlights the significance of shared language in defining and recognizing roles, as well as in creating separate spaces and meanings for different groups. The passage says, ***"This can often be done through the recognition of the particular language that is used among role players".*** The passage further says, ***"By creating this language which also serves as a code, they create their world of meanings and significances".*** The above-highlighted lines show that language does play a crucial role in identity formation. **Hence, Statement 2 is correct.**

50 (c)

Required sequence is-
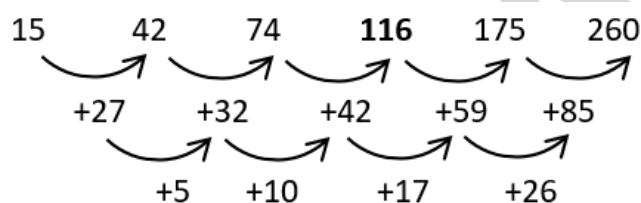
$5 = 2^2+1$
$10 = 3^2+1$
$17 = 4^2+1$
$26 = 5^2+1$
$X = 74 + 42 = 116$
Hence, option (c) is the correct answer.

51 (b)

(7/10) part of the water tank is filled with water. It means that (3/10) part of water tank is empty and when we throw a stone of size 3x3x1 m³ (which is 9m³) in the water tank, it gets completely full.
So, (3/10)th part of tank is equal to 9 m³.
∴ Capacity or total volume of tank = (9x10)/3 = 30 m³
Volume of cuboidal water tank = L x B x H
Or 30 = 5 x 2 x H
Or H = 30/(5x2)
Or H = 3 m
Thus, the height of the cuboidal water tank is 3 m.
Hence, option (b) is the right answer.

52 (d)

After 25 days, 35 men finished the remaining work in (38 − 25 − 1), i.e. 12 days.
∴ 30 men would have finished it in (12 ×35)/30, i.e. 14 days, i.e. 1 day behind the deadline.
Hence, option (d) is the right answer.

53 (c)

Let the required distance be x km.

Then, in 1st case,

Time = distance/speed = x/5 hours

In 2nd case,

Time = distance/speed = x/6 hours

Now, the difference between the two times is 25 min {i.e. 25/60 hours}

So, (x/ 5 – x/6) = 25/60 = 5/12

Or (6x – 5x)/30 = 5/12

Or x/30 = 5/12

Or 12x= 5×30

Or x = 5×30/12 = 12.5 km

Thus, the market is 12.5 km away from his home.

Hence, option (c) is the right answer.

54 (c)

2/5th of the sunken part is still sunk in the mud.

2/5th of 4/9th = (4/9) × (2/5) = 8/45th part

Now, 8/45th part = 4 m (according to the question)

So, 1 part = (4/8) × 45 = 22.5 m

So, 22.5 meter is the actual length of the whole pillar.

Hence, option (c) is the right answer.

55 (c)

This graph clearly brings out the fact that overall sex ratio increased (930 to 934) from 1971 to 1981 but it fell to 927 in 1991 and there has been a consistent rise in overall sex ratio from 1991 to 2011 (927 in 1991 to 933 in 2001 and 940 in 2011). So, after 1971 overall ratio of a country is not consistently rising or falling. So, options (a) and (b) are not correct.

The fall in child sex ratio has been unabated since 1961. So, option (c) is correct.

We can nowhere see a rise in child sex ratio in the graph. The graph represents consistent fall in child sex ratio since 1961. Therefore, option (d) is incorrect.

Hence, option (c) is the correct answer.

56 (b)

In between 1991 and 2011, the two curves of the graph intersect at the same point. So, at that particular point of time, child sex ratio (0-6 years) and overall sex ratio of a country are equal. Therefore, statement 1 is incorrect.

It is given that 1961 is base year. So,

Percentage change in overall sex ratio in the given 50 years (1961 to 2011) = {(941-940)/941} × 100 = 0.10%

Percentage change in child sex ratio (0-6 years) in the given 50 years (1961 to 2011) = {(976-914)/976} × 100 = 6.35%

The percentage change in child sex ratio (0-6 years) is more than that of overall sex ratio in the given 50 years.

So, statement 2 is incorrect.

The overall sex ratio in 1991 is 927 and child sex ratio in 2001 is 927.

Therefore, the overall sex ratio in 1991 and child sex ratio in 2001 are equal.

So, statement 3 is correct.

Average of child sex ratio (0-6 years) and overall sex ratio in the year 1971 = (964+930)/2 = 947

Average of child sex ratio (0-6 years) and overall sex ratio in the year 1981 = (962+934)/2 = 948

The average of child sex ratio (0-6 years) and overall sex ratio in the year 1971 and 1981 is not the same.

So, statement 4 is incorrect.

Therefore, answer is option (b).

57 (a)

Number of days from 17th March to 12th July = 14 (March) + 30 (April) + 31 (May) + 30 (June) + 12 (July)

= 117 days

Dividing 117 by 7, we get 5 as remainder.

5 days after a Monday we get a Saturday.

Hence, option (a) is the right answer.

58 (d)

Option (a) is not correct: The passage does not imply that allied activities are necessary for every farmer or agricultural environment, even though it does highlight their benefits. It would be extreme to infer that allied activities are necessary for every farmer globally. **Hence, option (a) is not correct.**

Option (b) is not correct: The passage mentions the advantages of animals and traditional implements in specific situations. They are suited in certain areas where the use of mechanical means of transport (such as tractors) is either not feasible or is very costly. But, it nowhere advocates entirely abandoning mechanized farming. **Hence, option (b) is not correct.**

Option (c) is not correct: The passage focuses on the practical benefits of animal-related activities in agriculture, but it doesn't endorse animal exploitation or mistreatment. **Hence, option (c) is not correct.**

Option (d) is correct: The passage emphasizes the advantages of a holistic approach to agriculture that goes beyond monoculture crop production. By integrating allied activities, farmers can create more resilient, sustainable, and profitable agricultural systems. **Hence, Option (d) is correct.**

59 (a)

Statement 1 is correct: The passage emphasizes the importance of studying climate history, and highlights its relevance in understanding the current phenomenon of climate change. The passage says, "*A knowledge of the history of climate is important for studying climate change*.", "*A knowledge of the history of climate is important for studying climate change*" and "*They are useful in understanding climate variability more precisely*". It can be implied that this knowledge serves as a baseline for comparing and interpreting observed climatic changes occurring today. Hence, statement 1 is correct.

Statement 2 is not correct: The passage nowhere signifies that there is a lack of international collaboration. Also, how it is crucial for addressing climate change is not covered. So, this statement is not based on the information given in the passage. Hence, statement 2 is not correct.

60 (d)

Perimeter of circular track = $\pi \times d$ = (22/7) × 1400 = 4400 metres

Perimeter of square track = 4 × side = 4 × 1400 = 5600 meters

We know that, speed of Milkha is same in covering circular track and square track. Let Milkha completes one round of the square track in t seconds.

So, (4400/11) = (5600)/t

$\Rightarrow$ (44/11) = 56/t

$\Rightarrow$ t = (56 × 11)/44

t = 14 seconds

Hence, option (d) is the right answer.

61 (b)

By hit and trial method:

16 @ 5 # 31

Or 16 × 5 – 31

Or 80 – 31 = 49

Hence, option (b) is the right answer.

62 (a)

Let T be the time period for which Hemendra joined Shikha.

As given, profit part of Shika is = 2/3

So, Profit part of Hemendra = 1 – 2/3 = 1/3

Ratio of the investments by Shikha and Hemendra = Ratio of the profits earned by Shikha and Hemendra

Or (30000 × 12) : (18000 × T) = (2/3) : (1/3)
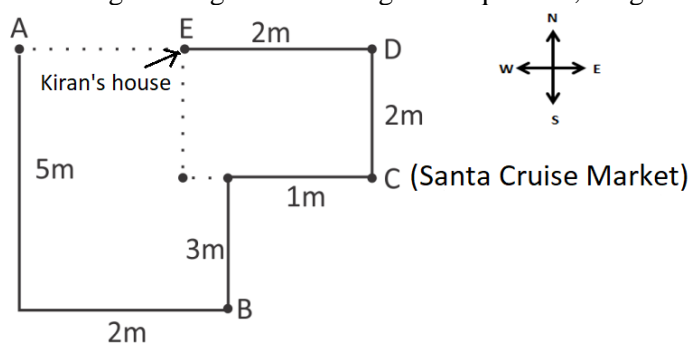
Or 5 × 12 : 3 × T = 2 : 1
Or 60/3T = 2/1
Or 6T = 60
Or T = 60/6 = 10
So, Hemendra joined Shika after 2 months.
Hence, option (a) is the right answer.

63 (a)

On drawing the diagram according to the question, we get:

Thus, Kiran's house is in the east direction from Rajeshwari's house.
Hence, option (a) is the right answer.

64 (a)

$f(2a + 4) = 40a^2 + 80a + 60$
Let, $2a + 4 = x$
Or $a = (x - 4)/2$
So, $f(x) = 40\{(x − 4)/2\}^2 + 80\{(x − 4)/2\} + 60$
or $f(x) = 40\{(x^2 + 16 - 8x)/4\} + 40(x - 4) + 60$
or $f(x) = 10x^2 + 160 – 80x + 40x – 160 + 60$
or $f(x) = 10x^2 - 40x + 60$
On putting $(5a + 4)$ in place of x in the above equation, we get:
$f(5a + 4) = 10(5a + 4)^2 – 40(5a + 4) + 60$
or $f(5a + 4) = 10(25a^2 + 16 + 40a) – 40(5a + 4) + 60$
or $f(5a + 4) = 250a^2 + 160 + 400a – 200a - 160 + 60$
or $f(5a + 4) = 250a^2 + 200a + 60$
Hence, option (a) is the right answer.

65 (b)

Let the quantities of lily, rose and jasmine in a garland be x, y and z respectively.
Cost of a garland per kg = (30/125) × 100 = Rs.24 /kg
Total cost of a garland = 22x + 30y + 32z = 24(x + y+ z)
Or 2x – 6y – 8z = 0
Or x – 3y – 4z = 0 ………..(i)
Quantity of lily in the garland is 4 kg more than 3 times of the sum of the quantities of the other two verities.
So, x - 3(y + z) = 4
Or x – 3y - 3z = 4 ……………(ii)
Subtracting equation (i) from (ii), we get:
z = 4
So, the quantity of jasmine in a garland, z = 4 kg
Hence, option (b) is the right answer.

66 (c)

Let the number of 2 rupee, 3 rupee and 5 rupee coins be x, y and z respectively.
The total number of coins is 300 and the amount is Rs.1200.
So, x + y + z = 300 ………..(i)
And, 2x + 3y + 5z = 1200 ……………..(ii)

If the number of 2 rupees coins and the number of 3 rupees coins are interchanged, the total amount comes down by Rs.60.

So, (2x + 3y + 5z) – (3x + 2y + 5z) = 60

Or y – x = 60

Or y = 60 + x ………….(iii)

Equation (i)×5 – Equation (ii):

3x + 2y = 300

Or 3x + 2(60 + x) = 300   (since, y = 60 + x)

Or 3x + 120 + 2x = 300

Or 5x = 300 - 120 = 180

Or x = 180/5 = 36

So, y = 60 + x = 60 + 36 = 96

Putting the value of x and y in equation (i), we get:

x + y + z = 300

Or 36 + 96 + z = 300

Or z = 168

So, the total number of 5 rupee coins is 168.

Hence, option (c) is the right answer.

67 (c)

In triangle PBC,

q + ∠PBC = π - s

or ∠PBC = π - s – q ……..(i)

In triangle ABE,

r + ∠ABE = p

or ∠ABE = p - r ………..(ii)

We know that line ABC is a straight line.

So, ∠ABE + ∠PBC = π

Putting the value of ∠PBC and ∠ABE from equations (i) & (ii), we get:

(p – r) + (π - s – q) = π

Or p – r – s – q = 0

Or p = q + s + r

Hence, option (c) is the right answer.

68 (a)

Statement 1 is correct: The passage emphasizes that philosophers build upon and challenge each other's ideas, creating a dynamic process of refinement. The passage says, "*One thinker refutes the other and comes forward with his own viewpoints which are subsequently refuted by successive philosophers*". It is further mentioned, "*Metaphorically speaking, a philosopher inhales much before he exhales*". This implies a cycle of taking in the information that already exists and then interacting with opposing viewpoints to generate new understandings. Hence, statement 1 is correct.

Statement 2 is correct: The passage claims that encountering diverse philosophical perspectives expands one's understanding and helps overcome ignorance. Refer to the line: "*New vistas of knowledge open the floodgates of wisdom thereby eliminating ignorance*". Hence, Statement 2 is correct.

Statement 3 is not correct: The passage describes philosophical reasoning as a process of refinement, not absolute elimination of previous ideas. Each refutation can be seen as a contribution to the overall understanding, not a complete elimination of what came before. The context of hierarchy in the statement is not mentioned or symbolized in the passage. Hence, statement 3 is not correct.

69 (a)

Option (a) is correct: The passage revolves around the central idea of a boost in economic activity in European countries after America was colonized. The passage highlights how countries like Spain and England, directly trading with America, experienced a surge in industrial activity. The passage also recognizes the indirect benefits for countries like Austria and some German provinces, which did not

directly trade with America, but still saw increased demand for their goods like linen through intermediary nations. Overall, the message emphasizes the positive economic impact of American discovery and colonization on European nations. Hence, option (a) is correct.

Option (b) is not correct: This statement diverts from the passage's main point about economic benefits. While resource extraction was certainly an aspect of colonization, the passage nowhere mentions that it was the only purpose. Hence, option (b) is not correct.

Option (c) is not correct: The passage focuses on the economic impact on countries as a whole, not on the distribution of wealth within those countries. The impact on common people is not mentioned in the passage. Also, the context of the ruling elite is missing in the passage. Hence, option (c) is not correct.

Option (d) is not correct: The passage does not explicitly mention the increased agricultural production in Europe due to colonization of America. Instead, the passage focuses on industrial activity. Hence, option (d) is not correct.

70 (a)

Option (a) is correct: The passage revolves around the theme of the review of the CPCB draft by CSE. The passage says, "…*the methodology is not full-fledged as it does not consider the impact of different types of pollution on the health of humans and occupational health impacts*". It further says, "…*the fugitive emissions from process operation and material handling have been given low weightage*". Therefore, CSE seems to favour a revision in the draft, so as to ensure a comprehensive and transparent classification system. Hence, option (a) is correct.

Option (b) is not correct: The passage does not necessarily suggest that all fugitive emissions are equally harmful, even while it condemns the downplaying of fugitive emissions in comparison to other kinds of pollution. Depending on their concentration and makeup, different fugitive emissions (dust, gasses, etc.) might have different effects on health. Hence, option (b) is not correct.

Option (c) is not correct: The passage highlights the categorization of stone crushers as an example, but it doesn't suggest that other industries with significant fugitive emissions are adequately assessed. Also, the passage suggests, "*Due to this, the stone crusher units — one of the most polluting sectors in terms of fugitive emissions — have been proposed to be shifted from the orange to green category in the CPCB report.*" It means that originally it was under the orange category. But there is no basis in the passage which suggests it to be under the red category. Hence, option (c) is not correct.

71 (a)

Distance covered by Rohan in 30 minutes = $50 \times (30/60) = 25$ km
Time taken by Rohini to overtake Rohan = $25/(60 - 50) = 2.5$ hours
Hence, option (a) is the right answer.

72 (b)

Let the original price of petrol be Rs. x.
According to the question,
Increased price of Petrol = 130% of x = $(130/100) \times (x) = 13x/10$
Decreased price of Petrol = 80% of $(13x/10) = (80/100) \times (13x/10) = 104x/100$
Increase in price of petrol = $(104x/100) – x = (4x/100)$
Increase% = $(4x/100) \times (100/x) = 4\%$
Hence, option (b) is the right answer.

73 (b)

Let the initial quantities of petrol and diesel in the vessel be 13x litres and 5x litres respectively.
Quantity of petrol taken out = $(13/18) \times 72 = 52$ litres
Quantity of diesel taken out = $72 – 52 = 20$ litres
According to the question,
$(13x – 52)/(5x – 20 + 51) = 8/7$
$\Rightarrow 91x – 364 = 40x + 248$
$\Rightarrow 51x = 612$
$\Rightarrow x = 12$
So, the initial quantity of diesel in the vessel = $12x = 12 \times 5 = 60$ litres
Hence, option (b) is the correct answer.

74 (c)

Let's find the unit digit of the expression $(374)^{202} + (384)^{203}$

Required unit digit = Unit digit of $(4)^{202}$ + Unit digit of $(4)^{203}$

= Unit digit of $(4)^2$ + Unit digit of $(4)^1$

= Unit digit of $(6 + 4)$

= Unit digit of (10)

= 0

We know that zero is the smallest even number.

Hence, option (c) is the right answer.

75 (a)

Given, total population = 56000

Suppose initially male population = X and female population = Y

Then, according to the question:

X + Y = 56000 …………. (i)

There is 9% reduction in male population.

$X - (X \times 9\%) = X - (9X/100) = 91X/100$

And there is 15% increase in female population.

$Y + (Y \times 15\%) = Y + (Y \times 15/100) = 115Y/100$

According to the question,

$(91X/100) + (115Y/100) = 56000$

Or $(91X + 115Y)/100 = 56000$

Or $91X + 115Y = 56000 \times 100$ ………………(ii)

Equation (ii) – 91 × Equation (i):

24Y = 504000

Or Y = 21000

And, X = 56000 – 21000 = 35000

Thus, the number of males and females in the population is 35000 and 21000 respectively.

Hence, option (a) is the right answer.

76 (b)

Let the age of Dashrath's son be X years and age of Dashrath be 11X years in 2005.

According to question,

11X + 15 = 14X

⇒ 3X = 15

∴ X = 5 years

Hence, age of son = 5 years

Dashrath's age = 11X = 5 × 11 = 55 years

Difference between the ages of Dashrath and his son in 2005 = 55 – 5 = 50 years

Hence, option (b) is the correct answer.

77 (a)

Let he spent a total of Rs. 100X on buying 12 avocados, 18 kiwis and 5 apples. Let the price of one avocado, one kiwi and one apple be A, B and C respectively.

Now, according to question,

12A + 18B + 5C = 100X   .... (i)

And 6A + 9B + 4C = 60X   .... (ii)

Equation (ii) × 2 - Equation (i):

On solving, we get,

C = 20X/3

Hence, amount spent on 5 apples = 5C = 5 × (20X/3) = 100X/3

Now, required percentage = {(100X/3)/100X} × 100 = 33.33%

Hence, option (a) is the correct answer.

78 (b)

$[\{(10/7) \div (2/5 \div 3/2) \times 25/9\} \div \{(4/18) \text{ of } 2/3 \div (3/5 \text{ of } 4/3 \times 3)\}] / [6/8 \text{ of } 10/36 \div 2/3]$

$= [\{(10/7) \div (2/5 \times 2/3) \times 25/9\} \div \{(4/18) \text{ of } 2/3 \div (3/5 \times 4/3 \times 3)\}] / [6/8 \text{ of } 10/36 \times 3/2]$

$= [\{(10/7) \div 4/15 \times 25/9\} \div \{4/27 \div 12/5\}] / [5/24 \times 3/2]$

$= [\{(10/7) \times 15/4 \times 25/9\} \div \{4/27 \times 5/12\}] / [5/16]$

$= [\{625/42\} \div \{(5/81)\}] / (5/16)$

$= (625/42) \times (81/5) \times (16/5)$

$= 25 \times 27 \times 8 / 7$

$= 5400/7$

So, the difference between the correct answer and her answer $= (5400/7) - (75/4) = 21075/28$

Hence, option (b) is the right answer.

79 (d)

Original amount (in 1995) = Rs.25,000

It is given that, his total amount doubles in every 10 years.

Amount after 10 years (in 2005) = 2 × Rs.25,000 = Rs.50,000

Amount at the end of 2005 = Rs.50,000 – Rs.500 = Rs.49,500

Amount after 10 years (in 2015) = 2 × Rs.49,500 = Rs.99,000

Amount at the end of 2015 = Rs.99,000 – Rs.500 = Rs.98,500

Amount after 10 years (in 2025) = 2 × Rs.98,500 = Rs.197,000

Amount after 10 years (in 2035) = 2 × Rs.197,000 = Rs.394,000

Therefore, he will get Rs. 394,000 at the end of the year 2035.

Hence, option (d), i.e. none of these is correct.

80 (d)

Statement 1 is not correct: According to the passage the study only tested the effects on lab-grown cardiac micro tissues, that too for a few virus variants. It doesn't provide information on the long-term effects or the frequency of such occurrences in actual COVID-19 patients.

Statement 2 is not correct: The passage says, "*The study by the Riken Institute recreated human cardiac microtissues through human-induced pluripotent stem cells*". It is further mentioned in the passage, "*After the cardiac microtissues were infected with SARS-CoV-2, they found that a viral infection can lead to the reduction of tissue contractility in the acute phase of viral infection*". The use of human induced pluripotent stem cells may or may not enhance the reliability of the findings. However, to say that it dents the credibility would be wrong, as nothing of this sort is indicated in the passage.