Q.1)
Ans) c
Exp) Option c is correct.
Debates about human races imply an inherent flaw in racist thought is the crux of the passage while the other statements are distant implications

Q.2)
Ans) c
Exp) Option c is correct.
Statement 1 is implied by the word essential in the first sentence.
Statement 2 is implied by the list of regions and adaptations described by the author.

Q.3)
Ans) a
Exp) Option a is correct.
In the passage, author asked that "Would humans stop hunting them for sport or survival" from this we can conclude that according to author human hunts animal for sport or survival and nothing is mentioned about how and when human stop to hunt animals.

Q.4)
Ans) c
Exp) Option c is correct.
In the passage author motioned that "A judge must essentially "re-constitute" that text by fashioning a new one, which is faithful to the old text but also responsive to and informed by the conditions, constraints, and aspirations of the world in which the new legal problem has arisen" implies that new-one is explained according to the time. So, reconstitute can be best described as Interpret and refashion i.e Option c is the correct answer.

Q.5)
Ans) c
Exp) Option c is correct
The author says that practically no progress has been made towards the aim of helping the student to think, logically. The last sentence confirms that he would expect good science education to enable students to use scientific knowledge.

Q.6)
Ans) d
Exp) Option d is correct
In the passage, it is clearly stated that prior to the 20th century some countries followed a practice of giving more votes to some individuals who were rich. It says that prior to the 20^{th} century the rich persons had more votes than the poor.

Q.7)
Ans) b
Exp) Option b is correct.
The passage discusses how despite legislative measures abolishing untouchability as well as making it punishable, it persists. Thus, it can be inferred that we need to go beyond legislative measures and target behavioural aspect of humans.
Therefore, **Option (b) is the correct answer.**

Option (a) is incorrect because, here we can't find any issue with the legislative measures. It is true that untouchability persists despite these laws. However, the passage itself explains how these laws have already made untouchability as criminal offence and made it punishable.
Option (c) is incorrect because nowhere it is mentioned that untouchability cannot be eliminated in future within the limits of the present constitution.
Option (d) is incorrect because even though majority of urban people are less aware about caste based discrimination but it can't be said so for each and every one of them.

Q.8)
Ans) b
Exp) Option b is correct.
In the passage it implies that "the opposing view being that subsidies are against market reforms and distorts the market as well as reduces resource efficiency" implies that Subsidies hamper efficient resource utilization.

Q.9)
Ans) d
Exp) Option d is correct.
Clearly, some people try to pickpocket of those who are not cautious about their purse. So, 1 and 2 are implicit.

Q.10)
Ans) b
Exp) Option b is correct
The statement talks of cactus plants only and not 'all plants with thick leaves'. So, 1 does not follow. Also, since cactus plants require little water, so they can be grown in places where water is not in abundance. So, 2 follows.

Q.11)
Ans) d
Exp) Option d is correct.
Currently, the ratio of their ages is 3: 2. Suppose, their ages are: 3x and 2x
Rajesh's age 3 years ago = 3x − 3
Vishal's age after 3 years = 2x + 3
The ratio of Rajesh's age 3 years ago and Vishal's age after 3 years is 1: 1
Therefore, $\frac{3x-3}{2x+3} = \frac{1}{1}$
Solving above, we get x is equal to 6
We are required to find the ratio between Rajesh's age 3 years hence and Vishal's age 3 years ago.
Rajesh's age: (3x + 3)
Vishal's age: (2x − 3)
Putting the value of x, we get:
$= \frac{3x+3}{2x-3} = \frac{[(3\times6)+3]}{[(2\times6)-3]} = \frac{21}{9}$
So, the required ratio will be 7: 3.

Q.12)
Ans) b
Exp) Option b is correct.
The only three single digit odd prime numbers are 3, 5 and 7. So the length of first piece = (3 + 5 + 7)/3=5. Now let the length of second piece = x units

Then by the condition given in question we have: - Length of third piece = x + 5. Length of second piece = x = 5 + (x +5)/2.
From that we get x = 15. So, the length of first piece is 5, second is 15 and third's length is 520. Original length (5 + 15 +20) = 40 units.

Q.13)
Ans) c
Exp) Option c is correct

Exp) Let the average marks in the third Annual examination be x.

Total marks = (Marks in first + second + third + forth) Annual examination

$$4(60)\left(\frac{200}{100}\right) = \left(\frac{45}{100}\right)(200) + \left(\frac{50}{100}\right)(200) + \left(\frac{55}{100}\right)(200) + \left(\frac{x}{100}\right)(200)$$

$$4(60) = 45 + 50 + 55 + x$$

$$x = 90$$

So, the student must score 90% in the fourth annual examination to secure 60% overall average.

∴ Average marks in the fourth annual examination

$$\left(\frac{90}{100}\right) \times 200 = 180\ marks.$$

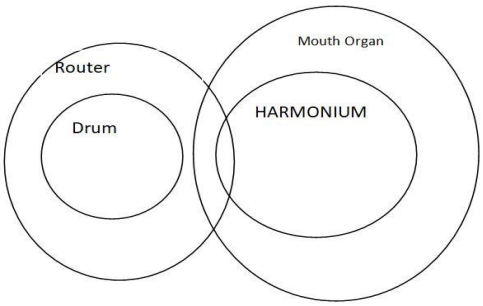
Q.14)
Ans) c
Exp) Option c is correct

Number of candidate who has at least one of these = (340+260+100+200+200+130+200) = 1430
The number of candidates having neither = (1500 − 1430) = 70

Q.15)
Ans) b
Exp) Option b is correct
Nothing is mentioned about any other society. So, I don't follow while the scheme is for farmers which provide financial support. So, II implies.

Q.16)
Ans) c
Exp) Option c is correct
Given, the age of son is "x"
So, the age of father's and mother's be 6x and 5x respectively.
So, according to the question,
$5x + 6x = [(x-1)^2 - 1]$
$11x = x^2 + 1 - 2x - 1$
$x^2 = 13x$
$x = 13$
So, the age of the son is 13 years.

Q.17)
Ans) c
Exp) Option c is correct.



Q.18)
Ans) c
Exp) Option c is correct.
We know that $5^5 = 5 \times 5^2 \times 5^2$
The number immediately before 25 that is divisible by 8 is 24.
Hence, replace 25 with 24+1.
Then we have:
$= 5^5 = 5(25^2) = 5(24+1)^2 = 5(24^2 + 2 \times 24 \times 1 + 1^2)$
$= 5 \times 24^2 + 5 \times 2 \times 24 + 5 \times 1$
Now,
$= \frac{5^5}{8} = \frac{5 \times 24^2 + 5 \times 2 \times 24 + 5}{8}$
$= 5 \times \frac{24^2}{8} + 5 \times 2 \times \frac{24}{8} + \frac{5}{8}$
$=$ Integer + Integer $+ \frac{5}{8}$
Hence, the remainder is 5.

Q.19)
Ans) b
Exp) Option b is correct
Here, P − Q means P is mother of Q, and Q + R means Q is father of R implies that P is grandmother of R. R @ S implies R is brother of S, implies that P is grandmother of S also.

Q.20)
Ans) a

Exp) Option a is correct

Total unit of work = L.C.M. of (14, 18, 21) = 126

Efficiency of (A+B+C) =$\left(\frac{126}{14}+\frac{126}{18}+\frac{126}{21}\right) = (9 + 7 + 6) = 22$

No. of days= $\frac{Total\ unit\ of\ work}{efficiency\ of\ (A+B+C)}$

⇨ $x = \frac{126}{22} = \frac{63}{11}$

Q.21)

Ans) b

Exp) Option b is correct.

The author mentioned in the passage that we can't halt bigotry by zapping them with a ray gun. So, statement (3) doesn't infer from the passage in the same line the author mentioned that the only way to halt them is to expose them. At the end of the passage, the author mentioned that we must learn to judge each other on our own merits and at last author mentioned that "us ALL – His children. Pax et Justitia implies peaceful and just.

Q.22)

Ans) c

Exp) Option c is correct

See the second half of the first paragraph. (d) is only a safeguard avoiding the negative.

Q.23)

Ans) b

Exp) Option b is correct.

From the above passage, it can be concluded that West focuses mainly on Negative impacts of Russian Communism government. So, they did not focus on Positive impacts of Russian Communism government and at the beginning of the passage, it is mentioned that "India was the only country in the world to truly recognize the achievements of the Soviet Union-rather than merely focus on the debilitating faults that Communism brought to its people" implies that India's perception of the USSR was always applauding.

Q.24)

Ans) a

Exp) Option a is correct

From the third paragraph of the passage, it can be concluded that most of the health services in China is provided by barefoot doctors, nothing is mentioned about statement (2) while about statement (3) it is mentioned that "Chairman Mao's war on flies, mosquitoes, and rats may have been regarded by the rest of the world as a joke".

Q.25)

Ans) b

Exp) Option b is correct

In the passage, it is mentioned that Chinese hospitals aren't overcrowded and also that it is difficult to find flies now in China it also mentioned that barefoot doctors are unlike west imagination they are neither barefoot nor doctors they are health workers but it is also mentioned that "Consequently, only the difficult cases find their way to the local hospitals and even fewer are passed on to the specialist hospitals for treatment." Implies that barefoot doctors are for ordinary/common diseases.

Q.26)

Ans) c

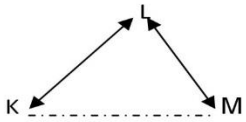
Exp) Option c is correct
From the first paragraph of the passage, it is concluded that according to author religion is that which changes one very nature, which binds one indissolubly to the truth within and which ever purifies. It is the permanent element in human nature which counts no cost too great in order to find full expression and which leaves the soul utterly restless until it has found itself, known its maker and appreciated the true correspondence between the Maker and itself. So, (c) follows.

Q.27)
Ans) c
Exp) Option c is correct
In the last line of the fourth paragraph of the passage author mention, "it is possible to reason out the existence of God to a limited extent" tell us about author view on God's existence.

Q.28)
Ans) b
Exp) Option b is correct.
TROUBLE is a seven-lettered word. Since the rearranged word has to start with a vowel, the first letter can be O, U or E. The balance 6 letters can be arranged in ${}^{6}P_{6}$ or 6! ways. Total number of words = 3 × 6! = 2160.

Q.29)
Ans) a
Exp) Option a is correct.
Abhay is the brother of Binod and Binod is the father of Ekta and Deepak. So, Abhay is the uncle of Deepak.

Q.30)
Ans) a
Exp) Option a is correct.



Hence M is in the East of K.

Q.31)
Ans) b
Exp) Option b is correct.
Let the number be 15a and 15b, then using the product of numbers = LCM × HCF
=15a ×15b = 315 × 15
= a × b = 21
21 = 3 × 7 so, numbers can be 15 × 3, 15 × 7
Sum = 45 + 108= 153

Q.32)
Ans) c
Exp) Option c is correct.
Total percentage of students = 100%
Students interested in chess = 12%
Students interested in Hockey = $\frac{3}{4} \times \mathbf{100} = \mathbf{75}\%$

Students interested in singing = $\mathbf{10\%\ of\ 13\%} = \left(\frac{\mathbf{10}}{\mathbf{100}} \times \mathbf{13}\right)\% = \mathbf{1.3\%}$

% of students interested in Dancing =$[\mathbf{100} - (\mathbf{12} + \mathbf{75} + \mathbf{1.3})]\% = \mathbf{11.7\%}$

So 11.7% = 117, then 100% = $\frac{\mathbf{117}}{\mathbf{11.7}} \times \mathbf{100} = \mathbf{1,000}$

So, total number of students = 1,000

Q.33)

Ans) b

Exp) Option b is correct.

Factorize 399 = 3 × 7 × 19

The possible pairs are: (57, 7), (21, 19), (399, 1), (133, 3)

The least possible sum is given when a=21 and b=19

And the sum is 2 + 1 = 3

Q.34)

Ans) b

Exp) Option b is correct.

(1) course of action is not the immediate relief to the victims. Thus (1) is not the right course of action to be chosen for the problem. The immediate medical aid will definitely mitigate the problem to a large extent. Thus (2) course of action is the immediate action to be taken and it is the remedial step.

Q.35)

Ans) a

Exp) Option a is correct

Exp) According, to question,

$= \frac{\frac{1}{2}x}{10} + \frac{\frac{1}{2}x}{12} = 11 \qquad \left(time = \frac{displacment}{velocity}\right)$

$= \left(\frac{x}{10} + \frac{x}{12}\right) = 22$

$= x = \frac{22 \times 60}{11} => 120\ km$

Q.36)

Ans) b

Exp) Option b is correct

Month	:	January	February	March
Odd days	:	3	1	3

Total 7 odd days is completely divisible by 7. So, there is 0 odd days. So April has start with the same day.

Q.37)

Ans) c

Exp) Option c is correct.

Let 1: k be the ratio in which Jignesh mixed the two types of pulses.

Then a sample of (1+k) kg of the mixture should equal 1 kg of pulses of the first type and k kg of pulses of the second type.

The pulses of the first type cost 50 Rs a kg and that of the second type costs 60 rupees a kg. Hence, it cost him:

(1 kg 50 rupees per kg) + (k kg 60 rupees per kg) = 50 + 60k

Since he sold the mixture at 70 rupees per kg, he must have sold the net (1+k) kg of the mixture at 70(1+k).

Since he earned 20% profit doing this, 70(1+k) must be 20% more than 50+60k.

Hence, we have the equation

$70(1 + k) = \left(1 + \frac{20}{100}\right)(50 + 60k)$

$(70 + 70k) = \left(\frac{120}{100}\right)(50 + 60k)$

$350 + 350k = 300 + 360k$

$10k = 5 \Rightarrow k = 5$

So, the required ratio be 1: 5

Q.38)

Ans) c

Exp) Let B's present age = x years. Then, A's present age = (x + 9) years.

(x + 9) + 10 = 3(x - 5)

=> x + 19 = 3x - 15

=> x =17

Q.39)

Ans) c

Exp) Option c is correct.

The quantity of milk in the original mixture

$= \frac{1}{1+1} \times 24 = 12\ \boldsymbol{litres}$

Quantity of water = 24-12= 12

Let quantity of water added = x

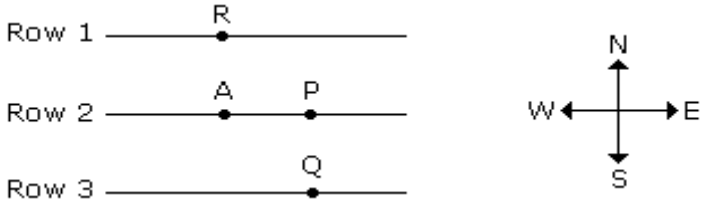
$\frac{\boldsymbol{milk}}{\boldsymbol{water}} = \frac{\mathbf{12}}{\mathbf{12} + \boldsymbol{x}} = \frac{\mathbf{1}}{\mathbf{2}} \Rightarrow (\mathbf{12} + \boldsymbol{x}) = \mathbf{24}$

$= \boldsymbol{x} = \mathbf{12}\ \boldsymbol{litres}$

Q.40)

Ans) d

Exp) Option d is correct.



Q is in South-East of R.

Q.41)

Ans) (c)

Exp) Option c is correct

The passage talks about how our lives today is blending with digital technology. Hence, best answer is (c).

Option (a) is incorrect because passage doesn't talk about governance thus this option is unrelated to the passage.

Option (b) is incorrect because it is an extreme option as it is saying that mankind's existence is dependent on the digital systems. Although we are dependent on it but not completely i.e. mankind can exist even without technology.

Option (d) is incorrect because our creativity can be expressed through various modes like painting, dance, literature, etc. Therefore, digital media is new form of mode to express but not the only mode.

Q.42)
Ans) b
Exp) Option b is correct.
From the passage it can be drawn that the floor of the Black Sea can best be compared to a slowly settling foundation.

Q.43)
Ans) d
Exp) Option d is correct.
In the passage it is mentioned "While India has enjoyed 8% - 9% GDP growth for the past few years, the boom has bypassed many rural areas and farmer distress and suicides have made newspaper headlines" implies that according to author loan waiver will ensure that the benefits of India's high GDP are felt by the rural poor.

Q.44)
Ans) d
Exp) Option d is correct.
Statement 1 is incorrect because the passage is not describing an improvement in lifestyle or subjective development. Instead, it is descibin how advertising works like propaganda to influence our thoughts behaviour and economic decisions.
Statement 2 is incorrect because there is no mention of regulation of the advertising industry in the passage. Further, the question's directive is pointing to implications about the human condition and not on the advertising industry or the economy.
Statement 3 is implied by the descriptions of anti ageing creams and plastic surgery in the passage.
Statement 4 is the underlying theme of the passage, and is thus an implication

Q.45)
Ans) d
Exp) Option d is correct.
Statement (d) is the core message of the passage
Statement (a) Is only the superficial awareness of the influencing factors described in the passage. It does not include the conclusion of the author about what our response should be.
Statement (b) Does not represent the complete message conveyed in the passage as it gives examples beyond vanity also, such as
political dynamics, and the insurance, smartphone and TV industries
Statement (c) is extending the thought of the passage further than the message of the author

Q.46)
Ans) c
Exp) Option c is correct.
In the passage it is mentioned that "The scale and magnitude of the financial support required by developing countries to enhance their domestic mitigation and adaptation actions are a matter of intense debate in the multilateral negotiations under the United Nations Framework Convention on Climate Change (UNFCCC)" implies that statement (1) and (3) can be concluded from the given passage.

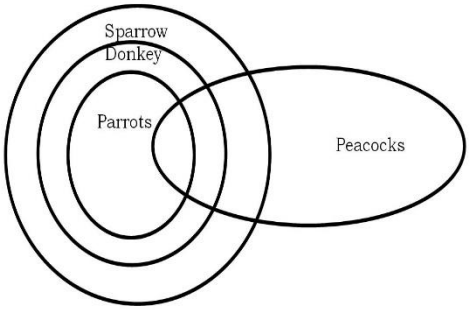
Q.47)
Ans) a
Exp) Option a is correct.

It is inferred from the passage that climate change is likely to have implications for developing countries domestic finances but nothing is mentioned about the capacity for multilateral trade in the passage.

Q.48)
Ans) a
Exp) Option a is correct.
The passage primarily focuses on discussing conflict regarding support for mitigation between developing and developed countries.

Q.49)
Ans) c
Exp) Option c is correct.
On dividing the given number by 798, let k be the quotient and 47 as remainder.
Then, number = 798k + 47 = (21 × 38k + 21 × 2 + 5)
=21 (38k + 2) + 5
⇒ the given number when divided by 21 gives 38k + 2 as quotient and 5 as remainder.

Q.50)
Ans) a
Exp) Option a is correct.



Q.51)
Ans) c
Exp) Option c is correct.
Lowest 4-digit number is 1000.
LCM of 3, 4 and 5
= |3, 4, 5
As we saw above no two numbers are divisible by common factor so their LCM is their product.
LCM of 3, 4 and 5 = 3 × 4 × 5 = 60.
Dividing 1000 by 60, we get the remainder 40. Thus, the lowest 4-digit number that exactly divisible by 3, 4 and 5 is 1000 + (60 - 40) = 1020.
Now, add the remainder 2 that's required. Thus, the answer is (1020 + 2 = 1022).

Q.52)
Ans) d
Exp) Option d is correct.
Out of the 6 girls, 4 girls are to be invited. It can be done in ${}^{6}C_{4}$ ways = 15 ways.
Now, nothing is given about the number of boys to be invited.
He can invite one boy, two boys, three boys, four boys, five boys, all six boys or no boy.
Hence, the total number of ways of selection of boys = 2^6 = 64.
So, the total number of ways of invitation = 15 × 64 = 960.

Q.53)
Ans) d
Exp) Option d is correct
Exp) Let the present ages of Rajeev and Anand be 7x and 10x years respectively.

Then, $\frac{7x+5}{10x+5} = \frac{8}{11}$

⇨ $77x + 55 = 80x + 40$

⇨ $3x = 15$

⇨ $x = 5$

So, the present ages of Rajeev and Anand are $(7 \times 5) and\ (10 \times 5)$ respectively.

The sum of their ages = $(35 + 50) = 85$

Hence, $a = 8\ and\ b = 5$

Then, $a^b = 8^5$

We know unit digit of 8 repeated after 4 powers. So, *unit digit of* 8^5 = *unit digit of* 8^1 => 8

Q.54)
Ans) a
Exp) Option a is correct.
Work done by (A+C) in 5 days = $5\left(\frac{1}{20} + \frac{1}{45}\right) = \frac{13}{36}$
Remaining work = $\left(1 - \frac{13}{36}\right) = \frac{23}{36}$
Work done by (A+B) in one day = $\left(\frac{1}{20} + \frac{7}{90}\right) = \frac{23}{180}$
Let the number of days be x
Then, $\frac{23}{36}$ work done in x days,
x = $\frac{23}{36} \div \frac{23}{180} = \frac{23}{36} \times \frac{180}{23} = 5$

Q.55)
Ans) c
Exp) Option c is correct.
From the statements the series will be,
Rajesh > Pawan > Ram > Raja
So, Raja scored lowest.

Q.56)
Ans) c
Exp) Option c is correct
Exp) We may have (1 black and 2 non-black) or (2 black and 1 non-black) or (3 black).

Required number of ways = $({}^3C_1 \times {}^6C_2) + ({}^3C_2 \times {}^6C_1) + ({}^3C_3)$

= $\left[3 \times \frac{6\times5}{2\times1}\right] + [3 \times 6] + 1$

= (45 + 18 + 1)

= 64

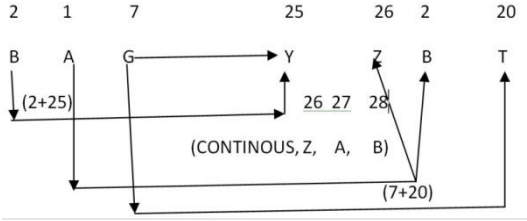
Q.57)
Ans) b
Exp) Option b is correct.
Here, we have to calculate: How many years ago the ratio of their ages was 3:2. Let us assume x years ago
At present: Shubham is 30 years and Nikhil is 25 years
x years ago: Shubham's age = (30 − x) and Nikhil's age = (25 − x)

Given, the ratio of their ages was 3:2
(30–x)/(25–x)=3/2
Solving, we get: x = 15
Therefore, the answer is 15 years.

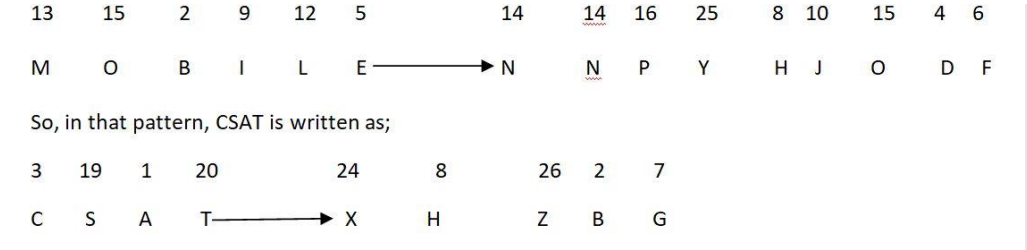
Q.58)
Ans) b
Exp) Option b is correct.
Total number of cubes after cutting = $\boldsymbol{n^3 = (4)^3 = 64}$ (n = number of pieces)
Cube with 3-sides painted = 8 (for a proper cube number of the cube at corner is always 8)
Cube with 2-sides painted = $\boldsymbol{12(n-2) = 12(4-2) = 24}$
Cube with 1 side painted = $\boldsymbol{6(n-2)^2 = 6(4-2)^2 = 24}$
Cube with no side painted = ($\boldsymbol{Total\ number\ of\ smaller\ cubes - cubes\ with\ at\ least\ one\ side\ painted}$)
$\boldsymbol{[64 - (8 + 24 + 24)] = 8}$

Q.59)
Ans) c
Exp) Option c is correct.
From statement 3 Chahal was acceptable by Baroda and Bihar teams and he was preferred by Tamil Nadu and Delhi. So, he was acceptable by all teams.

Q.60)
Ans) d
Exp) Option d is correct



From the above, we conclude the pattern that consonant is replaced by its opposite alphabet while vowel is replaced by preceding and the following alphabet.



Q.61)
Ans) a
Exp) Option a is correct.
Statement 1 is correct because the passage clearly says that the advances in female education is yet to translate into greater equity in employment, politics and social relations.
Statement 2 is incorrect because nowhere female education is shown antithetical/contradictory to female progress i.e. women empowerment.

Q.62)
Ans) c

Exp) Option c is correct.
From the above passage it can be concluded that the author's main objective is to convince government to empower poor.

Q.63)
Ans) d
Exp) Option d is correct.
According to author when people own their own property they have incentives to invest in time, money and energy to improve it because they know that they will be able to benefit from any such improvements.

Q.64)
Ans) d
Exp) Option d is correct.
From the passage we may conclude that author's view Violence does not mean emancipation from fear, but discovering the means of combating the cause of fear while Non-violence has to cultivate the capacity for sacrifice of the highest type in order to be free from fear.

Q.65)
Ans) d
Exp) Option d is correct.
In the passage author suggest that practitioners of non-violence should develop capacity for sacrifice in order to be free from fear.

Q.66)
Ans) a
Exp) Option a is correct.
In the passage it is mentioned "Over the past few decades, many Asian nations transformed from poverty into global competitors. From 2003 to 2007, Asian economies expanded at an average annual rate of 8.1%, triple that of advanced economies" implies that many of the poor countries were able to compete internationally during the period from 2003- 2007.

Q.67)
Ans) d
Exp) Option d is correct.
Statement a is incorrect because the passage does not discredit conventional methods of financial inclusion
Statement b is incorrect as the passage advocates composite methods of financial inclusion
Statement c is incorrect because the author is arguing for a specific solution
Statement d is correct because the author proposes that pursuing both philanthropic and capitalist objectives together can help us achieve our goals for financial inclusion.

Q.68)
Ans) c
Exp) Option c is correct.
Clearly, n(S) = (6 x 6) = 36.
Let E = Event that the sum is a multiple of 3 (i.e. 3, 6, 9 and 12)
Then E=(1, 2), (2, 1), (1, 5), (5, 1), (2, 4), (4, 2), (3, 3), (3, 6), (6, 3), (4, 5), (5, 4) and (6, 6)
n(E) = 12.
P(E) = $\frac{n(E)}{n(S)} = \frac{12}{36} = \frac{1}{3}$

Q.69)

Ans) b

Exp) Option b is correct.

Let's firstly clarify the relations then we consider sitting arrangements,

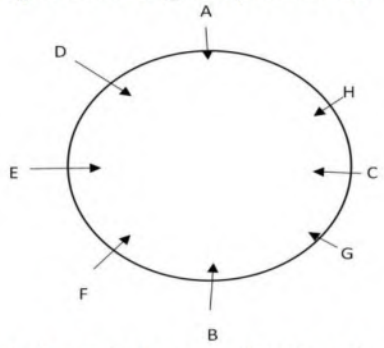
Using statement, A the grandchild of E sits immediate left to her grandmother D. So, E and D are of 3rd generation and husband and wife respectively.

B and G are daughters of C and H is the only son of F implies that F and C are married couples, B, G, A, and H are siblings in which H is male and A, B and G are females.

F is not the mother of H implies he is the father of H.

Now tabulate the concluded information,

Using the above-given pieces of information, the sitting arrangement must be,



H's father F is the son of E. So, H is grandson of E

Q.70)

Ans) b

Exp) Option b is correct.

Let's firstly clarify the relations then we consider sitting arrangements,

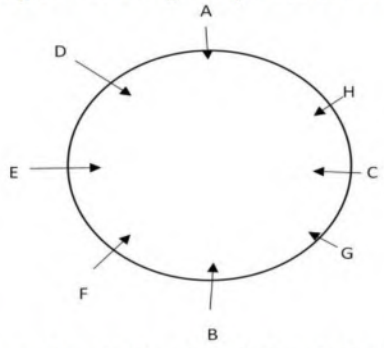
Using statement, A the grandchild of E sits immediate left to her grandmother D. So, E and D are of 3rd generation and husband and wife respectively.

B and G are daughters of C and H is the only son of F implies that F and C are married couples, B, G, A, and H are siblings in which H is male and A, B and G are females.

F is not the mother of H implies he is the father of H.

Now tabulate the concluded information,

Using the above-given pieces of information, the sitting arrangement must be,



A' s mother is C and F's father is E. There are 3 persons from either direction between them.

Q.71)

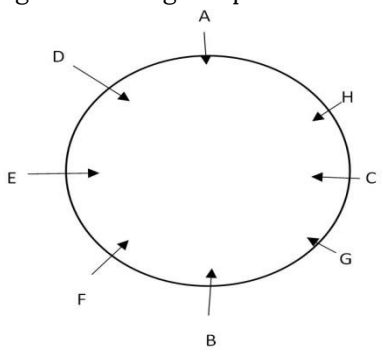
Ans) d

Exp) Option d is correct.

Let's firstly clarify the relations then we consider sitting arrangements,

Using statement, A the grandchild of E sits immediate left to her grandmother D. So, E and D are of 3rd generation and husband and wife respectively.

B and G are daughters of C and H is the only son of F implies that F and C are married couples, B, G, A, and H are siblings in which H is male and A, B and G are females.
F is not the mother of H implies he is the father of H.
Now tabulate the concluded information,
Using the above-given pieces of information, the sitting arrangement must be,



F's mother i.e. D is sitting immediate left to E.

Q.72)
Ans) b
Exp) Option b is correct.
Her husband's sister is sister-in-law of her and sister-in-law's only brother is her husband.

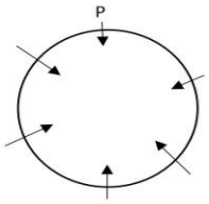
Q.73)
Ans) d
Exp) Option d is correct
The first coin can be put in 3 ways, similarly second, third and fourth coins also can be put in 3 ways.
So total number of ways = 3 x 3 x 3 x 3 $= 3^4 = 81$

Q.74)
Ans) b
Exp) Option b is correct.
The total profit for the year is 23,500. Of this B gets Rs. 12,000. Therefore, A would get (23,500–12,000) =Rs. 11,500
The partners split their profits in the ratio of their investments.
Therefore, the ratio of the investments of,
A: B= 11500:12000 = 23:24.
A invested Rs.15000 initially for a period of 3 months. Then, he withdrew Rs.5000.
Hence, his investment has reduced to Rs.10000 (for the next 5 months).
Then he withdraws another Rs.5000. Hence, his investment will stand reduced to Rs.5000 during the last four months.
So, the amount of money that he had invested in the company on a money-month basis will be,
$= (\mathbf{3 \times 15000}) + (\mathbf{5 \times 10000}) + (\mathbf{4 \times 5000})$
$= \mathbf{45000 + 50000 + 20000 = 115000}$
If A had 1,15,000 money months invested in the company, B would have had 1,20,000 money months invested in the company (as the ratio of their investments is 23:24).
If B had 120000 money-months invested in the company, he has essentially invested
$\frac{\mathbf{1,20,000}}{\mathbf{12}} = \mathbf{10,000}$

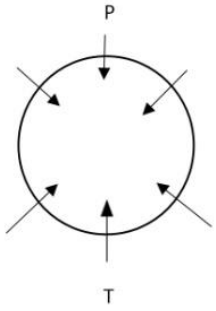
Q.75)
Ans) d
Exp) Option d is correct.

Let the two trains meet at a distance x km from place A
The time required by the train starting from A to cover x is $\frac{x}{110}$ ***hrs***
Time taken by the other train starting from B to cover (1820 - x) km = $\frac{1820-x}{80}$ ***hrs***
But the first train has started 1 hr early. So, it has traveled 110 km in this 1 hr.
Therefore, $\frac{x}{110} - \mathbf{1} = \frac{1820-x}{80}$
On Solving, x = 1100
So, they will meet at a distance of 1100 km from place A
So, the time at which they will meet will be $\frac{1100}{110}$ = 10 hrs (after 6 am)
Hence, they will meet at 4 pm.

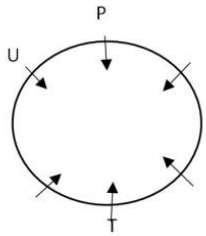
Q.76)
Ans) d
Exp) This question consists the concept of mainly two topics namely Blood relation and Sitting arrangement. For solving, it is better to try to solve it one by one. So, firstly try to relate them.
Using statements, it is clear that P and T are husband and wife respectively. R and S are male so they must be their son. Now, T sits between her son S and only daughter but U isn't an immediate neighbour of T. So, he must be her Son. So, Q is the only daughter of P and T.
Now, we already know how they are related to each other. So, now try to find their sitting arrangement.
For that let's fix any spot for P.



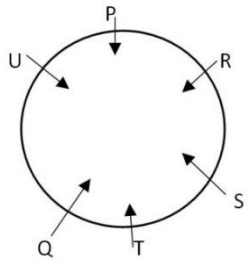
Then, T sits opposite P.



Using, statement 2, (U sits right of his father and second left to his mother). Now, the arrangement is;



Using statement 3 and statement 4, (T, the mother of Q, sits between her only daughter and one son S.R, the brother of S, sits immediate right to S) and we know Q is the only daughter of T and R, S and U are brothers. The arrangement will be;



So, $\frac{number\ of\ males}{number\ of\ females} = \frac{4}{2} = 2:1$

Q.77)

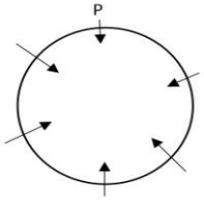
Ans) d

Exp) This question consists the concept of mainly two topics namely Blood relation and Sitting arrangement. For solving, it is better to try to solve it one by one. So, firstly try to relate them.

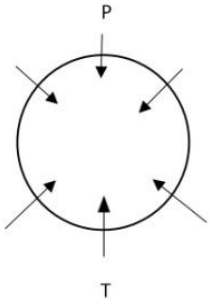
Using statements, it is clear that P and T are husband and wife respectively. R and S are male so they must be their son. Now, T sits between her son S and only daughter but U isn't an immediate neighbour of T. So, he must be her Son. So, Q is the only daughter of P and T.

Now, we already know how they are related to each other. So, now try to find their sitting arrangement.

For that let's fix any spot for P.



Then, T sits opposite P.



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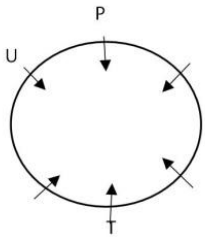
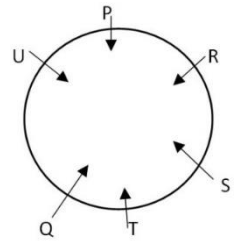


Using statement 3 and statement 4, (T, the mother of Q, sits between her only daughter and one son S.R, the brother of S, sits immediate right to S) and we know Q is the only daughter of T and R, S and U are brothers. The arrangement will be;



P is sitting 2nd position from the left of Q and 4th position from the right of Q.

Q.78)

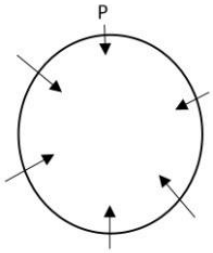
Ans) a

Exp) This question consists the concept of mainly two topics namely Blood relation and Sitting arrangement. For solving, it is better to try to solve it one by one. So, firstly try to relate them.

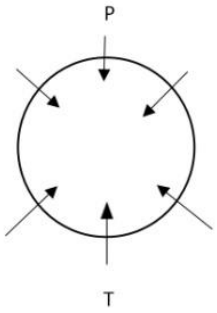
Using statements, it is clear that P and T are husband and wife respectively. R and S are male so they must be their son. Now, T sits between her son S and only daughter but U isn't an immediate neighbour of T. So, he must be her Son. So, Q is the only daughter of P and T.

Now, we already know how they are related to each other. So, now try to find their sitting arrangement.

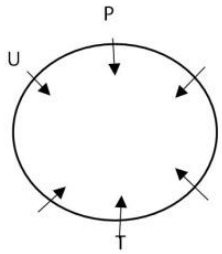
For that let's fix any spot for P.



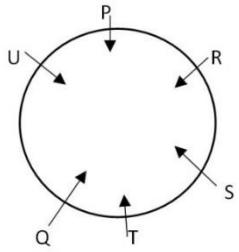
Then, T sits opposite P.



Using, statement 2, (U sits right of his father and second left to his mother). Now, the arrangement is;



Using statement 3 and statement 4, (T, the mother of Q, sits between her only daughter and one son S.R, the brother of S, sits immediate right to S) and we know Q is the only daughter of T and R, S and U are brothers. The arrangement will be;



Q is the daughter of P – T. So, she is the female member of the family other than T.

Q.79)

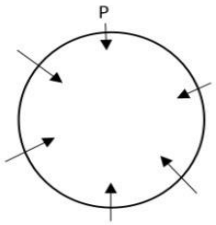
Ans) a

Exp) This question consists the concept of mainly two topics namely Blood relation and Sitting arrangement. For solving, it is better to try to solve it one by one. So, firstly try to relate them.

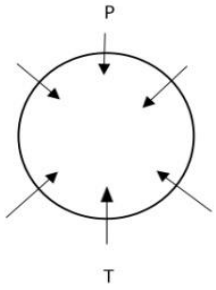
Using statements, it is clear that P and T are husband and wife respectively. R and S are male so they must be their son. Now, T sits between her son S and only daughter but U isn't an immediate neighbour of T. So, he must be her Son. So, Q is the only daughter of P and T.

Now, we already know how they are related to each other. So, now try to find their sitting arrangement.

For that let's fix any spot for P.



Then, T sits opposite P.



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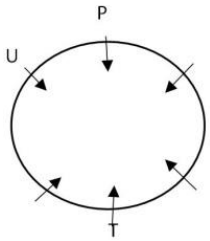
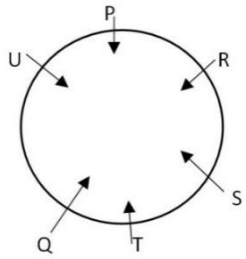
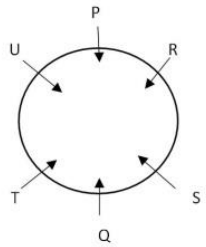


Using statement 3 and statement 4, (T, the mother of Q, sits between her only daughter and one son S.R, the brother of S, sits immediate right to S) and we know Q is the only daughter of T and R, S and U are brothers. The arrangement will be;



If Q and T interchange their position the new arrangement will be;



So, UQ is immediate neighbours of T.

Q.80)
Ans) b
Exp) Option b is correct.
Digits required to print one-digit numbers (1 to 9) = 9×1 = 9
Digits required to print two-digit numbers (10 to 99) = 90 × 2 = 180
Digits required to print three-digit numbers (100 to 999) = 900 × 3 = 2700.
So, upto 999 pages we have 2700 + 180 + 9 = 2889 digits.
Now from here onwards each number will use 4 digits and we are remaining with 3245 - 2889 = 356 digits
So, 356/4 = 89 more numbers are there. i.e., 999 + 89 = 1088 pages in the book.