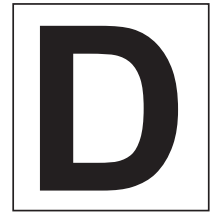


Test Code
04010525



परीक्षण पुस्तिका अनुक्रम

जनवरी-2025

ALL INDIA OPEN MOCK TEST

GENERAL STUDIES PAPER-II

(05th January, 2025)

Answer Key

1. (b)	17. (d)	33. (a)	49. (c)	65. (d)
2. (c)	18. (d)	34. (b)	50. (d)	66. (c)
3. (c)	19. (b)	35. (d)	51. (a)	67. (c)
4. (a)	20. (c)	36. (d)	52. (b)	68. (c)
5. (c)	21. (b)	37. (d)	53. (c)	69. (d)
6. (b)	22. (c)	38. (b)	54. (d)	70. (c)
7. (c)	23. (c)	39. (b)	55. (a)	71. (d)
8. (c)	24. (d)	40. (a)	56. (d)	72. (c)
9. (b)	25. (*)	41. (a)	57. (d)	73. (c)
10. (a)	26. (*)	42. (b)	58. (b)	74. (b)
11. (c)	27. (c)	43. (c)	59. (a)	75. (a)
12. (a)	28. (d)	44. (b)	60. (d)	76. (c)
13. (a)	29. (d)	45. (c)	61. (c)	77. (b)
14. (b)	30. (b)	46. (a)	62. (c)	78. (c)
15. (c)	31. (c)	47. (b)	63. (a)	79. (a)
16. (c)	32. (c)	48. (b)	64. (c)	80. (d)

*Note: For Q.25 & Q.26, 2.5 Marks per question will be granted.

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1. Ans. (b)

Option (b) is the correct choice.

Option (a) is not correct because 'currently ill-equipped' extends beyond the scope.

Option (b) is correct because it suggests that 'due to the relative ease of access to biological agents and the strong biotechnological capacity of its rival nations' India needs a capacity to respond.

Option (c) is not correct because the passage does not mention 'rival neighbours'.

Option (d) is not correct because it extends beyond the scope of the passage.

2. Ans. (c)

Option (c) is the correct choice

Option (a) is not correct because the passage is not implying that the IAP 'will predict' impact on military interests.

Option (b) is not correct because 'can be reasonably placed within India's Science Diplomacy Policy' extends beyond the scope as there is no indication of such a policy in the passage.

Option (c) is correct because the passage clearly states that IAP 'is expected to facilitate comparative scientific studies'.

Option (d) is not correct because the passage discusses the need for understanding but does not imply that India has 'no choice' in the matter.

3. Ans. (c)

Option (c) is correct

Statement (1) is valid as the passage mentions 'inadequate maternal health or childcare practices'.

Statement (2) is not valid as the passage only states 'other illnesses' and not specifically diarrhoea.

Statement (3) is valid as the passage clearly mentions that 'undernutrition ... signifies deficiencies in ...energy'. The phrase signifies confirms that it is symptom.

4. Ans. (a)

Option (a) is the correct choice.

Inference (1) is valid because the passage mentions that 'would reduce the seasonal winter-time peak in deaths'. This implies that it happens each year.

Inference (2) is not valid because the passage clearly mentions that 'a further increase in temperatures might reduce ... mosquito populations'. This means there is an upper limit to the temperature that helps mosquito populations grow.

5. Ans. (c)

Statement I: For $n = 11$ (prime), $(2^n - 1) = 2047 = 23 \times 89 = \text{composite}$

Statement II: Smallest composite number = 4, smallest prime number = 2

Their product = 8 = cube of smallest prime number.

6. Ans. (b)

Sequence is ABABA | BCBCB | CDCDC | DADAD

7. Ans. (c)

$$\frac{1}{x} + \frac{1}{y} = \frac{1}{6}$$

and $\frac{2}{x} + \frac{1}{2y} = \frac{1}{4}$

Solving these, $x = 9$

8. Ans. (c)

Fresh (40 kg) $\left\{ \begin{array}{l} \text{Water (90\% i.e. 36 kg)} \\ \text{Pulp (10\% i.e. 4 kg)} \end{array} \right.$

Dried (X kg) $\left\{ \begin{array}{l} \text{Water (20\% = 1kg)} \\ \text{Pulp (80\% = 4 kg)} \end{array} \right.$

Weight of non-water in 40 kg of fresh lemons
= 10% of 40 = 4 kg

Let there be X kg dry lemons which contain
80% non-water, hence

$$4 = 80/100 * X \Rightarrow X = 5\text{kg}$$

9. Ans. (b)

Blue light blinks 2 times per minutes i.e. after
every 60/2 seconds = 30 seconds

Yellow light blinks 4 times per 3 minutes

i.e. after every 180/4 seconds = 45 seconds

∴ Now they will blink after

L.C.M. of (30 and 45) seconds = 90 sec

Hence, the number of times they blink in

$$1 \text{ hour} = 3600/90 = 40.$$

10. Ans. (a)

Arithmetic mean of a list of non-negative real
numbers is greater than or equal to the
geometric mean of the same list.

Hence,

$$\frac{a+b+c}{3} \geq \sqrt[3]{abc}$$

$$\frac{a+c(b)}{3} \geq \sqrt[3]{abc}$$

$$\frac{(a+b)+c}{3} \geq \sqrt[3]{abc}$$

$$\frac{2b+b}{3} \geq \sqrt[3]{abc}$$

$$\frac{3b}{b} \geq \sqrt[3]{abc}$$

$$b \geq (8)^{1/3}$$

$$b \geq (2^3)^{1/3}$$

Hence, $b \geq 2$

11. Ans. (c)

Option (c) is the correct choice.

Assumption (1) is valid because the passage
mentions 'the greatest mortality burden

globally' and 'responsible for a third of all
greenhouse gas (GHG) emissions'.

Assumption (2) is valid because the passage
mentions that '...uses about three quarters of
all freshwater resources ...'

12. Ans. (a)

Statement 1 is correct: The passage directly
mentions, "the increasingly evident
unsustainability of production and
consumption patterns. Current production
models rely heavily on fossil fuels." Therefore,
heavy dependence on fossil fuels is a reason,
as per the author, for the unsustainability of
production patterns.

Statement 2 is correct: Again, the author
directly states, "the increasingly evident
unsustainability of production and
consumption patterns. Current production
models rely heavily on fossil fuels. We now
know that this is unsustainable because the
resources are finite.

Statement 3 is incorrect: The passage states
that "Some developed countries have begun
to alleviate the worst effects by expanding
recycling". This means that some countries are
trying to reduce the effects of unsustainable
production via recycling and other methods.
Therefore, recycling would reduce the
unsustainability in production patterns rather
than aggravate it.

13. Ans. (a)

Statement 1 is correct. This option says that it
is likely that the birds will become extinct
unless they are able to counter the genetic
changes that are affecting their flying
capability. It is correctly based on the
conclusion that the flying capacity of the birds
has been declining due to unanticipated
genetic changes.

Statement 2 is incorrect. No information is
given in the passage. The passage does not
suggest that the decline in the flying capability

is at a stage where some of these birds have or had become incapable of flying.

Statement 3 is also incorrect - It is more of an imagination. The passage talks about the probability of a further decrease in their flying capability. Also, the option does not consider that the birds might still avoid extinction by countering the adverse effect of the genetic changes.

14. Ans. (b)

Statement 1 is incorrect. The passage argues that in the past 30 years the moral structure around money has weakened, which is encouraging debt.

Statement 2 is correct. It is supported by the passage. The institutions that encourage debt and living for the moment have been strengthened.

15. Ans. (c)

Sol: 81^6 can be written as $(3^4)^6$ or 3^{24} . Hence, $3^{24} + 3^{27} = 3^{24}(1 + 3^3) = 3^{24} * 28$. Hence divisible by both 7 and 4.

16. Ans. (c)

Sol: In order to complete the work in time, the contractor has to finish the remaining 70% of the work in 25 days. Now, in the first 15 days the work done = $30 * 15 = 450$ man-days $\rightarrow$ 30% of the work. Hence, work left = 70% of the work = 1050 man-days. Since, 25 days are left to complete the task, the number of people required is $1050/25 = 42$ men. Since, 30 men are already working, 12 more men are needed to complete the work.

17. Ans. (d)

Total numbers = 101

Not divisible by 2 = 50

Of which divisible by 3 = first number 600, last number = 699 but even number have been already removed, hence count only odd numbers between 600 and 700 divisible by 3. Hence first number = 603, last number = 699,

common difference = 6, Hence remove = $[(699-603)/6] + 1 = 17$.

Hence remaining = $50-17 = 33$

For divisibility by 4, no need to remove any number as all even number have been already removed.

For divisibility by 5:

Remove all left odd numbers from 33 numbers which are divisibly by 5 and not by 3. Between 600 and 700, the first odd number divisibly by 5 is 605 and last is 695. We have 10 such numbers as $[(695-605)/10 + 1] = 10$.

Out of these 10 numbers i.e. 605, 615, 625, 635,.....,695 some of the numbers like are also divisible by 3 like 615 etc. Hence, $[(675-615)/30 + 1] = 3$. Hence, these three numbers were already removed in divisible by 3 list. Hence, remaining 7 numbers which are divisibly by 5 but not by 3 can be removed. Hence, numbers left = $33 - 7 = 26$.

18. Ans. (d)

a = 5, (5,11,17)

a = 7, (7,13,19)

a = 11, (11,17,23)

a = 17, (17,23,29)

a = 31, (31,37,43)

a = 41, (41,47,53)

a = 47, (47,53,59).

a = 61, (61, 67, 73)

a = 67, (67, 73, 79)

Hence, 9 such solutions exist.

19. Ans. (b)

Statement I: $2^{128}/17$ can be written as $(2^4)^{32}/17 = (16)^{32}/17 \Rightarrow R = 1$

Statement II: All even numbers greater than 2 are composite numbers as they have more than two distinct divisors.

20. Ans. (c)

First number between 102 and 200 which is divided by 7 is 105 and last number divided by 7 is 196.

Hence, three-digit numbers between 100 and 200 which leaves a remainder 3 when divided by 7 are: 108, 115, 122,, 199

This series is in A.P with first term as 108 and common difference as 7.

Hence, no. of terms in the series = $(199 - 108) / 7 + 1 = 14$

Sum of all N terms = (Last term + First term) *
No. of terms / 2

= $(199 + 108) * 14 / 2 = 2149$

21. Ans. (b)

Option (b) is the correct choice.

Assumption (1) is not valid because the passage states that lack of transparency and digitalisation is the problem in tracking products across systems.

Assumption (2) is valid because the passage states that 'leading to product surpluses and, eventually, waste.'

22. Ans. (c)

Option (c) is the correct choice.

Statement (1) is not valid because the passage directly states that 'trees don't necessarily make rivers flow'. This implies that the solution of planting trees may not work for river flow and thus also for groundwater recharge.

Statement (2) is valid because the passage has mentioned 'because of upstream regulation ...we won't be able to retain or enhance flow in our rivers'.

23. Ans. (c)

Option (c) is the correct choice

Inference (2) is not valid because the passage does not state only through diplomacy.

Inference (3) is not valid because the passage does not suggest that it should be prioritised. The passage expects geopolitics and diplomacy to be expanded.

Inference (1) is valid because the passage has mentioned that 'made it imperative to expand foreign policy focus beyond traditional concerns of states around geopolitics into more complex global development challenges like public health and climate change'.

24. Ans. (d)

Code = Number obtained by Sum of place values + Reverse of that number

MOBILE → Sum of place values = 56, hence code = $56 + 65 = 121$

WATCH → Sum of place values = 55, hence code = $55 + 55 = 110$

COMPUTER → Sum of place values = 111, hence code = 222

25. Ans. (*)

26. Ans. (*)

(

27. Ans. (c)

Let the quantities of alcohol be $2k$ for alcohol C, $3k$ for alcohol B, Pk for alcohol C. The concentrations of alcohols A, B, and C are 10%, 20%, and 30%, respectively. This means that the amounts of pure alcohol in each component are:

From A: $0.10 \times 2k = 0.2k$,

From B: $0.20 \times 3k = 0.6k$,

From C: $0.30 \times Xk = 0.3Xk$

The total amount of pure alcohol in the mixture is: $0.2k + 0.6k + 0.3Xk = (0.8 + 0.3X)k$

The total volume of the mixture is:

$2k + 3k + Xk = (5 + X)k$

The concentration of alcohol in the mixture is given as 23%. This means the amount of pure alcohol divided by the total volume should be 23%. Thus, we set up the equation:

$(0.8 + 0.3X)k / (5 + X)k = 0.23 \Rightarrow X = 5$.

28. Ans. (d)

Using statement I, at least one of X or Y will be divisible by 11, but not sure whether X or Y. Using statement II, Y is divisible by 2 but it does not give that which of X or Y is divisible by 11. Hence, using both the statements together also, it cannot be answered whether X is divisible by 11 or not.

29. Ans. (d)

Chintu	Danny	Bala	Anil
2	1	4	3
3	1	4	2
3	2	4	1
4	1	3	2
4	2	3	1
4	3	2	1

30. Ans. (b)

Logic: $(n^3 - n^2)$ starting from $n = 1$

31. Ans. (c)

Option (c) is the correct choice.

Assumptions (1) is valid as the passage has stated that a democratic system works on democratic values and provides opportunities for educational and economic development.

Assumption (2) is valid because the passage mentions that in a democratic system 'All citizens must be able to avail opportunities of universal and compulsory education'.

32. Ans. (c)

Option (c) is correct

Statements (1) is correct because the passage states that raising the risk weights for such exposures is a correction made by RBI to ensure a more informed regulatory framework. This implies that improving the quality of assessment of credit risk is the reason behind this change.

Statement (2) is correct as the passage clearly states that the RBI has done this to 'encouraging banks to have rated exposures'.

Statement (3) is incorrect due to 'large, domestic systemically important banks'. This extends beyond scope of the passage.

Statement (4) is correct as the passage has clearly stated 'unrated exposures can create information barriers for banks as well as the supervisor'.

33. Ans. (a)

Statement I is correct as the passage mentions that this is an important subject of many Indian texts, which are discussed in recent times at length.

Statement II is incorrect as it is not implied in the passage.

Hence option (a) is correct answer.

34. Ans. (b)

Option (b) is the correct choice.

Assumption (1) is not valid because the passage only mentions that 'the usually observed urban apathy in voting.' This cannot be taken to mean that rural voters are not subject to this apathy.

Assumption (2) is valid because the passage mentions that 'may help address the voter fatigue element'.

35. Ans. (d)

A takes 20 days to complete a job, B takes 15 days & C takes 40 days.

Then after 4 days, work done = $4 \left(\frac{1}{20} + \frac{1}{15} + \frac{1}{40} \right) = 4 * \frac{(6 + 8 + 3)}{120} = \frac{17}{30}$, then remaining work = $1 - \frac{17}{30} = \frac{13}{30}$.

Hence B would require = $\frac{13}{30} * 15 \text{ days} = \frac{13}{2} \text{ days} = 6 \frac{1}{2} \text{ days}$

36. Ans. (d)

On 100 he saves 8. On 118 he still saves 8. Thus, his expenditure goes up from 92 to 110- a percentage increase of 19.56%.

37. **Ans. (d)**

III is correct. I and IV form a complementary pair. Hence D is correct.

38. **Ans. (b)**

One clock loses = 4 min/h

Other clock gains = 3 min/h

Net difference = 7 min/h

Total time from 9 am to 5 pm on Monday = 8 hours

Hence the difference in minutes between these two clocks from 9 am to 5 pm on Monday = $7 \times 8 = 56$ minutes.

39. **Ans. (b)**

We are arranging 8 digits in total, where we have 2 occurrences of 4, 3 occurrences of 5, and 3 occurrences of 6.

The number of distinct arrangements is given by the formula for the multinomial coefficient:

Number of ways = $8! / (2! \times 3! \times 3!)$

Where:

8! is the total number of ways to arrange 8 digits without any restrictions,

2!, 3!, and 3! account for the repeated digits (the two 4's, three 5's, and three 6's).

40. **Ans. (a)**

9-digit number can be represented as "X-X-X-X-X"

The four-digits 1,1,7,7 can be arranged at '1' places in $4!/2!2!$ ways = 6 ways

The five digits 4,4,2,2,2 can be arranged at 'X' places in $5!/2!3!$ ways = 10 ways

Hence, no of arrangements = $6 \times 10 = 60$

41. **Ans. (a)**

Option (a) is correct.

Statement (1) and (4) are valid as the passage clearly states that 'data belong to that jurisdiction'.

Statement (2) and (3) are not valid as developing capacity to extract data and setting

up public fund are beyond scope of the passage.

42. **Ans. (b)**

Option (b) is the correct choice.

Assumption (1) is not valid because the passage has mentioned that 'frontrunners... are only belatedly beginning to introduce the protection of such rights'. This means that developed countries have also set up systems to protect data recently.

Assumption (2) is valid because the passage does mention that for online commerce the first step in data regulation is to ensure the rights of individuals.

43. **Ans. (c)**

Option (c) is the correct choice.

Option (a) is not correct because based on the passage we cannot state that they both are equally affected.

Option (b) is not correct because of the usage of the phrase of social-economic systems. The passage does not speak of this.

Option (c) is correct because the passage clearly states that humans fundamentally depend on ES.

Option (d) is not correct because it extends beyond the scope of the passage.

44. **Ans. (b)**

Assumption 1 is incorrect. The statement is beyond the scope of the passage because the passage does not mention or discuss anything regarding income or increased incomes. So, this is not a correct assumption. The passage instead discusses the increased opportunities for women in the globalised world. Assumption 2 is incorrect. The line "The expansion of the middle class is said to have occurred as a consequence of this process" reflects that there has been a considerable impact of globalization on the Indian middle class, but does not compare it with middle

classes of other countries. Also, the passage does not compare the impact of globalization on different classes in India.

Assumption 3 is correct. This statement is correct because of the following lines from the passage, "Many scholars argue that globalization has been detrimental to women due to growing structural gender inequalities, but many respondents identify greater opportunities to challenge pre-existing patriarchal norms through the role models available in the globalized media". These lines represent two contrasting opinions about the impact of globalization on women. Scholars say that it has been detrimental, but respondents say that it has benefitted as it provides opportunities to challenge the patriarchal norms.

Therefore, it is correct to say that impact of globalization on women is not clear as per the information provided in the passage.

45. Ans. (c)

Numbers divisible by 4: 204, 208, 212..., 296 = 24 numbers.

Numbers divisibly by 7: 203, 210, 217,, 294 = 14 numbers

Numbers divisible by both i.e. by 28 are 224, 252, 280 = 3 numbers

Hence required probability = $(24+14-3)/99 = 35/99$

46. Ans. (a)

Last three digits can be any digit from 0 to 9. Hence each of the last three digits can be selected from 10 digits (0-9). Hence, the required probability = $1/10 * 1/10 * 1/10 = 1/1000$

47. Ans. (b)

Total no. of cases = 1000

Favourable cases (sum of digits is 9):

Page no. with all identical digits = 333

Page no. with two identical digit: 900, 711, 522, 144 $\rightarrow 3!/2! * 4 = 12$

Page no. with all different digits: 432, 612, 531, 450, 360, 270, 180 $\rightarrow 3! * 7 = 42$

Hence total favourable cases = 55

Probability = $55/1000 = 11/200$

48. Ans. (b)

At 12:00, the direction is West and hence the direction at 6:00 is East and 9:00, the direction is South and it will be North at 3:00. Thus, at 4:30, the hour hand will point in North-East direction.

49. Ans. (c)

$n(S) + n(E) - n(S \cap E) = 120 + 80 - 42 = 158$

Number of students registered neither for science nor for english = $500 - 158 = 342 = 68.4\%$

50. Ans. (d)

Sol: Let total capital = Rs. X, then P's capital = $x/3$

Q's capital = (P + R)'s capital

$\Rightarrow 2 * Q's \text{ capital} = x$

$\Rightarrow Q's \text{ capital} = \frac{x}{2}$

Hence, R's capital = $\frac{x-x}{3} - \frac{x}{2} = \frac{x}{6}$

Hence, P : Q : R = $\frac{x}{3} : \frac{x}{2} : \frac{x}{6}$

Hence, R's share = $\frac{1}{6} \times 1800 = \text{Rs } 300$

51. Ans. (a)

"Option (a) is the correct choice. "Option (a) is correct because in first sentence of the passage the author makes the reversing of environmental trends contingent upon informed understanding of these systems. "Option (b) is not correct because the passage tells us that we need to develop new narratives that are not restricted in outlook like the nature-society dichotomy. This does not mean

that the nature-society dichotomy is an actual divide. "Option (c) is not correct because it extends beyond the scope of the passage as it speaks of accountability. "Option (d) is not correct because the passage does not insist upon predicting the future as a necessity for achieving improved understanding."

52. Ans. (b)

Statement 1 is incorrect: The passage mentions that "there is a built-in tension between markets and democracy." The passage further goes on to elaborate, how. Here "built-in" refers to the systemic aspects of each.

Statement 2 is incorrect: The last few lines of the passage invalidate the claim made in statement 2. The passage mentions that "some people never get the opportunity to develop skills that markets demand" and that "capitalism has always witnessed bursts of unemployment". Therefore, we can assume that democracies are not efficient if the market runs strong.

Statement 3 is correct: As the markets cannot ensure equity (as understood from the various lines of the passage), government programs are needed to complement the market outcomes, to help those who have not benefited by the "efficient distribution of resources" of the markets.

Hence, Option (b) is correct.

53. Ans. (c)

Statement 1 is correct: "Pockets of desert-like landscape are now appearing in other parts of the country including the Sutlej-Ganga Plains and Deccan Plateau. Where only a few decades back there used to be lush green forests with perennial streams and springs, there is only brown earth, bare of vegetation, without any water in the streams and springs except in the rainy season." Supports the assertion of the author that deforestation and denudation will ultimately lead to the depletion of soil resources.

Statement 2 is incorrect: This statement goes beyond the scope of the passage. The passage does not mention anything related to the common man.

Statement 3 is correct: This is supported by the lines "the harshness of the climatic conditions" and "Where only a few decades back there used to be lush green forests with perennial streams and springs, there is only brown earth, bare of vegetation, without any water in the streams and springs except in the rainy season".

54. Ans. (d)

2 men selected from 8 men = ${}^8C_2 = 28$

2 women out of remaining 6 are chosen in ${}^6C_2 = 15$ ways

when we select two men from 8 couples then we can't select two wives from the 8 women because they can be the wife of selected men. So, we had to select wives from the 6 women (excluding wives of 2 men). And this could be done in reverse order also. Therefore, we have to multiply the obtained value with 2.

So, now required number of ways is $2 \times 28 \times 15 = 840$.

55. Ans. (a)

Circumference increased by 12% which means radius also increased by 12%.

Then new radius = $1.12R$

Hence percentage change in area = $\frac{[(1.12R)^2 - R^2]}{R^2} \times 100 = 25.44\%$

56. Ans. (d)

$G = 2 * B$

$G + B = 114$

$2B + B = 114$

Hence, $B = 38$ and hence $G = 76$

Sunil - 16th From the top

There are 15 students ahead of him of which 12 are girls. Hence no. of boys ahead of Shushant = is $15 - 12 = 3$

No of the boys in the rank after him = $38 - 3 - 1$ (Sunil)
 $= 38 - 4 = 34$

57. Ans. (d)

Let the usual speed by x km/hr and $50/18$ m/s = 10 km/hr. Then
 $75/x - 75/(x+10) = 15/60$, Solving $x = 50$. Hence
 required time = $400/50 = 8$ hrs.

58. Ans. (b)

Conclusion I, II and IV does not follow and only III follows.

59. Ans. (a)

Question cannot be answered by I alone but can be answered using II alone as when Q is even i.e. the power is even then it will be always positive.

60. Ans. (d)

Shyam age is a prime number in 2023 and 2025. Hence these will be set of prime numbers like (3,5), (5,7), (11,13) and so on. Hence, a unique pair cannot be determined. Hence D

61. Ans. (c)

Option (c) is the correct choice.

Option (a) and (b) are not correct because they discuss 'efficiency'. We cannot infer whether efficiency in particular will improve based on the passage.

Option (c) is correct because the passage states that 'Data driven insights'.

Option (d) is not correct because it extends beyond the scope of the passage.

62. Ans. (c)

Statement 1 is incorrect since it implies that lower tax rates will always lead to greater investment in higher education. Although, the passage discusses the direct correlation between the two, the use of the word invariably makes it an extreme statement.

Statement 2 is incorrect because it is economic freedom, resulting from lower tax rates, that ensures investment in higher education and not vice versa.

Statement 3 is correct since greater economic freedom makes way for investment in education which is a key component for building human capital.

Although Statement 1 may look correct, there is no option for marking Statements 1 & 2 as correct assumptions. Hence, **the most appropriate answer is Option (c).**

63. Ans. (a)

Option (a) is the correct choice.

Assumption (1) is valid because the passage mentions that 'Despite India holding the highest foreign reserves since 1947, the rupee recently bore the brunt'.

Assumption (2) is not valid because the passage does not suggest that the rupee will drop in value each time there is food shortage.

64. Ans. (c)

Statement I: $G + 2O < 2G + O \Rightarrow O < G$

Statement II: $O + 2A = A + 2G \Rightarrow O + A = 2G$

Also given, $O + A + G < 300$

Combining both statements, hence, $2G + G < 300 \Rightarrow G < 100$ and $O < G$, Hence price of A is highest among all.

Hence question can be answered only by combining both the statements together.

65. Ans. (d)

Statement I: 123, 143 etc. However, for a number to be divisible by 3, sum of digits should be divisible by 3. Hence, question cannot be answered using I alone.

Statement II: Question cannot be answered using II alone.

By combining both statements also, the question cannot be answered.

66. Ans. (c)

$$10Y + X - 10X - Y = 36$$

$$\text{Hence, } Y - X = 4$$

Hence, possible combinations: (1,5), (2,6), (3,7), (4,8) & (5,9). Hence, five such numbers are there.

67. Ans. (c)

We have to find the day on 1st December, 2002.

1st December, 2002 = (2000 years + time period from 1.1.2002 to 1.12.2002)

1600 years " 0 odd days

400 years " 0 odd days

Jan. Feb. March April

$$(31 + 28 + 31 + 30 + 31 + 30 + 31 + 31 + 30 + 31 + 30 + 1) = 335 = 6 \text{ odd days}$$

Hence, 1st December 2002 = Sunday. Hence, Wednesday falls on 4th, 11th, 18th, 25th Dec 2002.

68. Ans. (c)

When P has either Q or R on his right, we have either PQ or PR

When Q has R or S on his right, we have QR or QS.

Thus, we must have PQR or PQS or PR and QS.

For PQR, S,T,U, no of ways = $3! = 6$

For PQS, R,T,U, no of ways = $3! = 6$

For PR, QS T, U, no of ways = $3! = 6$

Hence required number of ways = 18

69. Ans. (d)

Possibilities-

$$1. \quad 1 \text{ white, } 2 \text{ non-white} - {}^3C_1 * {}^6C_2 = 45$$

$$2. \quad 2 \text{ white, } 1 \text{ non-white} - {}^3C_2 * {}^6C_1 = 18$$

$$3. \quad 3 \text{ white} - {}^3C_3 = 1$$

$$\text{Hence, total ways} = 45 + 18 + 1 = 64$$

70. Ans. (c)

Let age of Chaman = x years, then age of Aman = 3x years and Age of Baman = 5x years,

$$\text{Then, } x = (x + 3x + 5x)/3 - 4$$

Solving, x = 2, then Baman's present age = 5x = 10 years.

71. Ans. (d)

Option (d) is correct

Statement (1) is not valid as the passage has not mentioned 'accommodation'.

Statement (2) is not valid as the passage has discussed filling up of existing vacancies.

Statement (3) is valid as the passage states 'the inability of the formal justice system to deliver speedy and affordable justice to all'.

72. Ans. (c)

Let the cost price be Rs. 1 per gram, then the cost for 1000 grams would be Rs. 1000. Hence, for 1 kg sale he would charge a price of 1035 (after an increase of 15% followed by a decrease of 10%). But, since he sells only 900 grams, the cost price for the quantity would be Rs. 900. Thus, for him, C.P = Rs. 900 and S.P = Rs 1035. Hence Profit percentage = 15%.

73. Ans. (c)

$$P(1 + R/100)^4 = 2P \Rightarrow (1 + R/100)^4 = 2$$

$$\text{Let } P(1 + R/100)^n = 8P \Rightarrow (1 + R/100)^n = 2^3 \Rightarrow (1 + R/100)^n = [(1 + R/100)^4]^3$$

$$\text{Hence, } n = 12$$

74. Ans. (b)

$$\text{Total number of lines} = {}^{12}C_2 - {}^4C_2 + 1 = 66 - 6 + 1 = 61$$

75. Ans. (a)

Let the number of coins of 1, 50 p, 25 p be A, B and C respectively.

$$A + B + C = 180$$

$$A = 2C$$

$$A + 0.5B + 0.25C = 120, \text{ Solving these, we get } B = 60$$

76. Ans. (c)

Sol: 8th floor - A, 7th floor - F, 6th floor- H,
5th floor- B, 4th floor- D, 3rd floor- E, 2nd floor-
C, 1st floor- G

77. Ans. (b)

8th floor - A, 7th floor - F, 6th floor- H, 5th
floor- B, 4th floor- D, 3rd floor- E, 2nd floor- C,
1st floor- G

78. Ans. (c)

Statement I:

Number of zeros would depend on the number
of 5's in the value of the factorial.

Hence, 50! Would end in = $[50/5] + [50/52]$
zeros = 12 zeros

And 75! Would end in = $[75/5] + [75/52]$ zeros
= 18 zeros

When two numbers with 12 zeros at then end
and 18 zeros at the end are added, the resultant
would have 12 zeros at the end.

Statement II:

Any three digit number in the form ABC can
be written as $100A + 10B + C$. Its reverse CBA
can be written as $100C + 10B + A$

Hence difference between ABC and CBA =
 $100A + 10B + C - (100C + 10B + A)$
= $99(A - C)$ Hence divisible by 99.

Hence both the statments I and II are correct.

79. Ans: (a)

Let the distance travelled be D km.

Then, time $\rightarrow t$ (with stoppage) = $D/40$ and
 t (no stoppage) = $D/50$

Hence, time spent on stoppages, t (stoppage)
= $D/40 - D/50 = D/200$

Now calculate the average stoppage time per
hour by dividing the time spent on stoppages
by the total time taken for the journey with
stoppages,

Average stoppage per hour = t (stoppage)/
 t (with stoppage) = $(D/200) / (D/40) = 1/5$.
Hence $1/5 * 60 = 12$ minutes

Hence, train stops for 12 minutes per hour an
average.

80. Ans. (d)

In a 300m race, when Anil runs 300m, Vipul
runs 255 m. Hence, ratio of their speeds =
 $300:255 = 20:17$

In the 400m race, when Vipul runs 400 meters,
Sanjay runs 380 meters. Thus, the ratio of their
speeds = $400 : 380 = 20 : 19$

Ratio of Speed of Anil and Sanjay = $20/17 * 20/19 = 400/323$

Hence, for every 400 m Anil runs, Sanjay runs
only 323 m.

Hence, in a 500 m race, When Anil runs 500m,
Sanjay will run= $500 * 323/400 = 403.75$ m.

Hence, Anil will beat Sanjay by $500 - 403.75 = 96.25$ m.

■■■■