

1. Ans: (d) Explanation: Statement 1 is Incorrect: The passage mentions that 'More than three-fourths of the municipal budget goes into collection and transportation, which leaves very little for processing/resource recovery and disposal. Thus, this statement seems to assume the opposite of what the passage actually infers. Statement 2 is Incorrect: Though the statement talks about technological intervention, it does not comment upon the efficiency of the private or public sector

2. Ans: (d) Explanation: Statement 1 is not Correct: Firstly, the use of word 'developed countries' in the statement can be read as synonymous to the use of 'west' or 'Americas' in the passage. Further, the passage says, 'Agricultural technology is changing fast. Much of this change is brought about by affluent farmers in the West/Americas.' Thus, though most of technological development emerges from the west, the use of 'much' and not 'all' indicates that it is not confined to the west.

Statement 2 is not Correct: The passage clearly states that 'Techniques developed in the West are being adapted in some places to make tropical crops more productive.' Thus, it negates the assumption that technological changes are not adapted in developing countries

3. Ans: (b) **Good corporate governance improves the credibility of the firms.**

**Explanation:** The passage emphasizes how good corporate governance promotes accountability, financial transparency, and fair treatment of stakeholders. This, in turn, enhances firms' credibility, making them more attractive to investors. Option (b) best captures this idea, while the other options either introduce unrelated points or overstate the role of international capital markets in enforcing governance.

4. Ans: (b)

(b) **Knee-jerk reactions cannot but an evidence-based approach will be more effective.**

**Explanation:** The passage argues that arbitrary measures, like banning certain vehicles or fuels without a scientific basis, are ineffective in tackling pollution. It advocates for an evidence-based approach to understand the actual sources of pollutants and employ suitable technologies for effective pollution control. Option (b) aligns closely with this implication, while other options either focus on enforcement or misinterpret the underlying message.

5. Ans: (d) **Indian banking system requires structural reforms as a long-term solution for bad loans problem.**

**Explanation:** The passage suggests that while the Insolvency and Bankruptcy Code and recapitalization of banks are helpful, they are not sufficient to prevent future problems. Systemic reforms are essential to address the root causes of unsustainable and reckless lending. Option (d) directly captures this need for structural reforms, making it the best answer. Other options either suggest unrelated measures or focus on temporary fixes rather than addressing the underlying issues.

6. Ans: (b) Explanation: Option (a) is Incorrect: emphasises a mix within government rather than individual training for all statesmen, even though the passage recognises the value of statesmanship. It is ideal but impractical to suggest that contemporary statesmen be trained in scientific methods and philosophical thought. The paragraph emphasises that government shouldn't be limited to an empirical apparatus devoid of moral principles. Philosophy and scientific aptitude are essential components of government. But it doesn't say anywhere how to accomplish this. There has been no mention, either overtly or covertly, of the necessity of training statesmen. Other methods for achieving this include external consulting, guidance, etc. Option (c) is Incorrect: as it offers an excessively general solution. The passage makes the case for particular roles played by the government rather than a total reform of social education to encourage philosophical thinking in all. The passage highlights the value of philosophy in science and statesmanship, but it makes no mention of how education plays a crucial role in developing these abilities from a young age.

7. The crucial message conveyed about sustainable forest development, based on the CLI and the author's emphasis, is:

(c) **Balancing conservation with community well-being is the cornerstone of sustainable forest management.**

This is highlighted in the discussion on promoting knowledge sharing, inclusive certification systems, and partnerships with indigenous communities, emphasizing the need to balance environmental conservation with the livelihoods and well-being of forest-dependent communities.

8. (d) **Strengthening global cooperation and adopting stringent emissions regulations is the most effective course of action to protect children from future threats.**

The author emphasizes the urgency of transitioning to a low-carbon, climate-resilient future and the need for immediate action to protect children's futures, which implies that comprehensive and cooperative global efforts, particularly in regulating emissions, are crucial.

9. (c) **Increased demand for organic products through "Bharat Organic" will incentivize further diversification of organic offerings.**

The passage emphasizes the growing consumer demand for diverse, high-quality organic products like honey, spices, and millets, and how NCOC is expanding the "Bharat Organic" brand to meet these preferences. This suggests that rising demand will encourage further diversification of organic products.

**10.(c) The urgent need for global cooperation and equitable transition strategies is paramount to navigating the economic and social challenges posed by the transition to net-zero.**

The passage emphasizes the challenges of transitioning to a net-zero future, highlighting the need for international cooperation, fair transition policies, and addressing the social and economic implications for workers and communities dependent on fossil fuels. This suggests that global cooperation and equitable strategies are key to achieving the IEA's Net Zero Roadmap goals.

**11.(c) Prioritize domestic resource mobilization through improved tax administration, tackling tax evasion, and promoting public-private partnerships.**

The passage highlights the importance of mobilizing domestic resources, improving tax systems, combating illicit financial flows, and leveraging private sector investments, which makes this the most feasible and comprehensive solution for addressing the funding gap.

**12.(c) A comprehensive understanding of the ecological and socio-economic implications of Conocarpus, coupled with community engagement, is crucial for finding a sustainable solution.**

The passage emphasizes the need for a balanced approach that takes into account both environmental protection and the socio-economic dependence of coastal communities on Conocarpus. It calls for scientific research, community engagement, and alternative livelihood exploration, supporting a holistic and inclusive approach.

**13.(c) The near-disappearance of Lake Puraquequara serves as a powerful symbol of the escalating climate crisis and its far-reaching consequences for the Amazon and the planet.**

The passage highlights the drying of Lake Puraquequara as a direct result of global warming, emphasizing its broader implications for the Amazon rainforest, climate regulation, and the planet's ecological balance. It stresses the urgent need for action to address climate change, making this the most fitting option.

**14.(c) Proposed reforms, coupled with stricter regulations, hold promise for strengthening IBC transparency.**

The passage discusses both proposed reforms to improve transparency in the Insolvency and Bankruptcy Code (IBC) and criticisms that call for stricter regulations and judicial oversight. This option accurately reflects the balanced tone of the passage, acknowledging the potential of reforms to improve transparency while also highlighting the need for additional measures.

**15.(c) Despite challenges, efficient implementation of Gati Shakti can significantly strengthen India's competitive edge in the global market.**

The passage highlights how PM Gati Shakti aims to improve logistics, economic growth, and regional development, while acknowledging challenges in coordination and investment. Therefore, the successful implementation of the plan would enhance India's competitiveness globally.

Passage-13

**16.(a) The RBI prioritizes controlling inflation over supporting economic growth in its monetary policy decisions.**

**Explanation:** The passage highlights the RBI's recent OMO strategy, which involves selling longer-term bonds to withdraw liquidity, aiming to curb inflation and mitigate excessive risk in the market. This choice, even at the potential cost of higher borrowing costs and slower growth, suggests that controlling inflation takes precedence in the RBI's current approach. While options (b) and (d) are accurate statements about bond yields and prices, they do not specifically support the passage's main argument. Option (c) is relevant but not as directly supportive of the primary focus on inflation control.

**17.(c) Lack of balance between external life and internal life.**

**Explanation:** The passage discusses the need for balance between a person's external (objective) life and inner (psychological) life, stating that when these two are misaligned, conflict and crisis arise. Option (c) directly reflects this central theme of achieving balance to maintain stability, while the other options introduce unrelated elements that are not implied in the passage.

**18.(b) Only 3**

**Explanation:** The passage highlights that wisdom is the deeper understanding and application of knowledge in a meaningful way. Option 3 aligns with this idea, suggesting that wisdom allows for a serious comprehension of knowledge, reality, and truth. Option 1 is not implied as a corollary, and option 2 is incorrect, as wisdom, not just knowledge, is needed to make sound decisions.

**19.(a) Blind obeysance of orders, without application of one's own mind, is an unethical act.**

**Explanation:** The passage emphasizes Aristotle's view that humans' unique function is reasoning and that a good human life involves the application of reason and practical wisdom to achieve balance in virtue. Option (a) aligns

with this, as it implies that ethical actions require the application of one's own reason. The other options either contradict Aristotle's perspective or misinterpret the emphasis on balanced virtue and practical wisdom.

**20.(c) Acceptance towards life's ups and downs can lead to peace.**

**Explanation:** The passage introduces the Japanese philosophy of *Uketamo*, which emphasizes acceptance of life's joys and sorrows to foster a sense of equilibrium. This philosophy implies that by accepting life's changes and challenges, one can achieve inner peace. Option (c) best captures this central idea, while the other options do not align with the philosophy described.

**21.(d) A gradual strengthening of democratic values and responsible political participation.**

**Explanation:** The passage highlights the MoU's goal of integrating electoral literacy into education, empowering students with knowledge about democratic rights and responsibilities. This would likely lead to a deeper appreciation of democratic values and more responsible political participation over time. Options (a), (b), and (c) could be indirect outcomes but do not represent the primary long-term consequence as accurately as option (d) does.

**22.(c) Apply a transparent and consistent set of criteria for reviewing and approving bills.**

**Explanation:** The passage discusses the concerns surrounding the backlog of bills awaiting gubernatorial assent and the accusations of political bias in the decision-making process. By applying a transparent and consistent set of criteria, governors can address criticisms of partisan bias while fulfilling their constitutional duty to scrutinize legislation. This approach would promote accountability and ensure that bills are evaluated fairly, contributing to a smoother legislative process. Options (a) and (b) may overlook the necessity for careful scrutiny, while (d) may further complicate the situation without addressing the need for consistency and transparency.

23.. Ans: (d) **83, 89, 91, 97**

Since, we know that prime number is a number that can be divided exactly only by itself and 1.

We can see that all the numbers in the said series are prime numbers except 91 which is divisible by 13 as well as 7.

24. Ans: (c) From the given table we need to identify the pattern for Alphabets and also for numbers.

Alphabet pattern: BAC, CBA, ACB (First two letters are shifting to the right of 3rd letter in the next row Number pattern:

$$10 - 7 = 3, 9 - 3 = 6 \text{ So, } 13 - 10 = 3$$

So, the missing entry is 3B

25. Ans: (c) The given sequence has 20 letters.

Let's break this into 4 groups each consisting of 5 letters.

abab\_ / b\_bcb / \_dcdc / ded\_d

One common pattern observed in the above is that 1st, 3rd and 5th letters are the same while the 2nd and the 4th letters are the same.

ababa / bcbcb / cdcdc / deded

So, the missing letters are: a, c, c, e

26. Ans: (b) Let  $\otimes = x$ ,

So, the given equation can be written as

$$x + 1x + 5x + xx + x1 = 1xx \text{ Or,}$$

$$x + (10 + x) + (50 + x) + (10x + x) + (10x + 1)$$

$$= 100 + 10x + x \text{ Or, } 24x + 61 = 100 + 11x \text{ Or,}$$

$$13x = 39 \text{ Or, } x = 3$$

Alternate Method:

From option

(b) Let's take  $\otimes = 3$ , So, the given equation can be written as

$$3 + 13 + 53 + 33 + 31 = 133 \text{ Sum of LHS} = 133 \text{ and RHS} = 133.$$

So, the symbol  $\otimes$  should be replaced by '3'.

27. Ans: (b) The english alphabet when four letters grouped together is:

ABCD EFGH IJKL MNOP QRST UVWX YZ

As per the question,

the letters are arranged as follows:

DCBA HGFE LKJI PONM TSRQ XWVU ZY

The 13th letter in this arrangement is 'P'.

And the 4th letter to the right of 'P' is 'T'.

28. Ans: (d) We need to decipher the pattern in the first pair and then apply the same pattern in the second pair

to find the answer.

The pattern in first pair (ACPQ : BESU) is as follows:

$$A + 1 = B, C + 2 = E, P + 3 = S, Q + 4 = U$$

So by applying the same logic on the second pair we will get:

$$M + 1 = N, N + 2 = P, G + 3 = J, I + 4 = M \text{ So, } @ = \text{'NPJM'}$$

29. Ans: (c) If both hands start moving together from the same position, they will coincide every 720 /11 minutes, approximately 65.45 minutes.

30. (c) Explanation: There are a total 26 letters in the given arrangement. Place value of vowels is:

$$A = 25, E = 15, I = 7, O = 16, U = 1$$

Now the sum of place values of vowels =  $25 + 15 + 7 + 16 + 1 = 64$

31. (b) Explanation: 1st consider the number series:

16, 31, 60, 116 we can observe that

$$1\text{st term} = 16$$

$$2\text{nd term} = 16 \times 2 - 1 = 31$$

$$3\text{rd term} = 31 \times 2 - 2 = 60$$

$$4\text{th term} = 60 \times 2 - 4 = 116$$

$$\text{Hence 5th term should be } 116 \times 2 - 8 = 224$$

Now observe the alphabetical series:

$$G \text{ is at 7th place in alphabets } 7 = 1 + 6$$

$$D \text{ is at 4th place in alphabets } 4 = 3 + 1$$

32.. Ans: (a) Explanation:

$$\text{Here, } C + A + T = 24 + 26 + 7 \text{ (backward letter positions)} = 57$$

So,

$$RAT = R + A + T = 9 + 26 + 7 = 42$$

33. Ans: (c) Explanation: War and Worship are not related to each other, all others are related to each other.

34. Ans: (c) Explanation:

We know that we use ink in pen and 'ink' is called 'honey'.

So, we use 'honey' in pen

35. ANS. (b) Explanation:

We can observe that each alphabet has a symbol/ letter associated with it.

L - Letter; C - Code

L	B	R	O	T	H	E	R	D	A	M
C	\$	&	5	3	@	4	&	9	7	*

Similarly, THREAD will be written as 3@&479.

36. (b) Explanation: The angle between the clocks at 5:40

The formula for finding angle between the hands is

$$q = 112 m - 30h$$

(here q = angle, m = minutes and h = hour)

$$q = 112 m - 30h$$

$$q = 112 \times 40 - 30 \times 5$$

$$q = 220 - 150 = 70$$

This is the inner angle between the hands, Reflex angle means the angle which is greater than 180 and less than 360.

Or we can say the outer angle formed by the hands of the clock .:

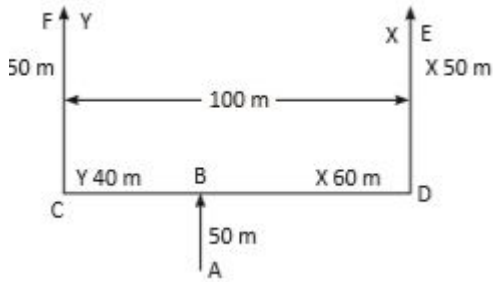
The reflex angle will be

$$360 - 70 = 290$$

37. ans: (c) Explanation: Out of the given years, only 2016 is divisible by 4 and hence, 2016 is a leap year.

38. Ans: (c) Explanation: Since 2021 is 2 ordinary years back, so 2 odd days, therefore 5th January 2021 was Tuesday.

39. Ans: (a) Explanation: Route of X and Y is shown in the figure below:



Now according to question X and Y start running from point A and run till point B

AB = 50m,

After reaching B,

X turn right and reached at point D such that

BD = 60m After reaching point B,

Y turn left and reached point C such that

BC = 40m, After reaching point C,

Y turn left and reach point F such that

CF = 50 m After reaching point D,

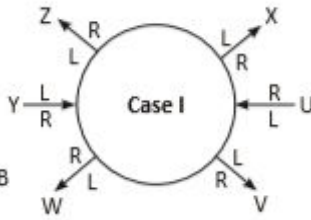
X take Right and reach point E such that

DE = 50 m, Finally X and Y are T

E and F respectively to find distance between X and Y we need to find EF (distance between E and F)

EF = BC + BD EF = 60 + 40 = 100m

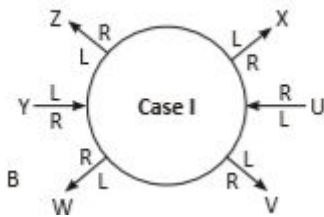
40. (b) Explanation: Based on the given information the following seating arrangement is derived:



Clearly, we can see that two persons who are facing the center are Y and U.

41.

a) Explanation: Based on the given information the following seating arrangement is derived:



But if positions of V & X and Z & W are interchanged then we get:

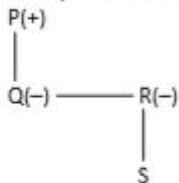
Clearly, the person sitting 2nd to the left to V is Y.

Direction (9-10): Study the given information and answer the following questions. i. A # B means A is the mother of B ii. A + B means A is the brother of B iii. A - B means A is the sister of B iv. A \$ B means A is the father of B

42.

**Explanation:**

The given relationship P S Q - R # S is shown as:



We can observe that Q and R are sisters and P is their father.

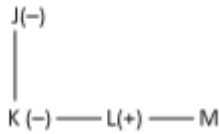
So, P is the father of R.



43.

**Explanation:**

The given relationship  $J \# K - L + M$  is shown as:



J is the mother of K, L and M.

44Ans: (b) Explanation:

Current age of Nandu = 16 years

Current age of Shobha = 20 years

Now, Age of Shobha After 4 years =  $20 + 4 = 24$  years

Age of Nandu before 4 years =  $16 - 4 = 12$  years.

Hence the ratio of their age according to question =  $12 : 24 = 1 : 2$

45. Ans: (d) Explanation: According to the question,

Arti > Ajit > Virat Sachin > Ansh > Virat Sachin > Arti

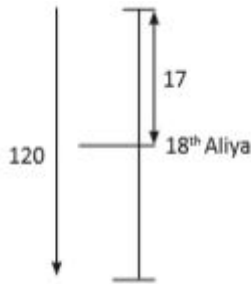
On arranging the above data,

we get

Sachin > Arti > Ajit > Ansh > Virat

46. (c) Explanation: Number of Boys and Girls are in the ratio 2: 1

There are 120 students, so number of boys and girls will be 80 and 40 respectively



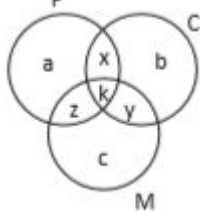
Number of persons ahead of Aliya are 17 Number of Boys in the top 17 ranks = 10 (given)

Number of girls among the top 18 will be 8 (including Alia) Number of girls after Alia's rank will be

$40 - 8 = 32$

47.

48. (c) Explanation



Total number of students who passed in at least one of the subjects =  $90 - 6 = 84$

Number of students who passed in only one subject =  $a + b + c = 72$

Number of students who passed in only two subjects =  $x + y + z = 8$

Number of students who passed in all the three subjects =  $k = 84 - 72 - 8 = 4$

Number of students who passed in at least two subjects =  $x + y + z + k = 8 + 4 = 12$

49. Explanations

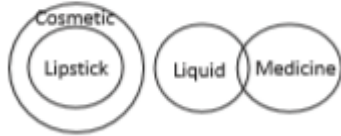
=  $a + b + c = 72$

Number of students who passed in only two subjects =  $x + y + z = 8$

Number of students who passed in at most in two subjects but atleast in one subject =  $72 + 8 = 80$

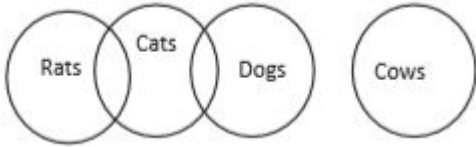
Q50. Ans: (c)

Explanation:



Clearly, only some cosmetics are lipsticks

51. Ans: (c) Explanation: The given information can be depicted in Venn Diagram as:



Conclusion-I is false as there is no direct link given between Cow and Cat.

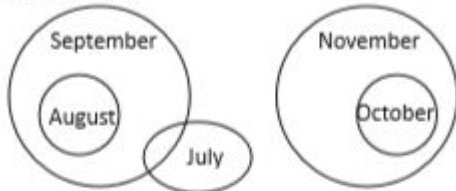
Conclusion-II is false as there is no direct link between Dog and Rat.

Conclusion-III is true

52. (d) Neither Conclusion – I nor Conclusion – II follows.

Explanation:

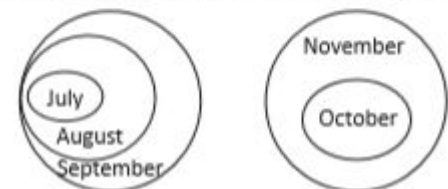
Using the given statements we can make the following Venn diagram.



We can clearly see from the Venn diagram that No November is July.

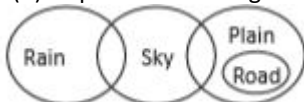
So conclusion – II is not correct.

There is a possibility that All July can be August.



So, Conclusion – I is true.

53. (b) Explanation: Using the following statements we can make the following Venn diagram.



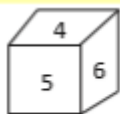
We can observe that Some Rain can be Plain.

So, Conclusion – I is not true.

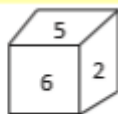
Also, some Sky can be Road.

So, Conclusion – II follows.

54. In the following question the two positions of a single dice are given. Find the digit on the face which is opposite to the face having digit 2.



(i)



(ii)

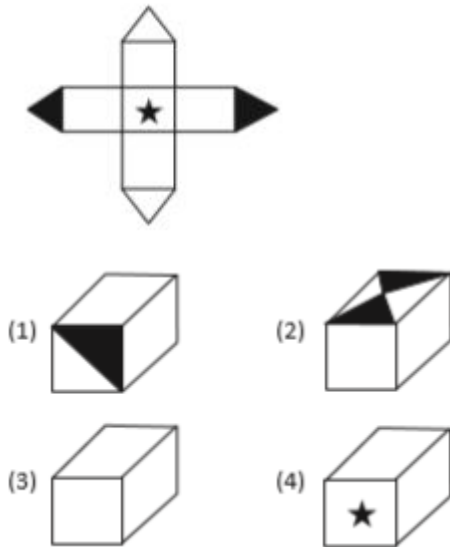
Ans: (b) Explanation: As in this case, 5 and 6 are common digits while 4 and 2 are uncommon.

As the rule given in case IV,

here uncommon digits will be opposite to each other.

Hence, 4 will definitely be opposite to digit 2

55. An explanatory figure of dice is given. Study the figure and identify the correct dice formed by that figure:



(b) Explanation: The picture of dice cut open. When joined all the triangles will get together and form one side of a dice and that side will be opposite the side having Star

56. Ans: (a) Explanation: Odd numbers are 1, 3, 5, 7, 9, ..... 47, 49, ...

Total number of odd values till 50 = 25. Sum of odd numbers =  $n^2$

Sum of 25 odd numbers till 50 =  $(25)^2$

Average = Sum of values/Number of values

Average =  $(25)^2/25$ . Average = 25

57. Ans: (a) Explanation: First using small bracket

$[76 - \{90 \div 5(12) \div 3\}] = [76 - \{90 \div 60 \div 3\}] = [76 - \{3/2 \div 3\}] = [76 - 1/2]$

Then the big bracket  $76 - 1/2 = 75.5$

58. Ans: (b) Explanation: On dividing 432686 by 12, Remainder = 2.

Required number to be subtracted = 2.

59. (b) Explanation: The least number which is divided by a, b, and c leaving remainder p, q, and r respectively is the LCM of (a, b, c) - k;

where  $k = a - p = b - q = c - r$ .

LCM of (36, 54, 60) = 540

Here,  $k = 36 - 24 = 54 - 42 = 60 - 48 = 12$

So, the general form of the desired number =  $540N - 12$

To obtain the largest such number less than 3000,

put  $N=5$ . Therefore,

the required number =  $540 \times 5 - 12 = 2688$

60. Ans: (b) Explanation: Let total marks in each subject be 100.

Therefore, total marks for all 6 subjects = 600

Overall marks scored = 60% of 600 = 360

According to the question,  $5x + 6x + 7x + 8x + 9x + 10x = 360$  or

$45x = 360$  or

$x = 8$

So, marks in the given 6 subjects must be:

$5 \times 8 = 40,$

$6 \times 8 = 48,$

$7 \times 8 = 56,$

$8 \times 8 = 64,$

$9 \times 8 = 72,$

$10 \times 8 = 80$

Therefore, in 3 subjects the student has scored less than 60% marks.

61. Ans: (d) Explanation:

Required number =  $5432 - \text{LCM of } 5, 14, 17$

=  $5432 - 1190 = 4242$



62. Ans: (d) Explanation: Given, total amount = 1840

Let the number of Rs.50, Rs.20, and Rs.10 notes be a, b and c respectively.

Given,  $a + b + c = 50$

Statement 1:

$$a = 25 \quad b + c = 50 - 25 = 25 \dots(i)$$

$$20b + 10c = 1840 - (25 \times 50)$$

$$\Rightarrow 20b + 10c = 590$$

63. Ans: (b) Explanation:

Average weight of 5 people sitting in the boat = 38 kg

$$\text{Total weight} = 5 \times 38 = 190 \text{ kg}$$

Average weight of the boat and the people sitting in the boat = 52 kg

$$\text{Total weight} = 6 \times 52 = 312 \text{ kg}$$

$$\text{Weight of Boat} = (\text{Total weight of boat and five people}) - (\text{Total weight of 5 people}) = 6 \times 52 - 5 \times 38 = 312 - 190 = 122 \text{ kg}$$

64. (c) Explanation:

Let the number of male employees = a then,

number of female employees =  $120 - a$

Sum of salaries of all employees = sum of salaries of female employees + sum of salaries of male employees

$$= 120 \times 50,000 = (120 - a) \times 45,000 + a \times 60,000$$

$$\Rightarrow 60,00,000 = 54,00,000 - 45,000a + 60,000a$$

$$\Rightarrow 15,000a = 6,00,000 \quad a = 40$$

$\therefore$  Number of male employees = 40

65. Ans: (b) Explanation: Let's assume that each question carries 1 mark.

Now, the number of questions attempted by Anita

$$= 70\% \text{ of } 10 + 40\% \text{ of } 30 + 60\% \text{ of } 30$$

$$= 7 + 12 + 18 = 37.$$

Given also, passing marks

$$= 60\% \text{ of } 70 = 42.$$

So, required number of questions to be attempted

$$= 42 - 37 = 5$$

66. Ans: (d) Explanation:

Let us assume there are 100 persons in the group,

out of which 70 will be male and 30 will be female.

Out of male, two sevenths are married, that is 20 males are married.

Since, total married persons are 30, this implies 10 females are married.

So, fraction of unmarried females =  $20/30 = 2/3$

67. (a) Explanation: The amount Ramesh initially has = 60% of the laptop's price

$$= 60\% \text{ of Rs. } 40,000$$

$$= \text{Rs. } 24,000 \quad \text{Total amount Ramesh has after borrowing}$$

$$= \text{Initial amount} + \text{Borrowed money}$$

$$= \text{Rs. } 24,000 + \text{Rs. } 10,000$$

$$= \text{Rs. } 34,000 \quad \text{Percentage of laptop's price that Ramesh has after borrowing}$$

The amount Ramesh initially has = 60% of the laptop's price = 60% of ₹ 40,000 = ₹ 24,000

Total amount Ramesh has after borrowing = Initial amount + Borrowed money = ₹ 24,000 + ₹ 10,000 = ₹ 34,000

Percentage of laptop's price that Ramesh has after borrowing

$$= \frac{\text{Total amount}}{\text{Laptop's price}} \times 100 = \frac{34,000}{40,000} \times 100 = 85\%$$

Therefore, Ramesh has 85% of the laptop's price after borrowing the money.

Percentage

68. ANS-D

Explanation:



$$\frac{x-15}{20-x} = \frac{3}{2}$$

$$\Rightarrow 2(x-15) = 3(20-x)$$

$$\Rightarrow 2x - 30 = 60 - 3x$$

$$\Rightarrow x = 18$$

69.

(d)

Explanation:

Let selling price = Rs  $x$

Then, cost price =  $\frac{4x}{5}$

Selling Price is 110% of  $x = \frac{11x}{10}$

$$\text{Gain} = \frac{11x}{10} - \frac{4x}{5} = \frac{3x}{10}$$

$$\text{gain \%} = \frac{3x/10}{4x/5} \times 100 = 37.5\%$$

(b)

Q70. Ans: (c)

Explanation:

Here,  $P = 4000$ ,  $R_1 = 5\%$ ,  $R_2 = 15\%$

$$\text{Amount after 2 years} = P \left(1 + \frac{R_1}{100}\right) \left(1 + \frac{R_2}{100}\right)$$

$$= 4000 \times \left(1 + \frac{5}{100}\right) \left(1 + \frac{15}{100}\right)$$

$$= 4000 \times \frac{105}{100} \times \frac{115}{100}$$

$$= 4000 \times \frac{21}{20} \times \frac{23}{20} = ₹ 4830$$

Q71. Ans: (d) Explanation

Equation:

Length of train + Length of bridge

$$\text{Length of train} \times \text{Time} = 300 + 200 = 20 \times \text{Speed}$$

$$= \frac{500}{20} = 25 \text{ m/s} = 90 \text{ km/h}$$

72. (d) Explanation: Walk + Ride = 6hrs: 34 minutes (given) Ride + Ride = 5hrs: 08 minutes

$$2 \times \text{Ride} = 5:08 \text{ hours}$$

$$\Rightarrow \text{Ride} = 2:34 \text{ hours} \quad \text{Walk} + 2:34 = 6:34 \quad \text{Walk} = 6:34 - 2:34 = 4 \text{ hrs.}$$

$$\text{Time taken if he walks both ways} = 2 \times \text{Walk} = 2 \times 4 = 8 \text{ hrs.}$$

73.

Explanation:

24 men completes  $\frac{1}{3}$ rd work in 9 days

Therefore, total time required by 24 men to complete the whole work =  $9 \times 3 = 27$  days

$$\text{We have, } \frac{M_1 D_1}{W} = \frac{M_2 D_2}{W}$$

Time required by 18 men to complete the same work:

$$24 \times 27 = 18 \times D \text{ (Since work is same)}$$

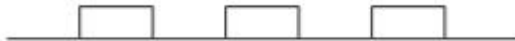
$$D = 24 \times \frac{27}{18} = 36 \text{ days}$$

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74.

**Explanation:**

Lets first arrange 3 men (in the boxes) and create 4 vacant positions beside them in the following manner.



Out of 4 vacant positions we have to select 3 places for the women.

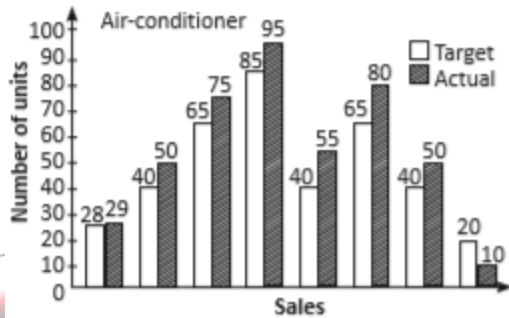
So the total number of possibilities  
 $= 3! \times {}^4C_3 \times 3! = 6 \times 4 \times 6 = 144$

**Note:** here 3! is for arranging 3 men,  ${}^4C_3$  is for selecting 3 spaces out of 4 nearby positions for women and finally 3! is for arranging the women.

75. 4. (a) Explanation: The four consonants all different can be arranged in 2nd, 3rd, 5th and 6th (four) places in  $4! = 4 \times 3 \times 2 \times 1 = 24$  ways.

Three vowels A, A, A out of which two are alike can be arranged in 1st, 4th and 7th positions in 1 way A\_\_A\_\_A  
 Hence the total number of ways are  $24 \times 1 = 24$  ways

76. A company manufacturing air conditioners set a monthly target. The target and realized values are shown in the bar chart



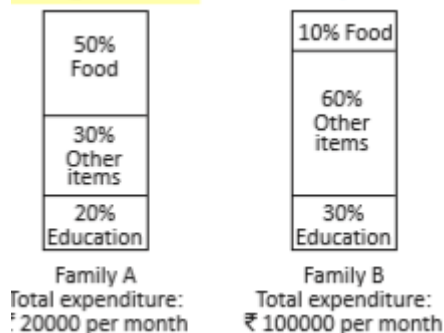
Ans: (b) Explanation: From the bar graph, it is clear that the monthly target set by the company is achieved by the sales team every month except the last one.

So, statement I is not true.

Now we are left with option (b) and option (d).

Hence, statement II has to be correct. The sales team could not achieve the target in the last month, so statement III is also not correct.

77. The proportion of expenditure on various items by two families A and B are represented in the following bar chart.

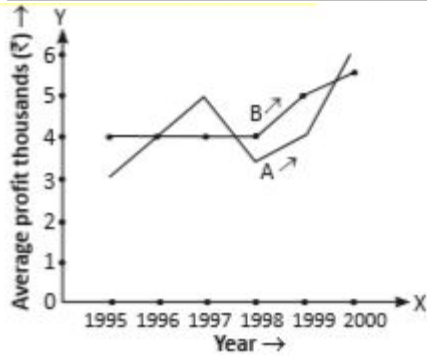


Ans: (c) Explanation: Expenditure of family A on food = 50% Of Rs. 20000  
 = Rs. 10000 per month

Expenditure of family B on food = 10% of Rs. 100000 = Rs. 10000 per month

Thus expenditure of both the families is the same.

78.



Ans: (b) Explanation: Average profit of A and B will be the same at the point of intersections. The intersection corresponds to the year 1996.

79. Ans: (c) Explanation: In year 1998, graph of B is above A, i.e. Average profit of B is greater than average profit of A.

Hence, their difference is positive.

80. Ans: (d) Explanation: In year 2000, average profit of A = Rs.6000

In year 1999,

average profit of A = Rs.4000

Average profit of A was greater in year 2000 than 1999 by (Rs.6000 - Rs.4000)

= Rs.2000



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