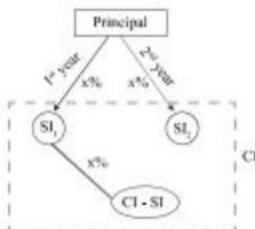


SNAP 2024 Answer Key PDF

1. (d) Sentence **Q** logically follows **S1** because it introduces what the library contains. Sentence **S** follows **Q** by explaining the role of librarians in maintaining these resources. Sentence **P** comes next, as it describes who benefits from these resources. Sentence **R** concludes the middle section by highlighting the environment of the library. The last sentence, **S6** wraps up by reinforcing the overall importance of the library.
2. (b) The idiom **"to burn the midnight oil"** means to work or study late into the night, often to complete an important task. It originates from the time when oil lamps were used for lighting, and people had to literally burn oil to continue working after dark. It is commonly used to describe someone putting in extra effort to meet deadlines or prepare for exams.
3. (b) The idiom **"hit the nail on the head"** means to describe exactly what is causing a situation or problem. It originates from carpentry, where hitting the nail directly on the head ensures it is driven in properly. In conversation, it is used when someone gives an accurate explanation or solution to a problem.
4. (a) The antonym of 'ardent' is indifferent, which means passionate or intensely enthusiastic. However, the remaining words are described below:
 - **Indifferent** means **lacking interest or enthusiasm**, making it the correct antonym.
 - **Zealous** and **Fervent** are synonyms of "ardent," so they are incorrect.
 - **Enthusiastic** also means eager and excited, which is similar in meaning to "ardent."
5. (a) The reporting verb **"said"** remains the same as there is no object. The present perfect tense **"have completed"** changes to the past perfect **"had completed"** in indirect speech. The pronoun **"I"** changes to **"she"** as it refers to the speaker.
6. (b) This is a **universal truth** (scientific fact), so the **tense remains unchanged** in direct speech. The verb **"revolves"** is in the simple present tense and remains the same. The reporting verb **"told"** changes to **"said"** as there is no object in the direct sentence.
7. (a) The phrase **"even though"** indicates contrast. The correct answer should reflect that despite being unwell, she **still did something** rather than stopping. Option (a) correctly conveys determination and perseverance.
8. (b) **"The moment"** indicates an immediate reaction. The logical consequence of a fire alarm ringing is that people would **evacuate the building**. Other options do not logically follow a fire alarm situation.
9. (b) **"If we don't leave now"** suggests urgency. The logical consequence of **delaying departure** is missing the train. Other options contradict the situation and do not make sense.
10. (a) Kind is the closest synonym. The remaining words are also described here: **Benevolent** means **kind, generous, and well-meaning**. **Cruel, selfish, and hostile** all have opposite or negative meanings, making them incorrect choices.
11. (a) Artifact is a **man-made object** from the past, often of **historical or cultural significance**. However, the remaining words are incorrectly spelt.
12. (a) The correct answer is 'vindictive', meaning seeking revenge, which fits the context perfectly. The remaining words that are incorrect are also defined below:
 - **Malicious** means intending harm but does not necessarily imply personal revenge.
 - **Spiteful** suggests a small, mean-spirited action rather than a major decision like firing someone.
 - **Callous** means emotionally insensitive but does not imply revenge.
13. (b) The correct answer is 'resolute', meaning firmly determined, which fits the context perfectly. The remaining words that are incorrect are also defined below:
 - **Obstinate** means stubborn in a negative way, which doesn't fit well in the sentence.
 - **Relentless** means persistent but often has a slightly aggressive tone, which may not be ideal here.
 - **Unwavering** is close in meaning but does not fully capture the **active pursuit** of success as well as "resolute" does.
14. (a) A **florist** is a person who works with **flowers**. Similarly, a **chef** is a person who works with **food**. Other options do not have the same relationship; for example, an **author writes books**, but they don't necessarily "work with" them in the same way a florist works with flowers.
15. (c) A **sentinel** is someone who **watches or keeps guard**. Similarly, a **guard** is someone who **protects**. Other

options don't reflect the same duty-based relationship (e.g., a soldier fights in a battle, but their role is broader than just battle itself).

16. (c)



$$CI - SI = 16560 - 14400 = ₹ 2160$$

$$SI \text{ for 1 year} = \frac{14400}{2} = ₹ 7200$$

$$\text{Rate \%} = \frac{2160}{7200} \times 100$$

$$= \boxed{30\%}$$

$$\text{Principal} = \frac{7200}{30} \times 100$$

$$= \boxed{₹ 24,000}$$

17. (b) $x + y + z = 850$

x is reduced by 100, y is reduced by 25 and z is reduced by 50, then:

$$x : y = 1 : 2$$

$$y : z = 5 : 6$$

ATQ

$$x' : y' = 1 : 2 \Rightarrow x' = \frac{1}{2} y'$$

$$y' : z' = 5 : 6$$

$$\Rightarrow y' = \frac{5}{6} z'$$

$$x' = \frac{1}{2} \times \frac{5}{6} z'$$

$$= \frac{5}{12} z'$$

$$x' = \frac{5}{12} z'$$

$$y = \frac{5}{6} z'$$

$$\frac{5}{12} z' + 100 + \frac{5}{6} z' + 25 + (z' + 50) = 850$$

$$\frac{9}{4} z' + 175 = 850$$

$$z' = 300$$

$$x' = \frac{5}{12} z' \Rightarrow \frac{5}{12} \times 300 = 125$$

$$y' = \frac{5}{6} z' \Rightarrow \frac{5}{6} \times 300 = 250$$

$$x = x' + 100 \Rightarrow 125 + 100 = 225$$

$$y = y' + 25$$

$$\Rightarrow 250 + 25 = 275$$

$$x + y = 225 + 275 = \boxed{500}$$

18. (a) $\log a + \log b - \log c$

$$= \log \left(\frac{a \times b}{c} \right)$$

$$\text{Here, } a = 87600, b = 23100, \log c = 8 = \log_{10} 10^8$$

$$\Rightarrow c = 10^8$$

$$\therefore \log 87600 + \log 23100 - 8$$

$$= \log \left(\frac{87600 \times 23100}{10^8} \right)$$

$$= \log \left(\frac{87600}{10^4} \times \frac{23100}{10^4} \right) = \log (8.76 \times 2.31)$$

$$= \log 8.76 + \log 2.31$$

19. (d) Let the expenditure of December be x

$$3200 \times 6 + 3000 + 3600 + 3900 + 4200 + \frac{x}{2} + x$$

$$= 3200 \times 12$$

$$33900 + \frac{x}{2} + x = 38400$$

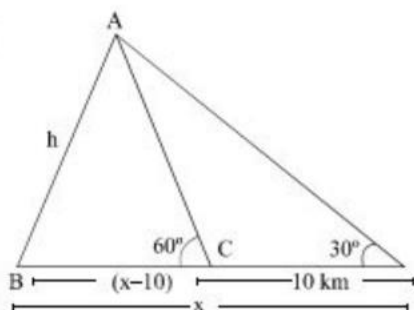
$$\frac{2x + x}{2} = 4500$$

$$3x = 9000$$

$$x = 3000$$

$$\text{November} = \frac{x}{2} = \frac{3000}{2} = ₹ 1500$$

20. (b)

In $\triangle ABC$

$$\frac{AB}{BC} = \tan 60^\circ$$

21. (c) Total cost price of 1500 articles = 1500×120 paisa
 = 180000 paisa = ₹ 1800

$$\text{Profit is } 180\% \text{ of CP} = 1800 \times \frac{180}{100} = ₹ 3240$$

$$\text{Selling price of 1 article} = \frac{3240}{1200} = ₹ 2.7$$

$$\begin{aligned} &240 \text{ articles got spoilt and remaining sold at:} \\ &= (1500 - 240 - 1200) \times 2.7 \\ &= 60 \times 2.7 = 162 \end{aligned}$$

$$\text{Actual profit\%} = \frac{₹(3240 + 162) - 1800}{1800} \times 100$$

$$= \frac{1602}{1800} \times 100 = 89\%$$

22. (a) $(30 \times 102) - 10 = 3050$

$$(5 \times 8) - 10 = 30$$

$$(5 \times 3) - 10 = 5$$

$$(8 \times x) - 10 = 102$$

$$8 \times x = 112$$

$$x = 14$$

23. (b) Probability = $\frac{\text{Non-green combinations}}{\text{Total combinations}}$

$$= \frac{{}^6C_2}{{}^{13}C_2} = \frac{(6 \times 5)/2}{(13 \times 12)/2}$$

$$= \frac{15}{78} = \frac{5}{26}$$

24. (a) Amount = $P \left(1 + \frac{R}{100}\right)^T$

$$= 45000 \left(1 + \frac{6}{100}\right) \left(1 + \frac{7}{100}\right) \left(1 + \frac{8}{100}\right) \left(1 + \frac{9}{100}\right)$$

$$= 45000 \times 1.06 \times 1.07 \times 1.08 \times 1.09$$

$$= 60083.11 \sim 60,000$$

25. (a) Let the cost price be 100x

ATQ

$$\text{Selling price} = 100x \times \frac{130}{100}$$

$$= 110.5x$$

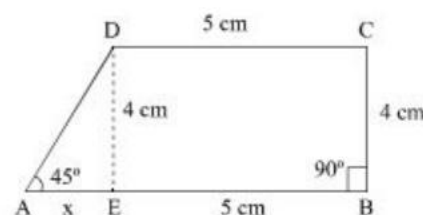
Since, the cost price of 1 kg (1000g) is 100x, the cost

$$\text{price of 800g} = \frac{100x}{1000} \times 800 = 80x$$

$$\text{Profit percentage} = \frac{(110.5 - 80)x}{80x} \times 100$$

$$= \boxed{38.125\%}$$

26. (c) According to the question,

In $\triangle ADE$

$$\tan 45^\circ = \frac{DE}{AE} = \tan 45^\circ = \frac{4}{x} \Rightarrow 1 = \frac{4}{x}$$

$$x = 4$$

$$\text{Area of trapezium} = \frac{1}{2} [AB + DC] \times DE$$

$$= \frac{1}{2} [9 + 5] \times 4 = 28 \text{ cm}^2$$

27. (c) Original ratio of selected and unselected students

$$= 3x : 2x$$

Ratio when 100 students less had applied and 50 less ratio of selected and unselected = 7 : 4

According to the question,

$$\Rightarrow \frac{3x-100}{2x-50} = \frac{7}{4}$$

$$\Rightarrow 12x - 400 = 14x - 350$$

$$\Rightarrow 2x = 50$$

$$\Rightarrow x = 25$$

$$\begin{aligned} \Rightarrow \text{Total no. of students who applied} \\ &= 25 \times 7 + 100 \\ &= 275 + 100 = 375 \end{aligned}$$

28. (d) Prime factorization of 21, 24, 28 = 21

$$\Rightarrow 3 \times 7, 24 \Rightarrow 2^3 \times 3$$

$$28 \Rightarrow 2^2 \times 7$$

$$\text{L.C.M. of (21, 24, 28)} = 2^3 \times 3 \times 7$$

$$= 8 \times 3 \times 7 = 168$$

Now, Divide 2000, by 168 to find the first multiple which is greater than 2000 and 3000.

$$= \frac{2000}{168} = 11.90$$

$$\text{Smallest number} = 11 \times 168 = 2016$$

29. (a) Pattern of the series as shown below,

$$\begin{array}{ccccccc} 5 & 6 & 16 & 57 & 244 & 1245 & 7506 \\ \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow \\ \times 1+1^2 & \times 2+2^2 & \times 3+3^2 & \times 4+4^2 & \times 5+5^2 & \times 6+6^2 & \end{array}$$

30. (a) HCF of 435, 493 and 551 kg is

$$\text{HCF} = 493 - 435 = 52 = \boxed{29} \times 2$$

↓
H.C.F

Now,

Least no. of bags =

$$\frac{\text{Quantity of rice 1}}{\text{HCF}} + \frac{\text{Quantity of rice 2}}{\text{HCF}} + \frac{\text{Quantity of rice 3}}{\text{HCF}}$$

$$= \frac{435}{29} + \frac{493}{29} + \frac{551}{29}$$

$$= 15 + 17 + 19 = 51$$

31. (b) Let the number of boys = x and number of girls = y

According to the question,

Total number of boys and girls are 300

$$= x + y = 300 \quad \dots(i)$$

Each boy gets ₹2.40 and each girl gets ₹2.80

$$2.4x + 2.8y = 776 \quad \dots(ii)$$

solving both (i) and (ii), we get

$$x + y = 300$$

$$2.4x + 2.8y = 776$$

$$\Rightarrow 2.4x + 2.4y = 720$$

$$2.4x + 2.8y = 776$$

$$\begin{array}{r} - \\ - \\ \hline -0.4y = -56 \end{array}$$

$$y = \frac{56}{0.4} = 140$$

Hence, total number of girls are 140

32. (d) $\sqrt{4^{6 \times 2} \cdot 25^{7/2} \cdot 9Z^4}$

$$= \sqrt{4^{2(3 \times 2)} \cdot 5^{2(7/2)} \cdot 3^2 Z^4}$$

$$= 4^{3 \times 2} \cdot 5^{7/2} \cdot 3Z^4$$

33. (b) Percentage fall in imports in year 2021

$$= \frac{40 - 35}{40} \times 100 = \frac{5}{40} \times 100 = 12.5\%$$

Percentage fall in imports in year 2024

$$= \frac{48 - 45}{48} \times 100 = \frac{3}{48} \times 100 = 6.25\%$$

Percentage fall in imports in year 2023

$$= \frac{75 - 45}{75} \times 100 = \frac{30}{75} \times 100 = 40\%$$

Percentage fall in imports in year 2020

$$= \frac{45 - 40}{45} \times 100 = \frac{5}{45} \times 100 = 11.11\%$$

Hence, percentage fall in imports in year 2024 was minimum.

34. (d) Let the cost of orange, banana and apple be 'x', 'y' and 'z' respectively

According to the question,

$$2x + 3y + 4z = 15 \quad \dots(1)$$

$$3x + 2y + z = 10 \quad \dots(2)$$

On Adding (1) & (2)

$$5x + 5y + 5z = 25$$

$$\therefore x + y + z = 5 \quad \dots(3)$$

Then the cost of 3 oranges, 3 bananas and 3 apples is on multiplying by 3 in equation (3) we get

$$\boxed{3x + 3y + 3z = ₹ 15}$$

35. (b) Alcohol in 1st glass = $\frac{2}{3}$; water in 1st glass = $\frac{1}{3}$

Alcohol in 2nd glass = $\frac{1}{2}$; water in 2nd glass = $\frac{1}{2}$

$\therefore$ In 3rd glass,

$$\text{Alcohol} = \frac{2}{3} + \frac{1}{2} = \frac{7}{6};$$

$$\text{water} = \frac{1}{3} + \frac{1}{2} = \frac{5}{6}$$

$$\therefore \text{Required ratio} = \frac{7}{6} : \frac{5}{6} = 7 : 5$$

36. (c) 2nd October $\rightarrow$ Monday

2nd November $\rightarrow$?

Total number of odd days from 2nd october to 2nd November

Month $\rightarrow$ October + November

$$\text{Odd days} \rightarrow 29 + 2 = \frac{31}{7} = 3 \text{ days}$$

$$\therefore \text{Required day} = \text{Monday} + 3 = \text{Thursday}$$

37. (a) CASE I

If M is telling the truth, then

M $\rightarrow$ (true), B $\rightarrow$ (wrong), V $\rightarrow$ (right) [Not possible]

CASE II

If B is telling the truth then,

B $\rightarrow$ (true), M $\rightarrow$ (false), V $\rightarrow$ (false)

CASE III

If V is telling the truth

V $\rightarrow$ (true), M $\rightarrow$ (true), B $\rightarrow$ (wrong) [Not possible]

Hence, in case II, M is involved in the Robbery.

38. (c) Time on Monday in the clock - 3 : 00 AM

From 3:00 Am on Monday to 7:30 PM on

Tuesday, total number of hours gains

$$= 24 + 16.5 = 40.5 \text{ hours}$$

$$\text{total time gains} = 40.5 \times 2 \text{ minutes}$$

$$= 81 \text{ minutes} = 1 \text{ hour } 21 \text{ minutes}$$

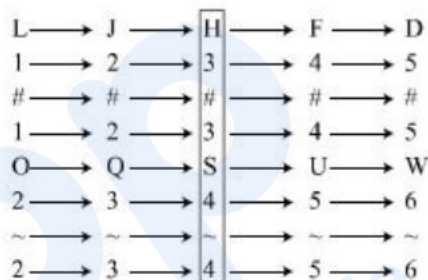
$$7 \text{ hours } 30 \text{ minutes (PM)}$$

$$\text{Required time} = 1 \text{ hours } 21 \text{ minutes}$$

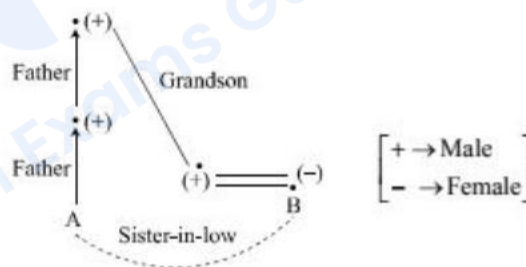
$$= 8 \text{ hours } 51 \text{ minutes}$$

$$= 8 : 51 \text{ PM}$$

39. (b) Pattern of the series as follows,



40. (a) According to the question,

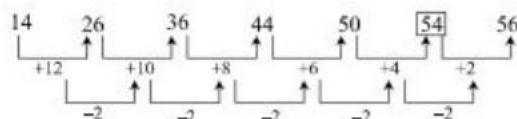


So, B is the sister-in-law of A.

41. (a) As, 'Narmada Bachao' Andolan was initiated by 'Medha Patkar'.

Similarly, 'Bhudan Andolan' was initiated by 'Vinoba Bhava'.

42. (a) Pattern of the series is as shown below



43. (d) Assumption I : for the company to implement a new policy effectively, it is always assumed that the notice will be read by employees.

Hence, this assumption is implicit the statement

Assumption II : By implementing facial recognition it assumed that the company system will improve efficiency, security and reduce fraud.

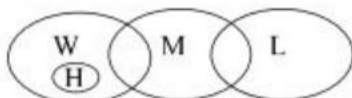
So, this assumption is also implicit the statement.

Hence, both the assumption will implicit the statement

44. (c) According to the statement, due to Earthquake there was Tsunami and due to Tsunami there were death and property loss.

So, the effects of this incident were, casualties, property loss and Death.

45. (b) According to the statements, Venn diagrams are as follows,



Conclusion I (✓) II (×) III (✓)

Hence, only conclusion I and III follows.

46. (b) Give time → 5 : 55 PM

Here, Hour = 5, minutes = 55

$$\text{Angle} = \left| \frac{11}{2} \times \text{minutes} - 30 \times \text{Hour} \right|$$

$$= \left| \frac{11}{2} \times 55 - 30 \times 5 \right|$$

$$= |302.5 - 150| = 152.50$$

47. (b) 19 December 2007 — Sunday

8th July 2007 — ?

Total number of odd days from 8th July 2007 to 19 December 2007

Months → July + August + Sep. + Oct. + Nov. + Dec.

odd days → 2 + 3 + 2 + 3 + 2 + 5

$$= \frac{17}{7} = 3 \text{ days.}$$

∴ Required day = Sunday - 3

= Thursday

48. (c) Number of strikes by cuckoo at 6' O clock = 6

Time taken to strike at 6' O clock = 10 seconds

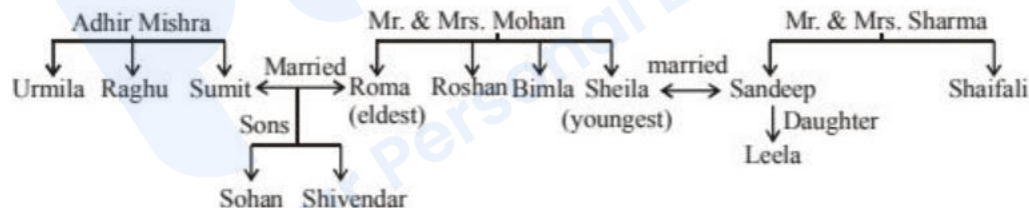
$$\text{Time per strike} = \frac{10}{6} \sim 1.67 \text{ sec per strike}$$

∴ Time taken to cuckoo at 10' O clock

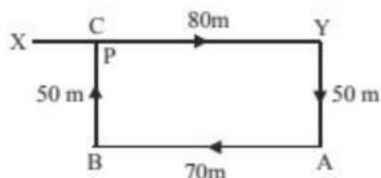
$$= 1.67 \times 10 \text{ seconds}$$

$$= 16.7 \text{ seconds}$$

Sol. (49-50): Family Tree



49. (b) Sumit's mother-in-law = Mrs. Mohan.
50. (c) As, Sohan is son of Sumit and Sumit is son of Adhir Mishra. So, surname of Sohan is Mishra.
51. (a) The movements of Raj are as shown in fig (X to Y, Y to A, A to B, B to C).



∴ Raj's distance from the starting point

$$= XC = (XY - YC) = (XY - BA)$$

$$= (80 - 70) \text{ m} = 10 \text{ m.}$$

Sol. (52-53) : Descending order of their ages and heights is as given below:

Age Nikku > Rekha = Megha > Parul > Keshav

or Nikku > Rekha = Megha > Keshav > Parul

Height Rekha > Keshav > Nikku > Parul > Megha.

52. (d) Either Rekha or Megha will be in the third position.

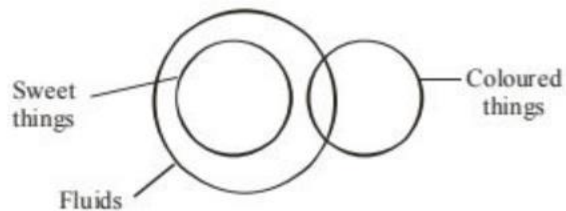
53. (d) Keshav will be the fourth position.

54. (d) The second, fifth and eighth letters of the word CARETAKER are A, T and E respectively. The words formed are EAT, ATE and TEA.

55. (c) The persons satisfying the given conditions are denoted by regions which lie inside the smaller triangle or the circle but outside the bigger triangle i.e. A and E.

56. (a) The person satisfying the given conditions are represented by regions which are common to the bigger triangle and the circle but lies outside the rectangle i.e. B and C.

57. (c)



So, some fluids are sweet things and some sweet things are fluids.

58. (d) The following arrangement is possible.

(Cabin, Neem)	(well, mango)
Coconut	Lemon

Neem tree and Lemon tree can be seen that diagonally opposite to each other in the plot.

59. (b) ITNIETAM → INTIMATE

using given alphabet a logical word is created
Similarly

TREVNIETARBI → INVERTIBRATE

B 2 C D, D E 3 F, H 5 I J, J 6 K L

60. (d) Clearly, the given letters, when arranged in the order 5, 1, 2, 3, 4 from the word 'TRACE'.