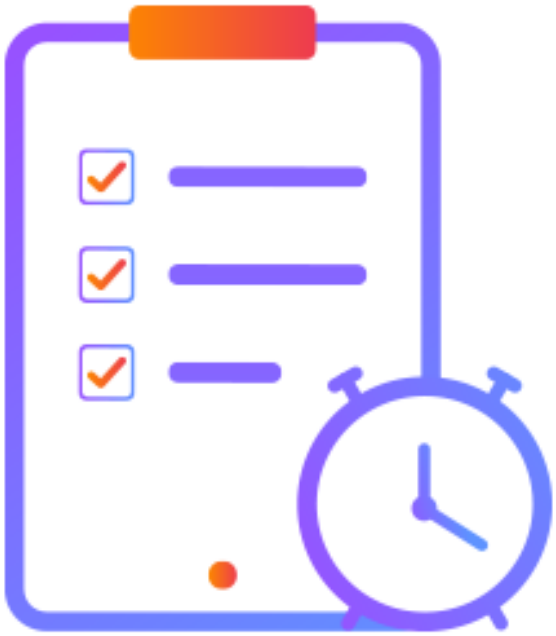


SNAP 2022 : Mock Test 3

Mock Test Questions & Solutions

Mock Test Solutions in English

Questions

1. **Direction:** The given sentences have been divided into four parts that have been marked A, B, C, and D. Choose the option that contains the part with an error as your answer.

   A grant from the US Public Health Service, a collaboration with local TV engineers, a set of specialised cameras, A/ microwave towers and a lot of coaxial cable B/ allowed Bird to transform the tiny airport clinic into a 'wired clinic'. C/ No error. D

   A. a) B. b)

   C. c) D. d)

2. **Direction:** The given sentences have been divided into four parts that have been marked A, B, C, and D. Choose the option that contains the part with an error as your answer.

   It remains to be seen how could a doctor A/ or patient know whether the video quality B/was good enough to simulate C/ the face-to-face presence of a direct physical examination. D

   A. a) B. b)

   C. c) D. d)

3. **Direction:** The given sentences have been divided into four parts that have been marked A, B, C, and D. Choose the option that contains the part with an error as your answer.

   Scientists study many natural phenomenon a)/ and analyse all the possible causes and outcomes b)/ of these occurrences, but it is hard c)/ to say that they understand everything. d)

   A. a) B. b)

   C. c) D. d)

4. **Direction:** Fill in the blanks with the most appropriate word from the given options.

   He is scoring centuries in almost every innings; he is going through a _____.

   A. dark patch B. green room

   C. blind spot D. purple patch

5. **Direction:** Fill in the blanks with the most appropriate word from the given options.

Everybody in India seems to know more about cricket than the players themselves. We are _____.

A. crystal clear
B. wet blankets
C. couch potatoes
D. armchair critics

6. **Direction:** Fill in the blanks with the most appropriate word from the given options.

He will go ____ my car.

A. in
B. on
C. by
D. through

7. **Direction:** Choose the option with the correct spelling.

A. Heirarchical
B. Narcisistic
C. Possesion
D. Promontory

8. **Direction:** Fill in the blank with the option that completes the sentence correctly.

I can't understand what he is talking about. It is _____ to me.

A. all French
B. all Japanese
C. all Sanskrit
D. all Greek

9. **Direction:** Choose the option that corrects the underlined part of the sentence in the best way.

Delighted at the exceptional performance of all the employees, it was decided by the chairman that everybody will be promoted.

A. It was decided that everybody will be promoted by the chairman.
B. It was decided by the chairman that everybody will be promoted.
C. Everyone was promoted by the chairman.
D. The chairman decided to promote everyone.

10. What does the phrase ‘set the ball rolling’ mean?

A. Keeping going on one path
B. Make a start
C. Create a deadline
D. To roll the ball

11. Which of the following is the closest in meaning to the word ‘brobdingnagian’?

A. Small
B. Large
C. Messy
D. Chaotic

12. **Direction:** The given sentences have been divided into four parts that have been marked A, B, C, and D. Choose the option that contains the part with an error as your answer.

In 1989, India and China signed an agreement a)/ to co-operate with each other b)/ in the fight against terrorism c)/ but that agreement is not recognised by any European leader of that period. d)/ No error e)

A. a)
B. b)
C. c)
D. d)

13. **Direction:** Identify the option that changes the voice of the given sentences correctly.

The mother read the story to the kid.

A. The story was being read to the kid by the mother.
B. The story has read to the kid by the mother.
C. The story was read to the kid by the mother.
D. The story is read to the kid by the mother.

14. As which part of speech is the word ‘mirror’ used in the excerpt below?

I was trying to love matter.

I taped a sign over the mirror:

You cannot hate matter and love form.

A. Adverb
B. Adjective
C. Noun
D. Verb

15. As which part of speech is the word ‘louder’ used in the excerpt below?

You’re stepping on your father, she repeated,

louder this time, which began to be strange to me,

since she was dead herself; even the doctor had admitted it.

A. Adverb
B. Adjective
C. Noun
D. Verb

16. Which day of the week was 31 January 2007?

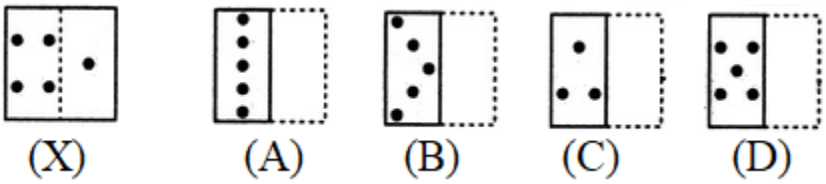
A. Monday
B. Tuesday
C. Wednesday
D. None of the above

17. Six friends, A, B, C, D, E and F sit around a circular table to discuss their studies, not necessarily in the same order. Everyone faces towards the centre. F sits second to the left of E. B sits to the immediate right

of A. D sits second to the right of C. E sits to the immediate left of D. Which of the following pairs of students are the immediate neighbours of D?

A. E and F
B. A and B
C. E and A
D. E and C

18. In the given question, a question figure (X) and four answer figures, viz. (A), (B), (C), and (D) are given. The question figure(X) is folded along the dotted line and another figure is obtained as the answer figures. Find out the answer figure obtained from folding the question figure.



A. C
B. A
C. B
D. D

19. Select the letter-cluster that follows the same pattern and hence it can replace the question mark (?) in the following series.

CHK, EFM, GDO, IBQ, ?

A. KZR
B. KZS
C. KAR
D. KAS

20. Select the number that follows the same pattern and hence it can replace the question mark (?) in the following series.

28, 30, 33, 38, 45, 56, ?

A. 65
B. 69
C. 75
D. 79

21. **Direction:** A statement is followed by 2 conclusions. Read the conclusions, and identify the ones that can be concluded from the statement. Mark your answers according to the given code.

Statement:

The incessant fuel price hike has hit the middle class families hard.

Conclusions:

I. The middle class families should do something to address the crisis.

II. People from middle class families should stop using petrol and diesel altogether.

A. Only I follows.
B. Only II follows.
C. Both I and II follow.
D. None follows.

22. **Direction:** Given below is a statement followed by two assumptions. Consider the statement to be true under all circumstances, and pick out the most appropriate answer option.

Statement:

India's new education policy is a wide-ranging solution to all of India's education sector problems.

Assumption:

I. The new education policy is good enough in some cases.

II. The new education policy has seen its stock rise in recent times.

A. Only I follows.
B. Only II follows.
C. Both I and II follows.
D. None follows.

23. **Direction:** In the following question, a statement is followed by two courses of action numbered I and II. You have to assume everything in the statement to be true, and on the basis of the information given in the statement, decide which of the suggested courses of action logically follow(s) for pursuing, and then select the correct option.

Mark Answer

Kate lives on the first floor of a building. She is not able to concentrate on her work because of the noise coming from the second floor of her building, where a 5-year-old kid plays all day.

Courses of action:

I. Kate should talk to the parents of the kid and ask them to resolve the problem.

II. Kate should lock the kid in a room till the time he doesn't apologise for the excess noise.

A. If only I follows
B. If only II follows
C. If neither I nor II follows
D. If both I and II follow

24. **Direction:** A statement followed by two arguments is given below. Consider the statement to be true under all circumstances, and pick out the most appropriate answer option.

Statement: Should roads be cordoned off to make commuting convenient for politicians?

Arguments:

I. Yes, since politicians are important to the nation and so is their time. Plus, it avoids any potential risk to their lives.

II. No, politicians are meant to serve people, and thus the convenience of people shouldn't be compromised.

A. Only argument I is strong.
B. Only argument II is strong.
C. Either I or II is strong.
D. Neither I nor II is strong.

25. The following question consists of two words that are related in a certain manner. They are followed by four pairs of related words. Select the pair that has the same relationship as the pair in the question.

Preposterous : Rational :: _____: _____

A. Meandering : Succinct
B. Chafe : Grate
C. Credit : Impute
D. Pedigree : Genealogy

26. At what time between 5 o'clock and 6 o'clock will the minute and hour hands of a clock be together?

A. 25 minutes past 5
B. $25\frac{3}{11}$ minutes past 5
C. 27 minutes past 5
D. $27\frac{3}{11}$ minutes past 5

27. Pointing to the photograph of a girl named Nitisha, Ranjit said, 'Her daughter's father's wife's mother is my wife's daughter's mother's mother-in-law.' How is Nitisha related to Ranjit?

A. Sister
B. Mother
C. Aunt
D. Sister-in-law

28. If two days before yesterday was Monday, then what day of the week will be the fourth day from the day after tomorrow?

A. Saturday
B. Sunday
C. Tuesday
D. Wednesday

29. Seven friends (A, B, C, D, M, N, and O) are seated in a row facing north. B, who is seated to the immediate right of M, is the only one between A and M. M is seated at one of the corners. D is the only

one between C and O. N is not the neighbour of A, but N is the neighbour of O. Who amongst the following is seated at the centre?

A. B
B. D
C. O
D. C

30. Select the letter-cluster that follows the same pattern and can replace the question mark (?) in the following series.

XVR, SRO, NNL, IJI, ?

A. DEE
B. DFF
C. CCE
D. CCF

31. **Direction:** In the question below, three statements followed by 2 conclusions are given. You have to assume the given statements to be true even if they seem to be at variance with commonly-known facts. Read all the conclusions and then decide which of the given conclusions logically follow from the given statements, disregarding commonly-known facts.

Statements:

All potatoes are onions.

Some tomatoes are potatoes.

Some tomatoes are not ginger.

Conclusions:

I. No ginger is a potato.

II. Some onions are tomatoes.

A. Only I follows.
B. Only II follows.
C. Neither I nor II follows.
D. Both I and II follow.

32. **Directions:** In the following question, two statements numbered I and II are given. There may be a cause-and-effect relationship between the two statements. These two statements may be the effect of the same cause or independent causes. These statements may be independent causes without having any relationship. Based on the relationship between the two statements, select the correct alternative.

Statement I: The people of Nainital are very fit.

Statement II: Nainital is a popular tourist destination.

A. Statement I is the cause and statement II is its effect.
B. Statement II is the cause and statement I is its effect.
C. Both the statements I and II are independent causes.
D. Both the statements I and II are independent effects.

33. **Directions:** In the following question, two statements numbered I and II are given. There may be a cause-and-effect relationship between the two statements. These two statements may be the effect of the same cause or independent causes. These statements may be independent causes without having any relationship. Based on the relationship between the two statements, select the correct alternative.

Statement I: Yesterday, all trains from New Delhi were running late.

Statement II: A thick fog enveloped New Delhi yesterday morning leading to poor visibility conditions.

A. Statement I is the cause and statement II is its effect.
B. Statement II is the cause and statement I is its effect.
C. Both the statements I and II are independent causes.
D. Both the statements I and II are independent effects.

34. The following question consists of two words that are related in a certain manner. They are followed by four pairs of related words. Select the pair that has the same relationship as the pair in the question.

Esteem : Disparage :: _____: _____

A. Scribbles: Jottings
B. Fictitious : Spurious
C. Ventilate : Verbalise
D. Certain : Moot

35. **Direction:** A few statements are given, and these are followed by a few conclusions. Take the given statements to be true even if they seem to be at variance with commonly known facts. Read the conclusions and then decide which of the given conclusions logically follows from the given statements.

Statements:

Some courts are magnanimous.

Some magnanimous folks are misers.

All misers are tardy.

All tardy folks are hippopotamuses.

Conclusions:

I. All courts being miserly is a possibility.

II. All tardy folks are not misers.

III. No tardy person is a hippopotamus.

A. Only Conclusion I follows.
B. Only Conclusion II follows.
C. Only Conclusion I and Conclusion III follow.
D. All conclusions follow.

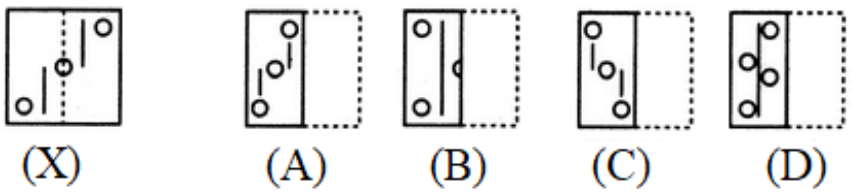
36. If 25 December 2014 was a Thursday, then what day of the week was 31 December 2016?

A. Sunday
B. Monday
C. Friday
D. Saturday

37. If ADOPT is coded as 27641 and BEACH is coded as 83152, then how will IMAGE be coded?

A. 57147
B. 57149
C. 67147
D. 67149

38. In the given question, a question figure (X) and four answer figures, viz. (A), (B), (C), and (D) are given. The question figure(X) is folded along the dotted line and another figure is obtained as the answer figures. Find out the answer figure obtained from folding the question figure.



A. A
B. B
C. D
D. C

39. M is the daughter of N and sister of P. P is the nephew of A, who is the son of O. The father of P is R. R has only one brother who is A, who has no sister. How is N related to O?

A. Wife
B. Daughter
C. Daughter-in-law
D. Niece

40. Select the number that can complete the following series by replacing the question mark (?).

140, 144, 153, 169, 194, 230, ?

A. 259 B. 269

C. 279 D. 289

41. Meena travels at a speed of 30 km/h and plans to reach the destination in 5 hours. After travelling for $\frac{2}{5}$th of the distance, she realises that she must reach the destination 60 minutes prior to the scheduled time. At what speed (in km/h) does she need to travel the remaining distance to reach at the required time?

A. 36 km/h B. 40 km/h

C. 45 km/h D. 48 km/h

42. The price of 3 bedsheets and 2 curtains is Rs. 800. If the price of each bedsheet increases by 16.66% and that of each curtain increases by 20%, then the price of 2 bedsheets and 5 curtains will be Rs. 1200. Find the sum of the new prices of a bedsheet and a curtain.

A. Rs. 345 B. Rs. 350

C. Rs. 360 D. Rs. 366

43. A group of interns, each having the same efficiency, was hired for a marketing project. From the 2nd day onwards, one intern was withdrawn each day. The project got completed when the last intern was withdrawn. If no intern had been withdrawn at any stage, the group would have finished the project in 55% of the time. How many interns were there in the group?

A. 3 B. 5

C. 10 D. 15

44. The lengths of the perpendicular sides of a right-angled triangle is 24 cm and 32 cm. Find the area (in sq cm) of the portion outside the right-angled triangle but inside its circumcircle.

A. $400\pi - 384$ B. $900\pi - 584$

C. $484\pi - 384$ D. $625\pi - 584$

45. If a quadratic equation having real and equal roots is given as $4x^2 + Px - 3x + 36 = 0$, then find the sum of the maximum and the minimum possible value of P.

A. 3 B. 4

C. 5 D. 6

46. In a village of 20,000 people, an election is conducted to choose the president of the village amongst Pravin and Navin. 15% of the villagers are children, and they cannot cast votes. On the day of the election, 10% of the eligible villagers did not cast their votes, and all the votes cast are valid. If Pravin wins the election by 2300 votes, then find the percentage of villagers who cast their vote for Navin.

A. 32.5%
B. 30%
C. 33.33%
D. 31.75%

47. If the LCM of two numbers is 2300% more than their HCF, then how many pairs of two such numbers exist?
A. 1
B. 2
C. 3
D. 4

48. Some gift wrapped boxes of equal sizes are kept on the table. There are either 50 pens or 100 pens in each of the boxes. If Keerthi and Spoorthi each pick two boxes randomly, find the probability that Keerthi has more pens than Spoorthi.
A. $\frac{1}{2}$
B. $\frac{1}{3}$
C. $\frac{1}{4}$
D. $\frac{1}{5}$

49. If f(x) = 3x – 5, g(x) = 4x + 2, and g(f(g(f(f(x))))) = 342, find the value of x.
A. 2
B. 3
C. 4
D. 5

50. What is the least possible number that must be subtracted from 15, 21, and 31 so that the resulting numbers are in mean proportion?
A. 6
B. 7
C. 8
D. 9

51. **Direction:** Study the following table and answer the questions that follow.

The table given below shows the number of aspirants who applied for the PQR 2022 Exam from five different states, the number of aspirants who appeared in the exam, the ratio of the number of boys to the number of girls who appeared in the exam.

Some data is missing from the table.

State	Number of applicants	Aspirants appeared	Ratio of boys to girls
Haryana	48000	32000	3 : 5
Punjab	45000	-	4 : 3
Maharashtra	55000	-	5 : 4
Uttarakhand	32000	12000	-
Himachal	24000	-	2 : 3

From Punjab, Maharashtra, and Haryana together, a total of 30,000 boys appeared. If the number of boys who appeared from Punjab is equal to the number of girls who appeared from Maharashtra, approximately what percentage of aspirants appeared from Maharashtra?

A. 40%
B. 33%
C. 27%
D. 24%

52. Find the number that can replace '?' in the following series:
21, 25, 43, 91, 191, 371, ?

A. 619
B. 665
C. 679
D. 681

53. The ratio of the height and the radius of a cylinder is 4 : 3. If the volume of the cylinder is $4851\ cm^3$, find the area of the circle whose diameter is equal to the height of the cylinder. (Use $\pi = \frac{22}{7}$)

A. $346.5\ cm^2$
B. $86.625\ cm^2$
C. $\frac{792}{7}\ cm^2$
D. $154\ cm^2$

54. Deepak bought an article for Rs. (x + 180). He marked up the price of the article by 20% and sold it after giving a discount of 10%, thereby earning a profit of Rs. 104. Had he bought the article for Rs. (2x + 180) and marked up its price by 25%, what percentage discount should he offer to earn a profit of Rs. 242?

A. 10%
B. 12%
C. 14%
D. 15%

55. Find the number of ways in which all the letters of the word 'ARITHMETIC' can be arranged such that they always end with 'I'.

A. 181440
B. 20160
D. 120160

C. $\frac{10!}{2!}$

56. An alloy of copper and zinc contains 400 g of copper and ‘x’ g of zinc. If the alloy had 25 g more zinc, then the amount of zinc would have been 20% of the alloy. Find the difference between the initial amounts of copper and zinc.

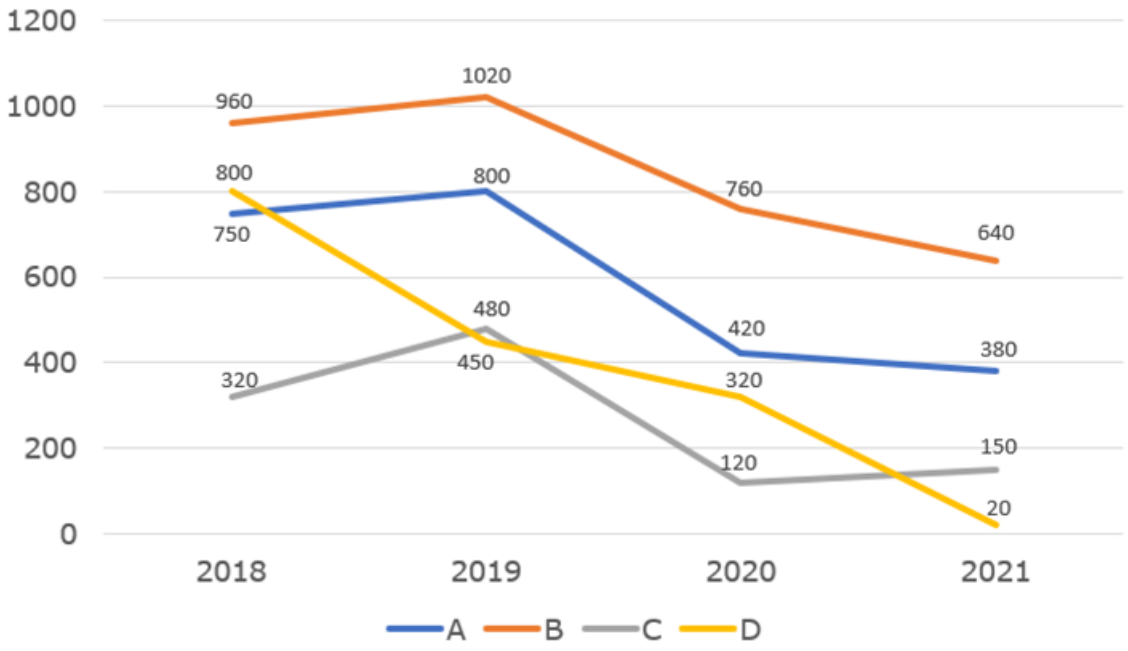
A. 400 g
B. 350 g
C. 375 g
D. 325 g

57. In a society, there are four buildings, viz. A, B, C, and D. 35 families live in buildings A and B each, while ‘x’ families live in buildings C and D each. The average monthly expenditure of all the families of building A is Rs. 12000. If the families of building C are also included, then the average expenditure becomes Rs. 14000 for the families of buildings A and C together. Find the total number of families residing in the society.

A. 140
B. 160
C. 150
D. Cannot be determined

58. **Direction:** Study the following information carefully, and answer the question that follows.

The line graph given below depicts the total runs scored by four different batsmen, viz. A, B, C, and D in the years 2018, 2019, 2020, and 2021



In each of the given years, A and B each scored 40% of the runs in ODI matches and the remaining in T20 matches. C and D each scored 20% runs in T20 matches and the remaining in ODI matches. For all the given years, find the difference between the sum of the runs scored by A in T20 matches and B in ODI matches and the sum of the runs scored by C in ODI matches and D in T20 matches.

A. 1628
B. 1442
C. 1588
D. 1482

59. If log(2x – 4) – log(x – 2) + log(x^2) = log(162), find the value of $log_x(x + 18)$.

A. $\frac{3}{2}$
B. 2
C. $\frac{5}{2}$
D. 3

60. Chetan borrows Rs. x at 15% per annum simple interest. He lent one-third of the amount to Abhishek at 10% compound interest per annum and the remaining amount to Pulkit at 25% compound interest per annum. At the end of two years, if the total interest amount received by him is Rs. 435 more than the total interest paid by him, find the value of x.

A. 2500
B. 3000
C. 3500
D. 4000

Solutions

1. D

Sol. The sentence lists out the many things that allowed Bird to transform his clinic. There is no error in the sentence.

2. A

Sol. The given sentence is not a question. So, the correct structure should be 'It remains to be seen how could a doctor could…'

3. A

Sol. The word 'phenomenon' is singular. Its plural is 'phenomena'. Notice the use of 'many', which means it will have to be plural.

4. D

Sol. The correct idiom is 'purple patch', which means a run of success or good luck. A green room is a room in a theatre or studio where the performers relax when not performing. A blind spot is an area where a person lacks understanding or knowledge.

5. D

Sol. The most suitable idiom is D. Armchair critics are people who offer advice or criticism without having any practical experience or knowledge. A wet blanket is one who plays the spoilsport. A couch potato is a lazy person. A Good Samaritan is a kind person.

6. A

Sol. We cannot use 'on' as a preposition for car. As it is a specific car that is being discussed, we cannot use 'by'. 'By' is used when we refer to a means of transport, such as by car, by bus, etc. As it is a specific (my) car, it will be used. Option D does not fit at all.

7. D

Sol. Option D is the correct answer as it is the correct spelling. The correct spellings of other words are:

- Hierarchical

- Narcissistic

- Possession

8. D

Sol. The correct idiom here is ‘all Greek’. It means one cannot understand anything about what is being talked about.

9. D

Sol. The first part of the sentence before the comma is a modifier. It should modify a person. In other words, there should be an answer to the question: who was delighted (if we pose this question WRT the sentence)? This helps us eliminate options A, B, and C.

10. B

Sol. Option B is the correct answer as ‘set the ball rolling’ means ‘to make a start’.

11. B

Sol. Option B is the correct answer because ‘brobdingnagian’ is used to refer to something of a huge or enormous size.

12. D

Sol. This part of the sentence should have been in the simple past tense as we are referring to lack of recognition in the past by the leaders of that time.

13. C

Sol. The first rule of ‘voice’ is that the tense remains the same. The tense here is simple past.
‘Read’ is in the active voice.
‘Was read’ is in the passive voice.

14. C

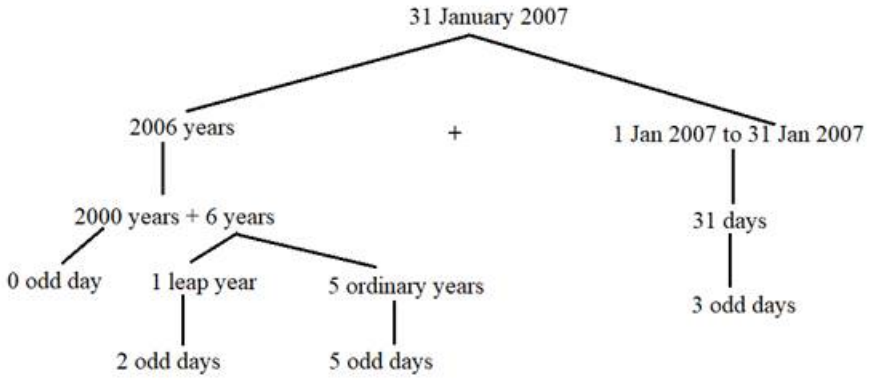
Sol. ‘Mirror’, here, is used as a noun.

15. A

Sol. ‘Louder’ is used as an adverb here as it elaborates on how she ‘repeated’.

16. C

Sol. For 31 January 2007:



Thus, total number of odd days = 0 + 2 + 5 + 3 = 10 odd days

= 1 week + 3 odd days = 3 odd days

Code for weeks

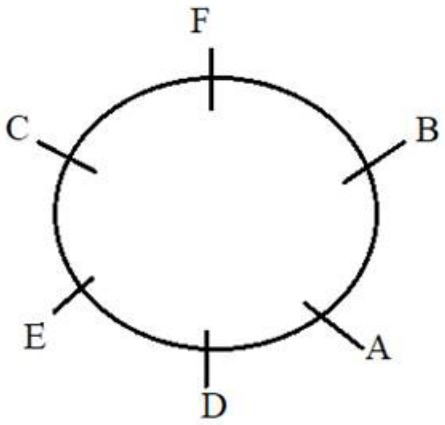
No. of odd days	Day
0	Sunday
1	Monday
2	Tuesday
3	Wednesday
4	Thursday
5	Friday
6	Saturday

So, 31 January 2007 was Wednesday.

Hence, option C is the correct Answer

17. C

Sol. According to the given information, the positions of A, B, C, D, E, and F are as follows:



Clearly E and A are immediate neighbours of D.

Hence, option C is the correct Answer

18. D

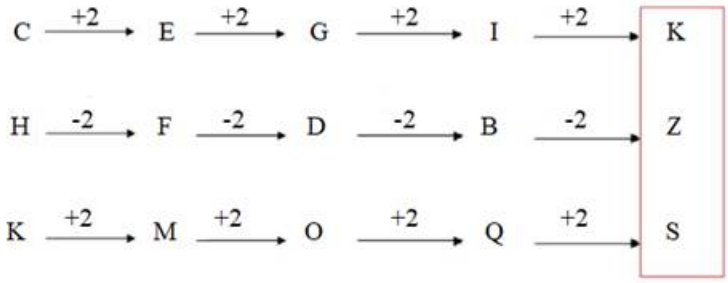
Sol.

Since the figure(X) is folded along the dotted line, as shown in the options, the figure obtained would be Figure (D).

Hence, option D is the correct Answer

19. B

Sol. The pattern of the series is as follows:



Hence, option B is the correct Answer

20. B

Sol. The pattern of the series is as follows:

28 + 2 = 30

30 + 3 = 33

33 + 5 = 38

38 + 7 = 45

45 + 11 = 56

56 + 13 = 69

Here, successive prime numbers starting from 2 are added in a number to obtain the next number. The required number will be 69.

Hence, option B is the correct Answer

21. D

Sol. Here, none of the conclusions follow. The middle class families can do nothing to address the crisis because the prices of petrol and diesel are not in their hands. All they can do is limit their usage of these fossil fuels, nothing else. And even then, they can't stop using these fuels completely. Hence, option D is the right answer here.

22. D

Sol. Here, none of the assumptions follow. Assumption I is incorrect because from the context, we can't say that the new education policy is good only for a few cases. And if that is the case, then what are those good cases? Since there is no clarity on the overall context, this assumption is rejected.

Assumption II is rejected because again, we can't assume it in the given context. The new education policy being a wide-ranging solution can't be correlated to its stock rising. Hence, option D is the right answer.

23. A

Sol.

I follows because talking to the parents is a good idea. Telling a stranger to resolve the problem might not help. II does not follow because locking up the kid is violent and extreme.

Hence, the correct answer is option A.

24. D

Sol. Argument I suggests that a politician's time is more important than a commoner's, and travelling in regular traffic would pose a risk to their lives. This is without any basis and, hence, is not a strong argument. Argument II is vague as it lacks concrete information. So, both the arguments are weak.

Hence, the correct answer is option D.

25. A

Sol.

In the pair of words given in the question, the word 'preposterous' means 'contrary to reason or common sense; utterly absurd or ridiculous', and the word 'rational' means 'based on or in accordance with reason or logic'. So, they are antonyms.

A. The word 'meandering' means 'proceeding in a convoluted or undirected fashion', and the word 'succinct' means '(especially of something written or spoken) briefly and clearly expressed'. They are antonyms.

B. The word 'chafe' means '(of an object) rub abrasively against another', and the word 'grate' means 'reduce (food) to small shreds by rubbing it on a grater'. They are synonyms.

C. The word 'credit' means 'publicly acknowledge a contributor's role in the production of (something published or broadcast)', and the word 'impute' means 'attribute'. They are synonyms.

D. The word 'pedigree' means 'the recorded ancestry or lineage of a person or family', and the word 'genealogy' means 'a line of descent traced continuously from an ancestor'. They are synonyms.

Hence, the correct answer is option A.

26. D

Sol. We know that the angle between clock hands: $\theta = \left|30H - \frac{11}{2}M\right|$, where H

Here, θ = 0^0 and H = 5,

So, $0^0 = 30 \times 5 - \frac{11}{2}M$

$\frac{11}{2}M = 150^0$

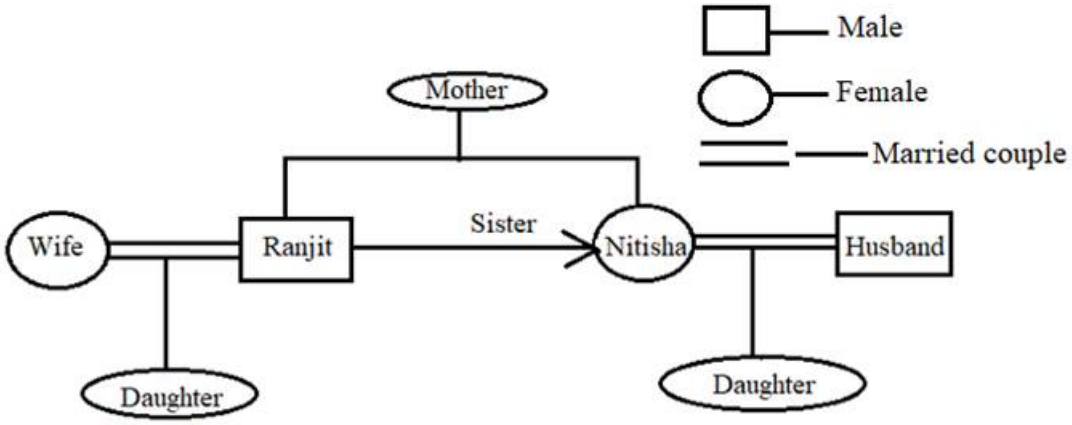
$M = 150^0 \times \frac{2}{11} = \frac{300}{11} = 27\frac{3}{11}$

So, required time = $27\frac{3}{11}$ minutes past 5

Hence, option D is the correct Answer

27. A

Sol. With the information given, the family tree can be created:

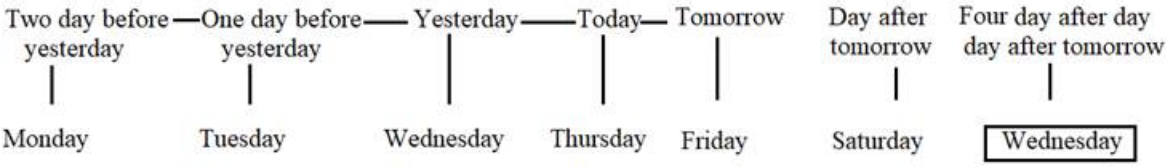


Clearly, Nitisha is the sister of Ranjit.

Hence, option A is the correct Answer

28. D

Sol.

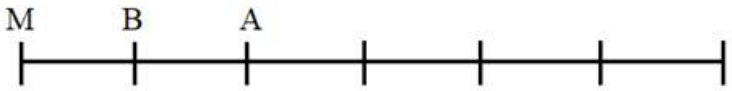


As today is Thursday, the fourth day from the day after tomorrow will be Wednesday.

Hence, option D is the correct Answer

29. D

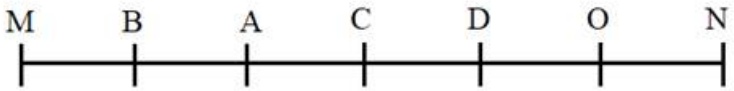
Sol. B, who is seated to the immediate right of M, is the only one between A and M. M is seated at one of the corners.



D is the only one between C and O.

N is not the neighbour of A, but N is the neighbour of O.

So, the final arrangement will be as follows:

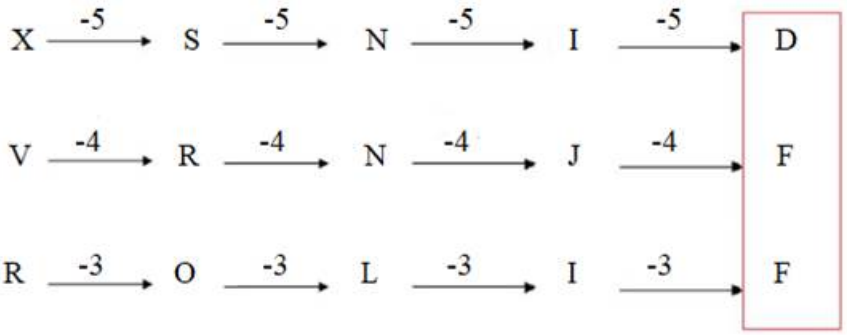


Clearly, C is seated in the centre.

Hence, option D is the correct Answer

30. B

Sol. The pattern of the series is as follows:

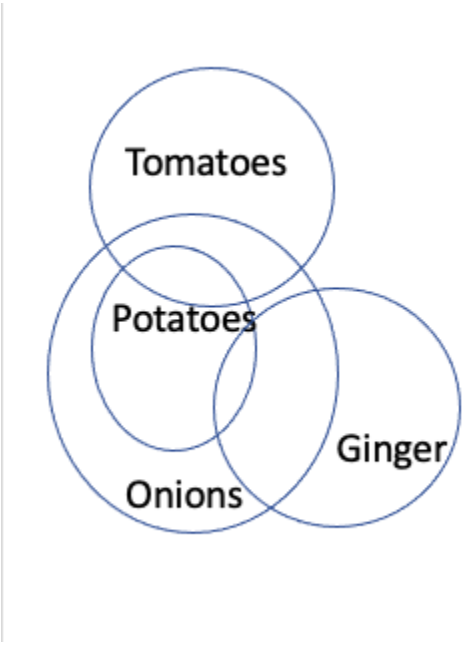


Hence, option B is the correct Answer

31. B

Sol. I cannot be concluded because even if some tomatoes are not ginger and some tomatoes are potatoes, we cannot infer that no ginger is a potato.

II can be concluded because some onions are definitely tomatoes; the tomatoes that are potatoes are automatically onions because all potatoes are onions.



Hence, the correct answer is option B.

32. D

Sol. Both statements are about Nainital, but there is no cause-and-effect relationship between the two as one

is about the general fitness of the people of Nainital, and the second is about the beauty of the place.

Thus, D is the correct answer; both are independent effects.

Hence, the correct answer is option D.

33. B

Sol. The first statement is that trains from New Delhi were running late. The second statement is that there was a thick fog affecting visibility in New Delhi. Both refer to yesterday. So, we can deduce that the fog and poor visibility caused the delays in trains from New Delhi.

Hence, the correct answer is option B.

34. D

Sol.

In the pair of words given in the question, the word ‘esteem’ means ‘respect and admiration’, and the word ‘disparage’ means ‘to criticise someone or something in a way that shows a lack of respect’. So, they are antonyms.

A. The word ‘scribble’ means ‘a piece of writing or a picture produced carelessly or hurriedly’, and the word ‘’jottings’ means ‘quickly written short notes’. They are synonyms.

B. The word ‘fictitious’ means ‘not real or true; imaginary or fabricated’, and the word ‘spurious’ means ‘not being what it purports to be; false or fake’. They are synonyms.

C. The word ‘ventilate’ means ‘discuss or examine (an opinion, issue, or complaint) in public’, and the word ‘verbalise’ means ‘express (ideas or feelings) in words, especially by speaking out loud’. They are synonyms.

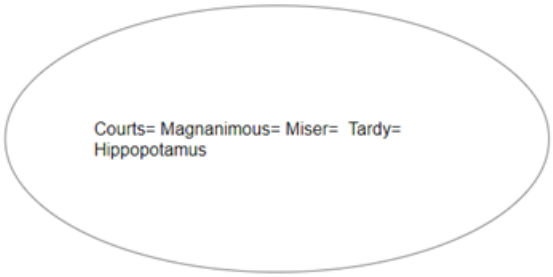
D. The word ‘certain’ means ‘able to be firmly relied on to happen or be the case’, and the word ‘moot’ means ‘subject to debate, dispute, or uncertainty’. They are antonyms.

E. The word ‘conspicuous’ means ‘easily seen or noticed; readily visible or observable’. Apparent is a synonym.

Hence, the correct answer is option D.

35. A

Sol. Conclusion II and Conclusion III can clearly not be conclusions because these two conclusions are negatives that cannot be drawn from positive premises. Conclusion I is a possibility according to the diagram given below.



36. D

Sol. 25 December 2014: Thursday

25 December 2015: 1 odd day

25 December 2016: 2 odd days (leap year)

31 December 2016: 6 odd days

Total number of odd days = 1 + 2 + 6 = 9 days = 1 week and 2 days

So, 25 December 2016 was Thursday + 2 days, i.e Saturday.

Hence, option D is the correct Answer

37. B

Sol. Here, the coded pattern is as follows:

A = 1, D = 4, O = 15 = 1 + 5 = 6, P = 16 = 1 + 6 = 7, T = 20 = 2 + 0 = 2;

Now reverse the order of codes for all digits and we get: 27641.

Similarly, B = 2, E = 5, A = 1, C = 3, H = 8; now reverse all the digits we get: 83152.

Similarly, I = 9, M = 13 = 1 + 3 = 4, A = 1, G = 7, E = 5; now reverse all the digits we get, i.e., 57149, as the desired code.

Hence, option B is the correct Answer

38. B

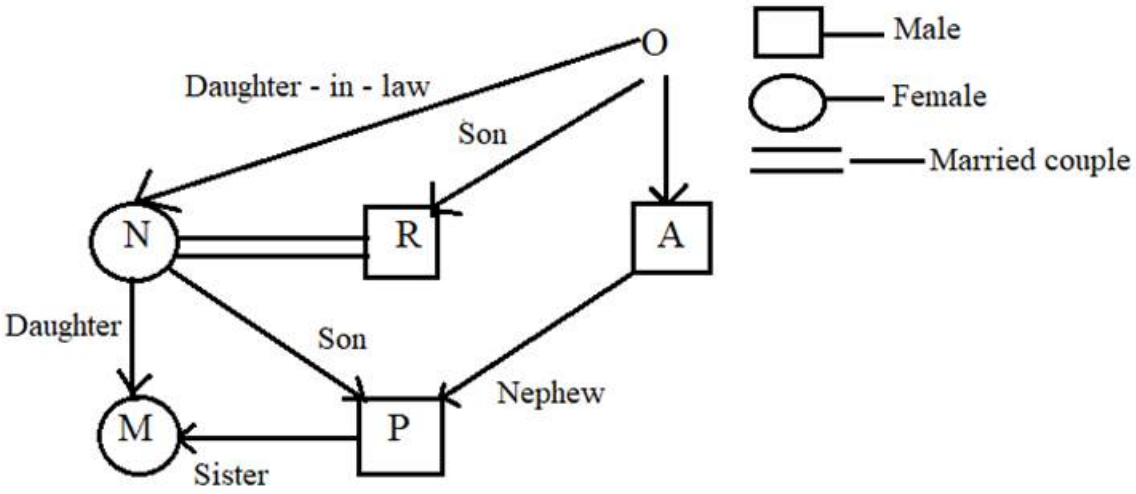
Sol.

Since the figure(X) is folded along the dotted line, as shown in the options, the figure obtained would be Figure B.

Hence, option B is the correct Answer

39. C

Sol.



Clearly, N is the daughter-in-law of O.

Hence, option C is the correct Answer

40. C

Sol. The pattern of the series is as follows:

$140 + 2^2 = 144$

$144 + 3^2 = 153$

$153 + 4^2 = 169$

$169 + 5^2 = 194$

$194 + 6^2 = 230$

$230 + 7^2 = 279$

Hence, option C is the correct Answer

41. C

Sol. Total distance = $30 \times 5 = 150$ km

Time taken to cover $\frac{2}{5}th$ of the distance = $\frac{\frac{2}{5} \times 150}{30} = 2\ hours$

So, the remaining distance must be covered in 2 hours.

New speed = $\frac{90}{2} = 45$ km/h

Hence, option C is the correct answer.

42. D

Sol.

Let the price of a bedsheet and a curtain be Rs. B and Rs. C, respectively.

Given: $3B + 2C = 800$ …(1)

After increase in the price:

$2B(1 + \frac{1}{6}) + 5C(1 + \frac{1}{5}) = 1200$

$\Rightarrow 7B + 18C = 3600$ …(2)

Substituting the value of 2C from equation (1) in (2), we get:

$7B + 9(800 - 3B) = 3600$

$\Rightarrow B = 180$, then $C = 130$

Required answer = $180^{(1 + \frac{1}{6})}$ + $130(1 + \frac{1}{5})$ = 210 + 156 = Rs. 366

Hence, option D is the correct answer.

43. C

Sol. Let's the number of interns be X = Number of days

$X + X - 1 + X - 2 + ... + 2 + 1 = X(X \times \frac{55}{100})$

$\frac{X(X+1)}{2} = X(X \times \frac{55}{100})$

$(X + 1) = X \times \frac{55}{50}$

$1 = X \times \frac{5}{50}$

$X = 10$

Hence, option C is the correct answer.

44. A

Sol. Using Pythagoras theorem:

Length of hypotenuse $= \sqrt{24^2 + 32^2} = \sqrt{1600} = 40$ cm = Diameter of the circumcircle

Required area $= \pi \times (\frac{40}{2})^2 - \frac{1}{2} \times 24 \times 32 = 400\pi - 384$ square units

Hence, option A is the correct answer.

45. D

Sol. Given: $4x^2 + Px - 3x + 36 = 0$

$\Rightarrow 4x^2 + (P - 3)x + 36 = 0$

Now, if the above equation has real and equal roots, then:

$(P - 3)^2 - 4 \times 4 \times 36 = 0$

$\Rightarrow (P - 3)^2 = 24^2$

$\Rightarrow P - 3 = \pm 24$

So, P = 27 or P = –21

Required sum = 27 + (–21) = 6

Hence, option D is the correct answer.

46. A

Sol. Number of voters in the village = (100% – 15%) = 85%, i.e., $85\% \times 20000 = 17000$

Number of votes casted = $(100\% - 10\%) \times 17000 = 90\% \times 17000 = 15300$

Let 'N' be the number of votes secured by Navin.

Then, $N + N + 2300 = 15300$ or $N = 6500$

Required percentage $= \frac{6500}{20000} \times 100 = 32.5\%$

Hence, option A is the correct answer.

47. B

Sol.

Let the HCF of two numbers be 'H'. Thus, the LCM will be 24H.

Let the two numbers be Hx and Hy, where x and y are co-prime to each other.

Thus, LCM = Hxy = 24H

$\Rightarrow$ xy = 24

Any number can now be written as a product of two co-prime numbers in 2^{n-1} ways, where n is the number of prime factors of the number.

Prime factorisation of 24 = $2^3 \times 3$

Thus, the number of ways in which x and y can be written as a product of two co-prime factors is 2^{2-1} = 2 ways.

Hence, option B is the correct answer.

48. B

Sol. The number of pens with each of them has three possibilities: 100, 150, or 200. Thus, we have the following cases:

No. of pens with Keerthi (K)	No. of pens with Spoorthi (S)	
100	100	K = S
100	150	K < S
100	200	K < S
150	100	K > S
150	150	K = S
150	200	K < S
200	100	K > S
200	150	K > S
200	200	K = S

Required probability $= \frac{3}{9} = \frac{1}{3}$

Hence, option B is the correct answer.

49. B

Sol. Given: f(x) = 3x – 5 and g(x) = 4x + 2

So, f(f(x)) = 3(3x – 5) – 5 = 9x – 20

$\Rightarrow$ g(f(f(x))) = 4(9x – 20) + 2 = 36x – 78

$\Rightarrow$ f(g(f(f(x)))) = 3(36x – 78) – 5 = 108x – 239

$\Rightarrow$ g(f(g(f(f(x))))) = 4(108x – 239) + 2 = 432x - 954

Given: g(f(g(f(f(x))))) = 342

So, 342 = 432x - 954

Or x = 3

Hence, option B is the correct answer.

50. A

Sol. Let 'x' be the least number subtracted.

$\frac{(15-x)}{(21-x)} = \frac{(21-x)}{(31-x)}$

$\Rightarrow (15 - x)(31 - x) = (21 - x)^2$

$\Rightarrow 15 \times 31 - 15x - 31x + x^2 = 21 \times 21 + x^2 - 42x$

$\Rightarrow 465 - 46x = 441 - 42x$

$\Rightarrow 24 = 4x$

$\Rightarrow x = 6$

Hence, option A is the correct answer.

51. B

Sol. Let the number of boys and girls who appeared from Punjab be 4x and 3x, respectively.

Let the number of boys and girls who appeared from Maharashtra be 5y and 4y, respectively.

According to the question:

4x = 4y

Or x = y

According to the question:

$4x + 5y + \frac{3}{8} \times 32000 = 30000$

$\Rightarrow 4x + 5x + 12000 = 30000$

$\Rightarrow 9x = 18000$

$\Rightarrow x = 2000 = y$

Number of aspirants who appeared from Maharashtra = 5y + 4y = 9y = 18000

Required percentage = $\frac{18000}{55000} \times 100 = 32.72\% \approx 33\%$

Hence, option B is the correct answer.

52. B

Sol. The pattern of the given series is as follows:

$21 + 2^2 \times 1 = 25$

$25 + 3^2 \times 2 = 43$

$43 + 4^2 \times 3 = 91$

$91 + 5^2 \times 4 = 191$

$191 + 6^2 \times 5 = 371$

$371 + 7^2 \times 6 = 665$

Thus, '?' will be replaced by 665.

Hence, option B is the correct answer.

53. D

Sol. Let the height and the radius of the cylinder be 4x cm and 3x cm, respectively.

According to the question:

$\frac{22}{7} \times 3x \times 3x \times 4x = 4851$

$\Rightarrow x^3 = 42.875$

$\Rightarrow$ x = 3.5 cm

Thus, height of the cylinder = 14 cm

Radius of the circle = $\frac{14}{2}$ = 7 cm

Area = $\frac{22}{7} \times 7 \times 7 = 154\ cm^2$

Hence, option D is the correct answer.

54. B

Sol. Original marked up price of the article = 120% of (x + 180) = Rs. 1.2(x + 180)

Selling price = 90% of 1.2(x + 180) = Rs. 1.08(x + 180)

According to the question:

1.08(x + 180) – (x + 180) = 104

$\Rightarrow$ 0.08x + 14.4 = 104

$\Rightarrow$ 0.08x = 89.6

$\Rightarrow$ x = 1120

Thus, original cost price = Rs. (1120 + 180) = Rs. 1300

New cost price = Rs. (2x + 180) = Rs. 2420

New marked price = 125% of 2420 = Rs. 3025

Selling price = 2420 + 242 = Rs. 2662

Required answer = $\frac{3025 - 2662}{3025} \times 100$ = 12%

Hence, option B is the correct answer.

55. A

Sol.

The given word is ARITHMETIC.

Number of letters = 10

It is given that the words should end with an I.

For the remaining nine places, we have eight distinct letters.

Required answer = $\frac{9!}{2!}$ = 181440

Hence, option A is the correct answer.

56. D

Sol. Using the data given in the question, we get the following:

$\frac{400}{x + 25} = \frac{80}{20}$

$\Rightarrow \frac{400}{x + 25} = \frac{4}{1}$

$\Rightarrow$ 400 = 4x + 100

$\Rightarrow$ 4x = 300

$\Rightarrow$ x = 75

Required answer = 400 – 75 = 325 g

Hence, option D is the correct answer.

57. D

Sol. Total expenditure of all the families of building A = 12000 × 35

Total expenditure of all the families of buildings A and C = 14000(35 + x)

Expenditure of all the families of building C = 14000(35 + x) – 12000 × 35 = 70000 + 14000x

From the above equations, we cannot find the value of x. Thus, the total number of families residing in the society cannot be calculated.

Hence, option D is the correct answer.

58. C

Sol. For all the given years:

Runs scored by A in T20 matches = 60% of (750 + 800 + 420 + 380) = 1410

Runs scored by B in ODI matches = 40% of (960 + 1020 + 760 + 640) = 1352

Runs scored by C in ODI matches = 80% of (320 + 480 + 120 + 150) = 856

Runs scored by D in T20 matches = 20% of (800 + 450 + 320 + 20) = 318

Required answer = (1410 + 1352) – (856 + 318) = 1588

Hence, option C is the correct answer.

59. A

Sol. $\log(2x - 4) - \log(x - 2) + \log(x^2) = \log(162)$

$\Rightarrow \log\frac{2x-4}{x-2} + \log(x^2) = \log(162)$

$\Rightarrow \log 2 + \log(x^2) = \log(162)$

$\Rightarrow \log(2x^2) = \log(162)$

$\Rightarrow 2x^2 = 162$

$\Rightarrow$ x = 9 (because logarithm is not defined on negative values)

Thus, $log_9(9 + 18) = log_{3^2}(3^3) = \frac{3}{2}$

Hence, option A is the correct answer.

60. B

Sol. At the end of two years, total interest paid by Chetan = 15% × 2 × x

Total interest received by him = $(\frac{x}{3} \times 1.1 \times 1.1 - \frac{x}{3}) + (\frac{2x}{3} \times 1.25 \times 1.25 - \frac{2x}{3}) = \frac{x}{3} \times 0.21 + \frac{2x}{3} \times 0.5625$

According to the question:

$\frac{x}{3} \times 0.21 + \frac{2x}{3} \times 0.5625 - 0.3x = 435$

$\Rightarrow 0.07x + 0.375x - 0.3x = 435$

$\Rightarrow x = 3000$

Hence, option B is the correct answer.