

## SNAP Sample Questions for Practice

### Quantitative Techniques

1. Ajay works as much in 2 days as B in 3 days and B works as much in 4 days as C in 5 days; in how many days will AJAY, .B and C working together finish the work if Ajay alone can finish it in 11 days?
  - a) 3
  - b) 4
  - c) 5
  - d) 8
2. Shyam travels 600 kms to reach home partly by metro train & rest by motorcycle. He takes 8 hours if he travels 120 kms by metro train & the rest by motorcycle. But he would take 20 min more if he were to travel 200 kms by metro train and the rest by motorcycle. Find speeds of metro train and motorcycle. (in kmph)
  - a) 50 and 70 kmph
  - b) 40 and 80 kmph
  - c) 60 and 80 kmph
  - d) 30 and 60 kmph
3. In what ratio should a 35% milk solution be mixed with a 25% milk solution in order to get a 30% milk solution?
  - a) 1:3
  - b) 1:1
  - c) 3:1
  - d) 3:2
4. Rs.430 is divided among 45 persons consisting of men, women and children. The sum of men's, women's and children's shares are as 12 : 15 : 16 but the individual shares of a man, woman & child are as 6 : 5 : 4. Find share of 1 man, 1 child and 1 woman.
  - a) 12, 10, 8
  - b) 12, 8, 10
  - c) 12, 15, 16
  - d) 6, 5, 4
5. Find the length of the largest diagonal of a cuboid having dimensions of 4 m, 8 m and 15 m.
  - a)  $12\sqrt{750}$  m
  - b)  $\sqrt{222}$  m
  - c)  $\sqrt{333}$  m
  - d)  $\sqrt{111}$  m
6. Aman and Bharat two cyclists ride in opposite directions from two places 108 km apart, and meet in 6 hours. If Aman's speed is twice that of Bharat, find the speed with which B is riding?
  - a) 3 kmph
  - b) 4 kmph
  - c) 6 kmph
  - d) 7 kmph

7. Spinning 6 hours daily P can spin 4 kg cotton balls in 24 days. Spinning 8 hours daily how many days will he take to spin 20 kg cotton balls?

- a) 30 days
- b) 80 days
- c) 90 days
- d) 100 days

8. A train travelling at 72 km/h overtakes a 100 m platform in 15 seconds. In how much time can it overtake a man moving in the opposite direction at 20 m/s?

- a) 5 seconds
- b) 10 seconds
- c) 4 seconds
- d) 7.5 seconds

9. Aman sold a watch at 10% loss. If he had sold for Rs. 100 more, he would have made a profit of 10%. At what price it should be sold to get a profit of 50%?

- a) 500
- b) 800
- c) 750
- d) 1200

10. An electric pump can fill a cistern in 6 hours. Because of a leak in the cistern it was taking 9 hrs to fill the cistern. Find the time in which the leak can drain all the water of the cistern when full.

- a) 18 hours
- b) 21 hours
- c) 24 hours
- d) 27 hours

11. If Akbar can beat Birbal by 20 m in a 100 m race and can beat Chandragupta by 50 m in a 200 m race, by how many metres can Birbal beat Chandragupta in a race of 500 m?

- a) 25 m
- b) 31.25 m
- c) 10 m
- d) 50 m

12. X, Y and Z shared Rs. 14800 such that X received 25% more than Y, and Y received 20% more than Z. What amount did Z receive?

- a) Rs. 7000
- b) Rs. 6000
- c) Rs. 4800
- d) Rs. 4000

13. A shop selling washing machines offers 3 % discount on all cash purchases. What cash amount does a customer pay for washing machine with marked price Rs. 1300?

- a) 1285
- b) 1297
- c) 1261
- d) 1254

14. The expression  $(2a - 3b)(4a + 0.5b) - a(8a - 11b)$

- a) Is always positive for all  $a$  and  $b$
- b) Is always negative for all  $a$  and  $b$
- c) Is zero
- d) Depends on the values of  $a$  and  $b$

15. At 12:00 pm Ritika starts walking at 6 km/hr. At 13:30 pm, Rahul follows her on his bicycle at 8 km/hr. When will Ritika be 3 km behind Rahul?

- a) 1930 pm
- b) 1900 pm
- c) 2000 pm
- d) 1830 pm

16. Chitra had 40% savings with the total income of Rs. 10000. The income of Chitra decreased by 20%, she decided to decrease the expenditure by 10%. By what percentage does the saving change?

- a) 40%
- b) 43.33%
- c) 20%
- d) None of these

17. What is the least number which, when divided by 5, 6, 7, 8 gives the remainder 3 but is divisible by 9?

- a) 1463
- b) 1573
- c) 1683
- d) 1793

18. A man's working hours a day were increased by 20%, and his wages per hour were increased by 25%. By how much per cent were his daily earnings increased?

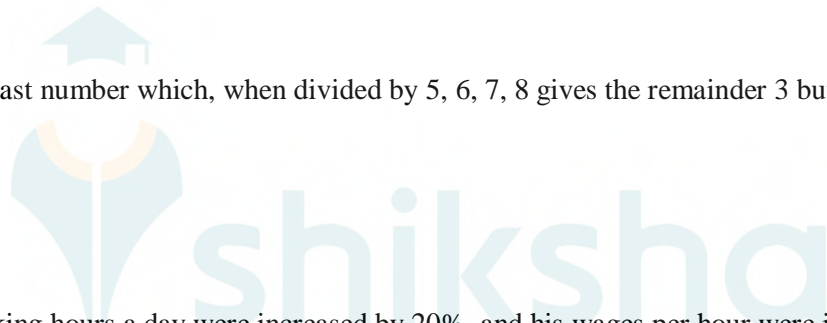
- a) 44%
- b) 34%
- c) 54%
- d) 47%

19. Raj, Federik and Philips are three contestants for a race of 1, 000 m. If Raj can give Federik a start of 50 m and Philips a start of 69 m, then of how many metres would Federik give a start to Philips in a similar race?

- a) 40 m
- b) 20 m
- c) 19 m
- d) None of these

20. An incorrect clock set right at 9 am loses three minutes in every hour. If the time shown by the clock is 4 pm on the same day, what is the approximate actual time of the day?

- a) 4:12 pm
- b) 4:10 pm
- c) 4:22 pm



d) 4:45 pm

21. If  $x = 2 + 2\frac{2}{3} + 2\frac{1}{3}$ , then the value of  $x^3 - 6x^2 + 6x$  is

- a) 3
- b) 2
- c) 1
- d) None

22. A & B can together do a job in 2 days, B & C in 4 days & A and C in  $12/5$  days. Find the no. of days required by A, B & C together to do the same job.

- a)  $\frac{7}{3}$  days
- b)  $\frac{5}{3}$  days
- c)  $\frac{12}{7}$  days
- d)  $\frac{15}{7}$  days

23. A bag contains 25-paise, 50-paise and 1-rupee coins in the ratio 4:2:5. If the total value of all the coins in the bag is Rs. 770, then find the value of all the 25 paise and 50 paise coins in the bag.

- a) Rs. 220
- b) Rs. 70
- c) Rs. 110
- d) Rs. 140

24. In 15 days, 9 women and 15 girls can reap a field. In what time could 15 women and 16 girls reap the same field, assuming 3 women can do as much work as 4 girls?

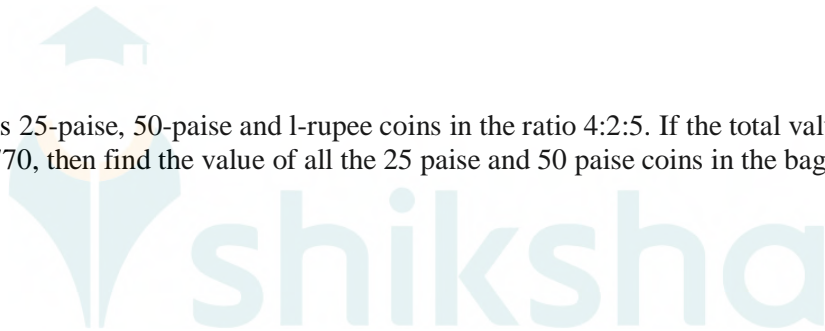
- a) 10.5 days
- b) 25 days
- c) 11.25 days
- d) 20 days

25. A earns 25% less than B, but 20% more than C. If C earns Rs 60 less than B, find their respective earnings.

- a) 120, 160, 100
- b) 120, 144, 90
- c) 90, 144, 100
- d) 160, 120, 144

26. Two parties contest in an election where all the eligible people vote. If the winner gets 60% of the total votes and wins by 150 votes, find the number of votes polled in favour of the losing party.

- a) 300



- b) 750
- c) 450
- d) 500

27. A manufacturing firm has a capital of Rs. 9000. The gross annual sales are Rs. 3750. The cost of materials and manufacture is 35% of the gross sales. Rent, rates and taxes amount to Rs. 386; advertising to Rs. 940; office expenses, Rs. 136; manager's salary Rs. 200 plus 1% of gross sales. Find the % profit on the capital.

- a) 8.5%
- b) 7.8%
- c) 9%
- d) 8.2%

28. A hound ran to catch a rabbit 70 m apart. The rabbit has 35 jumps in one minute & the hound has 50 jumps in 2 minutes. If 2 jumps of the rabbit equal 40 cm & one jump of the hound equal 60 cm, in what time will the hound catch the rabbit?

- a)  $\frac{37}{4}$  min
- b)  $\frac{33}{4}$  min
- c)  $\frac{35}{4}$  min
- d)  $\frac{29}{4}$  min

29. 6 gallons of milk are drawn from a cask and replaced by 6 gallons of water. 6 gallons of the mixture are next drawn and again replaced by 6 gallons of water. If the ratio of milk to water in the cask is now 81 : 19, how much milk was in the cask at first? (There was no water in the cask at first.)

- a) 100
- b) 50
- c) 80
- d) 60

30. Two trains start from Delhi and Lucknow at 7 pm and 9 pm respectively and move towards Lucknow and Delhi. The train from Delhi reaches Lucknow at 1 am while the train from Lucknow reaches Katara at 3 pm. At what time will they meet during the journey?

- a) 11 pm
- b) 12 pm
- c) 1 pm
- d) 1.30 pm

31. At an exam  $\frac{1}{5}$  of a class individually gained  $\frac{7}{8}$  of the maximum marks,  $\frac{1}{10}$  gained  $\frac{3}{4}$  of the maximum,  $\frac{1}{4}$  gained  $\frac{1}{4}$  of the maximum, and the rest  $\frac{1}{2}$  of the maximum. The average marks obtained by the whole class are 172. What are the maximum marks?

- a) 308
- b) 320
- c) 311
- d) 304

32. Find the digit sum of  $1! + 2! + 3! + 4! + 5! + \dots + 200!$

- a) 1
- b) 8
- c) 9
- d) 3

33. The digits of a three-digit number A are written in reverse order to form another three digit number B. If  $B > A$  and  $B - A$  is perfectly divisible by 7, then which of the following is necessarily true?

- a)  $112 < A < 311\lambda$
- b)  $100 < A < 299\lambda$
- c)  $106 < A < 305\lambda$
- d)  $118 < A < 317\lambda$

**Direction for questions 34 to 36:** In a survey of 200 people, where each person plays from one of the games – Cricket, Basketball and TUK-TUK, it was found that 90 people play Cricket, 50 plays Basketball and 70 plays TUK-TUK. Further, 20 people play both Cricket and Basketball, 15 plays both Basketball and TUK-TUK while 30 play both Cricket and TUK-TUK. Five people play all the tree games.

34. How many people play none of the games?

- a) 40
- b) 50
- c) 60
- d) 30

35. Find the percentage of people who only play Basketball?

- a) 10%
- b) 20%
- c) 25%
- d) 30%

36. Number of people who play Cricket and TUK-TUK only is how much more than the number of people who play Basketball and TUK-TUK only?

- a) 15
- b) 20
- c) 25
- d) 30

37. The HCF of two numbers is 6 and their LCM is 50. If one of the numbers is 12, find the other number.

- a) 25
- b) 50
- c) 30
- d) Not possible

38. Lal, Bhan, Chaman hold a pasture for which they pay Rs. 16 per month. They put 70, 50, 40 sheep respectively on it. Lal sells  $\frac{2}{7}$  of his flock to Bhan after 4 months and after 3 months more Chaman sells  $\frac{2}{5}$  of his stock to Lal. How much rent should each pay in a year?

- a) 76, 76, 40
- b) 100, 40, 52
- c) 88, 73, 31
- d) 80, 71, 41

39. A salesman averages Rs. 480 during a normal 40-hour week. During a sale, his rates are increased by 50%. What is his commission if he puts in 60 hours during the sale?

- a) 780
- b) 1080
- c) 1200
- d) 1280

40. A dishonest dealer sells his goods at the cost price and still earns a profit of 25% by under weighing. What weight does he use for a kilogram?

- a) 750 g
- b) 800 g
- c) 825 g
- d) 850 g

### Data Interpretation

Direction for question 1 to 15: Each item is followed by two statements, I and II. Answer each question using the following instructions.

1. A positive number is exactly divisible by 4 and 3 both. What is that number?

- I. It is greater than 15
- II. It is less than 14

- a) If the question can be answered by one of the statements alone and not by the other.
- b) If the question can be answered by using either statement alone.
- c) If the question can be answered by using both the statements together, but cannot be using either statement alone.
- d) If the question cannot be answered even by using both the statements together.

2. What is the numerical value of the ratio  $\frac{a}{b}$ ?

- I.  $ab = 12$
- II.  $a = 5b$

- a) If the question can be answered by one of the statements alone and not by the other.
- b) If the question can be answered by using either statement alone.
- c) If the question can be answered by using both the statements together, but cannot be using either statement alone.

d) If the question cannot be answered even by using both the statements together.

3. What are the ages of the brother (ages are natural numbers)?

I. The product of their ages is 21.

II. The sum of their ages is not divisible by 3.

a) If the question can be answered by one of the statements alone and not by the other.

b) If the question can be answered by using either statement alone.

c) If the question can be answered by using both the statements together, but cannot be using either statement alone.

d) If the question cannot be answered even by using both the statements together.

4. Product of  $w$ ,  $x$ ,  $y$  and  $z$  is 1003 ( $w$ ,  $x$ ,  $y$  and  $z$  are all natural numbers). Which one is the largest among them?

I.  $w > x > y$

II.  $w > x > z$

a) If the question can be answered by one of the statements alone and not by the other.

b) If the question can be answered by using either statement alone.

c) If the question can be answered by using both the statements together, but cannot be using either statement alone.

d) If the question cannot be answered even by using both the statements together.

5. Is  $pq$  an even number?

I.  $p$  is divisible by 3.

II.  $(q + 1)$  is divisible by 4.

a) If the question can be answered by one of the statements alone and not by the other.

b) If the question can be answered by using either statement alone.

c) If the question can be answered by using both the statements together, but cannot be using either statement alone.

d) If the question cannot be answered even by using both the statements together.

6. What is the HCF of natural numbers  $A$  and  $B$ ?

I. LCM of the natural numbers  $A$  and  $B$  is 101.

II.  $A$  and  $B$  are distinct natural numbers.

a) If the question can be answered by one of the statements alone and not by the other.

b) If the question can be answered by using either statement alone.

c) If the question can be answered by using both the statements together, but cannot be using either statement alone.

d) If the question cannot be answered even by using both the statements together.

7.  $A$  is not shorter than  $B$ , who in turn is not taller than  $C$  who is shorter than  $D$ . who among  $A$ ,  $B$ ,  $C$  and  $D$  is the tallest?

I.  $C$  and  $A$  are of equal height

II.  $B$  and  $A$  are of equal height

a) If the question can be answered by one of the statements alone and not by the other.

b) If the question can be answered by using either statement alone.

c) If the question can be answered by using both the statements together, but cannot be using either statement alone.

d) If the question cannot be answered even by using both the statements together.

8. How many marks did Sanskar raj obtain in mathematics?

I. Sanskar raj secured on an average 45% marks in mathematics, physics, and chemistry together.

II. Sanskar raj secured 5% marks more in mathematics than the average of mathematics, physics and chemistry.

a) If the question can be answered by one of the statements alone and not by the other.

b) If the question can be answered by using either statement alone.

c) If the question can be answered by using both the statements together, but cannot be using either statement alone.

d) If the question cannot be answered even by using both the statements together.

9. What is a two digits number?

I. The number obtained by interchanging the digits is smaller than the original number by 45.

II. Sum of the digits is 11.

a) If the question can be answered by one of the statements alone and not by the other.

b) If the question can be answered by using either statement alone.

c) If the question can be answered by using both the statements together, but cannot be using either statement alone.

d) If the question cannot be answered even by using both the statements together.

10. Average age of Vijay, Badal, Chitransh and Divya is 46 years. Who is the oldest among them?

I. Chitransh is 91 years old.

II. Ages (in years) of all of them are distinct natural numbers.

a) If the question can be answered by one of the statements alone and not by the other.

b) If the question can be answered by using either statement alone.

c) If the question can be answered by using both the statements together, but cannot be using either statement alone.

d) If the question cannot be answered even by using both the statements together.

11. Pari, Qasim, Rupali and Saurav are four consecutive even integers. What is the value of the largest integer among these?

I. The average of the four numbers is the first prime number greater than 10.

II. The ratio between the largest and the smallest of the number is less than 10.

a) If the question can be answered by one of the statements alone and not by the other.

b) If the question can be answered by using either statement alone.

c) If the question can be answered by using both the statements together, but cannot be using either statement alone.

d) If the question cannot be answered even by using both the statements together.

12. On a fishing trip, Raju and Vijay each caught some fishes. Who caught more fish?

I. Raju and Vijay caught fishes in the ratio 2 : 3.

II. After Raju stopped fishing, Vijay continued fishing until he caught 12 fishes.

- a) If the question can be answered by one of the statements alone and not by the other.
- b) If the question can be answered by using either statement alone.
- c) If the question can be answered by using both the statements together, but cannot be using either statement alone.
- d) If the question cannot be answered even by using both the statements together.

13. Is  $Q$  a positive number?

- I.  $4Q + 24 > 0$
- II.  $4Q - 24 < 0$

- a) If the question can be answered by one of the statements alone and not by the other.
- b) If the question can be answered by using either statement alone.
- c) If the question can be answered by using both the statements together, but cannot be using either statement alone.
- d) If the question cannot be answered even by using both the statements together.

14. If the ratio of boys to girls attending school in school in 2000 was  $\frac{1}{3}$ , what was the ration of boys to girls attending school in 2001?

- I. 100 more boys were attending school in 2001 than in 2000.
- II. 150 more girls were attending school in 2001.

- a) If the question can be answered by one of the statements alone and not by the other.
- b) If the question can be answered by using either statement alone.
- c) If the question can be answered by using both the statements together, but cannot be using either statement alone.
- d) If the question cannot be answered even by using both the statements together.

15. If  $a$  and  $b$  are positive numbers, is  $b > a$ ?

- I.  $a^2 > b$
- II.  $a^2 > b^2$

- a) If the question can be answered by one of the statements alone and not by the other.
- b) If the question can be answered by using either statement alone.
- c) If the question can be answered by using both the statements together, but cannot be using either statement alone.
- d) If the question cannot be answered even by using both the statements together.

16. Quantity I: What is the highest power of 5 that is contained in  $125^{125} - 25^{25}$ ?

Quantity II: What is the remainder when  $5^{163}$  is divided by 1000?

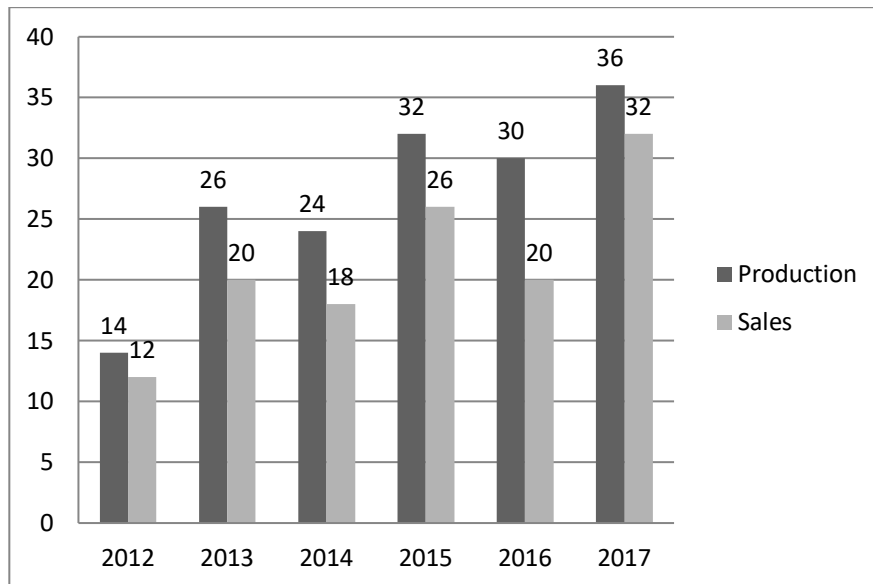
- a) Quantity I > Quantity II
- b) Quantity II > Quantity I
- c) Quantity I = Quantity II
- d) relationship cannot be determined

17. Quantity I: Twenty times a positive integer is less than than it is square by 96. What is the integer?

Quantity II: Two times a two digit number is 9 times the number obtained by reversing the digits and sum of the digit is 9 what is the value of that number

- a) Quantity I > Quantity II
- b) Quantity II > Quantity I

- c) Quantity I = Quantity II  
d) relationship cannot be determined



18. What is the difference between the sales of 2012 and 2014 (in lac tonnes)?

- a) 6  
b) 4  
c) 10  
d) 8

19. Total sales of 2016 and 2017 together are approximately what percentage of sales in 2014?

- a) 260%  
b) 160%  
c) 360%  
d) 240%

20. What is the approximate percentage increase in the production from 2014 to 2016?

- a) 30%  
b) 20%  
c) 25%  
d) 40%

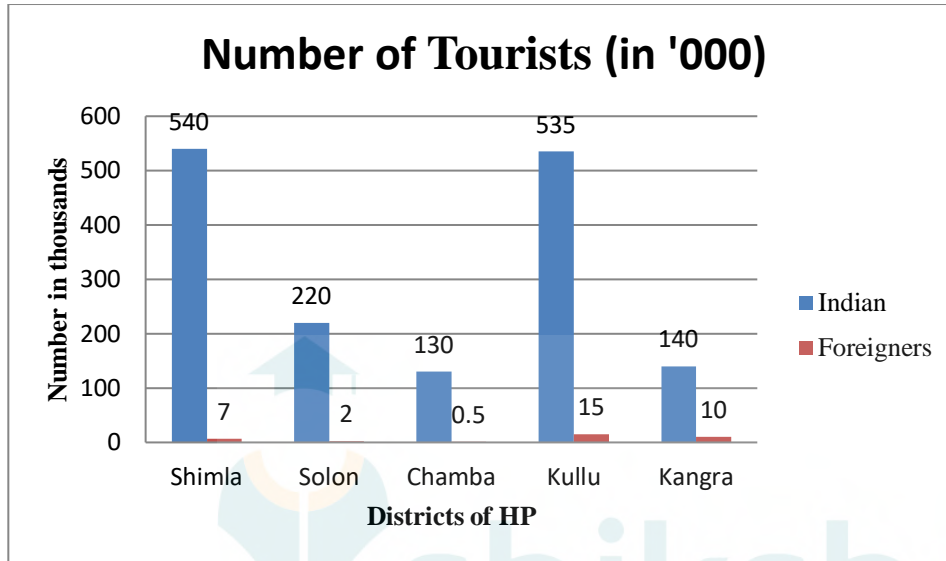
21. What is the percentage drop in sales from 2013 to 2012?

- a) 30%  
b) 40%  
c) 50%  
d) 10%

22. In which year is the difference between the production and sales the maximum?

- a) 2013
- b) 2015
- c) 2016
- d) 2017

The bar graph given below show the five districts of the state of Himachal Pradesh and the number of tourists visiting them. For the given bar chart, total number of Indian tourists is more that the total number of foreign tourists. None of the tourists can be Indian as well as foreigner.



23. By the percentage are the Indian tourists visiting Chamba less than those visiting Shimla?

- a) 30%
- b) 50%
- c) 60%
- d) 75%

24. Approximately what percentage of the total tourists visiting Himachal Pradesh are foreigners?

- a) 2%
- b) 8%
- c) 4%
- d) 5%

25. What is the ratio between the Indian tourists and the foreign tourists visiting Kullu?

- a) 105: 3
- b) 70: 3
- c) 107: 3
- d) 35: 3

26. Which of the following districts has the maximum ration of Indian and foreign tourists?

- a) Shimla
- b) Solon
- c) Chamba
- d) Kangra

27. Which of the following districts has the maximum ration of Indian and foreign tourists?

- a) Shimla
- b) Solon
- c) Chamba
- d) Kangra

The table given below shows the number of people visiting six different Super-markets and the percentage of Men, Women and Children visiting those Super-markets.

Name of the Super-markets	Total Number of people	Percentage of		
		Men	Women	Children
A	34560	35	55	10
B	65900	37	43	20
C	45640	35	45	20
D	55500	41	26	33
E	42350	06	70	24
F	59650	24	62	14

28. Number of men visiting Super-market B forms approximately what percent of the total number of people visiting all the super markets together?

- a) 12
- b) 8
- c) 13.5
- d) 5.75

29. Number of children visiting Super-market A forms what percent of number of children visiting Supermarket F? (rounded off to two digits after decimal)

- a) 94
- b) 40
- c) 15
- d) 75

30. What is the total number of children visiting Super-market A and C together?

- a) 16525
- b) 26459
- c) 12584
- d) 24306

31. What is the average of the women visiting all the Super-markets together?

- a) 24823.5

- b) 23387.5
- c) 25412.5
- d) 20886.5

32. What is the respective ratio of the number of women visiting Super-market A to those visiting Super-market C?

- a) 33 : 35
- b) 235 : 336
- c) 332 : 379
- d) None of these

33. Quantity I: What least number should be added to 231228 to make it exactly divisible by 30?  
Quantity II: What least number should be subtracted from 231228 to make it exactly divisible by 90?

- a) Quantity I > Quantity II
- b) Quantity I < Quantity II
- c) Quantity I ≥ Quantity II
- d) Quantity I ≤ Quantity II

34. At a construction site 20 worker can complete a certain work in 15 days while working 6 hours a day.  
Quantity I: If 10 workers are employed to work 12 hours a day, what time will they take to complete the work?

Quantity II: If 18 workers are employed to work 5 hours a day. What time will they take to complete the work?

- a) Quantity I > Quantity II
- b) Quantity I < Quantity II
- c) Quantity I ≥ Quantity II
- d) Quantity I ≤ Quantity II

35. Rs. 150 is divided among A, B and C so that A receives half as much as B and C receive together and B receives 1/4th of what A and C receive together.

Quantity I: The absolute difference between share of A and B.

Quantity II: If A gives 40% of his share to an orphanage as charity, then how much money does the orphanage get?

- a) Quantity I > Quantity II
- b) Quantity I < Quantity II
- c) Quantity I ≥ Quantity II
- d) Quantity I ≤ Quantity II

Direction for question 36 to 40: The table given below shows the sales volume of five products A, B, C, D and E manufactured by a company named XUAC Pvt. Ltd. From October to November in the year 2018.

Month product	June	July	August	September	October	November
P	6746	7813	8761	8093	9257	9809
Q	4072	4239	6577	7081	7341	6958

R	4185	6164	6328	6961	6916	8011
S	2285	3015	3327	4239	6273	9036
T	3819	5648	5841	6179	7214	7645

36. In July, the sales of R constituted what percent of the total sales of the five products put together?

- a) 21.94
- b) 22.42
- c) 22.93
- d) 23.40

37. Which product recorded the maximum percentage in its sales in any month, except October, over the previous month during the given period?

- a) P
- b) T
- c) Q
- d) S

38. In December 2018, the sales of S witnessed an increase of over the previous month and the sales of T was the same as that of S. What was the percentage increase in the sales. Of T in December over the previous months?

- a) 46.75
- b) 47.25
- c) 47.74
- d) 48.75

39. In October, the total sales of Q and S constituted what percentage of the total sales of the five products put together?

- a) 34.89%
- b) 36.79%
- c) 38.67%
- d) 42.34%

40. In December 2018, the sales of each product witnessed an increase of 15% over the previous month, then what was the total sales of the five products put together in December 2018?

- a) 47677.85
- b) 45604.60
- c) 62188.5
- d) 53766.75

### Logical Reasoning

Direction for question 1 to 5: Each question below is followed by two arguments numbered I and II. You have to decide which of the arguments is a strong argument and which is a weak argument.

#### 1. Statement

Should the subsidy on petroleum product be further reduced?

**Arguments**

- I. Yes, the present subsidy is a drain on national resources; let the consumer share the burden.
  - II. No, this will have a cascading effect and the prices of all the commodities will sharply increase, creating higher rate of inflation.
- a) If only argument I is strong
  - b) If only argument II is strong
  - c) If neither I nor II is strong
  - d) If both I and II are strong

**2. Statement**

Should government close down loss-making public sector enterprises?

**Arguments**

- I. No, all employees will lose their jobs, security and earning; what would they do?
  - II. Yes, in a competitive world the rule is 'survival of the fittest'.
- a) If only argument I is strong
  - b) If only argument II is strong
  - c) If neither I nor II is strong
  - d) If both I and II are strong

**3. Statement**

Should the school teachers be necessarily involved in the census activities?

**Arguments**

- I. No, this will adversely affect the quality of teaching programme.
  - II. Yes, the teachers are the best fit for this job.
- a) If only argument I is strong
  - b) If only argument II is strong

- c) If neither I nor II is strong
- d) If both I and II are strong

#### 4. Statement

Should all the professional colleges in India be encouraged to run their own courses without affiliation to any university?

#### Arguments

- I. Yes, this is only way to create more opportunities for those who seek professional training.
- II. No, this will dilute the quality of professional training as all such colleges may not be equipped to conduct such courses.

- a) If only argument I is strong
- b) If only argument II is strong
- c) If neither I nor II is strong
- d) If both I and II are strong

#### 5. Statement

Should the parents of those children who do not send their wards to school be fined?

#### Arguments

- I. Yes, this is only way to eradicate illiteracy.
- II. No, why should the parents be fined?

- a) If only argument I is strong
- b) If only argument II is strong
- c) If neither I nor II is strong
- d) If both I and II are strong

Direction for question 6 to 12: In each question below is given a statement followed by two assumptions numbered I and II. An assumption is something supposed or taken for granted. You have to consider the statement and the following assumptions and decide which of the assumptions is implicit in the statement.

## 6. Statement

The local civic body has urged all the residents to voluntarily reduce consumption of potable water by about 30 per cent to tide over the water crisis.

### Assumptions

- I. Many residents may reduce consumption of potable water.
- II. Many activity may welcome the civic body's move and spread awareness among residents.

- a) If only assumptions I is implicit
- b) If only assumptions II is implicit
- c) If neither assumptions I nor II is implicit
- d) If both assumptions I and II are implicit

## 7. Statement

The chairman of the company decided to hold a grand function to celebrate silver jubilee during the next weekend and invited a large number of guests.

### Assumptions

- I. The company officials may be able to make all the necessary preparations for the silver jubilee celebration.
- II. Majority of the guests invited by the Chairman may attend the function.

- a) If only assumptions I is implicit
- b) If only assumptions II is implicit
- c) If neither assumptions I nor II is implicit
- d) If both assumptions I and II are implicit

## 8. Statement

The traffic police department has put huge notice boards at all the major junctions of the city warning drivers to refrain from using cell phones while driving or else their licences will be impounded.

### Assumptions

- I. The drivers of the vehicles may ignore the warning and continue using cell phones while driving.

II. The traffic police department may be able to nab most of the offenders and impound their licences.

- a) If only assumption I is implicit
- b) If only assumption II is implicit
- c) If neither assumption I nor II is implicit
- d) If both assumptions I and II are implicit

### 9. Statement

Many people were caught by the railway police while they were trying to cross the railway tracks and imposed heavy penalty before releasing them.

#### Assumptions

- I. People may refrain from crossing railway tracks in future.
- II. People may continue crossing railway tracks and pay hefty penalty.

- a) If only assumption I is implicit
- b) If only assumption II is implicit
- c) If neither assumption I nor II is implicit
- d) If both assumptions I and II are implicit

### 10. Statement

“If you are a first class graduate with good communication skill and also have work experience of at least two years in the sales related activities, you are welcome in our organization.” – An employment advertisement.

#### Assumptions

- I. Many with good communications skills may not respond to the advertisement.
- II. All the first class graduates may possess good communications skills.

- a) If only assumption I is implicit
- b) If only assumption II is implicit
- c) If neither assumption I nor II is implicit
- d) If both assumptions I and II are implicit

### 11. Statement

In view of the severe heat wave passing through the state, the government has asked all the schools to remain closed for the next fortnight with immediate effect.

#### Assumptions

- I. The heat wave may not continue beyond a fortnight.
  - II. The parents of the students may not allow their wards to attend school even after a fortnight.
- a) If only assumption I is implicit
  - b) If only assumption II is implicit
  - c) If neither assumption I nor II is implicit
  - d) If both assumptions I and II are implicit

### 12. Statement

The government has recently announced additional food for work programmes for all the drought affected regions in the country.

#### Assumptions

- I. The government has adequate funds to run these programmes.
  - II. Affected people may be able to get at least one meal a day due to these programmes.
- a) If only assumption I is implicit
  - b) If only assumption II is implicit
  - c) If neither assumption I nor II is implicit
  - d) If both assumptions I and II are implicit

Directions for question 13 to 17: In each of the questions below are given statements followed by some conclusions. You have to take 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 follows from the given statements disregarding commonly known facts.

### 13. Statement

Some notes are coins. Some papers are plastics. All coins are papers. No note is cardboard.

**Conclusions**

- I. Some notes are papers
  - II. Some coins are plastics
  - III. No paper is cardboard
  - IV. No note is plastic
- a) Only I follow
  - b) I and II follow
  - c) I and III follow
  - d) None of these

**14. Statement**

Some tyres are ropes. Some ropes are tents. Some tents are walls. Some walls are building

**Conclusions**

- I. Some buildings are ropes
  - II. Some walls are ropes
  - III. Some tents are tyres
- a) None follows
  - b) Only I follow
  - c) Only II follow
  - d) Only III follow
  - e) I and II follow

**15. Statement**

Some plates are knives. All knives are chains. Some chains are wheels. All wheels are poles.

**Conclusions**

I. Some poles are chains

II. Some wheels are knives

III. Some chains are plates

a) I and II follow

b) I and III follow

c) II and III follow

d) All I, II and III follow

e) None of the above

**16. Statement**

Some trees are bushes. All flowers are bushes.

**Conclusions**

I. Atleast some bushes are trees.

II. Atleast some flowers are trees.

a) If only Conclusions I is follows

b) If only Conclusions II is follows

c) If neither Conclusions I nor II is follows

d) If both Conclusions I and II are follows

**17. Statement**

Some pencils are blankets. All blankets are erasers.

**Conclusions**

I. Atleast some pencils are erasers.

II. All erasers being pencils is a possibility.

a) If only Conclusions I is follows

b) If only Conclusions II is follows

- c) If neither Conclusions I nor II is follows
- d) If both Conclusions I and II are follows

Direction for question 18 to 21: In each of the questions given below there are two statements labeled Assertion (A) and Reason (R).

18. **Assertion (A)**

A ship rises as it enters the sea from a river.

**Reason (R)**

The density of sea water is higher as compared to river water.

- a) If both (A) and (R) are true and (R) is the correct explanation of (A)
- b) If both (A) and (R) are true but (R) is not the correct explanation of (A)
- c) If (A) is true but (R) is false
- d) If (A) is false but (R) are true

19. **Assertion (A)**

A person with blood group O is considered a universal recipient.

**Reason (R)**

Group O blood does not contain any antigens.

- a) If both (A) and (R) are true and (R) is the correct explanation of (A)
- b) If both (A) and (R) are true but (R) is not the correct explanation of (A)
- c) If (A) is true but (R) is false
- d) If (A) is false but (R) are true

20. **Assertion (A)**

Plaster of Paris is used by doctors for setting fractured bones.

**Reason (R)**

When plaster of Paris is mixed with water and applied around the fractured limbs, it sets into a hard mass.

- a) If both (A) and (R) are true and (R) is the correct explanation of (A)
- b) If both (A) and (R) are true but (R) is not the correct explanation of (A)
- c) If (A) is true but (R) is false
- d) If (A) is false but (R) are true

**21. Assertion (A)**

The body of the fish is streamlined.

**Reason (R)**

The streamlined body helps the fish to cut its way through the water.

- a) If both (A) and (R) are true and (R) is the correct explanation of (A)
- b) If both (A) and (R) are true but (R) is not the correct explanation of (A)
- c) If (A) is true but (R) is false
- d) If (A) is false but (R) are true
- e) If both (A) and (R) are false

Direction for question 22 to 24: In each question, two statements I and II are provided. These may have a cause and effect relationship or may have independent cause or be the effects of independent causes. Read the statements carefully and firm mark your answer as

**22. Statement I**

Afghanistan skipper Md. Nabi justified his decision to step down from the captaincy of ODI and T20 teams by saying 'I will be 37 by the next World Cup and I can't be sure of my place in the team. It is better that Afghanistan is now led by a player who will be at the peak of his career during that tournament.'

**Statement II**

Remarkably, unlike most skippers, whose individual performance drops after assuming the leadership role. Md. Nabi has actually batted better as captain in all three formats of the game.

- a) If statement I is the cause and statement II is its effect
- b) If statement II is the cause and statement I is its effect
- c) If both the statements I and II are effects of independent causes

d) If both the statements I and II are effects of some common cause

**23. Statement I**

Worldwide recession has created uncertainty in the job market.

**Statement II**

Many people are opting for change from private sector to public sector.

- a) If statement (A) is the cause and statement (B) is its effect
- b) If statement (B) is the cause and statement (A) is its effect
- c) If both the statements (A) and (B) are effects of independent causes
- d) If both the statements (A) and (B) are effects of some common cause

**24. Statement I**

Majority of the Government school teachers in the town joined the one-day strike called by the local teacher' union.

**Statement II**

The state Government had recently imposed ban on the teachers of the Government schools joining private coaching classes.

- a) If statement (A) is the cause and statement (B) is its effect
- b) If statement (B) is the cause and statement (A) is its effect
- c) If both the statements (A) and (B) are effects of independent causes
- d) If both the statements (A) and (B) are effects of some common cause

Directions for questions 25 to 27: In each question is given a statement followed by two courses of action numbered I and II. A course of action is a step or administrative decision to be taken for improvement, follow-up or further action in regard to the problem, policy etc. On the basis of the information given in the statement, you have to assume everything in the statement to be true and then decided which of the suggested courses of action logically follows for pursuing.

**25. Statement**

People in the logically were agitated as more than thirty people died in a building collapse.

**Course of action**

- I. Government should immediately announce compensation for the affected families.
- II. Authorities should take a stringent action against builders tending to compromise over quality of material used.
- a) If only course of action I follows
- b) If only course of action II follows
- c) If neither course of action I nor course of action II follows
- d) If both courses of action I and II follows

**26. Statement**

Expensive clothes and accessories are becoming a growing need among college going teenage children of middle income group.

**Course of action**

- I. Colleges should introduce a dress code.
- II. Children should be counseled emphasizing the importance of many other things.
- a) If only course of action I follows
- b) If only course of action II follows
- c) If neither course of action I nor course of action II follows
- d) If both courses of action I and II follows

**27. Statement**

Indian Airlines is running in loss.

**Course of action**

- I. It should be privatised
- II. It must curb the expenditure by removing concessions in the fare to MPs, bureaucrats and airline officers.
- a) If only I follows
- b) If only II follows
- c) If neither I nor II follows

d) If both I and II follows

Directions for question 28 to 30: Vijay would do five tasks: P, Q, R, S and T; starting at 9 am in the morning. P is the first task and takes 2 h. Q can be done after P is complete and requires 1 h. Work on R which would take 1 h can start only P and Q are complete. Vijay can do task S along with Q and R and would take 3 h for that. Activity T with duration of 1 h can start on completion of P, Q, R and S.

28. What is the earliest time when Vijay would complete R?

- a) 11 am
- b) 12 noon
- c) 1 pm
- d) 2 pm

29. If Vijay takes 2 h for Q and completes other preceding tasks without delay, when can T start?

- a) 12 noon
- b) 3 pm
- c) 2 pm
- d) 1 pm

30. What is the earliest time when Vijay can complete all tasks?

- a) 4 pm
- b) 3 pm
- c) 2 pm
- d) 1 pm

Directions for question 31 to 32: Ravi, who is facing North, starts from point A, walks 4m towards the right. He then takes a left turn and walks 3 m before taking a right turn, walking 2 m and stopping at point B.

Seema starts from the same point A walks 2 m towards the South. She then takes a left turn and walks 4 m. she now takes a right turn, walks 2 m before taking a left turn, walking 2 m and stopping at point C.

31. How far and towards which direction must Ravi walk in order to reach point C?

- a) 8 m towards North
- b) 7 m towards North
- c) 8 m towards South
- d) 7 m towards South

32. If Seema walks 4 m towards North from Points C, how far will she be from Point A?

- a) 4 m
- b) 2 m
- c) 6 m
- d) 8 m

Direction for question 33 and 34: Study the following information carefully and answer the questions given below it

- (i) P, Q, R, S, T and U are six members in a family in which there are two married couples.
- (ii) T a teacher is married to the doctor who is mother of R and U.
- (iii) Q, the lawyer, is married to P.
- (iv) P has one son and one grandson.
- (v) Of the two married ladies one is a housewife.
- (vi) There is also one student and one student and one male engineer in the family.

33. How is P related to R?

- a) Grandfather
- b) Mother
- c) Sister
- d) Grandmother

34. Who among the following is the housewife?

- a) P
- b) Q
- c) S
- d) T

35. Among P, Q, R, S and T each having different weight. R is heavier than only P and S is lighter than Q and heavier than T. who among them is the heaviest?

- a) P
- b) Q
- c) S
- d) Data inadequate

36. 0, 6, 24, 60, 120, 210, 336, ?

- a) 504
- b) 512
- c) 520
- d) 501

**Directions:** (Q. Nos. 37 and 38) in each of the following question find the relationship that can definitely be deduced on the basis of the relations given the symbol used to define the relationship are as follows.

@ means 'greater than'

# means 'less than'

\$ means 'not equal to'

% means 'equal to'

37. If it is given that,  $3M \% 2N$  and  $N$  and  $N \% 3O$ , then

- a)  $O @ M$
- b)  $M \# O$
- c)  $2O \% M$

d) None of these

38. If it is given that,  $N @ P$ ,  $P \# O$ ,  $O @ M$  and  $N \% M$ , then.

a)  $O @ N$

b)  $O \# N$

c)  $O \$ N$

d) None of these

**39. Directions:** Question are given with two statements (A) and (B) these statements may be either independent causes or may be effects of independent causes or a common cause one of these statements may be the effect of the other statement read both the statements and decide which of the following answer choice correctly depicts the relationship between these two statements.

(A) DTTDC recorded an all-time high liquor sale on this Holi eve.

(B) Dry days increased liquor sales

a) If statement (A) is the cause and statement (B) is its effect

b) If statement (B) is the cause and statement (A) is its effect

c) If both the statements (A) and (B) are independent causes

d) If both the statements (A) and (B) are effects of independent causes

**40. Directions:** In each of the question given below there are two statements labeled Assertion (A) and reason (R).

**Assertion (A):** Bulb filament is made of titanium.

**Reason (R):** The filament should have low melting point.

a) If both (A) and (R) are true and (R) is the correct explanation of (A)

b) If both (A) and (R) are true but (R) is not the correct explanation of (A)

c) If (A) is true but (R) is false

d) If both (A) and (R) are false

## General English

### 1. Fill in the blank with an appropriate word and complete the given sentence.

The individual \_\_\_\_\_ of international student mobility are well known.

- a) benefits
- b) temper
- c) energy
- d) position

### 2. Fill in the blanks with the appropriate words and complete the given sentence.

A well-known chef, started his career \_\_\_\_\_ the age of 15 when the prodigy \_\_\_\_\_ cooking under Eric Ripert at the iconic New York restaurant.

- a) in, has begun
- b) to, have begin
- c) on, begin
- d) at, began

### 3. Fill in the blanks with the appropriate words and complete the given sentence.

The gastronomy of food plays a \_\_\_\_\_ role in society at both utilitarian and \_\_\_\_\_ levels.

- a) central, hedonic
- b) centre, hedonist
- c) perpetual, beguile
- d) sanity, central

### 4. Fill in the blank with the appropriate words and complete the given sentence.

The annotations and \_\_\_\_\_ are taken in Catalan or Spanish depending on the mother tongue of each person.

- a) tensions
- b) transcriptions
- c) requirement
- d) palpitations

**5. What is the meaning of the idiom/phrase – Touch-and-go?**

- a) To make a mistake and leave
- b) Believe what is in front
- c) To make no excuses
- d) Having an uncertain and possibly bad result

**6. What is the meaning of the idiom/phrase – Red-tapism?**

- a) The place where all mechanical tests take place
- b) The place where all bad things happen
- c) The main source of talent, power, or ability in a team or group.
- d) Strict adherence to official formalities

**7. Which of the following phrases should replace the highlighted phrase in the following sentence to make the sentence grammatically correct?**

Our approach emphasizes the point of viewing of the consumers in their understanding of drugs.

- a) point of view of the consumers
- b) point off view of the consumers
- c) pointing of view of consumers
- d) No correction required

**8. Which of these phrases should replace the highlighted phrase in the following sentence to make the sentence grammatically correct?**

Some types of food may be prepared in different ways or include a different variety of ingredients.

- a) be prepared on different ways
- b) been preparing in different ways
- c) being prepared in different ways
- d) No correction required

**9. Read each part of the sentence for grammatical or idiomatic errors. Choose the part that contains an error.**

- a) Dung beetles disperse
- b) the seeds that promotes
- c) revegetation and spreads
- d) nutrients in the soil

**10. Read each part of the sentence for grammatical or idiomatic errors. Choose the part that contains an error.**

- a) Most Chinese dishes contain
- b) a mixture of vegetables that
- c) are stir-fried and combined
- d) by aromatic spices and herbs

**11. Read each part of the sentence for grammatical or idiomatic errors. Choose the part that contains an error.**

- a) Bartering is usually conducted
- b) directly among two parties; however
- c) it may be done multilaterally
- d) through a trade exchange

**12. In the following question, two of the words are related in some way i.e., they are similar or opposites. Pick out the option which represents this pair.**

- a) Blocking, Sulking
- b) Protest, Frugal
- c) Magical, Enchanted
- d) Trapped, Dapper

**13. In the following question, two of the words are related in some way i.e., they are similar or opposites. Pick out the option which represents this pair.**

- P. Blast
- Q. Meticulous
- R. Trash
- S. Whomp

- a) P-R
- b) R-S
- c) S-Q
- d) P-S

**14. Choose the most appropriate synonym of the given word.**

**Juggle**

- a) Nadir
- b) Hustle
- c) Unmask
- d) Bloom

**15. Choose the most appropriate synonym of the given word.**

**Gargantuan**

- a) Bitty
- b) Midget
- c) Pygmy
- d) Monumental

**16. Choose the most appropriate antonym of the given word.**

**Lengthen**

- a) Abbreviate
- b) Pinch
- c) Poll
- d) Nip

**17. Choose the word which can replace the given group of words.**

**Comprising or relating to all sorts or varieties.**

- a) Omnifarious
- b) Omnipresent
- c) Omniscient
- d) Omnipotent

**18. Choose the word which can replace the given group of words.**

A person who is extremely interested in only one thing

- a) Mythomania
- b) Monomania
- c) Pyromania
- d) Satyromania

**19. Sentences of a paragraph are given below in a jumbled order. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.**

P. With an aim to assist the loco pilots for train movement during the foggy weather conditions, fog PASS devices have been introduced.

Q. The fog PASS devices are global positioning system (GPS)-enabled handheld portable devices, which are given to loco pilots operating in fog affected areas.

R. The fog device serves as an aid for the loco crew during foggy weather conditions through an audio visual alarm, wherever any landmark comes within the geo-fence range of the locomotive.

S. The location of the stations, signals, warning boards, level crossing gates as well as the whistle for level crossing (W/L) boards in the section is fed in the device's equipment.

- a) PSQR
- b) PRQS
- c) SRPQ
- d) PQRS

**20. Sentences of a paragraph are given below in a jumbled order. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.**

P. The volcanic eruption was caused when lava was pushed upwards from the Earth's Mantle before it split off to form a lava channel.

Q. The lava was then pushed up towards the surface through the Earth's crust, causing minor earthquakes as it moved, before causing a big quake as it erupted under the sea.

R. However, scientists soon realised that the earthquake was in fact caused by an enormous underwater volcanic eruption.

S. On 15 May 2018 a 5.8 magnitude earthquake shook the nearby island of Mayotte.

- a) PSQR
- b) QRSP
- c) QPRS
- d) SRPQ

## SNAP Sample Questions for Practice – Solutions

### Quantitative Techniques

1. (c)

Ratio of efficiency of A & B is 3:2

Ratio of efficiency of B & C is 5:4

Ratio of efficiency of A, B & C is 15:10:8

A, B and C together can do the job in  $11 \times \frac{15}{33} = 5$  days

2. (b)

Let the speed of metro train be 'x' and that of motorcycle be 'Y'.

$$\frac{120}{X} + \frac{480}{Y} = 8 \dots (1)$$

$$\frac{200}{X} + \frac{400}{Y} = \frac{25}{3} \dots (2)$$

Solve to get X = 60, Y = 80.

**Alternate Method**

Use options and check.

3. (b)

$$\frac{\text{Quality of Cheaper}}{\text{Quality of Dearer}} = \frac{(35 - 30)}{(30 - 25)} = \frac{5}{5} = 1:1$$

Required ratio is Dearer : Cheaper since the first solution is Dearer.

4. (b)

We can see that men, women & children are in the ratio =  $\frac{12}{6}, \frac{15}{5}, \frac{16}{4}$ , or 2: 3: 4. Number of men,

women & children = 10, 15, 20. Now if each man gets 6a, we have  $10 \times 6a + 15 \times 5a + 20 \times 4a = 430$  or  $a = 2$ . Answers are Rs. 12, 10, 8.

5. (c)

$$\begin{aligned} \text{Required value} &= \sqrt{(1^2 + b^2 + h^2)} \\ &= \sqrt{16 + 64 + 144} \\ &= \sqrt{222} \end{aligned}$$

6. (a)

Let the speeds be 2A and A kmph resp.  $\Rightarrow \frac{108}{3A} = 6$

A = 6 and the speed of B = 6 kmph

7. (c)

$$\text{Required value} = 24 \times \frac{6}{8} \times \frac{20}{4} = 90 \text{ days}$$

8. (a)

Given that the speed of the train is  
 $72 \text{ km/h} = 20 \text{ m/s}$

Let  $L$  be the length of the train, then

$$\frac{(L+100)}{20} = 15$$

$$L = 200\text{m}$$

Time taken to cross a man moving in the opposite direction at  $20 \text{ m/s}$   
 $t = 200/90 = 5 \text{ s}$

9. (c)

$20\%$  of CP = Rs. 100 or CP = Rs. 500

Now the Aman wants a profit of  $50\%$ .

Therefore, he has to sell it at a price of  $500 \times 1.5 = \text{Rs. } 750$

10. (a)

Amt. filled in 1 hour =  $\frac{1}{6}$ .

Amt emptied in the same time =  $\frac{1}{6} - \frac{1}{9}$

Total time required to empty it =  $\frac{1}{\left(\frac{1}{6} - \frac{1}{9}\right)} = 18 \text{ hours.}$

11. (b)

As per the problem:

Akbar : 100, Birbal 80

Akbar : 200, Chandragupta : 150

We first need to make Akbar equal in both the ratios. Akbar : 200, Birbal : 160

Akbar : 200, Chandragupta : 150

Therefore, in a 160 m race, Birbal can beat Chandragupta by 10 m.

In a 500 m race, Birbal can beat Chandragupta by  $10 \times \frac{500}{160} = 31.25 \text{ m}$

12. (d)

$$X + Y + Z = 14800 \quad \dots(1)$$

$$X = Y + 25\% \text{ of } Y = \frac{5Y}{4} \quad \dots(2)$$

$$Y = Z + 20\% \text{ of } Z = \frac{6Z}{5} \quad \dots(3)$$

$\therefore$  Eq. (1) gives

$$\frac{5Y}{4} + \frac{6Z}{5} + Z = 14800$$

$$\Rightarrow \frac{3Z}{2} + \frac{6Z}{5} + Z = 14800$$

$$\Rightarrow 37Z = 7400 \Rightarrow Z = 4000$$

$$\therefore Y = 4800, X = 6000.$$

13. (c)

Discount = 3%

Price = 1300.

$$\Rightarrow \text{S.P} = .97 \times 1300 = 1261$$

14. (b)

After solving

$$\text{Given expression} = -\frac{3}{2}b^2$$

Since  $b^2$  is always positive therefore,  $-\frac{3}{2}b^2$  is always negative.

15. (a)

Ritika is 3 km behind Rahul when Rahul has covered the 9 km lead and 3 km extra. Relative speed = 2 km/hr.

$$\text{Time taken to cover 12 km} = \frac{12}{2} = 6 \text{ hr}$$

$$\text{Time at which Rahul is 3 km ahead} = 1330 \text{ hr} + 0600 \text{ hr} = 1930 \text{ hr}$$

16. (d)

As per the problem:

Savings of Chitra = Rs. 4000

So, expenditure = 10000 – 2000 – Rs. 6000

New income = Rs. 8000

$$\text{So expenditure} = 6000 \times 0.9 = 2700$$

$$\text{New saving} = \text{Rs. } 2600$$

$$\% \text{ change in saving} = \frac{4000 - 2600}{4000} \times 100 = 35\%$$

17. (c)

L.C.M. of 5, 6, 7, 8

$$= 35 \times 24 = 840$$

Therefore, the required number =  $840x + 3$ ,

Which is exactly divisible by 9.

For  $x = 2$ , it is divisible by 9.

Hence,

$$\text{Required number} = 840x + 3$$

$$= 840 \times 2 + 3$$

$$= 1683$$

18. (a)

Let daily working hours & wages per hour before increase be H and W respectively

So his Salary/day = HW

Working hours after increase =  $1.3H$ , wages per hour =  $1.2W$

So his daily salary =  $\frac{63}{50}H \times \frac{6}{5}W = \frac{33}{25}HW$ . Thus an Increase of 44%

19. (b)

When Raj runs 950 m, Philips would run 931 m. Hence, the start given is  $\frac{19}{950} \times 1000 = 20\text{m}$

20. (c)

Let the required time be  $t$  hours after 9 am. The clock would have lost time =  $3t$  minutes.  
Now according to the problem

$$420 + 3t = 60t$$

$$57t = 420$$

$$t = 420/57 = 7.36 \text{ hours}$$

That is 7.36 hours after 9 am or 7 hours and  $0.36 \times 60 = 22$  minutes (approx.) after 9 am.

21. (b)

$$x = 2 + 2\frac{2}{3} + 2\frac{1}{3}$$

$$\Rightarrow (x - 2) = 2\frac{2}{3} + 2\frac{1}{3}$$

$$\Rightarrow (x - 2)^3 = \left(2\frac{2}{3} + 2\frac{1}{3}\right)^3$$

$$= 4 + 2 + 3 \times 2\frac{2}{3} \times 2\frac{1}{3} \left[2\frac{2}{3} + 2\frac{1}{3}\right]$$

$$= 6 + 3 \times 2(x - 2)$$

$$\Rightarrow (x - 2)^3 = 6 + 6x - 12 = 6x - 6$$

$$\Rightarrow x^3 - 8 - 6x(x - 2) = 6x - 6$$

$$\Rightarrow x^3 - 6x^2 + 6x = 2.$$

22. (c)

Let the total work be 4 units (LCM of 2, 4 and  $\frac{12}{5}$ )

$$\text{One day work of A and B} = a + b = \frac{4}{2} = 2 \text{ units / day}$$

$$\text{One day work of B and C} = b + c = \frac{4}{4} = 1 \text{ units / day}$$

$$\text{One day work of A and C} = c + a = \frac{4}{12/5} = \frac{20}{12} = \frac{5}{3} \text{ units / day}$$

$$2(a + b + c) = \left(2 + 1 + \frac{5}{3}\right)$$

$$a + b + c = \frac{7}{3} \text{ units / day}$$

$$\text{Days required to complete the work by all the 3 together} = \frac{4}{7/3} = \frac{12}{7} \text{ days}$$

23. (a)

The bag has 25-paise, 50-paise and 1 -rupee coins in the ratio 4:2:5. Now this is the ratio of the number of coins while the total value of the coins has been given. So we first need to convert coins into value.

Let the coins be  $4x$ ,  $2x$  and  $5x$  respectively.

$4x$  coins of  $1/4$  rupee each = value is Rs.  $x$ .

$2x$  coins of  $1/2$  rupee each = value is Rs.  $x$ .

$5x$  coins of 1 rupee each = value is Rs.  $5x$ .

Now

$$x + x + 5x = 770$$

$$7x = 770 \Rightarrow x = 110$$

Value of all 25-paise coins = Rs. 110

Value of all 50-paise coins = Rs. 110

Total value = Rs. 220

24. (c)

Given 3 women = 4 girls, so 9 women = 12 girls and 15 women = 20 girls.

Now,

9 women + 15 girls = 12 girls + 15 girls = 27 girls, will reap a field in 15 days.

So, 1 girl will reap a field in =  $27 \times 15$  days

Thus 36 girls will reap the field in =  $\frac{27 \times 15}{36} = 11.25$  days

25. (a)

If C earns Rs X, A earns  $1.2X$  & B earns  $1.6X$  Now  $1.6X - X = 60$  or  $X = 100$ .

26. (a)

Since the winner gets 60 % of the total votes, the loser must have got 40% of the total votes. Let the total number of votes be T. Then

$$0.6T - 0.4T = 150$$

$$0.2T = 150 \Rightarrow T = 750$$

We need to find the votes polled by the losing party, that is

$$40 \text{ of } 750 = 0.4 \times 750 = 300 \text{ votes}$$

27. (d)

Total expenses =  $(35\% \text{ of } 3750) + 386 + 940 + 136 + 200 + 37.5 = 3012$

Total receipts = 3750 Total profit =  $3750 - 3012 = 738$

$$\% \text{ profit} = \left( \frac{738}{9000} \right) \times 100 = 8.2\%$$

28. (c)

Suppose the hound catches the rabbit in  $t$  minutes

$\Rightarrow$  Number of jumps by the rabbit =  $35t$  & distance covered =  $20 \times 35t = 700t$  cm.  
 Similarly Distance covered by hare =  $25t \times 60 = 1500t$  cm.  
 Now,  $1500t - 700t = 70$  meters or  $t = 8.75$  min.

29. (d)

Let there be  $x$  litres of wine in the beginning

$$\left(\frac{x-6}{6}\right)^2 = \frac{81}{100}$$

$\Rightarrow x = 60$  gallons

30. (a)

Both the trains take 6 hours for their journey. Let distance Delhi & Lucknow be  $6$  km. Therefore, speed of each train is  $1$  km/h.

Now, train from Katara starts at  $7$  am at a speed of  $1$  km/h. Therefore, it would have travelled  $2$  km from  $7$  to  $9$  am. Distance Katara & Lucknow at  $9$  am will be  $4$  km which will be covered at a relative speed of  $2$  km/h.

So, time taken to meet will be  $4/2$  that is two hours from  $9$  am, that is  $11$  am.

31. (b)

Weighted means give us

$$\frac{1}{5} \times \frac{7}{8} (\text{max}) = \frac{7}{40} (\text{max})$$

$$\frac{1}{10} \times \frac{3}{4} (\text{max}) = \frac{3}{40} (\text{max})$$

$$\frac{1}{4} \times \frac{1}{4} (\text{max}) = \frac{1}{16} (\text{max})$$

$$\frac{9}{20} \times \frac{1}{2} (\text{max}) = \frac{9}{40} (\text{max})$$

$$= \frac{\left(\frac{7}{40} + \frac{3}{40} + \frac{1}{16} + \frac{9}{40}\right) \text{max}}{1} = 172$$

Max =  $320$

32. (c)

The digit sum of factorial of numbers till  $5!$  is  $9$ .  $6!$  onwards each factorial will have digit sum as  $9$ .

33. (c)

Let  $A = abc$  and  $B = cba$

Therefore,  $B - A = 100c + 10b + a - (100a + 10b + c) = 99(c - a)$ .  $B - A$  is a multiple of  $7$ . Therefore,  $c - a = 7$  ( $a, c$ ) ( $1, 8$ ) or ( $2, 9$ ). Hence, number is between  $108$  to  $198$  or  $209$  to  $299$ .

34. (b)

Using the formula,

$$n(A \cup B \cup C) = n(A) + n(B) + n(C) - n(A \cap B) - n(B \cap C) - n(C \cap A) + n(A \cap B \cap C)$$

We have,

$$n(A \cup B \cup C) = 90 + 50 + 70 - 20 - 15 - 30 + 5 = 150$$

That is,  $50$  people do not play any of the three games.

35. (a)

Number of people who only play Basketball

$$= 50 - 20 - 15 + 5 = 20$$

Percentage = 10%

36. (a)

Number of people reading Cricket and TUK-TUK only =  $30 - 5 = 25$

Number of people reading Basketball and TUK-TUK only =  $15 - 5 = 10$

Difference between the two groups =  $25 - 10 = 15$

37. (d)

The situation is not possible since the LCM has to be a multiple of the HCF.

38. (a)

	Initially	After 4 months	After 7 months
Lal	70	50	66
Bhan	50	70	70
Chaman	40	40	24

New rent = 16 per month.  $\Rightarrow$  Rs  $16 \times 12 =$  Rs. 192 per year

Net for Lal =  $70 \times 4 + 50 \times 3 + 66 \times 5 = 760$

For Bhan =  $50 \times 4 + 70 \times 8 = 760$

For Chaman =  $40 \times 7 + 24 \times 5 = 440$

The shares will 76, 76 and 40.

39. (b)

In normal time rate =  $\frac{480}{40} =$  Rs. 12 per hour

During sale rates are increased by 50% i.e.,

Rate 40-hour week =  $480 + 50\%$  of 480 = Rs. 720

$\therefore$  Rate per hour =  $\frac{720}{40} =$  Rs. 18 per hour

Now, according to the question,

Required commission =  $18 \times 60 =$  Rs. 1080

40. (b)

$$25\% = \frac{x}{1000 - x} \times 100\%$$

$$\Rightarrow x = 200$$

Hence, he uses weight,  $1000 - 200 = 800$  g

### Data Interpretation

1. (a)

2. (a)

3. (d)

4. (a)

$$1003 = 1 \times 1 \times 17 \times 59$$

Using both the statements together, 'a' is the largest one.

5. (c)

Using statement I alone cannot give us any result. Using statement II alone gives that q is an odd number.

Using both the statements together we get pq is an odd number.

6. (c)

Using statement A only gives us two different sets of values of A and B – (97, 97) and (97, 1). So, unique value of HCF cannot be obtained.

Using the statement B only also does not give us a unique number. However, using both the statements together gives us the values of A and B as – (97, 1). And HCF of these two numbers = 1.

7. (b)

This question can be answered by using either statement alone.

8. (d) In none of the statements given marks have been given in terms of numbers, hence we cannot find the marks obtained in mathematics.

9. (c)

Using statement A alone gives that the difference between the digits of the number is 7. This gives the possibility of many numbers like 81, 92 etc. using statement B alone also gives the possibility of many numbers.

Using both the statement together, we get a unique number.

10. (c)

11. (a)

Using statement A alone, average of the given four numbers = 11, hence their sum = 44, hence the numbers will be 8, 10, 12, 14. Hence, the value of largest integer, whichever is that, is 4.

Using statement B alone is not going to give us the result.

12. (a)

13. (a)

14. (c)

15. (a)

16. (b)

Quantity 1:  $5^{50}(5^{325}-1)$

Highest power of 5 that is contained in the given expression is 50

Quantity 11: After  $5^4$ , the remainder left when  $5^n$  is divided by 1000 is 125 when n is odd and 625 when is even

So, it remainder is 125

Quantity 11 > Quantity 1

17. (b)

Quantity 1 =  $x^2 - 20x = 96$

$x = 24, -4$  (Cannot be negative)

$x = 24$

Quantity 11 =  $2(10x + y) = 9(10x + x)$

$88y - 11x = 0$

$x + y = 9$

Solving equation

$x = 8, y = 1$

Number = 81

Quantity 11 > Quantity 1

18. (a)

$18 - 12 = 6$  lac tonnes

19. (a)

$$\frac{52}{20} \times 100 = 260\%$$

20. (c)

$$\frac{6}{24} \times 100 = 25\%$$

21. (b)

$$\frac{8}{20} \times 100 = 40\%$$

22. (c)

Highest difference between the production and sales in 2016 i.e. 10 lac tonnes.

23. (d)

$$\text{Required \%} = \frac{540-130}{540} \times 100 = 75\%$$

24. (a)

Percentage share of foreign tourists vising HP

$$\frac{34.5}{1600} \times 100 = 2\%$$

25. (c)

$$\text{Ratio} = 535 : 15 = 107 : 3$$

26. (c)

27. (d)

28. (b)

$$\frac{24383}{303600} \cdot 100 = \approx 8\%$$

29. (b)

$$\frac{3456}{8351} \cdot 100 = \approx 41\%$$

30. (c)

$$3456 + 9128 = 12584$$

31. (a)

$$\frac{19008 + 28337 + 20538 + 14430 + 29645 + 36983}{6} = 24823.5$$

32. (d)

$$19008 : 20538$$

$$1056 : 1141$$

33. (b)

Quantity I: 231228 divisible by 3 since the sum of its digits is divisible by 3. To make it divisible by 10 also we need to make the last digit 0 such that the number remains divisible by 3. On adding 12 to 231228 we get 231240 which is divisible by 30.

Quantity II: 231228 is divisible by 9 since the sum of its digits is divisible by 9. To make it divisible by 10 also we need to make the last digit 0 such that the number remains divisible by 9. On subtracting 18 to 231228 we get 231210 which is divisible by 90.

Hence, Quantity I < Quantity II.

34. (b)

Quantity I: Time take  $\frac{20' 6' 15}{10' 12} = 15$  days

Quantity II: Time take  $\frac{20' 6' 15}{18' 5} = 20$  days

Hence, Quantity I < Quantity II.

35. (d)

From the given information we get.

$$2A = B + C \quad \dots(i)$$

$$4B = A + C \quad \dots(ii)$$

$$\frac{A}{B} + \frac{5}{3} \text{ and } \frac{A}{C} = \frac{5}{7} \quad \dots(iii)$$

From (i) and (iii) we get  $A : B : C = 1 : \frac{3}{5} : \frac{7}{5} = 5 : 3 : 7$

$$A's \text{ share} = \frac{5}{15} \cdot 150 = 50$$

$$B's \text{ share} = \frac{3}{15} \cdot 150 = 30$$

$$C's \text{ share} = \frac{7}{15} \cdot 150 = 70$$

Quantity I: Required difference =  $50 - 30 = 20$

Quantity II: Required amount =  $50 \times 0.4 = 20$

Clearly, Quantity I = Quantity II

36. (c)

$$\frac{6164}{26879} \cdot 100 = 22.93$$

37. (c)

$$\frac{6577 - 4239}{4239} = 55.15\%$$

38. (c)

In December 2018  $\Rightarrow$

$$D = 1.25 \times 9036 = 11295$$

$$D = E$$

$$\% \text{ required} = \frac{11295 - 7643}{7645} \cdot 100$$

$$= 47.74\%$$

39. (b)

$$\frac{13614}{37001} \cdot 100 = 36.79\%$$

40. (a)

$$1120.35 + 8001.7 + 9212.65 + 10391.4 + 8791.75 \\ = 47677.85$$

### Logical Reasoning

1. (d)

Argument I is strong because consumers should also share some burden. Argument II is also strong because increase in the price of petroleum products will increase the price of many other commodities.

2. (a)

Argument I is strong because a large section of employees cannot be ignored. Argument II is not strong because, it does not give any reason behind it.

3. (a)

When a single person is given so many responsibilities, it is possible that he may not concentrate on the main responsibility i.e. teaching. So, argument I is strong. Argument II is not strong because it does not give any reason behind it.

4. (b)

Argument I is not strong due to the word 'only'. Argument II is strong because chances of degrading of the standard of training cannot be ruled out.

5. (c)

Argument I is not strong due to the word 'only'. Argument II is not strong because such parents are increasing illiteracy, so they should be fined.

6. (d)

Both the assumptions are implicit because after this appeal may residents may reduce consumption of potable water and many activities may welcome this move.

7. (d)

Both the assumptions are implicit because company officials may be able to make all the necessary preparations for the silver jubilee celebrations and majority of guest invited by the chairman may attend the function.

8. (b) Assumptions I is not implicit because the notice board was put after assuming its positive response. Assumptions II is implicit because the traffic police department may be able to nab most of the offenders and impound their licences.

9. (a)

After seeing that heavy penalty was imposed on those who were trying to cross the railway track, people may refrain from crossing railway track in future. So, assumption I is implicit while II is not because no one wants to pay hefty penalty.

10. (c)

Assumption I is going against the statement, so it is not implicit. Assumption II is not implicit due to the word 'all'.

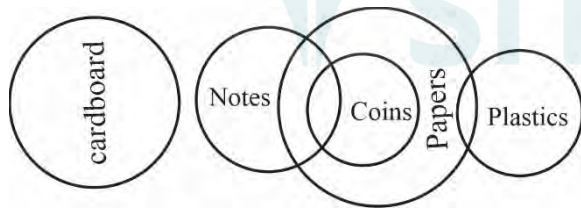
11. (a)

Assumption I is implicit because government assumes that heatwaves may not continue beyond a fortnight. Assumption II is not correlated with the statement, so it is not implicit.

12. (d)

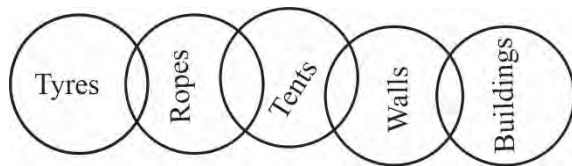
The government has made that announcement because it has adequate funds to run these programmes. By these programmes, affected people may be able to get at least one meal a day. So, both the assumptions are implicit.

13. (a)

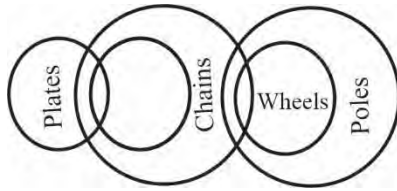


So, only I follow

14. (a)

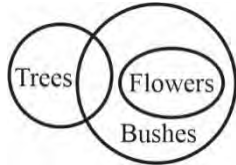


15. (c)



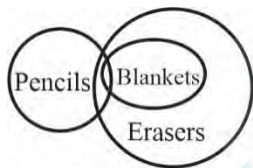
16. (a)

According to the statements Venn-diagram is



17. (a)

According to the statements, Venn-diagram is



I. Atleast some pencils are erasers. (True)

II. All erasers being pencils is a possibility. (False)

18. (a)

The density of sea water is higher as compared to river water, so when a ship enters the sea from a river, it rises. So, both A and R are true and R is the correct explanation A.

19. (d)

A person with blood group O is considered a universal donor. So, (A) is false and (R) is true because group O blood does not contain any antigens.

20. (a)

When plaster of Paris sets into a hard mass, it keeps the fractured bones in a fixed position which helps them to rejoin. So, it is used by doctors. Both (A) and (R) are true and (R) is the correct explanation of (A)

21. (a)

The body of fish is streamlined which helps it to cut its way through the water.

22. (c)

Md. Nabi step down from his captaincy of ODI and T20 teams and Md. Nabi has actually batted better as captain is one effects independent causes.

23. (a)

Many people are opting for change from private sector to public sector because worldwide recession has created uncertainty in the job market. It is considered that public sector jobs are more certain than the private sector jobs. So, statement (A) is the cause while statement (B) is the effect.

24. (b)

As government has imposed ban on government school teacher on joining private coaching classes, so local teachers, union has called the one day strike against it. So, statement (B) is the cause and statement (A) is its effect.

25. (d)

Course of action I is desirable on the basis of humanity. Course of action II will help for long time means helpful for future.

26. (b)

Course of action I does not make sense as any kind of imposition because of negative effect. Course of action II is likely to help things improve.

27. (b)

Reasons should be detected for the loss. Privatization of Indian Airlines is not a guarantee of making it profitable organization. So, action I does not follow but action II follows, because it must curb its expenditure.

Solution for question 28 to 30: From the given information we get the following result.

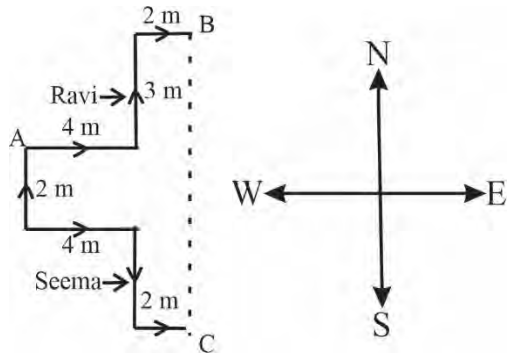
Task	P	Q + S	R + S	S	T
Time	9 am – 11 am	11 am – 12 noon	12 noon – 1 pm	1 pm – 2 pm	2 pm – 3 pm

28. (c) Vijay would complete work R by 1 pm

29. (c) T can start at 2 pm

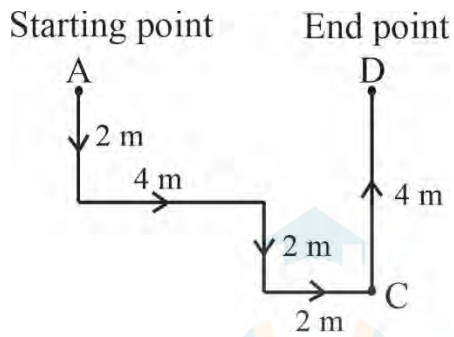
30. (b) Vijay can complete all the tasks by 3 pm

31. (d)



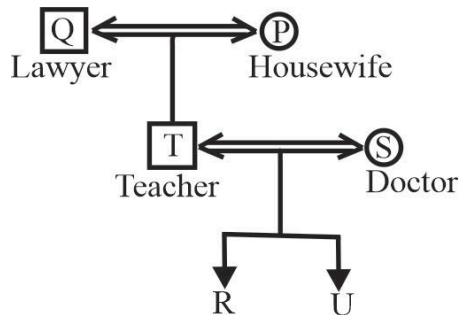
From the figure, it is clear that Ravi has to cover the distance BC in the South direction to reach at C.

32. (c)



Required distance =  $AD = (4 + 2)m = 6m$

From the given information, we can draw the following family tree.



33. (d)

P is the grandmother of R

34. (a)

P is the housewife

35. (b)

$$Q > S > T$$

R is heavier than only P. it means that P is the lightest and R is the second lightest

So, final order of weight is

$$Q > S > T > R > P$$

So, Q is the heaviest.

36. (a)

$$1^3 - 1 \quad 3^3 - 3 \quad 5^3 - 5$$

**Solution:** (Q. Nos. 37 and 38)

@ means '>'

# means '<'

& means '≠'

% means '='

37. (c) Given,  $3M \% 2N$  and  $N \% 30$

$$= 3M = 2N \text{ and } m = 30$$

$$= 3M = 2N \text{ and } N = 30$$

$$= 3M = 2 \times 30$$

$$= 20 = M$$

$$= 20\% M$$

38. (a)  $N@P$ ,  $P\#O$ ,  $O@M$  and  $N\%M$

$$= N > P, P < O, O > P \text{ and } N = M$$

$$= N > P < O > M = N$$

$$= O > M = N$$

$$= O > N$$

$$= O @ N$$

39. (a) The sale of liquor was high due to the Holi which is a dry day so, (b) is the cause and (A) is its effect.

40. (d) Bulb filament is made from tungsten because it has very high melting point so both (A) and (R) are false.

### General English

1. (a)

As we are talking about mobility here, a positive word is required. Hence, benefits is the most appropriate.

2. (d)

With age 'at' is used. Also, the past tense verb is required here.

3. (a)

In the first blank, we require a word which means 'important' or significant. Hence, central is appropriate here.

4. (b)

As per the context of the sentence, if we are using the word 'annotations' here then transcriptions is the only word makes sense here meaningfully.

5. (a)

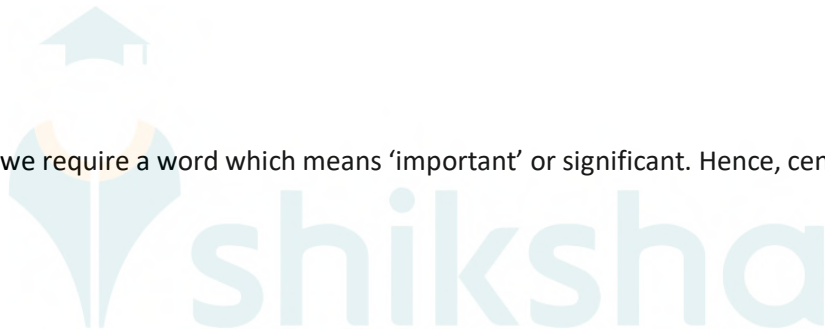
Touch-and-go means to have an uncertain and possibly bad result

6. (d)

Red tapism is an idiom referring to regulations or conformity to formal rules or standards.

7. (a)

As per the given sentence, point of view of the consumers is more correct.



8. (d)

No correction is required here, as the sentence is correct as it is.

9. (b)

As 'seeds' is the plural subject here, there is a requirement of plural verb only.

10. (b)

Combined with must be used here instead of combined by.

11. (c)

Among is not used when talking about two parties. Between should come in place of among.

12. (b)

Magical and enchanted are both synonym pairs.

13. (c)

Blast and whomp are synonym pairs. Other options have no link.

14. (d)

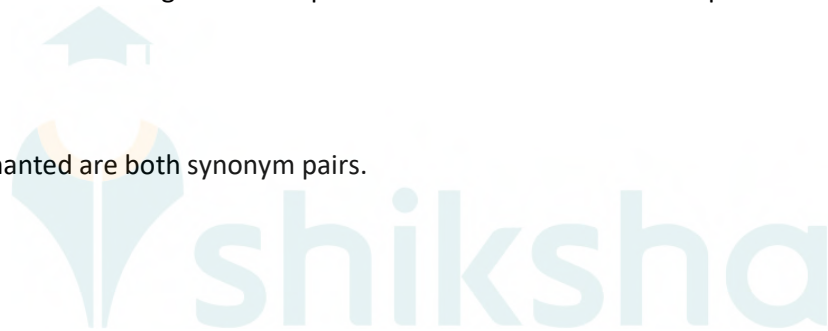
Juggle means to cause to believe what is untrue. With respect to its meaning, hustle is the most appropriate here.

15. (d)

Gargantuan means usually large. Monumental also means the same. Hence, D is correct.

16. (a)

Lengthen means to extend whereas abbreviate means to cut short.



17. (a)

Omnifarious means comprising or relating to all sorts or varieties.

18. (b)

Mono is the root word which means single. Mania means a serious mental illness that may cause somebody to be very excited or violent. Hence, the correct answer must be Monomania.

19. (d)

Following the flow of information and ideas, it can be easily deduced that PQRS is the most appropriate sequence here.

20. (c)

S states the date on which earthquake shook the nearby island and other statements take forward the narration.

