# PRACTICE SET-1

## REASONING ABILITY

1. If 'P × Q' means 'P is the daughter of Q'; 'P + Q' means 'P is the father of Q'; 'P ÷ Q' means 'P is the mother of Q' and 'P – Q' means 'P is the brother of Q', then in the expression A ÷ B + C – E × F, how is A related to F?
   (a) Mother
   (b) Aunt
   (c) Sister-in-law
   (d) ?
   (e) None of these

2. If 'P $ Q' means 'P is father of Q'; 'P ≠ Q' means 'P is mother of Q'; 'P * Q' means 'P is sister of Q', then how is D related to N in N # A $ B * D?
   (a) Nephew
   (b) Grandson
   (c) Grand daughter
   (d) Data inadequate
   (e) None of these

3. In a certain code language, AUSTRALIA is written as @$!#^@*?@. How is "STRAIT" written in that code language?
   (a) !#^@?#
   (b) !#@^?#
   (c) !#^?@#
   (d) !#^@#?
   (e) None of these

4. In a certain code language, "ENERGETIC" is written as "ETICGENER". How is "CARTRIDGE" written in that code language?
   (a) IDGESCART
   (b) IDGERCRAT
   (c) IDEGRCART
   (d) IDGERCART
   (e) None of these

5. Identify the diagram that best represents the relationship among the given classes.
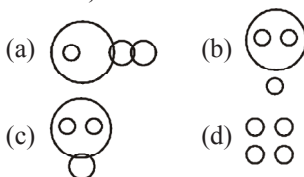
Food Supplement, Bournvita, Horlicks.
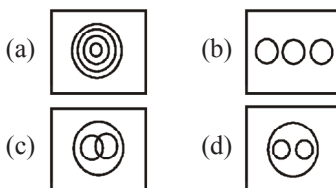
(a)
(b)
(c)
(d)

(e) None of these

6. Identify the diagram that best represents the relationship among the given classes.
   Football, Volleyball, Outdoor Games, Carrom.

(a)
(b)
(c)
(d)

(e) None of these

7. Ankit walks 17 km towards east. He turns left and walks 17 km. He turns left again and walks 24 km to reach point A. What is the straight line distance (in km) between the starting point and point A?
   (a) $13\sqrt{2}$
   (b) $14\sqrt{4}$
   (c) $4\sqrt{2}$
   (d) $11\sqrt{2}$
   (e) None of these

8. Two horse drawn wagons start from the same farm. Wagon X travels South 4.5 km and then turns right and travels 7.5 km. In the meanwhile wagon Y travels 9 km North, then 3.5 km West, then 2 km North , then it turns left and travels 4 km. Where is wagon Y with respect to wagon X?
   (a) 6.5 km North
   (b) 15.5 km North
   (c) 15.5 km South
   (d) 6.5 km South
   (e) None of these

9. Rashmi is 14th from the right end in a row of 40 girls. What is her position from the left end?
   (a) 25th
   (b) 27th
   (c) 21st
   (d) 24th
   (e) None of these

10. Lakshmi is elder than Meenu. Leela is elder than Meenu but younger than Lakshmi. Latha is younger than both Meenu and Hari but Hari is younger than meenu. Who is the youngest?
    (a) Lakshmi
    (b) Meenu
    (c) Leela
    (d) Latha
    (e) None of these

11. In a certain code language, "TRAIN" is written as "NIART". How is "SCOOTER" written in that code language?
    (a) RETOOCS
    (b) RETOCSO
    (c) RETSCOO
    (d) SCOORET
    (e) None of these

12. In a certain code language, "GASTRIC" is written as "UCIREKT". How will "DECEIVE" be written in that code language ?
    (a) ACBCCTG
    (b) ACACCTG
    (c) EGFCGXK
    (d) BFCCTGL
    (e) None of these

13. In the following question, which one set of letters when sequentially placed at the gaps in the given letter series shall complete it?
    K_L_K_LN_M_N
    (a) MNMLK
    (b) NMMLK
    (c) MNMKL
    (d) MLNKM
    (e) None of these

14. **A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.**
    **Universe, Galaxy, Solar System, ?**
    (a) World
    (b) India
    (c) Continent
    (d) Sub-continent
    (e) None of these

15. **A series is given with one term miss-ing. Select the correct alternative from the given ones that will complete the series.**
    **ADG, ILO, QTW, ?**
    (a) YBE        (b) ZBD
    (c) PRT        (d) BCD
    (e) None of these

16. **A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.**
    **BMX, DNW, FOV, ?**
    (a) HPU        (b) HPV
    (c) HIV        (d) TPU
    (e) None of these

17. **A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.**
    **10, 30, 120, ?**
    (a) 624        (b) 600
    (c) 625        (d) 670
    (e) None of these

18. **Naman left for his office in his car. He drove 15 km towards North and then 10 km towards West. Then he turned to the South and covered 5 km. Further he turned to the East and moved 8 km. Finally he turned right and drove 10 km. How far and in which direction is he from his starting point?**
    (a) 2 km West
    (b) 4 km East
    (c) 3 km North
    (d) 7 km South-East
    (e) None of these

**Directions (Q. Nos. 19–23) : Study the following information carefully and answer the given questions :**

Four players A, B, C and D are holding 4 cards each. Each of them has an Ace, a King, a Queen and a Jack. All of them have all the suits (spades, hearts, clubs and diamonds).
    (i) A has Ace of spades and Queen of diamonds.
    (ii) B has Ace of clubs and King of diamonds.
    (iii) C has Queen of clubs and King of spades.
    (iv) D has Jack of clubs.

19. **Ace of diamonds is with**
    (a) A          (b) B
    (c) C          (d) D
    (e) None of these

20. **Jack of hearts is with**
    (a) A          (b) B
    (c) C          (d) D
    (e) None of these

21. **Queen of spades is with**
    (a) A          (b) B
    (c) C          (d) D
    (e) None of these

22. **C has which of the following with him?**
    (a) Ace of hearts
    (b) Jack of spades
    (c) King of hearts
    (d) Queen of spades
    (e) None of these

23. **D has which of the following with him ?**
    (a) Ace of hearts
    (b) Queen of hearts
    (c) King of hearts
    (d) Queen of clubs
    (e) None of these

**Directions (24–29): Each of the questions below consists of a question and two statements numbered I and II or I–III given below it. You have to decide whether the data provided in the statements are sufficient to answer the question.**
**Read both the statements and give answer :**
    (a) If the data in statement I alone are sufficient to answer the question, while the data in statement II alone are not sufficient to answer the question.
    (b) If the data in statement Ii alone are sufficient to answer the question, while the data in statement I alone are not sufficient to answer the question.
    (c) If the data given in both statement I and Ii together are not sufficient to answer the question, and
    (d) If the data in both statements I and II together are necessary to answer the question.
    (e) If the data in both statements I and II together are necessary to answer the question.

24. **What is the colour of the fresh grass?**
    I. Blue is called green, red is called orange, orange is called yellow.
    II. Yellow is called white, white is called black, green is called brown and brown is called purple.

25. **What is the code of 'mangoes' in the code language?**
    I. In the code language, "Te Le Pa Na' means you eat many mangoes' and 'Le Na Da' means you sen mangoes'.
    II. In the code language, 'Ge Na Se La le code language, 'Ge Na Se La Le' means "They eat bananas and mangoes' and 'Ne De Le La means 'Who others eat bananas'.

26. **How many girls are taller than Shravan in his class?**
    I. When students of Shravan's class are ran descending order of their heights. Shravan's rank is 17th from the top among all the students and among boys.
    II. Sharvan's rank from the bottom on the basis of height among boys is 18th and among all students, 29th.

27. **How many children are there in the row?**
    I. Manoj is twelfth from the left end and fourth to the left of Hari in that row.
    II. Hari is eighth from the right end of that row.

**28.** What is Sumit's rank from the top in a class of 50 students ?
 I. Ajay is 6 ranks below Sumit and is twenty-ninth from the bottom.
 II. Ashu is 4 ranks above Sumit and is thirty-fifth from the bottom.

**29.** If "S" denotes "multiplied by", "V" denotes "subtracted from", "M" denotes "added to"and "L" denotes "divided by", then 36 L 9 S 8 V 7 M 5 = ?
 (a) 32          (b) 25
 (c) 37          (d) 30
 (e) None of these

**30.** If "A" means "subtraction", "B" means "division", "C" means "addition" and "D" means "multiplication", then
 411 B 3 A 29 C 53 D 20 = ?
 (a) 1169        (b) 1156
 (c) 1168        (d) 1163
 (e) None of these

**31.** lf "$" means "added to", "@" means "divided by", "#" means "multiplied by" and "%" means "subtracted from", then,
 136 @ 17 # 0 $ 19% 5 = ?
 (a) 67          (b) 24
 (c) 14          (d) 23
 (e) None of these

**32.** If "#" means "subtraction", "&" means "division", "@" means "addition" and "%" means "multiplication", then
 516 & 6 # 11 @ 50 % 4 = ?
 (a) 210         (b) 274
 (c) 250         (d) 275
 (e) None of these

**33.** If "S" denotes "multiplied by", "V" denotes "subtracted from", "M" denotes "added to" and "L" denotes "divided by", then
 96 L 12 S 7 V 49 M 10 =?
 (a) 18          (b) 20
 (c) 21          (d) 17
 (e) None of these

**34.** Arrange the given words in the sequence in which they occur in the dictionary.
 (i) Drama        (ii) Dramatical
 (iii) Dramaticism (iv) Dramality
 (v) Dramatise

 (a) i, iv, ii, iii, v    (b) i, iv, ii, v, iii
 (c) i, iv, v, iii, ii    (d) iv, i, v, iii, ii
 (e) None of these

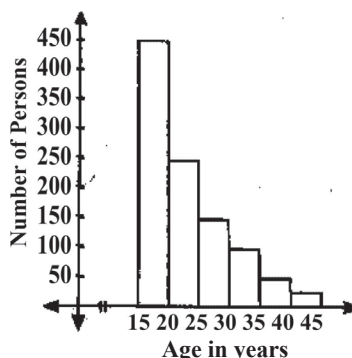**35.** Arrange the given words in the sequence in which they occur in the dictionary.
 1. Lighten          2. Liftoff
 3. Lemonade         4. Leisure
 5. Ladies
 (a) 32451           (b) 21345
 (c) 13245           (d) 54321
 (e) None of these

## NUMERICAL ABILITY

**36.** 29 is 0.8% of ?
 (a) 3625          (b) 1450
 (c) 7250          (d) 10875
 (e) None of these

**Directions (Q. Nos. 37-40):** Study the fol lowing histogram and answer the questions.



**37.** The total number of persons in the age group of 15 years to 45 years is:
 (a) 450           (b) 800
 (c) 1000          (d) 500
 (e) 600

**38.** The number of persons in the age group 20 – 30 years is :
 (a) 475           (b) 400
 (c) 300           (d) 700
 (e) 250

**39.** The ratio of the number of persons between the age group of 20 – 25 and 30 – 35 is :
 (a) 1 : 3          (b) 2 : 1
 (c) 10 : 3         (d) 6 : 1
 (e) None of these

**40.** The ratio of maximum population in an age group to the total number of persons under study is :
 (a) 4 : 5          (b) 9 : 10
 (c) 9 : 20         (d) 2 : 5
 (e) 8 : 9

**41.** The least number by which 72 must be multiplied in order to produce a multiple of 112, is:
 (a) 6             (b) 12
 (c) 14            (d) 18
 (e) None of these

**42.** The ratio of salary of U, V and W is 8 : 7 : 13. If W gets ₹ 3384 more than that of V, then what is the salary (in ₹) of U?
 (a) 4432          (b) 4512
 (c) 4642          (d) 5144
 (e) 4612

**43.** An 80 litre mixture of water and acid contains 20% acid. How much acid should be added to make the acid 60% in the new mixture?
 (a) 60            (b) 80
 (c) 70            (d) 90
 (e) None of these

**44.** A sum of ₹ 125 is divided among U, V and W in such a way that U gets ₹ 10 more than V and V gets ₹ 5 more than W. What is the ratio of their shares?
 (a) 12 : 10 : 9    (b) 10 : 8 : 7
 (c) 13 : 10 : 7    (d) 5 : 4 : 3
 (e) None of these

**45.** A carpenter can build a cupboard in 48 hours. After 12 hours he takes a break. What fraction of the cupboard is yet to be built?
 (a) 0.4           (b) 0.5
 (c) 0.75          (d) 0.25
 (e) None of these

**46.** Makarand works 2 times as fast as Samarjit. If Samarjit can complete a job alone in 27 days, then in how many days can they together finish the job?
 (a) 6 days         (b) 7 days
 (c) 5 days         (d) 9 days
 (e) None of these

**47.** Murad can do a piece of work in 33 hours. If he is joined by Joel who is 100% more efficient, in what time will they together finish the work?
(a) 4 hours       (b) 6 hours
(c) 2 hours       (d) 11 hours
(e) None of these

**Directions (Q. Nos. 48-52):** What should come in place of the question mark (?) in the following number series?

**48.** 4, 10, 40, 190, 940, ?, 23440
(a) 4690       (b) 2930
(c) 5140       (d) 3680
(e) None of these

**49.** 20, 40, 200, 400, 2000, 4000 ?
(a) 200       (b) 400
(c) 20000       (d) 40000
(e) None of these

**50.** 7, 4, 5, 9, ?, 52.5, 160.5
(a) 32       (b) 16
(c) 14       (d) 20
(e) None of these

**51.** 5, 54, 90, 115, 131, 140
(a) 149       (b) 146
(c) 142       (d) 152
(e) None of these

**52.** 6, 42, ?, 1260, 5040, 15120, 30240
(a) 546       (b) 424
(c) 252       (d) 328
(e) None of these

**53.** If $4x + 5y = 83$ and $\dfrac{4x}{3y} = \dfrac{21}{33}$, then $x + y = ?$
(a) 4       (b) 8
(c) 7       (d) 18
(e) None of these

**54.** Find $x$ if $\dfrac{x}{3} - \dfrac{x}{4} = 5$.
(a) $- 60$       (b) $- 100$
(c) 100       (d) 60
(e) None of these

**55.** If 3 dupattas is offered free on purchase of 6 dupattas priced ₹ 1200 each, what is the effective discount on each dupatta ?
(a) 25 percent
(b) 20 percent
(c) 12.5 percent
(d) 33.33 percent
(e) None of these

**56.** A shopkeeper by selling 20 Timex watches, earns a profit equal to the selling price of 4 Times watches. His profit percentage is :
(a) 20 percent       (b) 25 percent
(c) 40 percent       (d) 15 percent
(e) None of these

**57.** A student multiplied a number by 4/7 instead of 7/4. What is the percentage error in the calculation?
(a) 206.25 percent
(b) 67.35 percent
(c) 33.67 percent
(d) 103.13 percent
(e) None of these

**58.** A trader had 12 quintals of wheat. He sold a part of it at 13% profit and the rest at 23% profit, so that he made a total profit of 17 %. How much wheat did he sell at 23% profit?
(a) 720 kg       (b) 240 kg
(c) 480 kg       (d) 960 kg
(e) None of these

**Directions (Q. Nos. 59-61):** What should come in place of question mark(?) in the following number series?

**59.** $\sqrt{45556} + \sqrt{7943} - 6 = ?$
(a) 100       (b) 150
(c) 200       (d) 250
(e) 125

**60.** $(2198 - 1347 - 403) \div (159 - 113 - 27) = ?$
(a) 15       (b) 24
(c) 37       (d) 49
(e) 53

**61.** (775% of 523) ÷ 777 = ?
(a) 5       (b) 12
(c) 19       (d) 26
(e) 29

**62.** Of the 3 numbers whose average is 112, the first is 3/13 times the sum of other two the first number is ........... .
(a) 63       (b) 95
(c) 42       (d) 126
(e) None of these

**63.** On dividing $256a^2b^2c^2$ by $64a^2$, we get
(a) $2c^2$       (b) $2b^2$
(c) 4       (d) $4b^2c^2$
(e) None of these

**64.** If $3x - 4 > 2 - x/3$ and $3x + 5 > 4x - 5$; then find the value of $x$?
(a) 7       (b) 10
(c) –11       (d) 1
(e) None of these

**Directions (Q. Nos. 65–67):** In each of these questions, a question is given followed by information in three statements. You have to find out the data in which statement (s) is sufficient to answer the question and mark your answer accordingly.

**65.** What is the average age of the six members A, B, C, D, E and F in the family?
  I.  Total age of D and E is 14 yr.
  II.  Average age of A, B, C and F is 50 yr.
  III.  Average age of A, B, D and E is 40 yr.
(a) Both I and II
(b) Both I and III
(c) Both II and III
(d) All I, II and III
(e) None of these

**66.** What is the area of the right angled triangle?
  I.  Base of the triangle is X cm.
  II.  Height of the triangle is Y cm.
  III.  Hypotenuse of the triangle is Z cm.
(a) Both I and II
(b) Only II
(c) Both II and III
(d) Any two of three
(e) None of these

**67.** In how many days will B alone complete the work?
  I.  A and B together can complete the work in 8 days.
  II.  B and C together can complete the work in 10 days.
  III.  A and C together can complete the work in 12 days.
(a) Both I and II
(b) Both II and III
(c) All I, II and III

(d) Question cannot be answered even with the information in all the three statements

(e) None of these

**68.** **To travel 648 km, an Express train takes 12 hours more than Rajdhani. If however, the speed of the Express train is doubled, it takes 6 hours less than Rajdhani. The speed of Rajdhani is ...............**

(a) 36 km/hr          (b) 18 km/hr

(c) 45 km/hr          (d) 54 km/hr

(e) None of these

**69.** **A bank offers 10% compound interest per half year. A customer deposits ₹ 2000 each on 1st January and 1st July of a year. At the end of the year, the amount he would have gained by way of interest is :**

(a) ₹ 1240          (b) ₹ 310

(c) ₹ 155          (d) ₹ 620

(e) ₹ 253

**70.** **Jar A contains 78 L of milk and water in the respective ratio of 6 : 7. 26 L of the mixture was taken out from jar A. What quantity of milk should be added to jar A, so that water constitutes 40% of the resultant mixture in jar A?**

(a) 8 L          (b) 361 L

(c) 12 L          (d) 14 L

(e) 18 L

## ENGLISH LANGUAGE

**Directions (Q. Nos. 71–74) : In each of the following questions some of the sentences have errors and some are correct. Find out which part of a sentence has an error and blacken the option corresponding to it (a,b,c). If a sentence is free from errors, then your answer is (d) i.e. No error and if all have errors answer is (e).**

**71.** The way to increase the production of the food (a)/ is to bring more land (b)/ under cultivation. (c)/ No error. (d)/ All have errors (e)

**72.** The girls watched intently (a)/ as the model applied her make up (b)/ with a practiced hand. (c)/ No error. (d)

**73.** If he is a millionaire (a)/ he would help (b)/ the millennium project. (c)/ No error. (d)/ All have errors (e)

**74.** The Prime Minister along with his Cabinet colleagues (a)/ have been welcomed by the Chief Minister (2)/ at a formal ceremony. (c)/ No error. (d)/ All have errors (e)

**Directions (Q. Nos. 75–78): In each question, a part of sentence is printed in italics. Below each sentence, some phrases are given which can substitute the italicised part of the sentence. Find out the phrase which can correctly substitute that part of the sentence. If the sentence is correct as it is, the answer is 'No correction required' or 'No improvement.**

**75.** **People are *tiring* very soon in an activity which they don't like.**

(a) tried          (b) trying

(c) tired          (d) trying

(e) No improvement

**76.** ***All his family members* are in Kanpur.**

(a) All of his family members

(b) All the family members of his

(c) All the members of his family

(d) No correction required

(e) None of these

**77.** **On hearing the loud noise, he stopped and *got down from* his bicycle.**

(a) got from

(b) got down

(c) got off

(d) No improvement

(e) None of these

**78.** **They felt humiliated because they realised that they *had cheated*.**

(a) had been cheating

(b) had been cheated

(c) have been cheated

(d) were to be cheated

(e) No correction required

**Directions (Q. Nos. 79-80) : Choose the correct synonym for the word given in capital letters.**

**79.** **ACCUSE**

(a) Absolve          (b) Exonerate

(c) Vindicate          (d) Impeach

(e) None of these

**80.** **UNICONSCIONABLE**

(a) Distasteful

(b) Unmanageable

(c) Excessive

(d) Unmindful

(e) None of these

**Directions (Q. Nos. 81-85): In each of the items in this section, there is a sentence of which some parts have been jumbled up. You are required to rearrange these parts which are labelled P, Q, R and S to produce the correct sentence. Choose the proper sequence.**

**81.** **If you need help <u>promptly and politely</u>**
   **P**
<u>ask for attendants</u> <u>to help our customers</u>
   **Q**                    **R**
<u>who have instructions</u>.
   **S**

   **The proper sequence should be**

(a) SQPR          (b) QPSR

(c) QSRP          (d) SQRP

(e) None of these

**82.** **He was so kind and generous that <u>he not only</u> <u>made others do so</u>**
                    **p**          **Q**
<u>but also</u> <u>helped them himself</u> .
   **R**                    **S**

   **The proper sequence should be**

(a) PSRQ          (c) SPQR

(c) PRSQ          (c) QPRS

(e) None of these

**83.** **People <u>at his dispensary</u> <u>went to him</u>**
                    **P**          **Q**
   <u>of all professions</u>
            **R**
   <u>for medicine and treatment</u>.
            **S**

   **The proper sequence should be**

(a) QPRS          (b) RPQS

(c) RQSP          (d) QRPS

(e) None of these

**84.** **Little <u>that he had been let down</u>**
                    **P**
   <u>stood by all these years</u>
            **Q**
   <u>did he realize</u> <u>by a colleague</u>
            **R**
   <u>whom he had</u>.
            **S**

Froper sequence should be

(a) RPSQ      (b) RSQP

(c) QSRP      (d) QSPR

(e) None of these

85. There was <u>needed for its everyday life</u>
                        **P**

    <u>a time when each family</u>
               **Q**

    <u>for itself most of the things it</u>
                  **R**

    <u>actually produced</u>.
            **S**

The proper sequence should be

(a) QRSP      (b) RQPS

(c) RSPQ      (d) QSRP

(e) None of these

**Direction (Q. Nos. 86–90): Read the passage given below and then answer the questions that follow.**

Today perhaps your only association with the word 'polio' is the Sabin Oral Vaccine that protects children from the disease. Fifty-five years ago, this was not so. The dreaded disease, which mainly affects the brain and the spinal cord, causes stiffening and weakening of the muscles, crippling and paralysis–which is why I am in a wheelchair today. If somebody had predicted, when I was born, that this would happen to me, no one would have believed it. I was the seventh child in a family of four pairs of brothers and sisters, with a huge 23 year gap between the first and the last. I was told that, unlike the others, I was so fair and brown-haired that I looked more like a foreigner than a Dawood I was also considered to be the healthiest of the brood.

86. In this passage, the word 'brood' refers to

(a) polio victims

(b) foreign children

(c) children in the family

(d) Indian children

(e) None of these

87. In his childhood, the narrator said "more like a foreigner than a Dawood Bohri". This was because he was

(a) a foreign child

(b) a very healthy boy

(c) tall and smart

(d) fair and brown-haired

(e) none of these

88. The narrator was the seventh child in a family of

(a) 8 children

(b) 16 children

(c) 23 children

(d) 4 children

(e) None of these

89. In this passage, the narrator is a patient of

(a) heart disease

(b) polio

(c) paralysis

(d) nervous weakness

(e) None of these

90. In his childhood, the narrator was

(a) a weakling

(b) very healthy

(c) tall and slim

(d) short and stout

(e) none of these

**Direction (Q. Nos. 91–95): Rearrange the given five sentences A, B, C, D and E in the proper sequence so as to form a meaningful paragraph and then answer the questions given below them.**

(A) The decision to end this agreement and begin a fresh one was taken at the meeting of the working group of the two countries.

(B) Indo-Polish trade will be conducted in convertible currency from January 1 next year.

(C) The two countries have decided to sign a new trade agreement, to be effected to convertible currency.

(D) A final agreement in this regard is expected to be signed soon.

(E) This follows the expiry of the existing rupee trade agreement from December 31, this year.

91. Which sentence should come third in the paragraph?

(a) E          (b) A

(c) D          (d) C

(e) B

92. Which sentence should come first in the paragraph?

(a) E          (b) A

(c) D          (d) C

(e) B

93. Which sentence should come last in the paragraph?

(a) E          (b) A

(c) D          (d) C

(e) B

94. Which sentence should come second in the paragraph?

(a) E          (b) A

(c) D          (d) C

(e) B

95. Which sentence should come fourth in the paragraph?

(a) E          (b) A

(c) D          (d) C

(e) B

**Direction : (Q. No. 96) In the following question, choose the alternative which is opposite in meaning to the given word.**

96. **IGNORE**

(a) Support      (b) Favour

(c) Redress      (d) Accept

(e) None of these

**Direction (Q. Nos. 97–100): In the given passage, there are blanks, each of which has been numbered. Against each four or five words are suggested, one of which fits the blank appropriately. Find the appropriate word in each case.**

Apple's market share ...97.., in part because some ...98... were holding off their iPad purchase ...99... the third quarter expecting Apple to release a new, smaller tablet – the iPad Mini, which went ...100... sale last week.

97. (a) disapprove    (b) dismiss

(c) declined      (d) reject

(e) deny

98. (a) service      (b) consumers

(c) regular      (d) seller

(e) always

99. (a) after        (b) pending

(c) around      (d) during

(e) before

100. (a) on         (b) in

(c) at         (d) as

(e) into

# Answers with Explanations

## REASONING ABILITY

**1.** (e) $A \div B + C - E \times F$ means A is the mother of B, who is the father of C, who is the 14 brother of E, who is the daughter of F. Thus, C and E are the children of B and F. Since B is the father, so F is the mother of C and E i.e. F is the wife of B. A is the mother of F's husband i.e. A is the mother-in-law of F.

**2.** (d) N # A $ B * D means N is the mother of A, who is the father of B, who is the sister of D. Thus, D is the son or daughter of A and N is the mother of A.

So, D is the grandson or grand-daughter of N.

**3.** (a) As, A U S T R A L I A
$\downarrow \downarrow \downarrow \downarrow \downarrow \downarrow \downarrow \downarrow \downarrow$
@ $ ! # ^ @ * ? @

Similarly, S T R A I T
$\downarrow \downarrow \downarrow \downarrow \downarrow \downarrow$
! # ^ @ ? #

Finally, 'STRAIT' is written in code Language as !#^@?#.

**4.** (d) As,

E N E R G E T I C
E T I C G E N E R

Similarly,

C A R T R I D G E
I D G E R C A R T

Finally, 'CARTRIDGE' is written as 'IDGERCART' in code language.

**5.** (d) Bournvita and Horlicks, both are food supplement then

Horlicks ── Food supplement
── Bournvita

**6.** (b)

Outdoor Games
(Football) (Volleyball)   (Carrom)
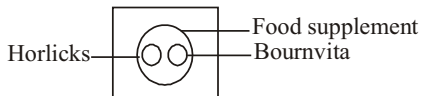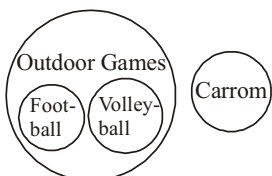
Football and Volleyball are outdoor games, but Carrom is indoor game.

**7.** (a)
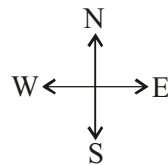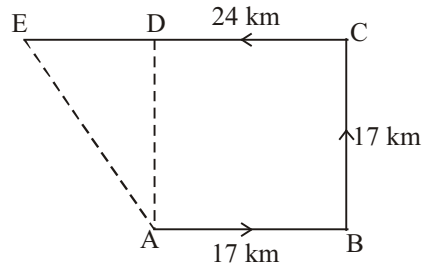


$$BC = A D = 17 \text{ km}$$
$$EC = 24 \text{ km}$$
$$(ED + CD) = 24 \text{ km}$$
$$ED = (24 - 17)$$
$$= 7 \text{ km}$$

In $\triangle ADE$,
$$AE^2 = ED^2 + AD^2$$
$$= (7)^2 + (17)^2$$
$$= 49 + 289$$
$$= 338$$
$$AE = \sqrt{338}$$
$$= 13\sqrt{2} \text{ km}$$

**8.** (b)
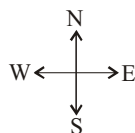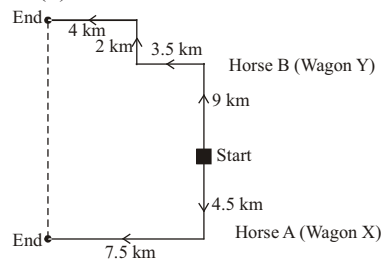


The required distance
$$= (4.5 + 9 + 2) \text{ km} = 15.5 \text{ km}$$
Hence the wagon Y is 15.5 km North with respect to wagon X.

**9.** (b) Required position $= (40 + 1 - 14)$
$= 27$th

**10.** (d) According to the question,
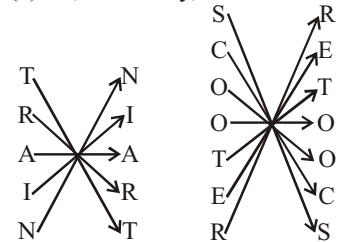Lakshmi > Meenu
Lakshmi > Leela > Meenu
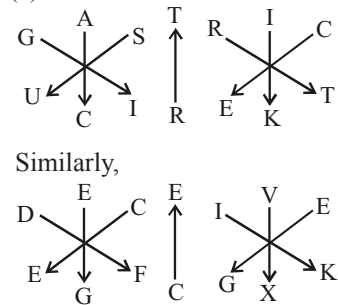Meenu > Hari > Latha
On arranging the above data, we get
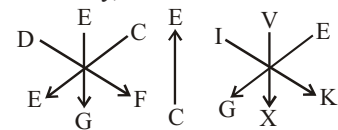Lakshmi > Leela > Meenu > Hari > Latha
Hence, Latha is the youngest.

**11.** (a) As,    Similarly,



**12.** (c)



Similarly,



Finally, 'DECEIVE' is written as 'EGFCGXK'.

**13.** (c)

K M L N / K M L N / K M L N
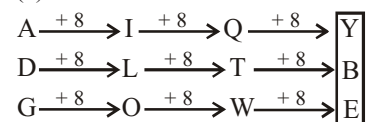
∴ Series become KMLN KMLN KMLN
Finally, the set of letters MNMKL will complete the series.

**14.** (a) The Series is:
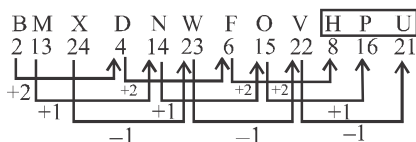Universe, Galaxy, Solar System, World.
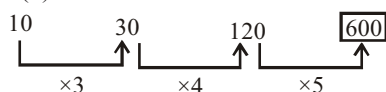Finally, "World" will complete the series.

**15.** (a)

A $\xrightarrow{+8}$ I $\xrightarrow{+8}$ Q $\xrightarrow{+8}$ Y
D $\xrightarrow{+8}$ L $\xrightarrow{+8}$ T $\xrightarrow{+8}$ B
G $\xrightarrow{+8}$ O $\xrightarrow{+8}$ W $\xrightarrow{+8}$ E

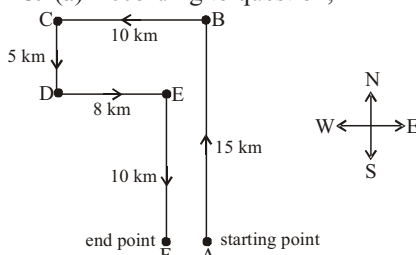Finally, the missing term is YBE.

**16.** (a)



Finally, the missing term is HPU.

**17.** (b)



The missing term is 600.

**18.** (a) According to question,



Clearly, A and F lie in the same straight line and F lies to the West of A.

Therefore, Naman's distance from the starting point A.

AF = (BC − DE) = (10 − 8) km = 2 km.

**[Hints 19–23]:** According to the given information:

Four suits → spades, hearts, clubs and diamonds From (i), we get

A $\xrightarrow{has}$ Ace of Spades and Queen of diamonds

From (ii), we get

B $\xrightarrow{has}$ Ace of clubs and king of diamonds.

From (iii), we get

C $\xrightarrow{has}$ Queen of clubs and king of spades.

From (iv), we get

D $\xrightarrow{has}$ Jack of clubs

So, A $\xrightarrow{has}$ king of clubs, Ace of spades and Queen of diamonds.

C $\xrightarrow{has}$ Ace of hearts, king of spades and queen of clubs.

[∵ A $\xrightarrow{has}$ Jack of hearts]

B $\xrightarrow{has}$ Ace of clubs, king of diamonds and Queen of hearts.

[∵ C $\xrightarrow{has}$ Jack of Diamonds, B $\xrightarrow{has}$ Queen of hearts]

By elimination, we get

D $\xrightarrow{has}$ Ace of Diamonds, Jack of clubs, king of hearts and Queen of spades.

| Player | Suit | | | |
|--------|--------|--------|-------|----------|
| | Spades | Hearts | Clubs | Diamonds |
| A | Ace | Jack | King | Queen |
| B | Jack | Queen | Ace | King |
| C | King | Ace | Queen | Jack |
| D | Queen | King | Jack | Ace |

**19.** (d) By analysing the above table, we get

*Ace of diamonds* $\xrightarrow{With}$ *D.*

**20.** (a) By analysing the above table, we get

*Jack of Hearts* $\xrightarrow{With}$ *A.*

**21.** (d) By analysing the above table, we get

*Queen of spades* $\xrightarrow{With}$ *D.*

**22.** (a) By analysing the above table, we get

*C* $\xrightarrow{has}$ *Ace of hearts*

**23.** (b) By analysing the above table, we get

*D* $\xrightarrow{has}$ *king of heart.*

**24.** (b) Colour of the fresh grass → 'green'.

From statement I:

Blue $\xrightarrow{called}$ green; red $\xrightarrow{called}$ orange; orange $\xrightarrow{called}$ yellow.

But there is no information regarding 'green'.

So, statement I alone is not sufficient.

From statement II : in o ro

Yellow $\xrightarrow{called}$ white: white $\xrightarrow{called}$ black; green called brown; brown $\xrightarrow{called}$ purple.

So, colour of the fresh grass- brown'.

So, statement II alone is sufficient.

**25.** (e) From statement I:

| Code | Word |
|------|------|

Te Le Pa Na → You eat many mangoes...(i)

Le Na Da → You sell mangoes. ... (ii)

From (i) & (ii), we get

Le Na $\xrightarrow{word}$ You mangoes.

So, statement I alone is not sufficient.

From statement II:

| Code | Word |
|------|------|

Ge Na Se La Le → They eat bananas and mangoes. ...(iv)

Ne De Le La → Who others eat bananas. ...(v)

From (iii) & (iv), we get

La Le $\xrightarrow{word}$ eat bananas.

So, statement II alone is not sufficient.

From (i) & (v), we get

Common code → 'Le'.

Common word → 'eat'.

So, "Le' $\xrightarrow{word}$ 'eat'. ...(vii)

From (i) & (iv), we get

Le na $\xrightarrow{word}$ eat mangoes. ...(viii)

Using (vii) in (viii), we get

'na' $\xrightarrow{word}$ 'mangoes'.

Therefore, the data in both statements I and II together are necessary to answer the given question.

**26.** (a) From statement I:

Shravan's rank from the top among all the students = 17th.

So, total number of students taller than Shravan = (17 − 1) = 16.

Shravan's rank from the top among boys = 12th.

So, total number of boys taller than Shravan = (12-1) = 11.

So, required number of girls taller than Shravan = 16 − 11 = 5.

So, statement I alone is sufficient.

From statement II :

Shravan's rank from the bottom among boys = 18th.

Shravan's rank from the bottom among all students = 29th

But there is no information regarding ranks from the top or total number of students in the class.

So, it is not possible to find the number of girls taller than Shravan.

So, statement II alone is not sufficient.

Therefore the data in statement I alone are sufficient to answer the given question.

**27.** (e) From statement I:

Manoj's rank from the left end

= 12th

Hari's rank from the left end

= (12 + 4) or 16th

From statement II :

Hari's rank from the right end = 8th.

From I & II, we get

Total number of children

= (16 + 8) – 1 = 23rd

Therefore, the data in both the statements I and II together are necessary to answer the given question.

**28.** (c) From statement I:

Ajay's rank → 29th from the bottom.

∵ Ajay → 6 ranks below Sumit.

So, Sumit's rank → (29 + 6) or 35th from the bottom.

Therefore, Sumit's rank from the top

= (Total students – Sumit's rank from the bottom) + 1

= (50 – 35) + 1 = 16th.

So, statement I is sufficient

From statement II :

Ashu's rank from the bottom → 3rd

∵ Ashu → 4 ranks above Sumit.

So, Sumit's rank from the bottom → (35 – 4) or 31st.

Therefore, Sumit's rank from the top →

(Total students – Sumit's rank from the bottom) + 1

= (50 – 31) + 1 = 20th.

So, statement II is sufficient. lng Therefore, data in statement I alone or in statement II alone are sufficient to answer the given question.

**29.** (d) S $\longrightarrow$ ṅ
V $\longrightarrow$ –
M $\longrightarrow$ +
L $\longrightarrow$ ÷

∴ 36 L 9 S 8 V 7 M 5

= 36 ÷ 9 × 8 – 7 + 5

= 4 × 8 – 7 + 5

= 32 – 7 + 5

= 37 – 7 = 30

**30.** (c) If

A $\longrightarrow$ –

B $\longrightarrow$ ÷

C $\longrightarrow$ +

and D → ×

then,

411 B 3 A 29 C 53 D 20

= 411 ÷ 3 – 29 + 53 × 20

= 137 – 29 + 53 × 20

= 137 – 29 + 1060

= 1197 – 29

= 1168

**31.** (c)

$ = +
@ = ÷
# = ×
% = —

∴ 136 @ 17 # 0 $ 19% 5

= 36 ÷ 17 × 0 + 19 – 5

= 8 × 0 + 19 – 5

= 14

**32.** (d) If

# $\longrightarrow$ –

& $\longrightarrow$ ÷

@ $\longrightarrow$ +

% $\longrightarrow$ ×

The given expression

516 & 6 # 11 @ 50 % 4

= 516 ÷ 6 – 11 + 50 × 4

= 86 – 11 + 50 × 4

= 86 – 11 + 200

= 286 – 11 = 275

**33.** (d) As,

S → ×
V → –
M → +
L → ÷

then,

96 L 12 S 7 V 49 M 10

= 96 ÷ 12 × 7 – 49 + 10

= 8 × 7 – 49 + 10

= 56 – 49 + 10

= 66 – 49 = 17

**34.** (a) According to dictionary, the arrangement of given words is,

(i) Drama      (iv) Dramality

(ii) Dramatical    (iii) Dramaticism

(v) Dramatise.

**35.** (d) According to dictionary,

(5) Ladies,      (4) Leisure,

(3) Lemonade,   (2) Liftoff,

(1) Lighten

## NUMERICAL ABILITY

**36.** (a) According to question

0.8 of $x = 29$

$\dfrac{0.8}{100} \times x = 29$

$x = \dfrac{29 \times 100}{0.8} = \dfrac{29 \times 1000}{8}$

= 29 × 125 = 3625

**37.** (c) Required number of persons

= 450 + 250 + 150 + 75 + 50 + 25

= 1000

**38.** (b) Required answer

= 250 + 150 = 400

**39.** (c) Required ratio

= 250 : 75

= 10 : 3

**40.** (b) Age group 15–20 → 450

$\Rightarrow \dfrac{450}{500} = \dfrac{9}{10}$

**41.** (c) Required number is divisible by 72 as well as by 112, if it is divisible by their LCM, which is 1008.

**42.** (b) Let the salary of U be ₹ 8$x$

Then,

$$W = 3384 + V$$

$\Rightarrow$     $V - W = -3384$

$\Rightarrow$     $W - V = 3384$

$\Rightarrow$  $13x - 7x = 3384$

$\Rightarrow$       $6x = 3384$

         $x = 564$

Then the salary of V = 7$x$

         $= 7 \times 564 = ₹ 3948$

Finally salary of U= 8$x$

         $= 8 \times 564 = 4512$

**43.** (b) Quantity of Acid $= \dfrac{80 \times 20}{100}$

                   = 16 litres

$\therefore$  Quantity of water   $= (80 - 16)$
                   = 64 litres

According of question,

Let the quantity of Acid = $x$

$\therefore$    $\dfrac{64}{16 + x} = \dfrac{40}{60}$

    $\dfrac{67}{16 + x} = \dfrac{2}{3}$

    $32 + 2x = 192$

$\Rightarrow$       $2x = 160$

       $x = 80$ litres

**44.** (b) Sum of the shares of
      U + V + W = 125   ...(i)
According to question,
      U = 10 + V
      V = 5 + W
$\therefore$       U = 10 + 5 + W
         = 15 + W
from equ. (i) we get,
15 + W + 5 + W + W = 125
         W = 35
$\therefore$         U = 50, V = 40
$\therefore$      U : V : W = 50 : 40 : 35
         = 10 : 8 : 7

**45.** (c) A cupboard built in 1 hour

      $= \dfrac{1}{48}$ parts

In 12 hours it is built $= \dfrac{12}{48}$ part

      $= \dfrac{1}{4}$ part

Left part of cupboard $= 1 - \dfrac{1}{4}$

      $= \dfrac{3}{4} = 0.75$

**46.** (d) Makarand works = 2 times of Samarjit

   Samarjit can complete a job in 27 days

   Makarand can complete in 27/2 days

   Let both will do it in t days

   $\dfrac{1}{t} = \dfrac{2}{27} + \dfrac{1}{27} = \dfrac{3}{27}$

$\Rightarrow$   $t = \dfrac{27}{3} = 9$ days

**47.** (d) Murad can do a piece of work in = 33 hours

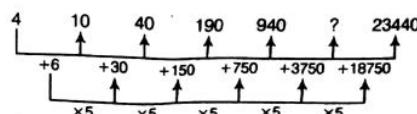   Joel can do it in $= \dfrac{33}{2}$ hours

   Let both will finish in $t$ hours

      $\dfrac{1}{t} = \dfrac{1}{33} + \dfrac{2}{33} = \dfrac{1 + 2}{33}$
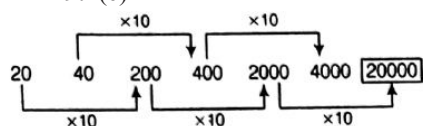
         $= \dfrac{3}{33} = \dfrac{1}{11}$

      $t$ = 11 hours

**48.** (a) Here, in the given series pattern follows



So, at the place of ? = 940 + 3750
                   = 4690
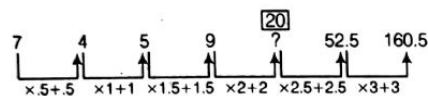
**49.** (c)



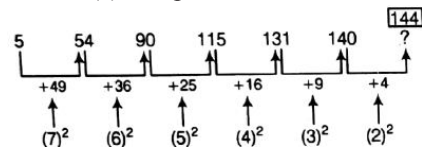So, at the place of
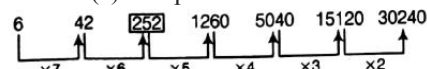   ? = 2000×10 = 20000

**50.** (d) The pattern follows as



So, at the place of ? = 9 × 2 + 2 = 20

**51.** (e) The pattern follows as



So, at the place of ? = 140 + 4 =144

**52.** (c) The pattern follows as



So, at the place of ? = 42 × 6 = 252

**53.** (d) $\dfrac{4x}{3y} = \dfrac{21}{33}$

$\Rightarrow$   $\dfrac{x}{y} = \left(\dfrac{21}{22} \times \dfrac{2}{3}\right) = \dfrac{7}{11} \Rightarrow x = \dfrac{7}{11}y$

      $= 4x + 5y = 83$

$\Rightarrow$   $4 \times \dfrac{7}{11}y + 5y = 83$

      $\dfrac{28}{11}y + 5y = 83$

$\Rightarrow$  $83y = 83 \times 11 \Rightarrow y = 11$

$\therefore$   $x = \dfrac{7}{11}y = \left(\dfrac{7}{11} \times 11\right) = 7$

So $x + y = 11 + 7 = 18$

**54.** (d) $\dfrac{x}{3} - \dfrac{x}{4} = 5 \Rightarrow \dfrac{4x - 3x}{12} = 5$

$\Rightarrow$   $x = 60$

**55.** (d)

Effective % $= \dfrac{3 \times 1200}{9 \times 1200} \times 100\%$

$= \dfrac{3}{9} \times 100\%$

$= \dfrac{100\%}{3} = 33\dfrac{1}{3}\% = 33.33\%.$

**56.** (b)

   SP – CP = Profit
   20 – CP = 4
      C.P. = 20 – 4 = 16 watches

Profit % $= \dfrac{4 \times 100}{16} = 25\%.$

**57.** (b) Let number be $x$

Percentage error

$$= \frac{\frac{7}{4}x - \frac{4}{7}x}{\frac{7}{4}x} \times 100\%$$

$$= \frac{\frac{49x - 16x}{28}}{\frac{7}{4}x} \times 100\%$$

$$= \frac{33x \times 4 \times 100\%}{28 \times 7x}$$

$$= \frac{33}{49} \times 100\% = 67.35\%$$

**58.** (c) Let $x$ quintal of wheat was sold at 13% and $(12 - x)$ quintal was sold at 23%

Let wheat price of $x$ quintal $= 100x$ and $(12 - x) \times 100$

According to question

$$\frac{100x \times 13}{100} + \frac{(12 - x) \times 100 \times 23}{100}$$

$$= \frac{12 \times 100 \times 17}{100}$$

$\Rightarrow$   $13x + 23(12 - x) = 12 \times 17$

$13x + 276 - 23x = 204$

$276 - 204 = 23x - 13x$

$72 = 10x$

$\therefore x = \dfrac{72}{10} = 7.2$ quintal

sold at 23% = 12 − 7.2 = 4.8 quintal

$\because$   1 quintal = 100 kg

So, 4.8 quintal = 4.8 × 100 = 480 kg.

**59.** (a) Here, the given expression can also be written as

$$\sqrt{4900} + \sqrt{7900} - 56 = ?$$

or   ? = 70 + 90 − 56

        [nearest perfect square]

or   ? = 160 − 56 = 104 ≈ 100

**60.** (b) Here, the terms of the given expression can be rounded off as

(2200 − 1350 − 400) ÷

(160 − 113 − 27) = ?

or   ? = 500 ÷ 20

or   ? = 25 ≈ 24

**61.** (a) Here, the given expression can also be written as

$$(800\% \times 500) \div 800 = ?$$

or   ? = $(500 \times 8) \div 800$

or   ? = $4000 \div 800$

     ? = 5

**62.** (a) Total value of 3 numbers

$$= 3 \times 112 = 336$$

Let numbers be $x_1, x_2$ and $x_3$.

$$x_1 = \frac{3}{13}(x_2 + x_3)$$

$$\Rightarrow \quad \frac{13}{3}x_1 = (x_2 + x_3)$$

$$\frac{x_1 + x_2 + x_3}{3} = 112$$

$$\frac{x_1 + (x_2 + x_3)}{3} = 112$$

$$x_1 + \frac{13}{3}x_1 = 336$$

$$x_1\left(\frac{3 + 13}{3}\right) = 336$$

$$x_1 = \frac{3 \times 336}{16} = 63.$$

Hence, the first number $x_1 = 63$.

**63.** (d) $256a^2b^2c^2 \div 64a^2$

$$\Rightarrow \frac{256a^2b^2c^2}{64a^2} \Rightarrow 4b^2c^2$$

**64.** (a)

| | |
|---|---|
| $3x - 4 > 2 - \dfrac{x}{3}$ | $3x + 5 > 4x - 5$ |
| $3x - 4 > \dfrac{6 - x}{3}$ | $10 > 4x + 3x$ |
| $9x - 12 > 6 - x$ | $10 > 7x$ |
| $10x > 8$ | $7x > 10$ |
| $x > \dfrac{18}{10}$ | $x > \dfrac{10}{7}$ |
| $x > 1.8$ | $x > 1.43$ |

Hence required value of $x = 7$.

**65.** (a) From statement I,

Total age of D and E = 14 yr

From statement II,

Average age of A, B, C and F = 50 yr

So, the total age of A, B, C and F = 50 × 4 = 200 yr

Now, total age of A, B, C, D, E and F = 14 + 200 = 214 yr

From both statements,

$\therefore$ Average age of A, B, C, D, E

And F $= \dfrac{214}{6} = 35\dfrac{2}{3}$ yr

Required statements are both I and II.

**66.** (d) Area of the right angled triangle is:

$$= \frac{1}{2} \times b \times h$$

Any two of three is sufficient to find the answer.

**67.** (c) From all three statements,

A + B = 8              ...(i)

B + C = 10            ...(ii)

C + A = 12            ...(iii)

$\therefore$   Work of a day of 2 (A + B + C)

$$= \frac{1}{8} + \frac{1}{10} + \frac{1}{12} = \frac{37}{120}$$

A, B and C together finished the work in 240/37 days.

$\therefore$ B alone can complete the work in

$$= \frac{\dfrac{240}{37} \times 12}{12 - \dfrac{240}{37}} = \frac{240}{17}\text{days}$$

**68.** (d) Let Rajdhani take $t$-hours.

Express train takes = $(t + 12)$ hours

Let Speed of Rajdhani be $v$

and speed of express train = $2v$

$$\frac{648}{v} - \frac{648}{2v} = 6$$

$$648\left(\frac{2 - 1}{v}\right) = 6$$

$$\frac{1}{2v} = \frac{6}{648} = \frac{1}{108}$$

$$v = \frac{108}{2} = 54 \text{ km/hr.}$$

**69.** (d) Total Amount

$$= 2000\left(1 + \frac{10}{100}\right)^2 + \frac{PRT}{100}$$

$$= 2000 \times \frac{11 \times 11}{10 \times 10} + 2000 \times \frac{10}{100} \times 1$$

$$= 2420 + 200$$

Total Amount = 2620

Interest = A – P = 2620 – 2000

= ₹ 620.

**70.** (e) Total mixture = 78 L

When 26 L of mixture is taken out, then remaining mixture = 78 – 26 = 52 L

Now, ratio of milk : water = 6 : 7

∴ Milk = $\frac{6}{13} \times 52 = 24$ L

Water = 52 – 24 = 28 L

Let $x$ L of milk should be added.

∴ $\frac{28}{24 + x} = \frac{40}{60}$

$\frac{40}{60} \Rightarrow \frac{28}{24 + x} = \frac{2}{3}$

$\Rightarrow 84 = 48 + 2x$

$\Rightarrow 36 = 2x$

$\Rightarrow x = 18$ L

## ENGLISH LANGUAGE

**71.** (a) **72.** (c) **73.** (a) **74.** (b)
**75.** (c) **76.** (c) **77.** (c) **78.** (b)
**79.** (d) **80.** (c) **81.** (c) **82.** (a)
**83.** (c) **84.** (a) **85.** (d) **86.** (c)
**87.** (d) **88.** (a) **89.** (b) **90.** (b)
**91.** (d) **92.** (e) **93.** (c) **94.** (a)
**95.** (b) **96.** (c) **97.** (c) **98.** (b)
**99.** (d) **100.** (a)

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