# REGIONAL RURAL BANKS (RRBs)

# OFFICER SCALE-I EXAM 2018

**Based on Memory**

## PRELIMINARY EXAMINATION (OBJECTIVE)*

| Sr. No. | Name of Tests (Objective) | No. of Questions | Medium of Exam | Maximum Marks | Duration |
|---|---|---|---|---|---|
| 1. | Reasoning | 40 | Hindi/English | 40 | Composite time of 45 minutes |
| 2. | Quantitative Aptitude | 40 | Hindi/English | 40 | |
| | Total | 80 | | 80 | |

*Candidates have to qualify in both the tests by securing minimum cut-off marks. Adequate number of candidates in each category, depending upon requirements, will be shortlisted for Online Main Examination.



### INSTRUCTIONS

(1) Time limit to complete this test is 45 minutes no sectional timing.

(2) It is not necessary for the candidate to attempt the section in order of their arrangement in this test. You can choose to attempt any section first, as per your preference. All questions are compulsory and carry equal marks.

(3) Do not use calculators, or any electronic medium for calculations. You may take a clean sheet of paper for rough work and all calculations must be performed manually by the candidate.

(4) There will be penalty for wrong answer marked by you in the objective tests. There are five alternatives in every question of a test.

(5) For each question for which a wrong answer has been given by you, 1/4 or 0.25 of the marks assigned to that question will be deducted as penalty. If a question is left blank, i.e. no answer is given by you, there will be no penalty for that question.

## REASONING

**Directions (Qs.1-5): Study the following information carefully and answer the questions given below:**

Eleven boxes A, B, C, D, E, F, G, H, I, J, K are kept one above the other but not necessarily in the same order. Box G is kept at fifth position from the top. Only two boxes are kept between G and H. Box D is kept just above box H. There are as many boxes above Box D as below Box B. Only five boxes are kept between Box F and Box K, which is kept at one of the positions below Box G. Box A is kept at one of the positions above Box F. Only one box is kept between Box G and Box C. Box I is kept above box E but not just above. Box E is not kept immediately above or immediately below Box C.

**1.** What is the position of box I?
(1) $8^{th}$ from the bottom (2) $7^{th}$ from the top (3) $3^{rd}$ from the top
(4) $6^{th}$ from the bottom (5) None of these

**2.** How many boxes are kept between Box E and Box H?
(1) Seven (2) Six (3) Five (4) Four (5) Eight

**3.** Which among the following statements is true regarding Box J?
(1) It is $7^{th}$ from the bottom
(2) Box K is placed above the Box J
(3) Only two boxes are kept between Box B and Box J
(4) It is kept just below Box H
(5) All are true

**4.** Which of the following represents the boxes kept between Boxes A and I?
(1) C, B (2) A, K (3) F, G (4) J, D (5) None of these

**5.** Which of the following box is kept just above Box B?
(1) K (2) C (3) F (4) D (5) None of these

**6.** If the second, fourth, seventh and eighth letters of the word "FRACTION" are combined to form a meaningful word, then what will be the $3^{rd}$ letter from the left in the word so formed. If more than one meaningful word is formed then the answer is X, if no such word is formed then answer is Z?
(1) O (2) X (3) R (4) Z (5) C

**7.** How many pair of digits have same number of digits between them in the number "573814269" as in the numeric series?
(1) Five (2) Four (3) Six (4) Three (5) More than six

**Directions (Qs.8-10): Study the following information carefully and answer the questions given below:**

Point B is 14 m east of point A. Point C is 9 m north of point B. Point D is 12 m east of point C. Point E is 15 m south of point D. Point F is 30 m west of point E. Point G is 10 m north of point F. Point H is 18 m east of point G.

**8.** If point X is 6 m south of point A then which point is at shortest distance from point X?
(1) E (2) A (3) F (4) B (5) G

**9.** What is the distance of Point C from Point H?
(1) 9 metre (2) 5 metre (3) 4 metre (4) 6 metre (5) 7 metre

**10.** Point B is in which direction with respect to Point F?
(1) South (2) South-east (3) North (4) North-east (5) North-west

**Directions (Qs.11-15): Study the following information carefully and answer the questions given below:**

Eight persons A, B, C, D, E, F, G and H are sitting around a circular table such that five of them are facing towards the centre and the rest are facing away from the centre. Three persons are sitting between F and H, who are facing centre. C is 2nd to the right of F and faces opposite direction to F. A sits 3rd to the left of C. G is one of the neighbours of E. Only two persons sit between G and B, who is not neighbour of H. G and A face same direction but opposite of F.

**11.** What is the position of E with respect to A?
(1) Immediate right (2) Fifth to the left
(3) Second to the left (4) Second to the right (5) None of these

**12.** How many persons are sitting between C and H, when counted from the left of C?
(1) One (2) Two (3) Three (4) Four (5) None

**13.** Four of the following five are alike in a certain way and hence they form a group. Which one among the following does not belong to that group?
(1) B (2) C (3) F (4) D (5) E

**14.** Which of the following represents an immediate neighbour of G?
(1) C (2) B (3) F (4) D (5) A

**15.** Which of the following statement is **not true** regarding F?
(1) It faces towards the centre
(2) E is to the immediate left of F
(3) Two persons sit between F and D, when counted from the right to D
(4) All are true
(5) No one sits between F and B

**Directions (Qs.16-20): Study the following information carefully and answer the questions given below:**

Certain number of persons are sitting in a row facing north. M sits 4th to the right of S. Only five persons sit between M and X. T sits at one of the positions left to S. The number of persons sitting between M and U are same as between S and T. Q is 2nd from one of the extreme ends. Only four persons sit between S and U. No one sits to the right of N, who is immediate right to P. X is 3rd left to P. Not more than two persons sit between Q and U.

**16.** How many persons are sitting in the row?
(1) 17 (2) 20 (3) 24 (4) 26 (5) 27

**17.** How many persons are sitting between S and T?
(1) Seven (2) Six (3) Five (4) Four (5) Eight

**18.** What is the position of U from the left end?
(1) 6th (2) 2nd (3) 4th (4) 5th (5) 3rd

**19.** How many persons are sitting between Q and M?
(1) Seven (2) Eleven (3) Ten (4) Nine (5) Eight

**20.** Which of the following represents the person sitting at extreme end?
(1) T (2) U (3) X (4) P (5) M

**Directions (Qs.21-25): Study the following information carefully and answer the questions given below:**

Movies of different duration were released on different days starting from Monday to Friday. Movie A was released on Tuesday. No movie was released between A and the one which was of 75-minutes duration. Only one movie was released between the one which is of 75-minutes duration and the one which is of 100-minutes duration. No movie was released between the one which is of 100 minutes and B. Only one movie was released after B. B was released immediately after 100-minutes duration movie. Movie C was released immediately after the one which is of 130-minutes duration. More than two movies were released between C and D. The movie which is of 90-minute duration was released before E. One of the movies was of 20 minutes more duration than movie E.

**21.** How many movies were released after E?
(1) One (2) Two (3) None (4) Three (5) More than three

**22.** Which of the following movie was of 150-minutes duration?
(1) E (2) A (3) C
(4) D (5) There is no such movie

**23.** What is the total duration of movies D and E together?
(1) 135 (2) 225 (3) 165 (4) 175 (5) 190

**24.** Which of the following statement is true regarding B?
(1) The movie released after B is of 120-minutes duration
(2) Two movies were released between A and B
(3) Movie B is of 100-minutes duration
(4) Total duration of movie B and A is 225 minutes
(5) Movie A was released after B

**25.** Which of the following statements is true?
(1) The movie released before A is of 130-minutes duration
(2) Three movies were released between A and E
(3) No movie was released between A and E
(4) Total duration of movie C and A is 230 minutes
(5) Movie C was released immediately after E

**Directions (Qs.26-28): Study the following information carefully and answer the questions given below:**

F is the husband of G. K is the mother-in-law of G. H is the father of F. M is the mother of H. P is the mother of K and B.

**26.** If Y is the father of H then how is Y related to M?
(1) Mother (2) Father (3) Sister (4) Brother (5) Husband

**27.** How is P related to F?
(1) Grandfather (2) Aunt (3) Mother (4) Grandmother (5) Wife

**28.** How is B related to H?
(1) Sister (2) Brother (3) Can't Say (4) Husband (5) Wife

**Directions (Qs.29-31): Study the following information carefully and answer the questions given below:**

There are six persons M, N, O, P, Q, R of different heights. N is shorter than M but taller than Q. Only two persons are taller than M. R is taller than Q and O. Q is not the shortest. The one who is second shortest is 154 cm. P is not the shortest person.

**29.** If M is 19 cm taller than Q, then what is the height of M?
(1) 190 cm (2) 181 cm (3) 175 cm (4) 130 cm (5) 173 cm

**30.** If P is 181 cm then which of the following statements is true?
I. Only one person is taller than P
II. The difference between the heights of P and Q is 27 cm
III. O is the shortest person
(1) Only I (2) Only I and II (3) All are true
(4) Only II and III (5) Only I and III

**31.** How many persons are shorter than N?
(1) One (2) Two (3) None (4) Three (5) More than three

**Directions (Qs.32-35): Each of the questions below consists of some statements followed by two Conclusions numbered I and II. Consider 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 does not logically follow from the given statements using all statements together.**

**Give answer (1):** if only Conclusion II follows
**Give answer (2):** if either Conclusion I or Conclusion II follows
**Give answer (3):** if neither Conclusion I nor Conclusion II follows
**Give answer (4):** if both Conclusion I and Conclusion II follow
**Give answer (5):** If only Conclusion I follows

**For (Qs.32-33): Statements:** All grills are Arrows
Some hats are grills
Some cells are arrows

**32. Conclusions:** I. Some cells are definitely not grills
II. Some hats can never be arrows

**33. Conclusions:** I. Some hats are arrows
II. Some grills are cells

**For (Qs.34-35): Statements:** Some doors are fans
No door is rose
No fan is shelf

**34. Conclusions:** I. Some fans can never be roses
II. Some roses are shelf is a possibility

**35. Conclusions:** I. All doors are shelf is a possibility
II. All shelf can be doors

**Directions: (Qs.36-40): Study the following information carefully and answer the questions given below:**

Fourteen persons are sitting in two parallel rows such that seven persons are sitting in each row. A, B, C, D, E, F, G are sitting in row-1 facing north while P, Q, R, S, T, U, V are sitting in row-2 facing south.

G sits third to the left of A and neither of them sits at an extreme end of the row. The one who faces A sits immediate right to T. Only one person sits between T and Q. The one who faces Q sit third to the right of E. S sits to the immediate left of V. S neither faces G nor E. D is an immediate neighbour of the one who faces S. The one who faces C sits fifth to the left of P. B sits third to the left of F. U sits at one of positions to the right of R.

**36.** Four of the following five are alike in a certain way and so they form a group. Which of the following does not belong to that group?
(1) U (2) B (3) T (4) C (5) P

**37.** How many persons sit between F and C?
(1) Two (2) One (3) None (4) Three (5) More than three

**38.** Which of the following statements is not true regarding U?
(1) No one sits to the right of U
(2) U sits third to the right of Q
(3) P is an immediate neighbour of U
(4) E is an immediate neighbour of the one who faces U
(5) Only two persons sit between U and S

**39.** What is the position of C with respect to A?
(1) Second to the left (2) Third to the right (3) Immediate right
(4) Immediate left (5) Second to the right

**40.** What is the position of B with respect to D?
(1) Third to the left (2) Second to the left (3) Third to the right
(4) Fourth to the left (5) Fifth to the right

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## QUANTITATIVE APTITUDE

**Directions (Qs.41-45): Find the wrong number in the following number series.**

**41.** 1 3 7 15 31 64 127
(1) 1 (2) 3 (3) 15 (4) 64 (5) 127

**42.** 1 15 119 475 949 947 473
(1) 947 (2) 475 (3) 15 (4) 473 (5) 1

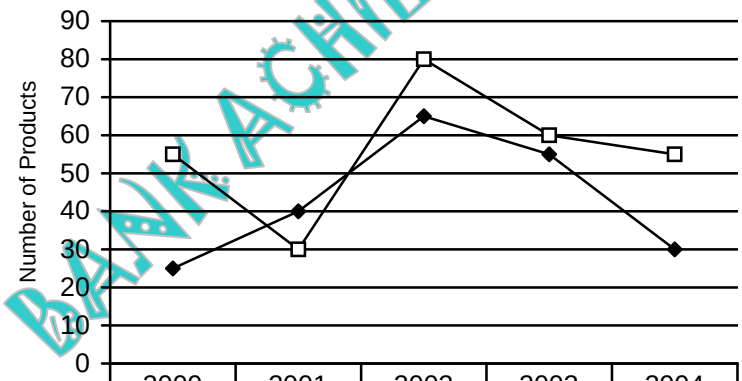
**43.** 250 260 291 314 340 370 405
(1) 370 (2) 314 (3) 260 (4) 405 (5) 250

**44.** 750 535 411 348 322 314 315
(1) 315 (2) 750 (3) 411 (4) 348 (5) 314

**45.** 2 7 27 107 427 1708 6827
(1) 17 (2) 1708 (3) 2 (4) 6827 (5) 7

**Directions (Qs.46-50): Study the line graph carefully and answer the questions give below.**

**This graph shows the total number of products for (kids + adults) in two different stores P and Q in five different years.**




| | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|
| Store P | 25 | 40 | 65 | 55 | 30 |
| Store Q | 55 | 30 | 80 | 60 | 55 |

**46.** What is the difference between total number of products in store P in years 2003 and 2004 together and total number of products in stores P and Q in the year 2000?
(1) None of these (2) 10 (3) 20
(4) 15 (5) 5

**47.** If total number of products in both the stores in year 2006 is increased by 20% as compared to year 2004, find total number of products in the year 2006?
(1) 102 (2) None of these (3) 96
(4) 108 (5) 92

**48.** What is the ratio of total number of products in store Q in year 2002 and 2003 together to total number of products in store Q in the year 2000?
(1) 23 : 12 (2) 23 : 11 (3) 28 : 11 (4) None of these (5) 27 : 13

**49.** What is the average number of products in all the years together in store P?
(1) 48 (2) 43 (3) 57 (4) None of these (5) 53

**50.** Total number of products in store P in the year 2003 and in store Q in the year 2004 together is what percent more/less than total number of products in the store Q in the year 2000?
(1) 150% (2) 40% (3) 125% (4) 100% (5) 50%

**Directions (Qs.51-55): In the following questions two equations numbered I and II are given. You have to solve both the equations and __**

**Give answer (1):** if $x > y$
**Give answer (2):** if $x \geq y$
**Give answer (3):** if $x < y$
**Give answer (4):** if $x \leq y$
**Give answer (5):** if $x = y$ or the relationship between $x$ and $y$ can not be established

**51.** I. $x^2 - 20x + 96 = 0$ II. $y^2 = 64$

**52.** I. $4x^2 - 21x + 20 = 0$ II. $3y^2 - 19y + 30 = 0$

**53.** I. $x^2 - 11x + 24 = 0$ II. $y^2 - 12y + 27 = 0$

**54.** I. $x^2 + 12x + 35 = 0$ II. $5y^2 + 33y + 40 = 0$

**55.** I. $4x^2 + 9x + 5 = 0$ II. $3y^2 + 5y + 2 = 0$



**Directions (Qs.56-60): Study the following information given in the paragraph carefully and answer the questions given below:**

There are 1000 students in a college. Out of 1000 students some appeared in exams 'X', 'Y' and 'Z' while some did not. The number of students not appeared in any exam is equal to the number of students appeared in exam 'Z' only. The number of students appeared in exam 'Y' is 360. Ratio of the number of students appeared in exams 'X' and 'Y' only to number of students appeared in exams 'Y' and 'Z' only is 2 : 3. The number of students appeared in exams 'X' and 'Z' both is half of the number of students appeared in only exam 'Z'. The number of students appeared in exam 'X' only is 50% more than the number of students appeared in 'Y' only. The number of students appeared in all the three exams is 4% of the total number of students in the college. The number of students appeared in 'Y' exam only is same as the number of students appeared in exams 'Y' and 'Z' only.

**56.** How many students appeared in at least two exams?
(1) 240 (2) 260 (3) 300 (4) 360 (5) 500

**57.** How many students appeared in two exams only?
(1) 280 (2) 220 (3) 340 (4) 300 (5) 260

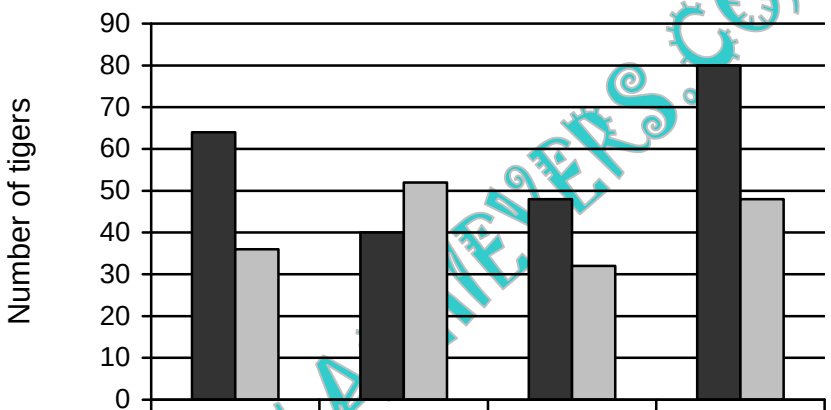
**58.** How many students appeared in at most two exams?
(1) 240 (2) 260 (3) 300 (4) 500 (5) 760

**59.** How many students did not appear in exam Y?
(1) 440 (2) 360 (3) 540 (4) 640 (5) None of these

**60.** How many students have appeared in exam X or in exam Z?
(1) 240 (2) 360 (3) 500 (4) 680 (5) 760

**Directions (Qs.61-65): Read the following bar graph carefully and answer the questions given below it.**

**The bar diagram shows the number of tigers in different National Parks. i.e., A to D of a country in two different years**




| | A | B | C | D |
|---|---|---|---|---|
| 1998 | 64 | 40 | 48 | 80 |
| 2018 | 36 | 52 | 32 | 48 |



**61.** The number of tigers in National parks B and C together in 2018 is how much more/less than the number of tigers in National Parks A and D together in 1998?
(1) 40 (2) 44 (3) 52 (4) 60 (5) 72

**62.** The number of tigers in National Park 'D' in both years together is what percent of the number of tigers in National Park 'C' in both years together?
(1) 60% (2) 160% (3) 140% (4) 120% (5) 180%

**63.** Find the ratio between the number of tigers in National Park 'A' in 2018 to the number of tigers in National Park 'B' in 1998?
(1) 9 : 10 (2) 10 : 9 (3) 16 : 13 (4) 13 : 16 (5) 3 : 4

**64.** The number of tigers in National Park 'E' in 2018 is 40% more than the number of tigers in National Park 'D' in 1998 while the number of tigers in National park 'E' in 1998 was 25% less than the number of tigers in National Park 'C' in 2018. Find total number of tigers in National Park 'E' in 1998 and 2018 together?
(1) 148 (2) 84 (3) 172 (4) 160 (5) 136

**65.** Average number of tigers in all National Parks in 2018 is how much less/more than average number of tigers in all National parks in 1998?
(1) 14 (2) 16 (3) 18 (4) 20 (5) 22

**66.** The difference between downstream speed and upstream speed of boat 6 km/hr and boat travels 72 km from P to Q (downstream) in 4 hours. Find the speed of boat in still water.
(1) 15 km/hr (2) 18 km/hr (3) 20 km/hr (4) 16 km/hr (5) 24 km/hr

**67.** In a vessel, there are two types of liquids A and B in the ratio of 5 : 9. 28 litre of the mixture is taken out and 2 liters of type B liquid is poured into the vessel. The new ratio (A : B) thus formed is 1 : 2. Find the initial quantity of mixture in the vessel?
(1) 84 litre (2) 42 litre (3) 50 litre (4) 56 litre (5) 70 litre

**68.** The average weight of 5 students in a class is 25.8 kg. When a new student joined them, the average weight is increased by 3.9 kg. Find the **approximate** weight of the new student.
(1) 55 kg (2) 49 kg (3) 42 kg (4) 44 kg (5) 58 kg

**69.** A person purchase two adjacent plots, one is in rectangular shape and other is in square shape and combined them to make a single new plot. The breadth of the rectangular plot is equal to the side of the square plot and the cost of fencing the new plot is Rs.390 (at the rate of Rs.5/m). Find the side of square if the length of the rectangular plot is 15 metre.
(1) 10 metre (2) 12 metre (3) 8 metre (4) 9 metre (5) 6 metre

**70.** A shopkeeper marks his article 50% above the cost price and gives a discount of 20% on it. If he had marked his article 75% above the cost price and had given a discount of 20% on it, then find the earlier profit is what per cent of the profit earned latter?
(1) 50% (2) 60% (3) $33\frac{1}{3}\%$ (4) 40% (5) 75%

**71.** A person invested two equal amounts in two different schemes. In first scheme, amount is invested at 8% p.a. on SI for T years and SI received is Rs.2000 while in second scheme, amount is invested at 10% p.a. for 2 years at CI and the compound interest received is Rs.1050. Find the value of T.
(1) 4 years (2) 8 years (3) 6 years (4) 5 years (5) 3 years

**72.** Satish saves 20% of his monthly salary. And of the remaining salary, $\frac{1}{4}$th and $\frac{1}{2}$nd part he gives to his mother and sister respectively and the remaining salary he submits as his EMI for the payment of his car. If his annual EMI was Rs.60,000, find his monthly salary.
(1) Rs.40,000 (2) Rs.35,000 (3) Rs.32,000
(4) Rs.30,000 (5) Rs.25,000

**73.** The sum of four times of an amount '*x*' and (*x* – 9.75) is Rs.442. Find the **approximate** value of *x*.
(1) Rs.85 (2) Rs.90 (3) Rs.100 (4) Rs.110 (5) Rs.75

**74.** A and B entered into a partnership by investing some amounts. The investment of A is twice of the investment of B. Another person C joined them after 4 months. At the end of a year, the profit shares of A and C are equal. Find the profit share of B is what percent of the profit share of C?
(1) 50% (2) $33\frac{1}{3}\%$ (3) 40% (4) 60% (5) 75%

**75.** The ratio of the age of Ishu 8 years hence and that of Ahana 6 years hence will be 5 : 6. The age of Ishu 10 years hence will be equal to the age of Ahana 6 years hence. Find the present age of Ishu.
(1) 1.5 years (2) 2 years (3) 3 years (4) 4 years (5) 5 years

**76.** What is the difference between 20% of P and 20% of (P + 5000)?
(1) 1500 (2) 1200 (3) 1000 (4) 2000 (5) 1600

**77.** The ratio of the diameter of base and height of a cylinder is 2 : 3. Find the radius of the cylinder if the **approximate** volume of cylinder is $3234.01\ \text{cm}^3$.
(1) $\frac{21}{2}$ cm (2) $\frac{7}{2}$ cm (3) 21 cm (4) 7 cm (5) 14 cm

**78.** A train of some length passes the platform of length 524 metre in 55 seconds. Find the length of train if the speed of trains is 72 km/hr.
(1) 476 metre (2) None of these (3) 428 metre
(4) 526 metre (5) 576 metre

**79.** Efficiency of B is two times more than efficiency of A. Both started working alternatively, starting with B and completed the work in total 37 days. If C alone can complete the same work in 50 days then find in how many days A and C together will complete the work?
(1) 24 days (2) 30 days (3) 36 days (4) 48 days (5) 18 days

**80.** 7 men and 6 women together can complete a piece of work in 8 days and work done by a woman in one day is half the work done by a man in one day. If 8 men and 4 women started working and after 3 days 4 men left the work and 4 new women joined them, in how many more days will the remaining work be completed?
(1) 7 days (2) 6 days (3) 5.25 days (4) 6.25 days (5) 8.14 days

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## ANSWERS

*For (Qs.1 to 5):*

| Number | Box |
|---|---|
| 1 | D |
| 2 | H |
| 3 | A |
| 4 | F |
| 5 | G |
| 6 | I |
| 7 | C |
| 8 | J |
| 9 | E |
| 10 | K |
| 11 | B |

**1.** **Ans (4): 6th from the bottom**
Box I is sixth from the top or bottom, i.e., it is at middle in the stack.

**2.** **Ans (2): Six**
Six boxes- A, F, G, I, C and J - are kept between Box H and Box E.

**3.** **Ans (3): Only two boxes are kept between Box B and Box J**
Box J is fourth from the bottom.
Box K is placed below Box J. There are five boxes between Box H and Box J.

**4.** **Ans (3): F, G**
Two boxes – F and G – are kept between Box A and Box I.

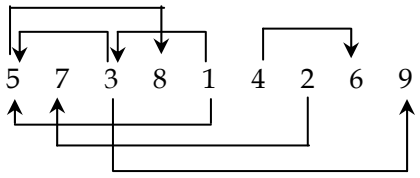
**5.** **Ans (1): K**
Box K is kept just above the Box B.

**6.** **Ans (3): R**

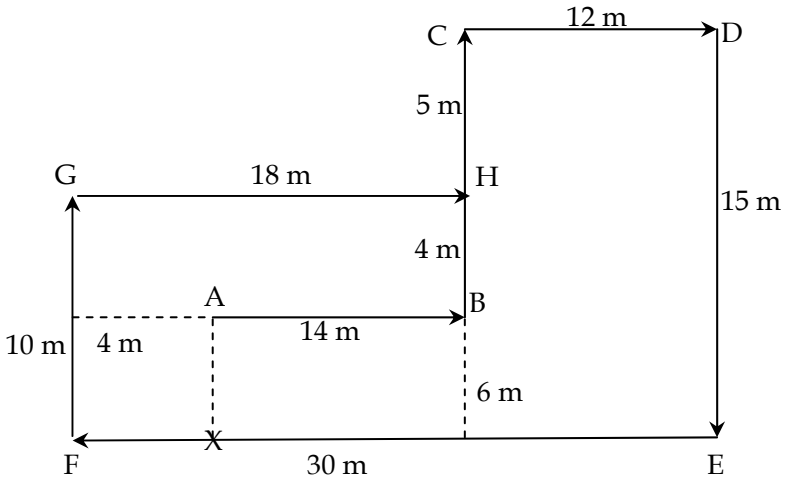
| 1 | **2** | 3 | **4** | 5 | 6 | **7** | **8** |
|---|---|---|---|---|---|---|---|
| F | **R** | A | **C** | T | I | **O** | **N** |

Specified letters ⇒ R, C, O, N
meaningful word ⇒ CO**R**N

**7.** **Ans (5): More than six**



*For (Qs.8 to 10):*

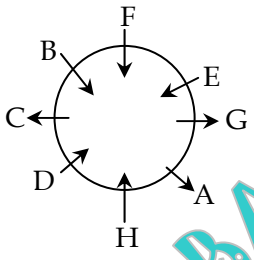



**8.** **Ans (3): F**
FX = 4 metre; A X = 6 metre

**9.** **Ans (2): 5 metre**
CH = 5 metre

**10.** **Ans (4): North-east**
Point B is in North – East direction of Point F.

*For (Qs.11 to 15):*






**11.** **Ans (3): Second to the left**
E sits second to the left to A.

**12.** **Ans (1): One**
When counted form the left of C, only D sits between C and H.

**13.** **Ans (2): C**
Except C, all others are facing the centre.

**14.** **Ans (5): A**
A is an immediate neighbour of G.

**15.** **Ans (4): All are true**
All the given statements are true.

*For (Qs.16 to 20)*


16. **Ans (3): 24**
24 persons are sitting in the row.

17. **Ans (5): Eight**
Eight persons are sitting between S and T.

18. **Ans (4): 5th**
U is fifth from the left end.

19. **Ans (2): Eleven**
Eleven persons are sitting between Q and M.

20. **Ans (1): T**
T sits at the extreme left end.

*For (Qs.21 to 25):*

| Day | Movie | Duration |
|---|---|---|
| Monday | D | 75 Minutes |
| Tuesday | A | 90 Minutes |
| Wednesday | E | 100 Minutes |
| Thursday | B | 130 Minutes |
| Friday | C | 120 Minutes |

21. **Ans (2): Two**
Two movies – B and C – were released after E.

22. **Ans (5): There is no such movie**
There is no movie of 150 minutes duration.

23. **Ans (4): 175**
Duration of movies D and E = (75 + 100) = 175 minutes

24. **Ans (1): The movie released after B is of 120-minutes duration**
Only one movie was released between A and B.
Total duration of movies B and A is 220 minutes
Movie A was released on Tuesday while movie B was released on Thursday.

25. **Ans (3): No movie was released between A and E**
The movie released before A is of 75 minutes duration.
Movie A was released immediately before E.
Total duration of movies C and A is 210 minutes.
Movie C was released immediately after B.

*For (Qs.26 to 28):*

P (-) M (-)
| |
B – K (-) ⇔ H (+)
|
F (+) ⇔ G (-)

**26. Ans (5): Husband**
Y is the husband of M

**27. Ans (4): Grandmother**
Therefore, P is grandmother (maternal) of F.

**28. Ans (3): Can't Say**
The gender of B is not known.

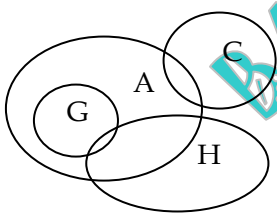
*For (Qs.29 to 31):* P, R > M > N > Q > O

**29. Ans (5): 173 cm**
M = (154 + 19) = 173 cm

**30. Ans (4): Only II and III**
P = 181 cm;
P – Q = (181 – 154) = 27 cm.
O is the shortest person.

**31. Ans (2): Two**
Q and O are shorter than N.

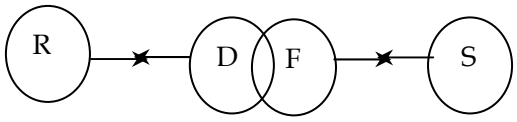
*For (Qs.32 & 33):*




**32. Ans (3): neither Conclusion I nor Conclusion II follows**
**Conclusions:**
I. Some cells are definitely not grills (×)
II. Some hats can never be arrows (×)

**33. Ans (5): only Conclusion I follows**
**Conclusions:**
I. Some hats are arrows (✓)
II. Some grills are cells (×)

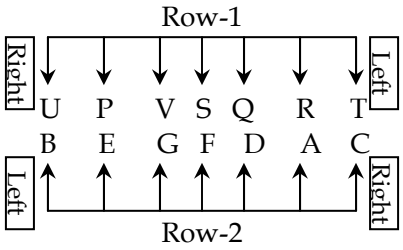
*For (Qs.34 & 35):*




**34. Ans (1): only Conclusion II follows**
**Conclusions:**
I. Some fans can never be roses (×)
II. Some roses are shelf is a possibility (✓)

**35. Ans (1): only Conclusions II follows**
**Conclusions:**
I. All doors are shelf is a possibility (×)
II. All shelf can be doors (✓)

*For (Qs.36 to 40):*




**36. Ans (5): P**
Except P, all others are seated at the extreme ends of the rows.

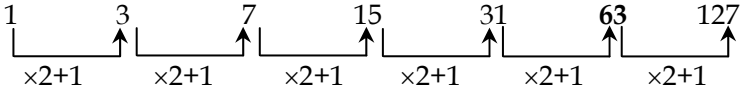
**37. Ans (1): Two**
Two persons – D and A- sit between F and C.

**38. Ans (2): U sits third to the right of Q**
U sits fourth to the right of Q.

**39. Ans (3): Immediate right**
C sits to the immediate right of A.

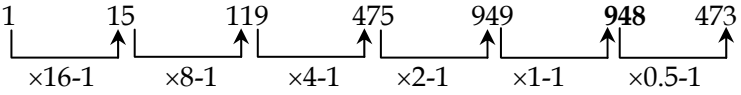
**40. Ans (4): Fourth to the left**
B sits fourth to the left of D.

**41. Ans (4): 64**



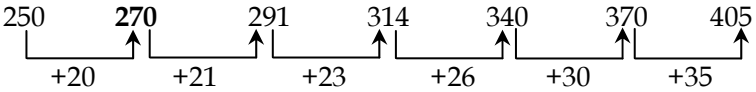

The wrong number is 64

**42. Ans (1): 947**



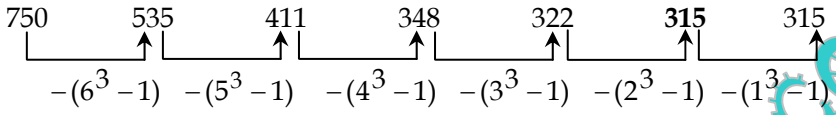

The wrong number is 947

**43. Ans (3): 260**



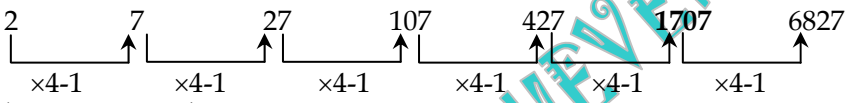

The wrong number is 260

**44. Ans (5): 314**




The wrong number is 314

**45. Ans (2): 1708**




The wrong number is 1708

**46. Ans (5): 5**

Number of products in store P in the year 2003 and 2004 = 55 + 30 = 85
Number of products in stores P and Q in the year 2000 = 25 + 55 = 80
Required difference = 85 – 80 = 5

**47. Ans (1): 102**

Total number of products in both stores in 2006 = 120% of (30 + 55) $= \frac{85 \times 120}{100} = 102$

**48. Ans (3): 28 : 11**

Required ratio = (80 + 60) : 55 = 140 : 55 = 28 : 11

**49. Ans (2): 43**

Required average $= \frac{25+40+65+55+30}{5} = \frac{215}{5} = 43$

**50. Ans (4): 100%**

Total number of products of store P in 2003 and that of store Q in 2004 = 55 + 55 = 110
Number of products in store Q in 2000 = 55

$\therefore$ Required percent $= \left(\frac{110-55}{55}\right) \times 100 = 100\%$ i.e. more

**51.** **Ans (2): $x \geq y$**

I. SR = 20, PR = 96 $\Rightarrow x = 12, 8$ ; II. $y = \pm 8$

**52.** **Ans (5): the relationship between $x$ and $y$ can not be established.**

I. SR = 21, PR = 80 $\Rightarrow x = \frac{16}{4}, \frac{5}{4} = 4, 1.25$

II. SR = 19, PR = 90 $\Rightarrow y = \frac{10}{3}, \frac{9}{3} = 3.33, 3$

**53.** **Ans (5): the relationship between x and y can not be established.**

I. SR= 11, PR = 24 $\Rightarrow x = 3, 8$

II. SR = 12, PR = 27 $\Rightarrow y = 9, 3$

**54.** **Ans (4): $x \leq y$**

I. SR = - 12, PR = 35 $\Rightarrow x = -7, -5$

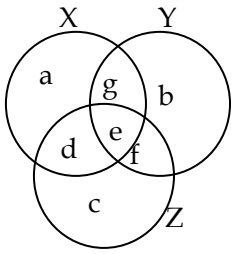
II. SR = -33, PR = 200 $\Rightarrow y = \frac{-25}{5}, \frac{-8}{5} = -5, -1.6$

**55.** **Ans (4): $x \leq y$**

I. SR = -9, PR = 20 $\Rightarrow x = \frac{-4}{4}, \frac{-5}{4} = -1, -1.125$

II. SR = -5, PR = 6 $\Rightarrow y = \frac{-2}{3}, \frac{-3}{3} = -0.67, -1$

***For (Qs.56 to 60):***




b +e + f +g = 360 …(i)

g = 2$x$ …(ii)

f = 3$x$ …(iii)

$d + e = \frac{c}{2}$ …(iv)

$a = \frac{3}{2}b$ …(v)

$e = 1000 \times \frac{4}{100} = 40$

b = f …(vi)

From equation (i), and (vi)

$3x + 40 + 3x + 2x = 360 \Rightarrow 8x = 360 - 40 = 320$

$\Rightarrow x = \frac{320}{8} = 40$

$\therefore$ f = 3$x$ = 3 × 40 = 120 = b ; g = 2$x$ = 2 × 40 = 80

From equation (v),

$a = \frac{3}{2} \times 120 = 180$

Students who did not appear in the exam.

$\Rightarrow 1000 - (a + b + c + d + e + f + g) = 1000 - (180 + 120 + c + d + 40 + 120 + 80)$

$\Rightarrow 1000 - 540 - c - d = 460 - c - d$

$\therefore 460 - c - d \Rightarrow 2c + d = 460 \Rightarrow 2(2d + 80) + d = 460$

$5d + 160 = 460$

$\Rightarrow 5d = 460 - 160 = 300 \Rightarrow d = 60$

$\therefore c = 2(d + e) = 2 \times (60 + 40) = 200$

**56. Ans (3): 300**

Required answer = d + f + g + e = 60 + 40 + 120 + 80 = 300

**57. Ans (5): 260**

Required answer = d + f + g = 60 + 120 + 80 = 260

**58. Ans (5): 760**

Required answer = a + b + c + d + f + g = 180 +120 + 200 + 60 + 120 + 80 = 760

**59. Ans (1): 440**

Required answer = a + d + c = 180 + 60 + 200 = 440

**60. Ans (4): 680**

Required answer = 800 – b = 800 - 120 = 680

**61. Ans (4): 60**

Number of tigers in national parks B and C in 2018 = 52 + 32 = 84

Number of tigers in national parks A and D in 1998 = 64 + 80 = 144

$\therefore$ Required difference = 144 – 84 = 60 i.e. less

**62. Ans (2): 160%**

Total number of tigers in both years in park D = 80 + 48 = 128

Total number of tigers in both years in park C = 48 + 32 = 80

$\therefore$ Required percent $= \frac{128}{80} \times 100 = 160\%$

**63. Ans (1): 9 : 10**

Required ratio = 36 : 40 = 9 : 10

**64. Ans (5): 136**

Number of tigers in park E in 2018 $= \frac{80 \times 140}{100} = 112$

Number of tigers in park E in 1998 $= \frac{32 \times 75}{100} = 24$

$\therefore$ Required answer = 112 + 24 = 136

**65. Ans (2): 16**

Average number of tigers:

In year 1998 $\Rightarrow \frac{64+40+48+80}{4} = \frac{232}{4} = 58$ year

In year 2018 $\Rightarrow \frac{36+52+32+48}{4} = \frac{168}{4} = 42$

$\therefore$ Required difference = 58 – 42 = 16 i.e. less

**66. Ans (1): 15 km/hr**

Speed of boat in still water = $x$ kmph ; Speed of current = $y$ kmph

Rate downstream = $(x + y)$ kmph

$(x + y) - (x - y) = 6 \Rightarrow 2y = 6 \Rightarrow y = 3$ kmph

$\therefore$ Rate downstream of boat $= \frac{72}{4} = 18$ kmph

$\therefore x + y = 18 \Rightarrow x + 3 = 18 \Rightarrow x = 18 - 3 = 15$ kmph

**67. Ans (4): 56 litres**

In 28 litres of mixture,

Liquid – A $\Rightarrow \frac{28\times 5}{14} = 10$ litre ;

Liquid – B $\Rightarrow \frac{28\times 9}{14} = 18$ litre

$\therefore \frac{5x-10}{9x-18+2} = \frac{1}{2} \Rightarrow 10x - 9x = 20 - 16 \Rightarrow x = 4$

$\therefore$ Original quantity of mixture in the vessel = $14x = 14 \times 4 = 56$ litre

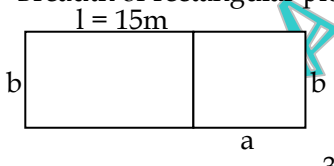
**68. Ans (2): 49 kg**

Weight of new student = 25.8 + Total increase = $(25.8 + 6 \times 3.9)$

$\Rightarrow (25.8 + 23.4) = 49.2$ kg $\approx 49$ kg

**69. Ans (2): 12 metre**

Breadth of rectangular plot = b metre = side of square plot




Perimeter of new plot $= \frac{390}{5} = 78$ metre

$\therefore 2(15 + b + b) = 78 \Rightarrow 15 + 2b = \frac{78}{2} = 39 \Rightarrow 2b = 39 - 15 = 24 \Rightarrow b = \frac{24}{2} = 12$ metre

**70. Ans (1): 50%**

Let the C.P. of article be Rs.100.

Case I $\Rightarrow$ Marked price = Rs.150

Its S.P. $= \frac{150\times 80}{100} =$ Rs.120

profit $= 120 - 100 =$ Rs.20

Case II $\Rightarrow$ Marked price = Rs.175

Its S.P. $= \frac{175 \times 80}{100} = \text{Rs.}140$

Profit $= 140 - 100 = \text{Rs.}40$

$\therefore$ Required percent $= \frac{20}{40} \times 100 = 50\%$

**71. Ans (4): 5 years**

Let principal in each scheme be 100

Compound interest (in%)= 10 + 10 + 1 = 21%

$\therefore \text{Principal} = \frac{100}{21} \times 1050 = \text{Rs.}5000$

$\therefore T = \frac{\text{S.I} \times 100}{\text{P} \times \text{R}} \Rightarrow T = \frac{2000 \times 100}{5000 \times 8} = 5 \text{ years}$

**72. Ans (5): Rs.25,000**

Let total monthly salary be 100

Remaining salary after savings = 100 – 20 = 80

EMI cost = $80 - \left(80 \times \frac{1}{4} + 80 \times \frac{1}{2}\right) = 80 - 60 = 20$

$\therefore \text{Monthly salary} = \frac{100}{20} \times \frac{60000}{12} = \text{Rs.}25000$

**73. Ans (2): Rs.90**

$4x + x - 9.75 = 442 \Rightarrow 5x = 442 + 9.75 \Rightarrow 5x = 451.75$

$\Rightarrow x = \frac{451.75}{5} = 90.35 \approx \text{Rs.}90$

**74. Ans (1): 50%**

Profit investment ratio of A and B = 2 : 1

$\Rightarrow 2 \times 12 : 1 \times 12 : x \times 8$

Given that $\Rightarrow 2 \times 12 = x \times 8$

$\therefore x = 3$

$\therefore \text{Required percentage} = \frac{12}{24} \times 100 = 50\%$

**75. Ans (2): 2 years**

Ishu's age after 8 years = $5x$ years

Ahan's age 6 years hence = $6x$ years

$5x + 2 = 6x \Rightarrow 6x - 5x = 2 \Rightarrow x = 2$

$\therefore$ Ishu's present age = $5x - 8 = 5 \times 2 - 8 = 2$ years

**76. Ans (3): 1000**

Required difference $= 5000 \times \frac{20}{100} = 1000$

77. **Ans (4): 7 cm**

Radius of cylinder = $x$ cm.

Its height = $3x$ cm

Volume of cylinder = $\pi r^2 h \Rightarrow \frac{22}{7} \times x^2 \times 3x = 3234 \Rightarrow x^3 = \frac{3234 \times 7}{22 \times 3} = 343$

$\therefore x = \sqrt[3]{343} = \sqrt[3]{7 \times 7 \times 7} = 7\text{cm}.$

78. **Ans (5): 576 metre**

When a train crosses a platform, the distance covered = length of train + length of platform

$\therefore$ If the length of train be $x$ metre, Speed $= \frac{\text{Distance}}{\text{Time}} \Rightarrow 72 \times \frac{5}{18} = \frac{x + 524}{55}$

$\Rightarrow 20 \times 55 = x + 524 \Rightarrow x + 524 = 1100 \Rightarrow x = 1100 - 524 = 576$ metre

79. **Ans (2): 30 days**

Time taken by B = $x$ days

$\therefore$ Time taken by A = $3x$ days

Work done in first two days $= \frac{1}{x} + \frac{1}{3x} = \frac{3+1}{3x} = \frac{4}{3x}$

$\therefore$ Work done in 36 days = $\frac{18 \times 4}{3x} = \frac{24}{x}$

$\therefore$ Work done in 37 days $= \frac{24}{x} + \frac{1}{x} = \frac{25}{x}$

$\therefore \frac{25}{x} = 1 \Rightarrow x = 25$

$\therefore$ Time taken by A = 75 days

$\therefore$ (A + C) 1 day work $= \frac{1}{75} + \frac{1}{50} = \frac{2+3}{150} = \frac{5}{150} = \frac{1}{30}$

$\therefore$ Required time = 30 days

80. **Ans (4): 6.25 days**

Given that $2W = 1M \Rightarrow \frac{M_1 D_1}{W_1} = \frac{M_2 D_2}{W_2}$

$\therefore \frac{(7M + 6W) \times 8}{1} = \frac{(8M + 4W) \times 3 + (4M + 8W) \times x}{1}$

$\Rightarrow 20 \times 8 = (20 \times 3) + 16 \times x \Rightarrow x = \frac{100}{16} = 6.25$ days



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