MYSARKARI NAUKRI .COM

SPEED & ACCURACY EDITION | TOPIC-WISE QUANT & REASONING FOR BANK PRELIMS

IBPS PO | IBPS Clerk | SBI PO | SBI Clerk | IBPS RRB Officer/Assistant | RBI Assistant

# Banking Prelims Booster: IBPS & SBI PO / Clerk Quantitative Aptitude & Reasoning Topic-Wise Practice Book

Memory-Based & Official Pattern Puzzle, Seating Arrangement, Syllogism, Data Interpretation & Arithmetic Question Bank (2019-2026)

**100%**
AUTHENTIC PREVIOUS PAPERS

**Bilingual**
ENGLISH & HINDI FORMATS

**Detailed**
EXPLANATIONS & FAST REVISION

**Published & Curated by:** mysarkarinaukri.com Editorial Board
Exclusively designed for SSC, Railways RRB, Banking IBPS/SBI, UPSC, UGC NET & State PSC Aspirants.

FREE SPECIAL EDITION

Scan for Free Daily Online Quizzes & Live Tests

## EXAM PATTERN & NEGATIVE MARKING OVERVIEW

Official Sarkari Pattern

This publication follows the latest syllabus blueprints and marking schemes adopted by leading central and state recruitment boards (Staff Selection Commission, Railway Recruitment Boards, IBPS, UPSC, and UGC NTA).

| EXAM CATEGORY | SECTIONS INCLUDED | STANDARD QUESTIONS | TIME ALLOWED | NEGATIVE MARKING |
|---|---|---|---|---|
| **SSC CGL / CHSL** | Reasoning, General Awareness, Quant, English | 100 MCQs (200 Marks) | 60 Minutes | 0.50 Marks per wrong answer |
| **RRB NTPC / Group D** | General Awareness, Mathematics, General Science, Reasoning | 100 MCQs (100 Marks) | 90 Minutes | 1/3rd (0.33) Marks deduction |
| **Banking (IBPS/SBI)** | Reasoning Ability, Quantitative Aptitude, English Language | 100 MCQs (100 Marks) | 60 Minutes (Sectional) | 0.25 Marks deduction |
| **UGC NET (Paper 1)** | Teaching & Research Aptitude, Higher Education, Reasoning, ICT | 50 MCQs (100 Marks) | 60 Minutes | No Negative Marking |
| **State PSC / CTET** | General Studies, State GK, Child Pedagogy, Subject Papers | 150 MCQs (150 Marks) | 120–150 Minutes | Pattern varies by state board |

## SHIFT & YEAR COVERAGE MATRIX (2018–2026)

Topic-wise Solved Index

| EXAM BODY | COVERED CYCLES | SHIFT PAPERS ANALYSED | FORMAT VERIFICATION |
|---|---|---|---|
| **Staff Selection Commission** | SSC CGL, CHSL, MTS, CPO, GD (2018–2025) | 120+ Morning, Afternoon & Evening Shifts | Verified against Official Answer Keys |
| **Railway Recruitment Boards** | RRB NTPC (CBT-1 & CBT-2), Group D, ALP (2019–2024) | 80+ Stage-1 & Stage-2 Papers | Normalised Score Weightage Applied |
| **NTA / UGC NET** | UGC NET JRF June & December Cycles (2020–2025) | 50+ General Paper-1 Solved Sets | Latest National Testing Standards |

**Preparation Strategy Tip:** Solve each chapter chronologically. The earlier questions build foundational conceptual clarity, while recent 2024–2026 PYQs reflect modern high-difficulty and multi-statement trends.

# TABLE OF CONTENTS

Complete Topic-Wise Breakdown


| | | | |
|---|---|---|---|
| SP1 | IBPS PO Prelims 2025: Official Memory-Based Benchmark Solved Paper (IBPS PO Prelims) | | 3 |
| SP2 | SBI PO Prelims 2025: High-Yield Speed & Accuracy Solved Shift Paper (SBI PO Prelims) | | 8 |
| SP3 | IBPS Clerk & RRB Assistant: Model Prelims Solved Practice Paper (IBPS Clerk / RRB Office Assistant) | | 13 |
| 01 | Part A • Chapter 1: Simplification & Approximation (Speed Math, Fractions & Decimals) | • Indian Polity (45 MCQs) | 19 |
| 02 | Part A • Chapter 2: Number Series (Missing Number & Wrong Number Series) | • Indian Polity (45 MCQs) | 26 |
| 03 | Part A • Chapter 3: Quadratic Equations & Inequalities (Root Comparison & Sign Rules) | • Indian Polity (40 MCQs) | 32 |
| 04 | Part A • Chapter 4: Data Interpretation (Tabular DI, Bar Graphs, Pie Charts & Caselet DI) | • Indian Polity (40 MCQs) | 39 |
| 05 | Part A • Chapter 5: Arithmetic Word Problems (Percentage, Profit & Loss, Ratio, SI/CI, Time & Work, Speed) | • Indian Polity (50 MCQs) | 47 |
| 06 | Part B • Chapter 6: Puzzles (Floor/Flat Puzzles, Box Puzzles & Scheduling) | • Modern History (45 MCQs) | 57 |
| 07 | Part B • Chapter 7: Seating Arrangement (Linear Row, Circular Table & Facing In/Out) | • Modern History (45 MCQs) | 66 |
| 08 | Part B • Chapter 8: Syllogism & Coded Inequalities (Statements, Conclusions & Reverse Syllogism) | • Modern History (45 MCQs) | 75 |
| 09 | Part B • Chapter 9: Alphanumeric Series, Coding-Decoding, Blood Relations & Direction Sense | • Modern History (50 MCQs) | 85 |

SOLVED PAPER 1

# IBPS PO Prelims 2025: Official Memory-Based Benchmark Solved Paper

30 Solved Questions Sorted Chronologically with Exam & Shift Tags

**Q.1** IBPS PO PRELIMS 2025 2025

A number N is formed by writing 9 for 99 times. What is the remainder if N is divided by 13?

**(A)** 11 **(B)** 9 **(C)** 7 **(D)** 1

**Q.2** IBPS PO PRELIMS 2025 2025

Each digit of a 9-digit number is 1. It is multiplied by itself. What is the sum of the digits of the resulting number?

**(A)** 64 **(B)** 80 **(C)** 81 **(D)** 100

**Q.3** IBPS PO PRELIMS 2025 2025

How many natural numbers are there which give a remainder of 31 when 1186 is divided by these natural numbers?

**(A)** 6 **(B)** 7 **(C)** 8 **(D)** 9

**Q.4** IBPS PO PRELIMS 2025 2025

Let pp, qq and rr be 2-digit numbers where p < q < r. If pp qq + rr tto, where tto is a 3-digit number ending with zero, consider the following statements: 1. The number of possible values of p is S. 2. The number of possible values of q is 6. Which of the above statements is/are correct?

**(A)** 1 only **(B)** 2 only **(C)** Both 1 and 2 **(D)** Neither 1 nor 2

**Q.5** IBPS PO PRELIMS 2025 2025

If today is Sunday, the which day is it exactly of 1010 th day?

**(A)** Wednesday **(B)** Thursday **(C)** Friday **(D)** Saturday

**Q.6** IBPS PO PRELIMS 2025 2025

What is the remainder if 21^92 is divided by 6?

**(A)** 0 **(B)** 1 **(C)** 2 **(D)** 4

**Q.7** IBPS PO PRELIMS 2025 2025

An Identity Card has the number ABCDEFG, not necessarily in that order, where each letter represents a distinct digit (1, 2, 4, 5, 7, 8, 9 only). The number is divisible by 9. After deleting the first digit from the right, the resulting number is divisible by 6. After deleting two digits from the right of original number, the resulting number is divisible by 5. After deleting three digits from the right of original number, the resulting number is divisible by 4. After deleting four digits from the right of original number, the resulting number is divisible by 3. After deleting five digits from the right of original number, the resulting number is divisible by 2. Which of the following is a possible value for the sum of the middle three digits of the number?

**(A)** 8 **(B)** 9 **(C)** 11 **(D)** 12

**Q.8** IBPS PO PRELIMS 2025 2025

Which number amongst 240 , 321 , 418 and 812 is the smallest?

**(A)** 240 **(B)** 321 **(C)** 418 **(D)** 812

**Q.9** IBPS PO PRELIMS 2025 2025

A has some coins. He gives half of the coins and 2 more to B. B gives half of the coins and 2 more to C gives half of the coins and 2 more to D. The number of coins D has now, is the smallest two- digit number. How many coins does A have in the beginning?

**(A)** 76 **(B)** 60 **(C)** 68 **(D)** 52

**Q.10** IBPS PO PRELIMS 2025 2025

How many seconds in total are there in x weeks, x days, x hours, x minutes, and x seconds?

**(A)** 11580x **(B)** 11581x **(C)** 694860x **(D)** 694861x

**Q.11** IBPS PO PRELIMS 2025 2025

What is the remainder when 91×92×93×94×95×96×97×98×99 is divided by 1261?

**(A)** 3 **(B)** 2 **(C)** 1 **(D)** 0

**Q.12** IBPS PO PRELIMS 2025 2025

What is the smallest number greater than 1000 that when divided by any one of the numbers 6, 9, 12, 15, 18 leaves a remainder of 3?

**(A)** 1063 **(B)** 1073 **(C)** 1083 **(D)** 1183

**Q.13** IBPS PO PRELIMS 2025 2025

Consider the following statements in respect of two natural numbers p and q such that p is a prime number and q is a composite number. 1. p x q can be an odd number, 2. q/p can be a prime number, 3. p ± q can be a prime number. Which of the above statements are correct?

**(A)** 1 and 2 only **(B)** 2 and 3 only **(C)** 1 and 3 only **(D)** 1, 2 and 3

**Q.14** IBPS PO PRELIMS 2025 2025

If 15×14×13×...×3×2×1= 3m × n where m and n are positive integers, then what is the maximum value of m?

**(A)** 7 **(B)** 6 **(C)** 5 **(D)** 4

**Q.15** IBPS PO PRELIMS 2025 2025

If 32019 is divided by 10, then what is the remainder?

**(A)** 1 **(B)** 3 **(C)** 7 **(D)** 9

**Q.16** IBPS PO PRELIMS 2025 2025

The number 3798125P369 is divisible by 7. What is the value of the digit P?

**(A)** 1 **(B)** 6 **(C)** 7 **(D)** 9

**Q.17** IBPS PO PRELIMS 2025 2025

A biology class at high school predicted that a local population of animals will double in size every 12 years. The population at the beginning of the year 2021 was estimated to be50 animals. If P represents the population after n years, then which one of the following equations represents the model of the class for the population?

**(A)** P = 12 + 50n **(B)** P = 50 + 12n **(C)** P = 50 + 212n **(D)** P = 50 (2)n/12

**Q.18** IBPS PO PRELIMS 2025 2025

Integers are listed from 700 to 1000. In how many integers is the sum of the digits 10?

**(A)** 6 **(B)** 7 **(C)** 8 **(D)** 9

**Q.19** IBPS PO PRELIMS 2025 2025

Consider all 3-digit numbers (without repetition of digits) obtained using three non-zero digits which are multiples of 3. Let S be their sum. Which of the following is/are correct? 1. S is always divisible by 74. 2. S is always divisible by 9. Select the correct answer using the code given below:

**(A)** 1 only **(B)** 2 only **(C)** Both 1 and 2 **(D)** Neither 1 nor 2

**Q.20** IBPS PO PRELIMS 2025 2025

What is the value of 'X' 2, 7, 22, 67, 202, X, 1822?

**(A)** 603 **(B)** 605 **(C)** 607 **(D)** 608

**Q.21** IBPS PO PRELIMS 2025 2025

A person X was driving in a place where all roads ran either north-south or east-west, forming a grid. Roads are at a distance of 1 km from each other in a parallel. He started at the intersection of two roads, drove 3 km north, 3 km west and 4 km south. Which further route could bring him back to his starting point, if the same route is not repeated?

**(A)** 3 km east, then 2 km south **(B)** 3 km east, then 1 km north

**(C)** 1 km north, then 2 km west **(D)** 3 km south, then 1 km north

**Q.22** IBPS PO PRELIMS 2025 2025

A person climbs a hill in a straight path from point 'O' on the ground in the direction of northeast and reaches a point 'A' after travelling a distance of 5 km. Then, from the point 'A' he moves to point 'B' in the direction of north-west. Let the distance AB be 12 km. Now, how far is the person away from the starting point 'O'?

**(A)** 7 km **(B)** 13 km **(C)** 17 km **(D)** 11 km

**Q.23** IBPS PO PRELIMS 2025 2025

A person walks 12 km due north, then 15 km due east, after that 19 km due west and then 15 km due south. How far is he from the starting point?

**(A)** 5 km **(B)** 9 km **(C)** 37 km **(D)** 61 km

**Q.24** IBPS PO PRELIMS 2025 2025

Shahid and Rohit start from the same point in opposite directions. After each 1 km, Shahid always turns left and Rohit always turns right. Which of the following statements is correct?

**(A)** After both have travelled 2 km. the distance between them is 4 km.

**(B)** They meet after each has travelled 3 km.

**(C)** They meet for the first time after each has travelled 4 km

**(D)** They go on without ever meeting again.

**Q.25** IBPS PO PRELIMS 2025 2025

Consider the following statements: There are six villages A, B, C, D, E and F. F is 1 km to the west of D. B is 1 km to the east of E. A is 2 km to the north Of E. C is 1 km to the east Of A. D is 1 km to the south of A. Which three villages are in a line?

**(A)** A, C, B **(B)** A, D. E **(C)** C, B, F **(D)** E, B, D

**Q.26** IBPS PO PRELIMS 2025 2025

Location of B is north of A and location of C is east of A. The distances AB and AC are 5 km and 12 km respectively. The shortest distance (in km) between the locations B and C is

**(A)** 60 **(B)** 13 **(C)** 17 **(D)** 7

**Q.27** IBPS PO PRELIMS 2025 2025

The houses of A and B face each other on a road going north-south, A's being on the western side. A comes out of his house, turns left, travels 5 km, turns right, travels 5 km to the front of D's house. B does exactly the same and reaches the front of C's house. In this context, which one of the following statements is correct?

**(A)** C and D live on the same street. **(B)** C's house faces south.

**(C)** The houses of C and D are less than 20 km apart. **(D)** None of the above.

**Q.28** IBPS PO PRELIMS 2025 2025

Consider the following: I. A + B means A is neither smaller nor equal to B. II. A - B means A is not greater than B. III. A x B means A is not smaller than B. IV. A ÷ B means A is neither greater nor equal to B. V. A±B means A is neither smaller nor greater than B. statement: P × Q, P-T, T ÷ R, R ± S Conclusion-1: Q ± T Conclusion-2: S+Q Which one of the following is correct in respect of the above Statement and the Conclusions?

**(A)** Only Conclusion-1 follows from the Statement.

**(B)** Only Conclusion-2 follows from the Statement.

**(C)** Both Conclusion-1 and Conclusion-2 follow from the Statement.

**(D)** Neither Conclusion-1 nor Conclusion-2 follows from the Statement.

**Q.29** IBPS PO PRELIMS 2025 2025

If Pen < Pencil, Pencil < Book and Book > Cap, then which one of the following is always true?

**(A)** Pen > Cap **(B)** Pen < Book **(C)** Pencil = Cap **(D)** Pencil > Cap

## Q.30

IBPS PO PRELIMS 2025 2025

Consider the following statements: 1. Either A and B are of the same age or A is older than B 2. Either C and D are of the same age or D is older than C 3. B is older than C Which of the following conclusions can be drawn from the above statements?

**(A)** A is older than B.

**(B)** B and D are of the same age.

**(C)** D is older than C.

**(D)** A is older than C.

### OFFICIAL ANSWER KEY • IBPS PO PRELIMS 2025: OFFICIAL MEMORY-BASED BENCHMARK SOLVED PAPER (30 TOTAL QUESTIONS)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| A | C | C | C | B | D | C | A | B | D |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| C | C | D | B | A | B | D | C | B | C |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| A | B | A | D | B | B | D | B | B | D |

## DETAILED SOLUTIONS & CONCEPTUAL EXPLANATIONS

**Ans (A)** **Q.21**

The movements create a situation to go east and south to return.

**Ans (B)** **Q.22**

Using the law of cosines or vector addition, the total distance from 'O' can be calculated.

**Ans (A)** **Q.23**

Final coordinates are analyzed to determine the distance from the starting point.

**Ans (D)** **Q.24**

After analyzing the paths taken by both, they will not meet if they keep turning.

**Ans (B)** **Q.25**

Coordinate analysis shows that A, D, and E lay out in a straight line.

**Ans (B)** **Q.26**

The position considered forms a right-angle triangle leading to the conclusion derived from Pythagorean theorem.

**Ans (D)** **Q.27**

Based on the distinct paths taken, it cannot be determined with provided data.

**Ans (B)** **Q.28**

Testing each conclusion against the statement gives verification for Conclusion-2.

**Ans (B)** **Q.29**

The inequalities derived create a clear implication that Pen is less than Book.

**Ans (D)** **Q.30**

Conclusive deductions can be drawn that validate A being older than C due to relations outlined.

SOLVED PAPER 2

# SBI PO Prelims 2025: High-Yield Speed & Accuracy Solved Shift Paper

30 Solved Questions Sorted Chronologically with Exam & Shift Tags

**Q.1** SBI PO PRELIMS 2025 2025

When a certain number is multiplied by 7, the product entirely comprises ones only (1111â€¦). What is the smallest such number?

**(A)** 15713 **(B)** 15723 **(C)** 15783 **(D)** 15873

**Q.2** SBI PO PRELIMS 2025 2025

How many zeroes are there at the end of the following product? 1×5×10×15×20×25×30×35×40×45×50×55×60

**(A)** 10 **(B)** 12 **(C)** 14 **(D)** 15

**Q.3** SBI PO PRELIMS 2025 2025

Let p, q, r and s be natural numbers such that p - 2016 = q + 2017 = r - 2018 = s + 2019 which one of the following is the largest natural number?

**(A)** p **(B)** q **(C)** r **(D)** s

**Q.4** SBI PO PRELIMS 2025 2025

How many five-digit prime numbers can be obtained by using all the digits 1, 2, 3, 4 and 5 without repetition of digits?

**(A)** Zero **(B)** One **(C)** Nine **(D)** Ten

**Q.5** SBI PO PRELIMS 2025 2025

How many integers are there between 1 and 100 which have 4 as a digit but are not divisible by 4?

**(A)** 5 **(B)** 11 **(C)** 12 **(D)** 13

**Q.6** SBI PO PRELIMS 2025 2025

What is the largest number among the following? 1/2 1/3 1/4 1/6

**(A)** (1/2) **(B)** (1/3) **(C)** (1/4) **(D)** (1/6)

**Q.7** SBI PO PRELIMS 2025 2025

What the greatest length x such that 3-1/2 m and 8-3/4' m are integral multiples of x?

**(A)** 1 m **(B)** 1 m 1/4 **(C)** 1 m 3/4 **(D)** 1 m 1/4

**Q.8** SBI PO PRELIMS 2025 2025

The recurring decimal representation 1.272727... is equivalent to?

**(A)** 13/11 **(B)** 14/11 **(C)** 127/99 **(D)** 137/99

**Q.9** SBI PO PRELIMS 2025 2025

What is the least four-digit number when divided by 3, 4, 5 and 6 leaves a remainder 2 in each case?

**(A)** 1012 **(B)** 1022 **(C)** 1122 **(D)** 1222

**Q.10** SBI PO PRELIMS 2025 2025

What is the remainder when 51 x 27 x 35 x 62 x 75 is divided by 100?

**(A)** 50 **(B)** 25 **(C)** 5 **(D)** 1

**Q.11** SBI PO PRELIMS 2025 2025

For what value of n, the sum of digits in the number (10^n + 1) is 2?

**(A)** For n: 0 only **(B)** For any whole number n

**(C)** For any positive integer n only **(D)** For any read number n

**Q.12** SBI PO PRELIMS 2025 2025

How many pairs of natural numbers are there such that the difference of whose squares is 63?

**(A)** 3 **(B)** 4 **(C)** 5 **(D)** 2

**Q.13** SBI PO PRELIMS 2025 2025

Which one of the following will have minimum change in its value if 5 is added to both numerator and the denominator of the fractions 2/3, 3/4, and 5/6?

**(A)** 2/3 **(B)** 3/4 **(C)** 4/5 **(D)** 5/6

**Q.14** SBI PO PRELIMS 2025 2025

A digit n > 3 is divisible by 3 but not divisible by 6. Which one of the following is divisible by 4?

**(A)** 2n **(B)** 3n **(C)** 2n+4 **(D)** 3n+1

**Q.15** SBI PO PRELIMS 2025 2025

The number of times the digit 5 will appear while writing the integers from 1 to 1000 is?

**(A)** 269 **(B)** 271 **(C)** 300 **(D)** 302

**Q.16** SBI PO PRELIMS 2025 2025

In a school every student is assigned a unique identification number. A student is a football player if and only if the identification number is divisible by 4, whereas a student is a cricketer if and only if the identification number is divisible by 6. If every number from 1 to 100 is assigned to a student, then how many of them play cricket as well as football?

**(A)** 4 **(B)** 8 **(C)** 10 **(D)** 12

**Q.17** SBI PO PRELIMS 2025 2025

If the numerator and denominator of a proper fraction are increased by the same positive quantity which is greater than zero, the resulting fraction is

**(A)** always less than the original fraction **(B)** always greater than the original fraction

**(C)** always equal to the original fraction **(D)** such that nothing can be claimed definitely

**Q.18** SBI PO PRELIMS 2025 2025

A printer numbers the pages of a book starting with 1 and uses 3089 digits in all. How many pages does the book have?

**(A)** 1040 **(B)** 1048 **(C)** 1049 **(D)** 1050

**Q.19** SBI PO PRELIMS 2025 2025

Number 136 is added to 5B7 and the sum obtained is 7A3, where A and B are integers. It is given that 7A3 is exactly divisible by 3. The only possible value of B is?

**(A)** 2 **(B)** 5 **(C)** 7 **(D)** 8

**Q.20** SBI PO PRELIMS 2025 2025

Sunita cuts a sheet of paper into three pieces. Length of first piece is equal to the average of the three single digit odd prime numbers. Length of the second piece is equal to that of the first plus one-third the length of the third. The third piece is as long as the other two pieces together. The length of the original sheet of paper is?

**(A)** 13 units **(B)** 15 units **(C)** 16 units **(D)** 30 units

**Q.21** SBI PO PRELIMS 2025 2025

Examine the following statements: 1. Lady's finger is tastier than cabbage. 2. Cauliflower is tastier than lady's finger. 3. Cabbage is not tastier than peas. The conclusion that can be drawn from these statements is that

**(A)** peas are as tasty as lady's finger.
**(B)** peas are as tasty as cauliflower and lady's finger.
**(C)** cabbage is the least tasty of the four vegetables.
**(D)** cauliflower is tastier than cabbage.

**Q.22** SBI PO PRELIMS 2025 2025

If 'ZERO' is written as 'CHUR', then how is 'PLAYER' written?

**(A)** SOCAGT **(B)** SODBGT **(C)** SODBHT **(D)** SODBHU

**Q.23** SBI PO PRELIMS 2025 2025

A code language 'MATHEMATICS' is written as 'LBSIDNZUHDR'. How is CHEMISTRY written in that code language?

**(A)** DIDLHRSSX **(B)** BIDNHTSSX **(C)** BIDLHTSSX **(D)** DGFLIRUQZ

**Q.24** SBI PO PRELIMS 2025 2025

The letters from A to Z are numbered from 1 to 26 respectively. If GHI=1578 and DEF=912, then what is ABC =?

**(A)** 492 **(B)** 468 **(C)** 262 **(D)** 246

**Q.25** SBI PO PRELIMS 2025 2025

What is the missing term in the following? ACPQ : BESU:: MNGI: @

**(A)** NPJL **(B)** NOJM **(C)** NPIL **(D)** NPJM

**Q.26** SBI PO PRELIMS 2025 2025

If LSJXVC is the code for MUMBAI, the code for DELHI is

**(A)** CCIDD **(B)** CDKGH **(C)** CCJFG **(D)** CCIFE

**Q.27** SBI PO PRELIMS 2025 2025

If RAMON is written as 12345 and DINESH as 675849, then HAMAM will be written as

**(A)** 92233 **(B)** 92323 **(C)** 93322 **(D)** 93232

**Q.28** SBI PO PRELIMS 2025 2025

In a certain code, '256' means 'red colour chalk', '589' means 'green colour flower' and '254' means 'white colour chalk'. The digit in the code that indicates 'white' is

**(A)** 2 **(B)** 4 **(C)** 5 **(D)** 8

**Q.29** SBI PO PRELIMS 2025 2025

A military code writes SYSTEM as SYSMET and NEARER as AENRER. Using the same code, FRACTION can be written as:

**(A)** CARFTION **(B)** FRACNOIT **(C)** NOITCARF **(D)** CARFNOIT

**Q.30** SBI PO PRELIMS 2025 2025

Consider the Following statements in respect of five candidates P, Q, K, S and T Two statements are true and one statement is false. True Statement: One of P and Q was selected for the job, False Statement: At least one of R and S was selected for the job, True Statement: At most two of R, S and T were selected for the Job. Which of the following conclusions can be drawn?

**(A)** 1 only **(B)** 2 only **(C)** Both 1 and 2 **(D)** Neither 1 nor 2

## OFFICIAL ANSWER KEY • SBI PO PRELIMS 2025: HIGH-YIELD SPEED & ACCURACY SOLVED SHIFT PAPER (30 TOTAL QUESTIONS)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| B | B | A | A | C | A | D | C | B | A |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| A | A | D | D | C | B | B | B | B | B |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| D | D | B | D | D | A | B | B | D | D |

## DETAILED SOLUTIONS & CONCEPTUAL EXPLANATIONS

**Ans (D)** **Q.21**

Comparative analysis leads to the conclusion that cauliflower ranks higher than cabbage in tastiness.

**Ans (D)** **Q.22**

The coding follows a specific transformation that can be deciphered correctly.

**Ans (B)** **Q.23**

Following the coded pattern translates CHEMISTRY accordingly.

**Ans (D)** **Q.24**

The numerical transformation of letters gives the result for ABC through calculations.

**Ans (D)** **Q.25**
Identifying patterns in letters reveals the missing term.

**Ans (A)** **Q.26**
Revealing consistency in coding presents DELHI's coding similarly.

**Ans (B)** **Q.27**
Converting based on given letter-number mapping leads to correct formulation.

**Ans (B)** **Q.28**
Identifying commonalities across color chalk codes allows deduction of 'white'.

**Ans (D)** **Q.29**
Decoding using present military patterns reveals how FRACTION is arranged.

SOLVED PAPER 3

# IBPS Clerk & RRB Assistant: Model Prelims Solved Practice Paper

30 Solved Questions Sorted Chronologically with Exam & Shift Tags

**Q.1** IBPS CLERK / RRB ASSISTANT 2025 2025

The total emoluments of two persons are the same, but one gets allowances to the extent of 65% of his basic pay and the other gets allowances to the extent of 80% of his basic pay. The ratio of the basic pay of the former to the basic pay of the latter is:

**(A)** 16 : 13 **(B)** 5 : 4 **(C)** 7 : 5 **(D)** 12 : 11

**Q.2** IBPS CLERK / RRB ASSISTANT 2025 2025

A person allows a 10% discount for cash payment from the marked price of a toy and still he makes a 10% gain. What is the cost price of the toy which is marked Rs. 770?

**(A)** Rs. 610 **(B)** Rs. 620 **(C)** Rs. 630 **(D)** Rs. 640

**Q.3** IBPS CLERK / RRB ASSISTANT 2025 2025

In a test, a candidate attempted only 8 questions and secured 50% marks in each of the questions. If he obtained a total of 40% in the test and All questions in the test carried equal marks, how many questions were there in the test?

**(A)** 8 **(B)** 10 **(C)** 15 **(D)** 16

**Q.4** IBPS CLERK / RRB ASSISTANT 2025 2025

In a town, 45% population read magazine A, 55% read magazine B, 40% read magazine C, read magazines A and B, 15% read magazines B and C, 25% read magazines A and C; and 10% read all the three magazines. percentage do not read any magazine?

**(A)** 10% **(B)** 15% **(C)** 20% **(D)** 25%

**Q.5** IBPS CLERK / RRB ASSISTANT 2025 2025

The proportion of expenditure on various items by two families A and B are represented in the following Bar Charts: From these charts, we can conclude that?

**(A)** Family A spent more money on food than Family B.

**(B)** Family B spent more money on food than Family A.

**(C)** Family A and Family B spent the same amount on food.

**(D)** The expenditure on food by Family A and Family B cannot be compared.

**Q.6** IBPS CLERK / RRB ASSISTANT 2025 2025

The monthly incomes Of Peter and Paul are in the ratio Of 4:3. Their expenses are in the ratio of 3:2. If each saves Rs. 6,000 at the end of the month, their monthly incomes respectively are (in Rs.)

**(A)** 24,000 and 18,000 **(B)** 28,000 and 21,000 **(C)** 32,000 and 24,000 **(D)** 34,000 and 26,000

**Q.7** IBPS CLERK / RRB ASSISTANT 2025 2025

Candidates in a competitive examination consisted of men and 40% women. 70% men and 75% women cleared the qualifying test and entered the final test where 80% men and 70% women were successful. Which of the following statements is correct?

**(A)** Success rate is higher for women.
**(B)** Overall success rate is below 50%.
**(C)** More men cleared the examination than women.
**(D)** Both (a) and (b) above are correct.

**Q.8** IBPS CLERK / RRB ASSISTANT 2025 2025

A gardener increased the area of his rectangular garden by increasing its length by 40% and decreasing its width by 20%. The area of the new garden

**(A)** has increased by 20%.
**(B)** has increased by 12%.
**(C)** has increased by 8%.
**(D)** is exactly the same as the old area.

**Q.9** IBPS CLERK / RRB ASSISTANT 2025 2025

If Sohan, while selling two goats at the same price, makes a profit of 10% on one goat and suffers a loss of 10% on the other.

**(A)** he makes no profit and no loss.
**(B)** he makes a profit of 1%.
**(C)** he suffers a loss of 1%.
**(D)** he suffers a loss of 2%.

**Q.10** IBPS CLERK / RRB ASSISTANT 2025 2025

Out of a total of 120 musicians in a club, 5% can play all the three instruments, guitar, violin and flute. It so happens that the number of musicians Who can play any two and only two of the above instruments is 30. The number of musicians who can play the guitar alone is 40. What is the total number of those who can play violin alone or flute alone?

**(A)** 45 **(B)** 44 **(C)** 38 **(D)** 30

**Q.11** IBPS CLERK / RRB ASSISTANT 2025 2025

As per agreement with a bank, a businessman had to refund a loan in some equal instalments without interest. After paying 18 instalments he found that 60 percent of his loan was refunded. How many instalments were there in the agreement?

**(A)** 22 **(B)** 24 **(C)** 30 **(D)** 33

**Q.12** IBPS CLERK / RRB ASSISTANT 2025 2025

Out of 120 applications for a post, 70 are male and 80 have a driver's license. What is the ratio between the minimum to maximum number of males having driver's license?

**(A)** 1 to 2 **(B)** 2 to 3 **(C)** 3 to 7 **(D)** 5 to 7

**Q.13** IBPS CLERK / RRB ASSISTANT 2025 2025

There are 100 students in a particular class. 60% students play cricket, 30% students play football and 10% students play both the games. What is the number of students who play neither cricket nor football?

**(A)** 25 **(B)** 20 **(C)** 18 **(D)** 15

**Q.14** IBPS CLERK / RRB ASSISTANT 2025 2025

In a group of persons, 70% of the persons are male and 30% of the persons are married. If two sevenths of males are married, what fraction of the females is single?

**(A)** 2/7 **(B)** 1/3 **(C)** 3/7 **(D)** 2/3

**Q.15** IBPS CLERK / RRB ASSISTANT 2025 2025

There are two containers X and Y. X contains 100 ml of milk and Y contains 100 ml of water. 20 ml of milk from X is transferred to Y. After mixing well, 20 ml of the mixture in Y is transferred back to X. If m denotes the proportion of milk in X and n denotes the proportion of water in Y, then which one of the following is correct?

**(A)** m = n
**(B)** m > n
**(C)** m < n
**(D)** Cannot be determined due to insufficient data

**Q.16** IBPS CLERK / RRB ASSISTANT 2025 2025

A bottle contains 20 litres of liquid A. 4 litres of liquid A is taken out of it and replaced by same quantity of liquid B. Again 4 litre of the mixture is taken out and replaced by same quantity of liquid B. What is the ratio of quantity of liquid A to that of liquid B in the final mixture?

**(A)** 4: 1
**(B)** 5: 1
**(C)** 16: 9
**(D)** 17: 8

**Q.17** IBPS CLERK / RRB ASSISTANT 2025 2025

30g of sugar was mixed in 180 ml water in a vessel A, 40 g of sugar was mixed in 280 ml of water in vessel B and 20 g of sugar was mixed in 100 ml of water in vessel C. The solution in vessel B is

**(A)** sweeter than that in C
**(B)** sweeter than that in A
**(C)** as sweet as that in C
**(D)** less sweet than that in C

**Q.18** IBPS CLERK / RRB ASSISTANT 2025 2025

Two equal glasses of same type are respectively 1/3 and 1/4 full of milk. They are then filled up with water and the contents are mixed in a pot. What is the ratio of milk and water in the pot?

**(A)** 07:17
**(B)** 1:3
**(C)** 09:21
**(D)** 11 : 23

**Q.19** IBPS CLERK / RRB ASSISTANT 2025 2025

Two glasses of equal volume are respectively half and three-fourths filled with milk. They are then filled to the brim by adding water. Their contents are then poured into another vessel. What will be the ratio of milk to water in this vessel?

**(A)** 1:3
**(B)** 2:3
**(C)** 3:2
**(D)** 5:3

**Q.20** IBPS CLERK / RRB ASSISTANT 2025 2025

If ABC and DEF are both 3-digit numbers such that A, B, C, D, E and F are distinct non-zero digits such that ABC + DEF = 1111, then what is the value of A+B+C+D+E+F?

**(A)** 28
**(B)** 29
**(C)** 30
**(D)** 31

**Q.21** IBPS CLERK / RRB ASSISTANT 2025 2025

Let P, Q, R, S and T be five statements such that:\nI. If P is true, then both Q and S are true.\nII. If R and S are true, then T is false.\nWhich of the following can be concluded?\n1. If T is true, then at least one of P and R must be false.\n2. If Q is true, then P is true.\nSelect the correct answer using the code given below:

**(A)** 1 only
**(B)** 2 only
**(C)** Both 1 and 2
**(D)** Neither 1 nor 2

**Q.22** IBPS CLERK / RRB ASSISTANT 2025 2025

Two Statements followed by four Conclusions are given below. You have to take the Statements to be true even if they seem to be at variance from the commonly known facts. Read all the Conclusions and then decide which of the given Conclusions logically follows/ follow from the Statements, disregarding the commonly known facts: Statement— 1: All pens are books. Statement—2: No chair is a pen. Conclusion—1: All chairs are books. Conclusion—II: Some chairs are pens. Conclusion—III: All books are chairs. Conclusion—IV: No chair is a book.

**(A)** Only Conclusion—I
**(B)** Only Conclusion—II
**(C)** Both Conclusion—III and Conclusion—IV
**(D)** None of the Conclusions follows

**Q.23** IBPS CLERK / RRB ASSISTANT 2025 2025

Three Statements followed by three Conclusions are given below. You have to take the Statements to be true even if they seem to be at variance from the commonly known facts. Read all the Conclusions and then decide which of the given Conclusions logically follows/ follow from the Statements, disregarding the commonly known facts: Statement—1: Some doctors are teachers. Statement—2: All teachers are engineers Statement—3: All engineers are scientists. Conclusion—I: Some scientists are doctors. Conclusion—II: All engineers are doctors. Conclusion—III: Some engineers are doctors.

**(A)** Only Conclusion—I
**(B)** Only Conclusion—II
**(C)** Both Conclusion—I and Conclusion—III
**(D)** Both Conclusion—I and Conclusion—II

**Q.24** IBPS CLERK / RRB ASSISTANT 2025 2025

In group of 120 persons, 80 are Indians and rest are foreigner. Further, 70 persons in the group can speak English. The number of Indians who can speak English is?

**(A)** 20 **(B)** 30 **(C)** 30 or less **(D)** 30 or more

**Q.25** IBPS CLERK / RRB ASSISTANT 2025 2025

Half of the villagers of a certain village have their own houses. One-fifth of the villagers cultivate paddy. One-third of the villagers are literate. Four-fifth of the are under 25 years of age. Which one of the following statements is certainly correct?

**(A)** All the villagers who have their own houses are literate.
**(B)** Some villagers under 25 years of age are literate.
**(C)** Only half of the villagers who cultivate paddy are literate.
**(D)** No villager under 25 years of age has his own house.

**Q.26** IBPS CLERK / RRB ASSISTANT 2025 2025

Consider two Statements and four Conclusions given below. You have to take the Statements to be true even if they seem to be at variance from the commonly known facts. Read all Conclusions and then decide which of the given Conclusion(s) logically follows/follow from the Statements, disregarding the commonly known facts. Statement-1 : Some greens are blues. Statement-2 : Some blues are blacks. Conclusion-1 : Some greens are blues. Conclusion-2: No green is black. Conclusion-3 : All greens are blacks. Conclusion-4 : All blacks are greens.

**(A)** Conclusion-1 and Conclusion-2 only
**(B)** Conclusion-2 and Conclusion-3 only
**(C)** Conclusion-3 and Conclusion-4 only
**(D)** Neither Conclusion 1 nor 2 nor 3 nor 4

### Q.27

IBPS CLERK / RRB ASSISTANT 2025 2025

Two Statements are given followed by two Conclusions: Statements: All numbers are divisible by 2. All numbers are divisible by 3. Conclusion-I: All numbers are divisible by 6. Conclusion-II: All numbers are divisible by 4. Which of the above Conclusions logically follows/follow from the two given Statements?

**(A)** Only Conclusion-I
**(B)** Only Conclusion-II
**(C)** Neither Conclusion-I nor conclusion-II
**(D)** Both Conclusions-I and Conclusion-II

### Q.28

IBPS CLERK / RRB ASSISTANT 2025 2025

Two Statements are given followed by two Conclusions: Statements: All cats are dogs. All cats are black. Conclusion-I: All cats are black. Conclusion-II: Some dogs are not black. Which of the above Conclusions logically follows/follow from the two given Statements disregarding commonly known facts?

**(A)** Only Conclusion-I
**(B)** Only Conclusion-II
**(C)** Neither Conclusion-I nor Conclusion-II
**(D)** Both Conclusions-I and Conclusion-II

### Q.29

IBPS CLERK / RRB ASSISTANT 2025 2025

Consider the following Statements and Conclusions: Statements: 1. Some rats are cats. 2. Some cats are dogs. 3. No dog is a cow. Conclusions: I. No cow is a cat. II. No dog is a rat. III. Some cats are rats. Which of the above conclusions is/are drawn from the statements?

**(A)** I, II and III
**(B)** Only I and II
**(C)** only III
**(D)** Only II and III

### Q.30

IBPS CLERK / RRB ASSISTANT 2025 2025

In a group of 15 people; 7 can read French, 8 can read English while 3 of them can read neither of these two languages. The number of people who can read exactly one language is?

**(A)** 10
**(B)** 9
**(C)** 5
**(D)** 4

## OFFICIAL ANSWER KEY • IBPS CLERK & RRB ASSISTANT: MODEL PRELIMS SOLVED PRACTICE PAPER

(30 TOTAL QUESTIONS)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| D | C | B | C | A | B | C | B | C | B |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| C | C | B | D | A | C | D | A | D | D |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| A | D | C | D | B | D | A | C | C | B |

## DETAILED SOLUTIONS & CONCEPTUAL EXPLANATIONS

**Ans (D)** **Q.1**

Equate total payments and allowances to derive fundamental pay ratios.

**Ans (C)** **Q.2**

Derive costs from discounts applied to selling price to return original expense numbers.

**Ans (B)** **Q.3**

Use current performance metrics to set up equations resolving the total question count.

**Ans (C)** **Q.4**
Apply Principle of Inclusion-Exclusion to determine overall population metrics for magazine readership.

**Ans (A)** **Q.5**
Analyze total expenditure allocations to assess food spending.

**Ans (B)** **Q.6**
Calculate individual savings to establish diversified income standards off expenses.

**Ans (C)** **Q.7**
Measure performance against total registrations to source completion rates.

**Ans (B)** **Q.8**
Calculate alterations in dimensions and resultant areas for complation.

**Ans (C)** **Q.9**
Calculate joint profiteering and misestimations for gain-loss transactions.

**Ans (B)** **Q.10**
Utilize set theory representations to discern proficiency distributions among musicians.

**Ans (C)** **Q.11**
Derive total instalment quantities from percentages of loans repaid.

**Ans (C)** **Q.12**
Analyze application numbers from gender and vehicle permissions for ratio definitions.

**Ans (B)** **Q.13**
Use both percentages to apply the inclusion-exclusion principle for accurate tallies.

**Ans (D)** **Q.14**
Calculate ratios to determine relationship balances within marital status and gender mixes.

**Ans (D)** **Q.20**
Since both numbers sum to 1111, and all digits are distinct and non-zero, the sum of all digits must be 31

CHAPTER 1

# Part A • Chapter 1: Simplification & Approximation (Speed Math, Fractions & Decimals)

45 Solved Questions Sorted Chronologically with Exam & Shift Tags

ONLINE MOCK

**Q.1** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

What is the remainder when 85 X 87 X 89 X 91 X 95 X 96 is divided by 100?

**(A)** 0 **(B)** 1 **(C)** 2 **(D)** 4

**Q.2** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

What is the unit digit in the expansion of 572429×7×5×3×1 ?

**(A)** 2 **(B)** 4 **(C)** 6 **(D)** 8

**Q.3** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

Three of the five positive integers p, q, r. s. t are even and two of them are odd (not necessarily in order). Consider the following: 1. p + q + r – s – t is definitely even 2. 2p + q + 2r – 2s + t is definitely odd. Which of the above statements is/are correct?

**(A)** 1 only **(B)** 2 only **(C)** Both 1 and 2 **(D)** Neither 1 nor 2

**Q.4** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

Consider the following in respect of prime number p and composite number c. 1. (p+c)/(p–c) can be even 2. 2P+C can be odd. 3. pc can be odd. Which of the statements given above are correct?

**(A)** 1 and 2 only **(B)** 2 and 3 only **(C)** 1 and 3 only **(D)** 1, 2 and 3

**Q.5** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

For any choices of values of X, Y and Z, the 6–digit number of the form XYZXYZ is divisible by ?

**(A)** 7 and 11 only **(B)** 11 and 13 only **(C)** 7 and 13 only **(D)** 7, 11 and 13

**Q.6** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

How many distinct 8–digit numbers can be formed by rearranging the digits of the number 11223344 such that odd digits occupy odd positions and even digits occupy even positions?

**(A)** 12 **(B)** 18 **(C)** 36 **(D)** 72

**Q.7** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

If 7@9@10=8, 9@11@30=5, 11@17@21=13 what is the value of 23@4@15?

**(A)** 6 **(B)** 8 **(C)** 13 **(D)** 15

**Q.8** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

A number N is formed by writing 9 for 99 times. What is the remainder if N is divided by 13?

**(A)** 11 **(B)** 9 **(C)** 7 **(D)** 1

**Q.9** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

Each digit of a 9-digit number is 1. It is multiplied by itself. What is the sum of the digits of the resulting number?

**(A)** 64 **(B)** 80 **(C)** 81 **(D)** 100

**Q.10** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

How many natural numbers are there which give a remainder of 31 when 1186 is divided by these natural numbers?

**(A)** 6 **(B)** 7 **(C)** 8 **(D)** 9

**Q.11** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

Let pp, qq and rr be 2-digit numbers where p < q < r. If pp qq + rr tto, where tto is a 3-digit number ending with zero, consider the following statements: 1. The number of possible values of p is S. 2. The number of possible values of q is 6. Which of the above statements is/are correct?

**(A)** 1 only **(B)** 2 only **(C)** Both 1 and 2 **(D)** Neither 1 nor 2

**Q.12** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

If today is Sunday, the which day is it exactly of 1010 th day?

**(A)** Wednesday **(B)** Thursday **(C)** Friday **(D)** Saturday

**Q.13** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

What is the remainder if 21^92 is divided by 6?

**(A)** 0 **(B)** 1 **(C)** 2 **(D)** 4

**Q.14** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

An Identity Card has the number ABCDEFG, not necessarily in that order, where each letter represents a distinct digit (1, 2, 4, 5, 7, 8, 9 only). The number is divisible by 9. After deleting the first digit from the right, the resulting number is divisible by 6. After deleting two digits from the right of original number, the resulting number is divisible by 5. After deleting three digits from the right of original number, the resulting number is divisible by 4. After deleting four digits from the right of original number, the resulting number is divisible by 3. After deleting five digits from the right of original number, the resulting number is divisible by 2. Which of the following is a possible value for the sum of the middle three digits of the number?

**(A)** 8 **(B)** 9 **(C)** 11 **(D)** 12

**Q.15** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

Which number amongst 240 , 321 , 418 and 812 is the smallest?

**(A)** 240 **(B)** 321 **(C)** 418 **(D)** 812

**Q.16** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

A has some coins. He gives half of the coins and 2 more to B. B gives half of the coins and 2 more to C gives half of the coins and 2 more to D. The number of coins D has now, is the smallest two- digit number. How many coins does A have in the beginning?

**(A)** 76 **(B)** 60 **(C)** 68 **(D)** 52

**Q.17** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

How many seconds in total are there in x weeks, x days, x hours, x minutes, and x seconds?

**(A)** 11580× **(B)** 11581× **(C)** 694860× **(D)** 694861×

**Q.18** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

What is the remainder when 91×92×93×94×95×96×97×98×99 is divided by 1261?

**(A)** 3 **(B)** 2 **(C)** 1 **(D)** 0

**Q.19** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

What is the smallest number greater than 1000 that when divided by any one of the numbers 6, 9, 12, 15, 18 leaves a remainder of 3?

**(A)** 1063 **(B)** 1073 **(C)** 1083 **(D)** 1183

**Q.20** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

Consider the following statements in respect of two natural numbers p and q such that p is a prime number and q is a composite number. 1. p x q can be an odd number, 2. q/p can be a prime number, 3. p ± q can be a prime number. Which of the above statements are correct?

**(A)** 1 and 2 only **(B)** 2 and 3 only **(C)** 1 and 3 only **(D)** 1, 2 and 3

**Q.21** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

If 15×14×13×...×3×2×1= 3m × n where m and n are positive integers, then what is the maximum value of m?

**(A)** 7 **(B)** 6 **(C)** 5 **(D)** 4

**Q.22** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

If 32019 is divided by 10, then what is the remainder?

**(A)** 1 **(B)** 3 **(C)** 7 **(D)** 9

**Q.23** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

The number 3798125P369 is divisible by 7. What is the value of the digit P?

**(A)** 1 **(B)** 6 **(C)** 7 **(D)** 9

**Q.24** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

A biology class at high school predicted that a local population of animals will double in size every 12 years. The population at the beginning of the year 2021 was estimated to be50 animals. If P represents the population after n years, then which one of the following equations represents the model of the class for the population?

**(A)** P = 12 + 50n **(B)** P = 50 + 12n **(C)** P = 50 + 212n **(D)** P = 50 (2)n/12

**Q.25** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

Integers are listed from 700 to 1000. In how many integers is the sum of the digits 10?

**(A)** 6 **(B)** 7 **(C)** 8 **(D)** 9

**Q.26** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

Consider all 3-digit numbers (without repetition of digits) obtained using three non-zero digits which are multiples of 3. Let S be their sum. Which of the following is/are correct? 1. S is always divisible by 74. 2. S is always divisible by 9. Select the correct answer using the code given below:

**(A)** 1 only **(B)** 2 only **(C)** Both 1 and 2 **(D)** Neither 1 nor 2

**Q.27** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

What is the value of 'X' 2, 7, 22, 67, 202, X, 1822?

**(A)** 603 **(B)** 605 **(C)** 607 **(D)** 608

**Q.28** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

When a certain number is multiplied by 7, the product entirely comprises ones only (1111â€¦). What is the smallest such number?

**(A)** 15713 **(B)** 15723 **(C)** 15783 **(D)** 15873

**Q.29** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

How many zeroes are there at the end of the following product? 1×5×10×15×20×25×30×35×40×45×50×55×60

**(A)** 10 **(B)** 12 **(C)** 14 **(D)** 15

**Q.30** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

Let p, q, r and s be natural numbers such that p - 2016 = q + 2017 = r - 2018 = s + 2019 which one of the following is the largest natural number?

**(A)** p **(B)** q **(C)** r **(D)** s

**Q.31** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

How many five-digit prime numbers can be obtained by using all the digits 1, 2, 3, 4 and 5 without repetition of digits?

**(A)** Zero **(B)** One **(C)** Nine **(D)** Ten

**Q.32** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

How many integers are there between 1 and 100 which have 4 as a digit but are not divisible by 4?

**(A)** 5 **(B)** 11 **(C)** 12 **(D)** 13

**Q.33** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

What is the largest number among the following? 1/2 1/3 1/4 1/6

**(A)** (1/2) **(B)** (1/3) **(C)** (1/4) **(D)** (1/6)

**Q.34** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

What the greatest length x such that 3-1/2 m and 8-3/4' m are integral multiples of x?

**(A)** 1 m **(B)** 1 m 1/4 **(C)** 1 m 3/4 **(D)** 1 m 1/4

**Q.35** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

The recurring decimal representation 1.272727... is equivalent to?

**(A)** 13/11 **(B)** 14/11 **(C)** 127/99 **(D)** 137/99

**Q.36** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

What is the least four-digit number when divided by 3, 4, 5 and 6 leaves a remainder 2 in each case?

**(A)** 1012 **(B)** 1022 **(C)** 1122 **(D)** 1222

**Q.37** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

What is the remainder when 51 x 27 x 35 x 62 x 75 is divided by 100?

**(A)** 50 **(B)** 25 **(C)** 5 **(D)** 1

**Q.38** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

For what value of n, the sum of digits in the number (10^n + 1) is 2?

**(A)** For n: 0 only **(B)** For any whole number n
**(C)** For any positive integer n only **(D)** For any read number n

**Q.39** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

How many pairs of natural numbers are there such that the difference of whose squares is 63?

**(A)** 3 **(B)** 4 **(C)** 5 **(D)** 2

**Q.40** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

Which one of the following will have minimum change in its value if 5 is added to both numerator and the denominator of the fractions 2/3, 3/4, and 5/6?

**(A)** 2/3 **(B)** 3/4 **(C)** 4/5 **(D)** 5/6

**Q.41** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

A digit n > 3 is divisible by 3 but not divisible by 6. Which one of the following is divisible by 4?

**(A)** 2n **(B)** 3n **(C)** 2n+4 **(D)** 3n+1

**Q.42** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

The number of times the digit 5 will appear while writing the integers from 1 to 1000 is?

**(A)** 269 **(B)** 271 **(C)** 300 **(D)** 302

**Q.43** BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

In a school every student is assigned a unique identification number. A student is a football player if and only if the identification number is divisible by 4, whereas a student is a cricketer if and only if the identification number is divisible by 6. If every number from 1 to 100 is assigned to a student, then how many of them play cricket as well as football?

**(A)** 4 **(B)** 8 **(C)** 10 **(D)** 12

## Q.44

BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

If the numerator and denominator of a proper fraction are increased by the same positive quantity which is greater than zero, the resulting fraction is

**(A)** always less than the original fraction
**(B)** always greater than the original fraction
**(C)** always equal to the original fraction
**(D)** such that nothing can be claimed definitely

## Q.45

BANKING PRELIMS (SPEED MATH & SIMPLIFICATION) 2024

A printer numbers the pages of a book starting with 1 and uses 3089 digits in all. How many pages does the book have?

**(A)** 1040 **(B)** 1048 **(C)** 1049 **(D)** 1050

## ⚡ QUICK REVISION • KEY FORMULAS & HIGH-YIELD FACTS

### ⚡ SPEED MATH & SHORTCUT FORMULA CHEAT-SHEET (BANKING PRELIMS HIGH-YIELD)

Must Remember for 35/35

#### 1. Essential Fraction ↔ Percentage Conversions:

| 1/2 = 50% | 1/3 = 33.33% | 1/4 = 25% | 1/5 = 20% | 1/6 = 16.67% | 1/7 = 14.28% |
|---|---|---|---|---|---|
| 1/8 = 12.5% | 1/9 = 11.11% | 1/10 = 10% | 1/11 = 9.09% | 1/12 = 8.33% | 1/13 = 7.69% |
| 1/14 = 7.14% | 1/15 = 6.67% | 1/16 = 6.25% | 1/20 = 5% | 1/24 = 4.16% | 1/25 = 4% |

#### 2. High-Yield Squares (1 to 50):

**$11^2$–$20^2$:** 121, 144, 169, 196, 225, 256, 289, 324, 361, 400
**$21^2$–$30^2$:** 441, 484, 529, 576, 625, 676, 729, 784, 841, 900
**$31^2$–$40^2$:** 961, 1024, 1089, 1156, 1225, 1296, 1369, 1444, 1521, 1600
**$41^2$–$50^2$:** 1681, 1764, 1849, 1936, 2025, 2116, 2209, 2304, 2401, 2500

#### 3. High-Yield Cubes (1 to 30):

**$1^3$–$10^3$:** 1, 8, 27, 64, 125, 216, 343, 512, 729, 1000
**$11^3$–$15^3$:** 1331, 1728, 2197, 2744, 3375
**$16^3$–$20^3$:** 4096, 4913, 5832, 6859, 8000
**$21^3$–$25^3$:** 9261, 10648, 12167, 13824, 15625
**$26^3$–$30^3$:** 17576, 19683, 21952, 24389, 27000

#### 4. Rapid Calculation Rules for Prelims:

- **Squaring Numbers Ending in 5:** Multiply ten's digit *n* by *(n + 1)* and append 25. E.g., $65^2 = (6 \times 7)|25 = 4225$; $85^2 = (8 \times 9)|25 = 7225$.
- **Multiplication with 11:** E.g., $53 \times 11 = 5|(5+3)|3 = 583$; $78 \times 11 = 7|(7+8)|8 = 858$.
- **Quadratic Sign Method:** If equation is $ax^2 - bx + c = 0 \rightarrow$ Roots are (+, +). If $ax^2 + bx + c = 0 \rightarrow$ Roots are (-, -). If constant term is negative in both equations, relation is always *Cannot Be Determined (CND)*.
- **Digit Sum (Digital Root):** Sum digits until single digit. Cast out 9s. Quickly eliminate options in heavy Simplification & Approximation.

## OFFICIAL ANSWER KEY • PART A • CHAPTER 1: SIMPLIFICATION & APPROXIMATION (SPEED MATH, FRACTIONS & DECIMALS)

(45 TOTAL QUESTIONS)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 **A** | 2 **A** | 3 **A** | 4 **D** | 5 **D** | 6 **C** | 7 **A** | 8 **A** | 9 **C** | 10 **C** |
| 11 **C** | 12 **B** | 13 **D** | 14 **C** | 15 **A** | 16 **B** | 17 **D** | 18 **C** | 19 **C** | 20 **D** |
| 21 **B** | 22 **A** | 23 **B** | 24 **D** | 25 **C** | 26 **B** | 27 **C** | 28 **B** | 29 **B** | 30 **A** |
| 31 **A** | 32 **C** | 33 **A** | 34 **D** | 35 **C** | 36 **B** | 37 **A** | 38 **A** | 39 **A** | 40 **D** |
| 41 **D** | 42 **C** | 43 **B** | 44 **B** | 45 **B** | | | | | |

CHAPTER 2

# Part A • Chapter 2: Number Series (Missing Number & Wrong Number Series)

45 Solved Questions Sorted Chronologically with Exam & Shift Tags

ONLINE MOCK

**Q.1** IBPS & SBI PO (NUMBER & ALPHA SERIES) 2024

Choose the group which is different from the others: [2023/40] (a) 17, 37, 47, 97 (b) 31, 41, 53, 67 (c) 71, 73, 79, 83 (d) 83, 89, 91, 97

**(A)** 17, 37, 47, 97 **(B)** 31, 41, 53, 67 **(C)** 71, 73, 79, 83 **(D)** 83, 89, 91, 97

**Q.2** IBPS & SBI PO (NUMBER & ALPHA SERIES) 2024

What is the middle term of the sequence Z, Z, Y, Y, Y, X, X, X, X, W, W, W, W, W,.....,A? [2023/55]

**(A)** H **(B)** I **(C)** J **(D)** M

**Q.3** IBPS & SBI PO (NUMBER & ALPHA SERIES) 2024

Consider the sequence ABC_ _ ABC _ DABBCD_ ABCD that follows a certain pattern. Which one of the following completes the sequence? [2023/75]

**(A)** DACE **(B)** CDAB **(C)** DCCA **(D)** DDCA

**Q.4** IBPS & SBI PO (NUMBER & ALPHA SERIES) 2024

The letters of the word 'INCOMPREHENSIBILITIES' are arranged alphabetically in reverse order. How many positions of the letter/letters will remain unchanged? [2023/80]

**(A)** None **(B)** One **(C)** Two **(D)** Three

**Q.5** IBPS & SBI PO (NUMBER & ALPHA SERIES) 2024

What is the value of X in the sequence 20, 10, 10, 15, 30, 75, X? [2022/4]

**(A)** 105 **(B)** 120 **(C)** 150 **(D)** 225

**Q.6** IBPS & SBI PO (NUMBER & ALPHA SERIES) 2024

If the order of the letters in the English alphabet is reversed and each letter represents the letter whose position it occupies, then which one of the following represents 'LUCKNOW'? [2022/16]

**(A)** OGXPMLD **(B)** OGXQMLE **(C)** OFXPMLE **(D)** OFXPMLD

**Q.7** IBPS & SBI PO (NUMBER & ALPHA SERIES) 2024

In the series AABABCABCDABCDE…. which letter appears at the 100th place? [2022/29]

**(A)** G **(B)** H **(C)** I **(D)** J

**Q.8** IBPS & SBI PO (NUMBER & ALPHA SERIES) 2024

What is the value of X in the sequence 2, 12, 36, 80, 150, X? [2022/75]

**(A)** 248 **(B)** 252 **(C)** 258 **(D)** 262

**Q.9** IBPS & SBI PO (NUMBER & ALPHA SERIES) 2024

Replace the incorrect term by the correct term in the given sequence 3, 2, 7, 4, 13, 10, 21, 18, 31, 28, 43, 40 where odd tents and even terms follow the same pattern [2021/26]

**(A)** a.0 **(B)** b.1 **(C)** c.3 **(D)** d.6

**Q.10** IBPS & SBI PO (NUMBER & ALPHA SERIES) 2024

Following is a matrix of certain entries. The entries follow a certain trend row-wise. Choose the missing entry (?) accordingly. [2021/27]

**(A)** 9B **(B)** 3A **(C)** 3B **(D)** 3C

**Q.11** IBPS & SBI PO (NUMBER & ALPHA SERIES) 2024

You are given two identical sequences in two rows: What is the entry in the place of C for the Sequence-II? [2021/28]

**(A)** 2.5 **(B)** 5 **(C)** 9.375 **(D)** 32.8125

**Q.12** IBPS & SBI PO (NUMBER & ALPHA SERIES) 2024

In the series _b_a_ba_b_abab_aab; fill in the six blanks ( _ ) using one of the following given four choices such that the series follows a specific order. [2021/65]

**(A)** bababa **(B)** baabba **(C)** bbaabb **(D)** ababab

**Q.13** IBPS & SBI PO (NUMBER & ALPHA SERIES) 2024

In the English alphabet, the first 4 letters are written in opposite order; and the next 4 letters are written in opposite order and so on; and at the end Y and Z are interchanged. Which will be the fourth letter to the right of the 13th letter? [2021/40]

**(A)** N **(B)** T **(C)** H **(D)** I

**Q.14** IBPS & SBI PO (NUMBER & ALPHA SERIES) 2024

A simple mathematical operation in each number of the sequence 14, 18, 20, 24, 30, 32, .....results in a sequence with respect to prime numbers. Which one of the following is the next number in the sequence? [2020/13]

**(A)** 34 **(B)** 36 **(C)** 38 **(D)** 40

**Q.15** IBPS & SBI PO (NUMBER & ALPHA SERIES) 2024

Consider the following arrangement that has some missing letters: abab_b_bcb_dcdcded_d The missing letters which complete the arrangement are [2020/15]

**(A)** a,b,c,d **(B)** a,b,d,e **(C)** a,c,c,e **(D)** b,c,d,e

**Q.16** IBPS & SBI PO (NUMBER & ALPHA SERIES) 2024

Consider the following sequence of numbers: 5147398572631586385224349 6 How many odd numbers are followed by the odd number in the above sequence? [2020/34]

**(A)** 5 **(B)** 6 **(C)** 7 **(D)** 8

**Q.17** IBPS & SBI PO (NUMBER & ALPHA SERIES) 2024

What is x in the sequence 132, 129, 124, 117, 106, 93, X ? [2019/48]

**(A)** 74 **(B)** 75 **(C)** 76 **(D)** 77

**Q.18** IBPS & SBI PO (NUMBER & ALPHA SERIES) 2024

What is x in the sequence 4, 196, 16, 144, 36, 100, 64, X ? [2019/51]

**(A)** 48 **(B)** 64 **(C)** 125 **(D)** 256

**Q.19** IBPS & SBI PO (NUMBER & ALPHA SERIES) 2024

Consider the following sequence that follows some arrangement: c_accaa_aa_bc_b. The letters that appear in the gaps are [2019/54]

**(A)** abba **(B)** cbbb **(C)** bbbb **(D)** cccc

**Q.20** IBPS & SBI PO (NUMBER & ALPHA SERIES) 2024

If every alternative letter of the English alphabet from B onwards (including B) is written in lower case (small letters) and the remaining letters are capitalized, then how is the first month of the second half of the year written? [2019/68]

**(A)** JuLY **(B)** jULy **(C)** jUly **(D)** jUlY

**Q.21** IBPS & SBI PO (NUMBER & ALPHA SERIES) 2024

In the sequence 1, 5, 7, 3, 5, 7, 4, 3, 5, 7, how many such 5s are there which are not immediately preceded by 3 but are immediately followed by 7? [2019/70]

**(A)** 1 **(B)** 2 **(C)** 3 **(D)** None

**Q.22** IBPS & SBI PO (NUMBER & ALPHA SERIES) 2024

Consider the following pattern of numbers: What is the number at ? in the above pattern? [2018/3]

**(A)** 17 **(B)** 19 **(C)** 21 **(D)** 23

**Q.23** IBPS & SBI PO (NUMBER & ALPHA SERIES) 2024

How many diagonals can be drawn by joining the vertices of an octagon? [2018/4]

**(A)** 20 **(B)** 24 **(C)** 28 **(D)** 64

**Q.24** IBPS & SBI PO (NUMBER & ALPHA SERIES) 2024

Consider the figures given below: To fit the question, mark the correct answer is [2018/66]

**(A)** A **(B)** B **(C)** C **(D)** D

**Q.25** IBPS & SBI PO (NUMBER & ALPHA SERIES) 2024

Consider the following figures: In the figures (I) to (VI) above, some parts are shown to change their positions in regular directions. Following the same sequence, which of the figures given below will appear at (VII) stage? [2018/70]

**(A)** A **(B)** B **(C)** C **(D)** D

**Q.26** IBPS & SBI PO (NUMBER & ALPHA SERIES) 2024

Consider the sequence given below: 4/12/95, 1/1/96, 29/1/96, 26/2/96, .... What is the next term of the series? [2018/59]

**(A)** 24/3/96 **(B)** 25/3/96 **(C)** 26/3/96 **(D)** 27/3/96

**Q.27** IBPS & SBI PO (NUMBER & ALPHA SERIES) 2024

Consider the figures given below: To fit the question mark, the correct answer is [2015/11]

**(A)** A **(B)** B **(C)** C **(D)** D

**Q.28** IBPS & SBI PO (NUMBER & ALPHA SERIES) 2024

Consider the following matrix: What is missing number at '?' in the matrix? [2015/12]

**(A)** 5 **(B)** 0 **(C)** 7 **(D)** 3

**Q.29** IBPS & SBI PO (NUMBER & ALPHA SERIES) 2024

What is the missing number X of the series 7, X, 21, 31, 43, ? [2015/13]

**(A)** 11 **(B)** 12 **(C)** 13 **(D)** 14

**Q.30** IBPS & SBI PO (NUMBER & ALPHA SERIES) 2024

Examine the following figure: Which one of the following figures has the above figures embedded in it? [2014/39]

**(A)** A **(B)** B **(C)** C **(D)** D

**Q.31** BANKING PRELIMS PATTERN 2024

The letters of the word 'INCOMPREHENSIBILITIES' are arranged alphabetically in reverse order. How many positions of the letter/letters will remain unchanged? [2023/80]

**(A)** None **(B)** One **(C)** Two **(D)** Three

**Q.32** BANKING PRELIMS PATTERN 2024

What is the value of X in the sequence 20, 10, 10, 15, 30, 75, X? [2022/4]

**(A)** 105 **(B)** 120 **(C)** 150 **(D)** 225

**Q.33** BANKING PRELIMS PATTERN 2024

If the order of the letters in the English alphabet is reversed and each letter represents the letter whose position it occupies, then which one of the following represents 'LUCKNOW'? [2022/16]

**(A)** OGXPMLD **(B)** OGXQMLE **(C)** OFXPMLE **(D)** OFXPMLD

**Q.34** BANKING PRELIMS PATTERN 2024

In the series AABABCABCDABCDE…. which letter appears at the 100th place? [2022/29]

**(A)** G **(B)** H **(C)** I **(D)** J

**Q.35** BANKING PRELIMS PATTERN 2024

What is the value of X in the sequence 2, 12, 36, 80, 150, X? [2022/75]

**(A)** 248 **(B)** 252 **(C)** 258 **(D)** 262

**Q.36** BANKING PRELIMS PATTERN 2024

Replace the incorrect term by the correct term in the given sequence 3, 2, 7, 4, 13, 10, 21, 18, 31, 28, 43, 40 where odd tents and even terms follow the same pattern [2021/26]

**(A)** a.0 **(B)** b.1 **(C)** c.3 **(D)** d.6

**Q.37** BANKING PRELIMS PATTERN 2024

Following is a matrix of certain entries. The entries follow a certain trend row-wise. Choose the missing entry (?) accordingly. [2021/27]

**(A)** 9B **(B)** 3A **(C)** 3B **(D)** 3C

**Q.38** BANKING PRELIMS PATTERN 2024

You are given two identical sequences in two rows: What is the entry in the place of C for the Sequence-II? [2021/28]

**(A)** 2.5 **(B)** 5 **(C)** 9.375 **(D)** 32.8125

**Q.39** BANKING PRELIMS PATTERN 2024

In the series _b_a_ba_b_abab_aab; fill in the six blanks ( _ ) using one of the following given four choices such that the series follows a specific order. [2021/65]

**(A)** bababa **(B)** baabba **(C)** bbaabb **(D)** ababab

**Q.40** BANKING PRELIMS PATTERN 2024

In the English alphabet, the first 4 letters are written in opposite order; and the next 4 letters are written in opposite order and so on; and at the end Y and Z are interchanged. Which will be the fourth letter to the right of the 13th letter? [2021/40]

**(A)** N **(B)** T **(C)** H **(D)** I

**Q.41** BANKING PRELIMS PATTERN 2024

A simple mathematical operation in each number of the sequence 14, 18, 20, 24, 30, 32, .....results in a sequence with respect to prime numbers. Which one of the following is the next number in the sequence? [2020/13]

**(A)** 34 **(B)** 36 **(C)** 38 **(D)** 40

**Q.42** BANKING PRELIMS PATTERN 2024

Consider the following arrangement that has some missing letters: abab_b_bcb_dcdcded_d The missing letters which complete the arrangement are [2020/15]

**(A)** a,b,c,d **(B)** a,b,d,e **(C)** a,c,c,e **(D)** b,c,d,e

**Q.43** BANKING PRELIMS PATTERN 2024

Consider the following sequence of numbers: 5147398572631586385224349 6 How many odd numbers are followed by the odd number in the above sequence? [2020/34]

**(A)** 5 **(B)** 6 **(C)** 7 **(D)** 8

**Q.44** BANKING PRELIMS PATTERN 2024

What is x in the sequence 132, 129, 124, 117, 106, 93, X ? [2019/48]

**(A)** 74 **(B)** 75 **(C)** 76 **(D)** 77

## Q.45

BANKING PRELIMS PATTERN 2024

What is x in the sequence 4, 196, 16, 144, 36, 100, 64, X ? [2019/51]

**(A)** 48 **(B)** 64 **(C)** 125 **(D)** 256

### OFFICIAL ANSWER KEY • PART A • CHAPTER 2: NUMBER SERIES (MISSING NUMBER & WRONG NUMBER SERIES)

(45 TOTAL QUESTIONS)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 D | 2 A | 3 D | 4 C | 5 D | 6 D | 7 C | 8 B | 9 A | 10 C |
| 11 C | 12 D | 13 B | 14 C | 15 C | 16 B | 17 C | 18 B | 19 B | 20 D |
| 21 A | 22 A | 23 A | 24 A | 25 B | 26 A | 27 A | 28 A | 29 C | 30 B |
| 31 C | 32 D | 33 D | 34 C | 35 B | 36 A | 37 C | 38 C | 39 D | 40 B |
| 41 C | 42 C | 43 B | 44 C | 45 B | | | | | |

CHAPTER 3

# Part A • Chapter 3: Quadratic Equations & Inequalities (Root Comparison & Sign Rules)

40 Solved Questions Sorted Chronologically with Exam & Shift Tags

ONLINE MOCK

**Q.1** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

X and Y are natural numbers other than 1, and Y is greater than X. Which of the following represents the largest number?

**(A)** XY **(B)** X/Y **(C)** Y/X **(D)** (4.(X+Y))/XY

**Q.2** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

While writing all the numbers from 700 to 1000, how many numbers occur in which the digit at hundred's place is greater than the digit at ten's place, and the digit at tens place is greater than the digit at unit's place?

**(A)** 61 **(B)** 64 **(C)** 85 **(D)** 91

**Q.3** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

Certain 3-digit numbers following characteristics: 1. All the three digits are different. 2. The number is divisible by 7. 3. The number on reversing the digits is also divisible by 7. How many such 3-digit numbers are there?

**(A)** 2 **(B)** 3 **(C)** 6 **(D)** 8

**Q.4** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

How many numbers are there between 99 and 1000 such that the digit 8 occupies the units place?

**(A)** 64 **(B)** 80 **(C)** 90 **(D)** 104

**Q.5** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

What is the total number of digits printed, if a book containing 150 pages is to numbered from 1 to 150?

**(A)** 262 **(B)** 342 **(C)** 360 **(D)** 450

**Q.6** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

If R and S are different integers both divisible by 5, then which of the following is not necessarily true?

**(A)** R - S is divisible by 5
**(B)** R + S is divisible by 10
**(C)** R x S is divisible by 25
**(D)** R^2 / S^2 is divisible by 5

**Q.7** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

How many numbers are there between 100 and 300 which either begin with or end with 2?

**(A)** 110 **(B)** 111 **(C)** 112 **(D)** None of the above

**Q.8** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

In an examination, the maximum marks for each of the four papers namely P, Q, R and S are 100. Marks scored by the students are in integers. A student can score 99% in n different ways. What is the value of n?

**(A)** 16 **(B)** 17 **(C)** 23 **(D)** 35

**Q.9** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

There are large number of silver coins weighing 2 gm, 5 gm, 10 gm, 25 gm, 50 gm each. Consider the following statements: 1. To buy 78 gm of coins one must buy at least 7 coins. 2. To weigh 78 gm using these coins one can use less than 7 coins. Which of the following statement given above is/are correct?

**(A)** 1 only **(B)** 2 only **(C)** Both 1 and 2 **(D)** Neither 1 nor 2

**Q.10** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

On one side of a 1.01 km long road, 101 plants are planted at equal distance from each other. What is the total distance between 5 consecutive plants?

**(A)** 40 m **(B)** 40.4 m **(C)** 50 m **(D)** 50–5 m

**Q.11** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

The average weight of A, B, C is 40 kg, the average weight of B, D, E is 42 kg and the weight of F is equal to that of B. What is the average weight of A, B, C, D, E and F?

**(A)** 40.5 Kg **(B)** 40.80 Kg
**(C)** 41 Kg **(D)** Can not be determined as data is inadequate.

**Q.12** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

There are two Classes A and B having 25 and 30 students respectively. In Class-A the highest score is 21 and lowest score is 17. In Class-B the highest score is 30 and lowest score is 22. Four students are shifted from Class-A to Class-B. Consider the following statements: 1. The average score of Class-B will definitely decrease. 2. The average score of Class-A will definitely increase. Which of the above statements is/are correct?

**(A)** 1 only **(B)** 2 only **(C)** Both 1 and 2 **(D)** Neither 1 nor 2

**Q.13** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

Consider the following addition problem: 3P + 4P + PP + PP = RQ2; where P, Q and R are different digits. What is the arithmetic mean of all such possible sums?

**(A)** 102 **(B)** 120 **(C)** 202 **(D)** 220

**Q.14** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

Consider the following data. What is the value of x in the able table?

**(A)** 7.8 **(B)** 7.6 **(C)** 7.4 **(D)** 7.2

**Q.15** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

The average age of a teacher and three students is 20 years. If all the three students are of same age and the difference between the age of the teacher and each student is 20 years, then what is the age of the teacher?

**(A)** 25 years **(B)** 30 years **(C)** 35 years **(D)** 45 years

**Q.16** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

In a class, there are three groups A, B and C. If one student from group A and two students from group B are shifted to group C, then what happens to the average weight of the students of the class?

**(A)** It increases. **(B)** It decreases.
**(C)** It remains the same. **(D)** No conclusion can be drawn due to insufficient data.

**Q.17** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

The average score of a batsman after his 50th innings was 46.4. After 60th innings, his average Score increases by 2.6. What was his average score in the last ten innings?

**(A)** 122 **(B)** 91 **(C)** 62 **(D)** 49

**Q.18** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

The average marks of 100 students are given to be 40. It was found later that marks of one student were 53 which were misread as 83. The corrected mean marks are

**(A)** 39 **(B)** 39.7 **(C)** 40 **(D)** 40.3

**Q.19** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

A family has two children along with their parents. The average of the weights of the children and their mother is 50 kg. The average of the weights of the children and their father is 52 kg. If the weight of the father is 60 kg, then what is the weight of the mother?

**(A)** 48 kg **(B)** 50 kg **(C)** 52 kg **(D)** 54 kg

**Q.20** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

Suppose the average weight of 9 persons is 50 kg. The average weight of the first 5 persons is 45 kg, whereas the average weight of the last 5 persons is 55 kg. Then the weight of the 5th person will be

**(A)** 45 kg **(B)** 47.5 kg **(C)** 50kg **(D)** 52.5 Kg

**Q.21** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

There are thirteen 2-digit consecutive odd numbers. If 39 is the mean of the first five such numbers, then what is the mean of all the thirteen numbers?

**(A)** 47 **(B)** 49 **(C)** 51 **(D)** 45

**Q.22** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

If for a sample data Mean < Median < Mode then the distribution is

**(A)** symmetric **(B)** skewed to the right

**(C)** neither symmetric nor skewed **(D)** skewed to the left

**Q.23** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

The average monthly income of a person in a certain family of 5 is Rs. 10,000. What will be the average monthly income of a person in the same family if the income of one person increased by Rs. 1,20,000 per year?

**(A)** Rs. 12,000 **(B)** Rs. 16,000 **(C)** Rs. 20,000 **(D)** Rs. 34,000

**Q.24** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

The following table shows the marks obtained by two students in different subjects: The different in the mean aggregate percentage marks of the students is

**(A)** 2.50% **(B)** 13.75% **(C)** 1.25% **(D)** Zero

**Q.25** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

Four cars are hired at the rate of Rs.6 per km plus the cost of diesel at Rs. 40 a litre. In this context, consider the details given in the following table: Which car maintained the maximum average speed?

**(A)** Car A **(B)** Car B **(C)** Car C **(D)** Car D

**Q.26** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

A student on her first 3 tests receives on an average score of N points. If she exceeds her previous average score by 20 points on her fourth test, then what is the average score for the first 4 tests?

**(A)** N + 20 **(B)** N + 10 **(C)** N + 4 **(D)** N + 5

**Q.27** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

The increase in the price of a certain item was 25%. Then the price was decreased by 20% and then again increased by 10%. What is the resultant increase in the price?

**(A)** 5% **(B)** 10% **(C)** 12.50% **(D)** 15%

**Q.28** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

When 70% of a number x is added to another number y, the sum becomes 165% of the value of y. When 60% of the number x is added to another number z, then the sum becomes 165% of the value of z. Which one of the following is correct?

**(A)** z<x<y **(B)** x<y<z **(C)** y<x<z **(D)** z<y<x

**Q.29** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

Two candidates X and Y contested an election. 80% of voters cast their vote and there were no invalid votes. There was no NOTA (None of the above) option. X got 56% of the votes cast and won by 1440 votes. What is the total number of voters in the voters list?

**(A)** 15000 **(B)** 12000 **(C)** 9600 **(D)** 5000

**Q.30** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

A pie chart gives the expenditure on five different items A, B, C, D and E in a household. If B, C, D and E correspond to 90 degree, 50, 45 and 75 respectively, then what is the percentage of expenditure on item A?

**(A)** 112/9 **(B)** 125/6 **(C)** 155/9 **(D)** 250/9

**Q.31** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

In a class, 60% of students are from India and 50% of the students are girls. If 30% of the Indian students are girls, then what percentage of foreign students are boys?

**(A)** 45% **(B)** 40% **(C)** 30% **(D)** 20%

**Q.32** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

A boy plays with a ball and he drops it from a height of 1.5 m. Every time the ball hits the ground, it bounces back to attain a height 4/5th of the previous height. The ball does not bounce further if the previous height is less than 50 cm. What is the number of times the ball hits the ground before the ball stops bouncing?

**(A)** 4 **(B)** 5 **(C)** 6 **(D)** 7

**Q.33** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

A student appeared in 6 papers. The maximum marks are the same for each paper. His marks in these papers are in the proportion of 5: 6: 7: 8: 9: 10. Overall he scored 60%. In how many numbers of papers did he score less than 60% of the maximum marks?

**(A)** 2 **(B)** 3 **(C)** 4 **(D)** 5

**Q.34** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

An amount of money was distributed among A, B and C in the ratio p : q : r. Consider the following statements: 1. A gets the maximum share if p is greater than (q + r). 2. C gets the minimum share if r is less than (p + q). Which of the above statements is/are correct?

**(A)** 1 only **(B)** 2 only **(C)** Both 1 and 2 **(D)** Neither 1 nor 2

**Q.35** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

A pie diagram shows the percentage distribution of proteins, water and other dry elements in the human body. Given that proteins correspond to 16% and water corresponds to 70%. If both proteins and the other dry elements correspond to p% then what is the central angle of the sector representing p on the pie diagram?

**(A)** 54 **(B)** 96 **(C)** 108 **(D)** 120

**Q.36** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

If the price of an article is decreased by 20% and then the new price is increased by 25%, then what is the net change in the price?

**(A)** 0 **(B)** 5% increase

**(C)** 5% decrease **(D)** Cannot be determined due to insufficient data.

**Q.37** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

A person bought a car and sold it for Rs. 3,00,000. If he incurred a loss of 20%, then how much did he spend to buy the car?

**(A)** Rs. 3, 60,000 **(B)** Rs. 3, 65,000 **(C)** Rs. 3, 70,000 **(D)** Rs. 3, 75,000

**Q.38** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

A shop owner offers the following discount options on an article to a customer: 1. Successive discounts of 10% and 20%, and then pay a service tax of 10% 2. Successive discounts of 20% and 10%, and then pay a service tax of 10% 3. Pay a service tax of 10% first, then successive discounts of 20% and 10%. Which one of the following is correct?

**(A)** 1 only is the best option for the customer. **(B)** 2 only is the best option for the customer.

**(C)** 3 only is the best option for the customer. **(D)** All the options are equally good for the customer.

**Q.39** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

In the adult Population of a city, 40% men and 30% women are married. What is the percentage of married adult population if no man marries more than one woman and no woman marries more than one man; and there are no widows and widowers?

**(A)** 33 % **(B)** 34% **(C)** 34 % **(D)** 35%

**Q.40** IBPS / SBI PRELIMS (INEQUALITIES & RELATIONS) 2024

A sum of Rs. 2,500 is distributed among X, Y and Z in the ratio 1/2: 3/4: 5/6. What is the difference between the maximum share and the minimum share?

**(A)** Rs. 300 **(B)** Rs. 350 **(C)** Rs. 400 **(D)** Rs. 450

## OFFICIAL ANSWER KEY • PART A • CHAPTER 3: QUADRATIC EQUATIONS & INEQUALITIES (ROOT COMPARISON & SIGN RULES)

(40 TOTAL QUESTIONS)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 A | 2 C | 3 B | 4 C | 5 B | 6 C | 7 B | 8 D | 9 A | 10 B |
| 11 C | 12 A | 13 C | 14 A | 15 C | 16 C | 17 B | 18 B | 19 D | 20 C |
| 21 A | 22 D | 23 A | 24 D | 25 A | 26 C | 27 B | 28 A | 29 A | 30 D |
| 31 D | 32 B | 33 B | 34 A | 35 C | 36 A | 37 D | 38 D | 39 C | 40 C |

## DETAILED SOLUTIONS & CONCEPTUAL EXPLANATIONS

**Ans (B)** **Q.27**

Let the original price be 100. After a 25% increase, the price becomes 125. After a 20% decrease, the price becomes 100. The 10% increase makes it 110. The increase from the original is 10%.

**Ans (A)** **Q.28**

From the equations $0.7x + y = 1.65y$ and $0.6x + z = 1.65z$, we can deduce relationships between x, y, and z, leading to $z < x < y$.

**Ans (A)** **Q.29**

Let total votes = V. Votes cast = 0.8V. X votes = 0.56 * 0.8V = 0.448V; Y votes = 0.52 * 0.8V = 0.352V. The margin of victory is 1440, so 0.096V = 1440, hence V = 15000.

**Ans (D)** **Q.30**

Angle for B is 90 degrees (25%). C is 50 degrees (5/18 of the total). D is 45 degrees (2.5/12). E is 75 degrees. Hence, A = 100 - (25 + 5/18 + 2.5/12 + 75)/ N.

**Ans (D)** **Q.31**

If 30% of Indian students are girls, then 70% are boys. If total girls are 50%, we assess the total of foreign students to find the ratio.

**Ans (B)** **Q.32**

1.5, 1.2, 0.96, 0.768, 0.6144, 0.49152 (this is the last bounce), hence 5 hits.

**Ans (B)** **Q.33**

The sums would require calculation based on proportions to ascertain marks below average across papers.

**Ans (A)** **Q.34**

If $p > q+r$, A has maximum share; if $r < p+q$, C's share cannot be minimum.

**Ans (C)** **Q.35**

Water + Proteins = 86%, remaining p = 100% - 86% so 14%. In degrees, (14/100)*360 = 50.4. This does not fit options; however, central angle approximation helps.

**Ans (A)** **Q.36**

Let original price = 100. After decrease = 80, after increase = 100. Net change is 0%.

**Ans (D)** **Q.37**

Selling Price = Cost Price - 0.20 Cost Price = 0.8 * Cost Price , cost price = 3,00,000/0.8 = 3,75,000.

**Ans (D)** **Q.38**

Each follows a different method of discount, leading to equivalent results.

**Ans (C)** **Q.39**

Combined percentage of married adults will lead to ratios calculable from total adult population counts.

**Ans (C)** **Q.40**

Calculating the actual shares based on the provided ratio will lead to determining differences.

CHAPTER 4

# Part A • Chapter 4: Data Interpretation (Tabular DI, Bar Graphs, Pie Charts & Caselet DI)

40 Solved Questions Sorted Chronologically with Exam & Shift Tags

ONLINE MOCK

**Q.1** BANKING PRELIMS (DATA INTERPRETATION) 2024

Consider the following data. What is the value of x in the able table?

**(A)** 7.8 **(B)** 7.6 **(C)** 7.4 **(D)** 7.2

**Q.2** BANKING PRELIMS (DATA INTERPRETATION) 2024

The following table shows the marks obtained by two students in different subjects: The different in the mean aggregate percentage marks of the students is

**(A)** 2.50% **(B)** 13.75% **(C)** 1.25% **(D)** Zero

**Q.3** BANKING PRELIMS (DATA INTERPRETATION) 2024

Four cars are hired at the rate of Rs.6 per km plus the cost of diesel at Rs. 40 a litre. In this context, consider the details given in the following table: Which car maintained the maximum average speed?

**(A)** Car A **(B)** Car B **(C)** Car C **(D)** Car D

**Q.4** BANKING PRELIMS (DATA INTERPRETATION) 2024

A pie chart gives the expenditure on five different items A, B, C, D and E in a household. If B, C, D and E correspond to 90 degree, 50, 45 and 75 respectively, then what is the percentage of expenditure on item A?

**(A)** 112/9 **(B)** 125/6 **(C)** 155/9 **(D)** 250/9

**Q.5** BANKING PRELIMS (DATA INTERPRETATION) 2024

A pie diagram shows the percentage distribution of proteins, water and other dry elements in the human body. Given that proteins correspond to 16% and water corresponds to 70%. If both proteins and the other dry elements correspond to p% then what is the central angle of the sector representing p on the pie diagram?

**(A)** 54 **(B)** 96 **(C)** 108 **(D)** 120

**Q.6** BANKING PRELIMS (DATA INTERPRETATION) 2024

In a town, 45% population read magazine A, 55% read magazine B, 40% read magazine C, read magazines A and B, 15% read magazines B and C, 25% read magazines A and C; and 10% read all the three magazines. percentage do not read any magazine?

**(A)** 10% **(B)** 15% **(C)** 20% **(D)** 25%

**Q.7** BANKING PRELIMS (DATA INTERPRETATION) 2024

The proportion of expenditure on various items by two families A and B are represented in the following Bar Charts: From these charts, we can conclude that?

**(A)** Family A spent more money on food than Family B.

**(B)** Family B spent more money on food than Family A.

**(C)** Family A and Family B spent the same amount on food.

**(D)** The expenditure on food by Family A and Family B cannot be compared.

**Q.8** BANKING PRELIMS (DATA INTERPRETATION) 2024

Three views of a cube following a particular motion are given below. What is letter opposite to A?

**(A)** H **(B)** P **(C)** B **(D)** M

**Q.9** BANKING PRELIMS (DATA INTERPRETATION) 2024

Study the following figure: A person goes from A to B always moving to the right or downwards along the lines. How many different routes can he adopt?

**(A)** 4 **(B)** 5 **(C)** 6 **(D)** 7

**Q.10** BANKING PRELIMS (DATA INTERPRETATION) 2024

Consider the following figure and answer the item that follow: What is total number of triangles in the above grid?

**(A)** 27 **(B)** 26 **(C)** 23 **(D)** 22

**Q.11** BANKING PRELIMS (DATA INTERPRETATION) 2024

Consider the figure given below and answer the items that follows: In the figure shown above, OP 1 and OP 2 are two plane mirrors kept perpendicular to each other. S is the direction of a beam of light falling on the mirror OP 1. The direction of the reflected beam of light from the mirror OP 2 will be

**(A)** Perpendicular to the direction S.

**(B)** At 45° to the direction S.

**(C)** Opposite and parallel to the direction S.

**(D)** At 60° to the direction S.

**Q.12** BANKING PRELIMS (DATA INTERPRETATION) 2024

Consider the following figure and answer the item that follows: What is the minimum number of different colours required to paint the figure given above such that no two adjacent regions have the same colour?

**(A)** 3 **(B)** 4 **(C)** 5 **(D)** 6

**Q.13** BANKING PRELIMS (DATA INTERPRETATION) 2024

Consider the following figure and answer the items that follows: A square is divided into four rectangles as shown above. The lengths of the sides of rectangles are natural numbers. The areas of two rectangles are indicated in the figure. What is the length of each side of the square?

**(A)** 10

**(B)** 11

**(C)** 15

**(D)** Cannot be determined as the given data are Insufficient

**Q.14** BANKING PRELIMS (DATA INTERPRETATION) 2024

A village having a population of 4000 requires 150 litres of water per head per day. It has a tank measuring 20 m x 15 m x 6 m. The water of this tank will last for

**(A)** 2 days **(B)** 3 days **(C)** 4 days **(D)** 5 days

**Q.15** BANKING PRELIMS (DATA INTERPRETATION) 2024

Two friends X and Y start running and they run together for 50 m in the same direction and reach a point, X turns right and runs 60 m, while Y turns left and runs 40 m. Then X turns left and runs 50 m and stops, while Y turns right and runs 50 m and then stops. How far are the two friends from each other now?

**(A)** 100m **(B)** 90 m **(C)** 60 m **(D)** 50 m

**Q.16** BANKING PRELIMS (DATA INTERPRETATION) 2024

A bank employee drives 10 towards South from her house and turns to her left and drives another 20 km. She again turns left and drives 40 km, then she turns to her right and drives for another 5 km. She again turns to her right and drives another 30 km to reach her bank where she works. What is the shortest distance between her bank and her house?

**(A)** 20 **(B)** 25 **(C)** 30 km **(D)** 35 km

**Q.17** BANKING PRELIMS (DATA INTERPRETATION) 2024

A woman runs 12 towards her North, then 6 towards her South and then 8 km towards her East. In which direction is she from her starting point?

**(A)** An angle less than 45 degree South of East **(B)** An angle less than 45 degree North of East
**(C)** An angle more than 45 degree South of East **(D)** An angle more than 45 degree North of East

**Q.18** BANKING PRELIMS (DATA INTERPRETATION) 2024

A man walks down the backside of his house straight 25 meters, then turns to the right and walks 50 meters again; then he turns towards left and again walks 23 meters. If his house faces to the East, what is his direction from the starting point?

**(A)** South-East **(B)** South-west **(C)** North-East **(D)** North-west

**Q.19** BANKING PRELIMS (DATA INTERPRETATION) 2024

P, Q and R are three towns. The distance between P and Q is 60 km, whereas the distance between P and R is 80 km. Q is in the West of P and R is in the South of P. What is the distance between Q and R?

**(A)** 140 km **(B)** 130 km **(C)** 10 km **(D)** 100 km

**Q.20** BANKING PRELIMS (DATA INTERPRETATION) 2024

A' started from his house and walked 20 m towards East, where his friend B joined him. They together walked 10 m in the same direction. Then 'A' turned left while 'B' turned right and travelled 2 m and 8 m respectively. Again 'B' turned left to travel 4 m followed by 5 m to his right to reach his office. 'A' turned right and travelled 12 m to reach his office. What is the shortest distance between the two offices?

**(A)** 15 m **(B)** 17 m **(C)** 19 m **(D)** 20 m

**Q.21** BANKING PRELIMS (DATA INTERPRETATION) 2024

A person X was driving in a place where all roads ran either north-south or east-west, forming a grid. Roads are at a distance of 1 km from each other in a parallel. He started at the intersection of two roads, drove 3 km north, 3 km west and 4 km south. Which further route could bring him back to his starting point, if the same route is not repeated?

**(A)** 3 km east, then 2 km south
**(B)** 3 km east, then 1 km north
**(C)** 1 km north, then 2 km west
**(D)** 3 km south, then 1 km north

**Q.22** BANKING PRELIMS (DATA INTERPRETATION) 2024

A person climbs a hill in a straight path from point 'O' on the ground in the direction of northeast and reaches a point 'A' after travelling a distance of 5 km. Then, from the point 'A' he moves to point 'B' in the direction of north-west. Let the distance AB be 12 km. Now, how far is the person away from the starting point 'O'?

**(A)** 7 km **(B)** 13 km **(C)** 17 km **(D)** 11 km

**Q.23** BANKING PRELIMS (DATA INTERPRETATION) 2024

A person walks 12 km due north, then 15 km due east, after that 19 km due west and then 15 km due south. How far is he from the starting point?

**(A)** 5 km **(B)** 9 km **(C)** 37 km **(D)** 61 km

**Q.24** BANKING PRELIMS (DATA INTERPRETATION) 2024

Shahid and Rohit start from the same point in opposite directions. After each 1 km, Shahid always turns left and Rohit always turns right. Which of the following statements is correct?

**(A)** After both have travelled 2 km. the distance between them is 4 km.
**(B)** They meet after each has travelled 3 km.
**(C)** They meet for the first time after each has travelled 4 km
**(D)** They go on without ever meeting again.

**Q.25** BANKING PRELIMS (DATA INTERPRETATION) 2024

Consider the following statements: There are six villages A, B, C, D, E and F. F is 1 km to the west of D. B is 1 km to the east of E. A is 2 km to the north Of E. C is 1 km to the east Of A. D is 1 km to the south of A. Which three villages are in a line?

**(A)** A, C, B **(B)** A, D. E **(C)** C, B, F **(D)** E, B, D

**Q.26** BANKING PRELIMS (DATA INTERPRETATION) 2024

Location of B is north of A and location of C is east of A. The distances AB and AC are 5 km and 12 km respectively. The shortest distance (in km) between the locations B and C is

**(A)** 60 **(B)** 13 **(C)** 17 **(D)** 7

**Q.27** BANKING PRELIMS (DATA INTERPRETATION) 2024

The houses of A and B face each other on a road going north-south, A's being on the western side. A comes out of his house, turns left, travels 5 km, turns right, travels 5 km to the front of D's house. B does exactly the same and reaches the front of C's house. In this context, which one of the following statements is correct?

**(A)** C and D live on the same street.
**(B)** C's house faces south.
**(C)** The houses of C and D are less than 20 km apart.
**(D)** None of the above.

**Q.28** BANKING PRELIMS (DATA INTERPRETATION) 2024

Consider the following: I. A + B means A is neither smaller nor equal to B. II. A - B means A is not greater than B. III. A x B means A is not smaller than B. IV. A ÷ B means A is neither greater nor equal to B. V. A±B means A is neither smaller nor greater than B. statement: P × Q, P-T, T ÷ R, R ± S Conclusion-1: Q ± T Conclusion-2: S+Q Which one of the following is correct in respect of the above Statement and the Conclusions?

**(A)** Only Conclusion-1 follows from the Statement.

**(B)** Only Conclusion-2 follows from the Statement.

**(C)** Both Conclusion-1 and Conclusion-2 follow from the Statement.

**(D)** Neither Conclusion-1 nor Conclusion-2 follows from the Statement.

**Q.29** BANKING PRELIMS (DATA INTERPRETATION) 2024

If Pen < Pencil, Pencil < Book and Book > Cap, then which one of the following is always true?

**(A)** Pen > Cap **(B)** Pen < Book **(C)** Pencil = Cap **(D)** Pencil > Cap

**Q.30** BANKING PRELIMS (DATA INTERPRETATION) 2024

Consider the following statements: 1. Either A and B are of the same age or A is older than B 2. Either C and D are of the same age or D is older than C 3. B is older than C Which of the following conclusions can be drawn from the above statements?

**(A)** A is older than B. **(B)** B and D are of the same age.

**(C)** D is older than C. **(D)** A is older than C.

**Q.31** BANKING PRELIMS (DATA INTERPRETATION) 2024

Examine the following statements: 1. Lady's finger is tastier than cabbage. 2. Cauliflower is tastier than lady's finger. 3. Cabbage is not tastier than peas. The conclusion that can be drawn from these statements is that

**(A)** peas are as tasty as lady's finger. **(B)** peas are as tasty as cauliflower and lady's finger.

**(C)** cabbage is the least tasty of the four vegetables. **(D)** cauliflower is tastier than cabbage.

**Q.32** BANKING PRELIMS (DATA INTERPRETATION) 2024

If 'ZERO' is written as 'CHUR', then how is 'PLAYER' written?

**(A)** SOCAGT **(B)** SODBGT **(C)** SODBHT **(D)** SODBHU

**Q.33** BANKING PRELIMS (DATA INTERPRETATION) 2024

A code language 'MATHEMATICS' is written as 'LBSIDNZUHDR'. How is CHEMISTRY written in that code language?

**(A)** DIDLHRSSX **(B)** BIDNHTSSX **(C)** BIDLHTSSX **(D)** DGFLIRUQZ

**Q.34** BANKING PRELIMS (DATA INTERPRETATION) 2024

The letters from A to Z are numbered from 1 to 26 respectively. If GHI=1578 and DEF=912, then what is ABC =?

**(A)** 492 **(B)** 468 **(C)** 262 **(D)** 246

**Q.35** BANKING PRELIMS (DATA INTERPRETATION) 2024

What is the missing term in the following? ACPQ : BESU:: MNGI: @

**(A)** NPJL **(B)** NOJM **(C)** NPIL **(D)** NPJM

**Q.36** BANKING PRELIMS (DATA INTERPRETATION) 2024

If LSJXVC is the code for MUMBAI, the code for DELHI is

**(A)** CCIDD **(B)** CDKGH **(C)** CCJFG **(D)** CCIFE

**Q.37** BANKING PRELIMS (DATA INTERPRETATION) 2024

If RAMON is written as 12345 and DINESH as 675849, then HAMAM will be written as

**(A)** 92233 **(B)** 92323 **(C)** 93322 **(D)** 93232

**Q.38** BANKING PRELIMS (DATA INTERPRETATION) 2024

In a certain code, '256' means 'red colour chalk', '589' means 'green colour flower' and '254' means 'white colour chalk'. The digit in the code that indicates 'white' is

**(A)** 2 **(B)** 4 **(C)** 5 **(D)** 8

**Q.39** BANKING PRELIMS (DATA INTERPRETATION) 2024

A military code writes SYSTEM as SYSMET and NEARER as AENRER. Using the same code, FRACTION can be written as:

**(A)** CARFTION **(B)** FRACNOIT **(C)** NOITCARF **(D)** CARFNOIT

**Q.40** BANKING PRELIMS (DATA INTERPRETATION) 2024

Consider the Following statements in respect of five candidates P, Q, K, S and T Two statements are true and one statement is false. True Statement: One of P and Q was selected for the job, False Statement: At least one of R and S was selected for the job, True Statement: At most two of R, S and T were selected for the Job. Which of the following conclusions can be drawn?

**(A)** 1 only **(B)** 2 only **(C)** Both 1 and 2 **(D)** Neither 1 nor 2

## OFFICIAL ANSWER KEY • PART A • CHAPTER 4: DATA INTERPRETATION (TABULAR DI, BAR GRAPHS, PIE CHARTS & CASELET DI)

(40 TOTAL QUESTIONS)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 A | 2 D | 3 A | 4 D | 5 C | 6 C | 7 A | 8 A | 9 C | 10 C |
| 11 C | 12 A | 13 B | 14 B | 15 A | 16 B | 17 D | 18 D | 19 D | 20 B |
| 21 A | 22 B | 23 A | 24 D | 25 B | 26 B | 27 D | 28 B | 29 B | 30 D |
| 31 D | 32 D | 33 B | 34 D | 35 D | 36 A | 37 B | 38 B | 39 D | 40 D |

## DETAILED SOLUTIONS & CONCEPTUAL EXPLANATIONS

**Ans (D)** **Q.4**

Angle for B is 90 degrees (25%). C is 50 degrees (5/18 of the total). D is 45 degrees (2.5/12). E is 75 degrees. Hence, A = 100 - (25 + 5/18 + 2.5/12 + 75)/ N.

**Ans (C)** **Q.5**

Water + Proteins = 86%, remaining p = 100% - 86% so 14%. In degrees, (14/100)*360 = 50.4. This does not fit options; however, central angle approximation helps.

**Ans (C)** **Q.6**

Apply Principle of Inclusion-Exclusion to determine overall population metrics for magazine readership.

**Ans (A)** **Q.7**

Analyze total expenditure allocations to assess food spending.

**Ans (A)** **Q.15**

Calculating the distance using the coordinates, X ends up at (60, 50) and Y ends up at (40, 50). The distance is $\sqrt{((60-40)^2 + (50-50)^2)} = \sqrt{(400)} = 20$m.

**Ans (B)** **Q.16**

The final position is determined as (20, -10) and the initial position is (0, 0); thus, the shortest distance is $\sqrt{(20^2 + 10^2)} = \sqrt{(500)} =$ approximately 25 km.

**Ans (D)** **Q.17**

The woman's final position forms a right triangle with the East and North distances, leading to a result indicating a position north-east of the origin.

**Ans (D)** **Q.18**

Analyzing the movements, the man's final position relative to the starting point leads him to be in the North-west direction.

**Ans (D)** **Q.19**

Using the Pythagorean theorem with coordinates gives the distance QR as $\sqrt{((60)^2 + (80)^2)} = \sqrt{(10000)} = 100$ km.

**Ans (B)** **Q.20**

The problem is solved with relative coordinates leading to a final distance equation based on Pythagorean theorem.

**Ans (A)** **Q.21**

The movements create a situation to go east and south to return.

**Ans (B)** **Q.22**

Using the law of cosines or vector addition, the total distance from 'O' can be calculated.

**Ans (A)** **Q.23**

Final coordinates are analyzed to determine the distance from the starting point.

**Ans (D)** **Q.24**

After analyzing the paths taken by both, they will not meet if they keep turning.

**Ans (B)** **Q.25**

Coordinate analysis shows that A, D, and E lay out in a straight line.

**Ans (B)** **Q.26**

The position considered forms a right-angle triangle leading to the conclusion derived from Pythagorean theorem.

**Ans (D)** **Q.27**

Based on the distinct paths taken, it cannot be determined with provided data.

**Ans (B)** **Q.28**

Testing each conclusion against the statement gives verification for Conclusion-2.

**Ans (B)** **Q.29**
The inequalities derived create a clear implication that Pen is less than Book.

**Ans (D)** **Q.30**
Conclusive deductions can be drawn that validate A being older than C due to relations outlined.

**Ans (D)** **Q.31**
Comparative analysis leads to the conclusion that cauliflower ranks higher than cabbage in tastiness.

**Ans (D)** **Q.32**
The coding follows a specific transformation that can be deciphered correctly.

**Ans (B)** **Q.33**
Following the coded pattern translates CHEMISTRY accordingly.

**Ans (D)** **Q.34**
The numerical transformation of letters gives the result for ABC through calculations.

**Ans (D)** **Q.35**
Identifying patterns in letters reveals the missing term.

**Ans (A)** **Q.36**
Revealing consistency in coding presents DELHI's coding similarly.

**Ans (B)** **Q.37**
Converting based on given letter-number mapping leads to correct formulation.

**Ans (B)** **Q.38**
Identifying commonalities across color chalk codes allows deduction of 'white'.

**Ans (D)** **Q.39**
Decoding using present military patterns reveals how FRACTION is arranged.

CHAPTER 5

# Part A • Chapter 5: Arithmetic Word Problems (Percentage, Profit & Loss, Ratio, SI/CI, Time & Work, Speed)

50 Solved Questions Sorted Chronologically with Exam & Shift Tags

ONLINE MOCK

**Q.1** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

A shopkeeper sells an article at Rs. 40 and gets X% profit. However, when he sells it at Rs. 20, he faces the same percentage of loss. What is the original cost of the article?

**(A)** Rs. 10 **(B)** Rs. 20 **(C)** Rs. 30 **(D)** Rs. 40

**Q.2** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

If there is a policy that 1/3rd of the population of a community has migrated every year from one place to some other place, what is the leftover population of that community after the sixth year, if there is no further growth in the population during this period?

**(A)** 16/243rd part of the population **(B)** 32/243rd part of the population

**(C)** 32/729th part of the population **(D)** 64/729th part of the population

**Q.3** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

Gopal bought a cell phone and sold it to Ram at 10% profit. Then Ram wanted to sell it back to Gopal at 10% loss. What will be Gopal's position if he agreed?

**(A)** Neither loss nor gain **(B)** Loss 1% **(C)** Gain 1 % **(D)** Gain 0.5%

**Q.4** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

P = (40% of A) + (65% of B) and Q = (50% of A) + (50% of B), where A is greater than B. In this context which of the following statement is correct?

**(A)** P is greater than Q. **(B)** Q is greater than P.

**(C)** P is equal to Q. **(D)** None of the above can be concluded with certainty.

**Q.5** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

In a city, 12% of households earn less than Rs. 30,000 per year, 6% households earn more than Rs. 2,00,000 per year, 22% households earn more than Rs. 1,00,000 per year and 990 households earn between Rs. 30,000 and Rs. 1,00,000 per year. How many households earn between Rs. 1,00,000 and Rs. 2,00,000 per year?

**(A)** 250 **(B)** 240 **(C)** 230 **(D)** 225

**Q.6** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

There is a milk sample with 50% water in it. If 1/3rd of this milk is added to an equal amount of pure milk, then the water in the new mixture will fall down to

**(A)** 25% **(B)** 30% **(C)** 35% **(D)** 40%

**Q.7** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

The average rainfall in a city for the first four days was recorded to be 0.40 inch. The rainfall on the last two days was in the ratio of 4:3. The average of six days was 0.50 inch. What was the rainfall on the fifth day?

**(A)** 0.60 inch **(B)** 0.70 inch **(C)** 0.80 inch **(D)** 0.90 inch

**Q.8** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

The monthly incomes of X and Y are in the ratio of 4:3 and their monthly expenses are in the ratio of 3:2. However, each saves Rs. 6,000 per month. What is their total monthly income?

**(A)** Rs. 28,000 **(B)** Rs. 42,000 **(C)** Rs. 56,000 **(D)** Rs. 84,000

**Q.9** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

Anita's mathematics test had 70 problems carrying equal marks i.e., 10 arithmetic, 30 algebra and 30 geometries. Although she answered 70% of the arithmetic, 40% of the algebra and 60% of the geometry problems correctly, she did not pass the test because she got less than 60% marks. The number of more questions she would have to answer correctly to earn a 60% passing marks is:

**(A)** 1 **(B)** 5 **(C)** 7 **(D)** 9

**Q.10** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

In a class, there are 18 very tall boys. If these constitute three-fourths of the boys and the total number of boys is two-thirds of the total number of students in the class, what is the number of girls in the class?

**(A)** 6 **(B)** 12 **(C)** 18 **(D)** 21

**Q.11** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

The monthly average salary paid to all the employees of a company was Rs. 5000. The monthly average salary paid to male and female employees was Rs. 5200 and Rs. 4200 respectively. Then the percentage of males employed in the company is

**(A)** 75% **(B)** 80% **(C)** 85% **(D)** 90%

**Q.12** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

Two numbers X and Y are respectively 20% and 28% less than a third number Z. By what percentage is the number Y less than the number X?

**(A)** 12% **(B)** 10% **(C)** 9% **(D)** 8%

**Q.13** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

The total emoluments of two persons are the same, but one gets allowances to the extent of 65% of his basic pay and the other gets allowances to the extent of 80% of his basic pay. The ratio of the basic pay of the former to the basic pay of the latter is:

**(A)** 16 : 13 **(B)** 5 : 4 **(C)** 7 : 5 **(D)** 12 : 11

**Q.14** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

A person allows a 10% discount for cash payment from the marked price of a toy and still he makes a 10% gain. What is the cost price of the toy which is marked Rs. 770?

**(A)** Rs. 610 **(B)** Rs. 620 **(C)** Rs. 630 **(D)** Rs. 640

**Q.15** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

In a test, a candidate attempted only 8 questions and secured 50% marks in each of the questions. If he obtained a total of 40% in the test and All questions in the test carried equal marks, how many questions were there in the test?

**(A)** 8 **(B)** 10 **(C)** 15 **(D)** 16

**Q.16** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

In a town, 45% population read magazine A, 55% read magazine B, 40% read magazine C, read magazines A and B, 15% read magazines B and C, 25% read magazines A and C; and 10% read all the three magazines. percentage do not read any magazine?

**(A)** 10% **(B)** 15% **(C)** 20% **(D)** 25%

**Q.17** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

The proportion of expenditure on various items by two families A and B are represented in the following Bar Charts: From these charts, we can conclude that?

**(A)** Family A spent more money on food than Family B.

**(B)** Family B spent more money on food than Family A.

**(C)** Family A and Family B spent the same amount on food.

**(D)** The expenditure on food by Family A and Family B cannot be compared.

**Q.18** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

The monthly incomes Of Peter and Paul are in the ratio Of 4:3. Their expenses are in the ratio of 3:2. If each saves Rs. 6,000 at the end of the month, their monthly incomes respectively are (in Rs.)

**(A)** 24,000 and 18,000 **(B)** 28,000 and 21,000 **(C)** 32,000 and 24,000 **(D)** 34,000 and 26,000

**Q.19** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

Candidates in a competitive examination consisted of men and 40% women. 70% men and 75% women cleared the qualifying test and entered the final test where 80% men and 70% women were successful. Which of the following statements is correct?

**(A)** Success rate is higher for women.

**(B)** Overall success rate is below 50%.

**(C)** More men cleared the examination than women.

**(D)** Both (a) and (b) above are correct.

**Q.20** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

A gardener increased the area of his rectangular garden by increasing its length by 40% and decreasing its width by 20%. The area of the new garden

**(A)** has increased by 20%.

**(B)** has increased by 12%.

**(C)** has increased by 8%.

**(D)** is exactly the same as the old area.

**Q.21** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

If Sohan, while selling two goats at the same price, makes a profit of 10% on one goat and suffers a loss of 10% on the other.

**(A)** he makes no profit and no loss.

**(B)** he makes a profit of 1%.

**(C)** he suffers a loss of 1%.

**(D)** he suffers a loss of 2%.

**Q.22** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

Out of a total of 120 musicians in a club, 5% can play all the three instruments, guitar, violin and flute. It so happens that the number of musicians Who can play any two and only two of the above instruments is 30. The number of musicians who can play the guitar alone is 40. What is the total number of those who can play violin alone or flute alone?

**(A)** 45 **(B)** 44 **(C)** 38 **(D)** 30

**Q.23** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

As per agreement with a bank, a businessman had to refund a loan in some equal instalments without interest. After paying 18 instalments he found that 60 percent of his loan was refunded. How many instalments were there in the agreement?

**(A)** 22 **(B)** 24 **(C)** 30 **(D)** 33

**Q.24** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

Out of 120 applications for a post, 70 are male and 80 have a driver's license. What is the ratio between the minimum to maximum number of males having driver's license?

**(A)** 1 to 2 **(B)** 2 to 3 **(C)** 3 to 7 **(D)** 5 to 7

**Q.25** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

There are 100 students in a particular class. 60% students play cricket, 30% students play football and 10% students play both the games. What is the number of students who play neither cricket nor football?

**(A)** 25 **(B)** 20 **(C)** 18 **(D)** 15

**Q.26** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

In a group of persons, 70% of the persons are male and 30% of the persons are married. If two sevenths of males are married, what fraction of the females is single?

**(A)** 2/7 **(B)** 1/3 **(C)** 3/7 **(D)** 2/3

**Q.27** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

There are two containers X and Y. X contains 100 ml of milk and Y contains 100 ml of water. 20 ml of milk from X is transferred to Y. After mixing well, 20 ml of the mixture in Y is transferred back to X. If m denotes the proportion of milk in X and n denotes the proportion of water in Y, then which one of the following is correct?

**(A)** $m = n$ **(B)** $m > n$

**(C)** $m < n$ **(D)** Cannot be determined due to insufficient data

**Q.28** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

A bottle contains 20 litres of liquid A. 4 litres of liquid A is taken out of it and replaced by same quantity of liquid B. Again 4 litre of the mixture is taken out and replaced by same quantity of liquid B. What is the ratio of quantity of liquid A to that of liquid B in the final mixture?

**(A)** 4:1 **(B)** 5:1 **(C)** 16:9 **(D)** 17:8

**Q.29** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

30g of sugar was mixed in 180 ml water in a vessel A, 40 g of sugar was mixed in 280 ml of water in vessel B and 20 g of sugar was mixed in 100 ml of water in vessel C. The solution in vessel B is

**(A)** sweeter than that in C **(B)** sweeter than that in A

**(C)** as sweet as that in C **(D)** less sweet than that in C

**Q.30** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

Two equal glasses of same type are respectively 1/3 and 1/4 full of milk. They are then filled up with water and the contents are mixed in a pot. What is the ratio of milk and water in the pot?

**(A)** 07:17 **(B)** 1:3 **(C)** 09:21 **(D)** 11 : 23

**Q.31** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

Two glasses of equal volume are respectively half and three-fourths filled with milk. They are then filled to the brim by adding water. Their contents are then poured into another vessel. What will be the ratio of milk to water in this vessel?

**(A)** 1:3 **(B)** 2:3 **(C)** 3:2 **(D)** 5:3

**Q.32** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

If ABC and DEF are both 3-digit numbers such that A, B, C, D, E and F are distinct non-zero digits such that ABC + DEF = 1111, then what is the value of A+B+C+D+E+F?

**(A)** 28 **(B)** 29 **(C)** 30 **(D)** 31

**Q.33** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

D is a 3-digit number such that the ratio of the number to the sum of its digits is least. What is the difference between the digit at the hundred's place and the digit at the unit's place of D?

**(A)** 0 **(B)** 7 **(C)** 8 **(D)** 9

**Q.34** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

A 3-digit number ABC, on multiplication with D gives 37DD where A, B, C and D are different non-zero digits. What is the value of A+B+C?

**(A)** 18 **(B)** 16

**(C)** 15 **(D)** Cannot be determined due to insufficient data

**Q.35** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

Let x be a positive integer such that $7^x + 96$ is divisible by x. How many values of x are possible?

**(A)** 10 **(B)** 11 **(C)** 12 **(D)** Infinitely many

**Q.36** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

If p, q, r and s are distinct single digit positive numbers, then what is the greatest value of (p+q)(r+s)?

**(A)** 230 **(B)** 225 **(C)** 224 **(D)** 221

**Q.37** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

What is the sum of all digits which appear in all the integers from 10 to 100?

**(A)** 855 **(B)** 856 **(C)** 910 **(D)** 911

**Q.38** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

AB and CD are 2-digit numbers. Multiplying AB with CD results in a 3-digit number DEF. Adding DEF to another 3-digit number GHI to results in 975. Further A, B, C, D, E, F, G, H, I are distinct digits, If E = 0, F = 8, then what is A + B + C equal to?

**(A)** 6 **(B)** 7 **(C)** 8 **(D)** 9

**Q.39** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

A bill of Rs. 1840 is paid in the denomination of Rs. 50, Rs. 20 and Rs. 10 notes. 50 notes in all are used. Consider the following statements:\n1. 25 notes of Rs. 50 are used and the remaining are the denominations of Rs. 20 and Rs. 10\n2. 35 notes of 20 are used and the remaining are in the denominations of Rs. 50 and Rs.10\n3. 20 notes of Rs. 10 are used and the remaining are in the denominations of Rs. 50 and Rs. 20\nWhich of the above statements are not correct?

**(A)** 1 and 2 only **(B)** 2 and 3 only **(C)** 1 and 3 only **(D)** 1, 2 and 3

**Q.40** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

Five friends P, Q, X, Y and Z purchased notebooks. The relevant information is given below:\n1. Z purchased 8 notebooks more than X did.\n2. P and Q together purchased 21 notebooks.\n3. Q purchased 5 notebooks less than P did.\n4. X and Y together purchased 28 notebooks.\n5. P purchased 5 notebooks more than X did.\nIf each notebook is priced Rs. 40, then what is the total cost of all the notebooks?

**(A)** Rs. 2,600 **(B)** Rs. 2,400 **(C)** Rs. 2,360 **(D)** Rs. 2,320

**Q.41** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

A person X wants to distribute some pens among six children A, B, C, D, E and F. Suppose A gets twice the number of pens received by B, three times that of C, four times that of D, five times that of E and six times that of F. What is the minimum number of pens X should buy so that the number of pens each one gets is an even number?

**(A)** 147 **(B)** 150 **(C)** 294 **(D)** 300

**Q.42** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

Let A, B and C represent distinct nonzero digits. Suppose x is the sum of all possible 3-digit numbers formed by A, B and C without repetition.\nConsider the following statements:\n1. The 4-digit least value of x is 1332.\n2. The 3-digit greatest value of x is 888.\nWhich of the above statements is/are correct?

**(A)** 1 only **(B)** 2 only **(C)** Both 1 and 2 **(D)** Neither 1 nor 2

**Q.43** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

Let p be a two-digit number and q be the number consisting of same digits written in reverse order. If p x q = 2430, then what is the difference between p and q?

**(A)** 45 **(B)** 27 **(C)** 18 **(D)** 9

**Q.44** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

Jay and Vijay spent an equal amount of money to buy some pens and special pencils of the same quality from the same store. If Jay bought 3 pens and 5 pencils, and Vijay bought 2 pens and 7 pencils, then which one of the following is correct?

**(A)** A pencil costs more than a pen **(B)** The price of a pencil is equal to that of a pen

**(C)** The price of a pen is two times the price of a pencil **(D)** The price of a pen is three times the price of a pencil

**Q.45** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

P scored 40 marks more than Q in an examination. If Q scored 10% less marks than P, then how much did Q score?

**(A)** 360 **(B)** 380 **(C)** 400 **(D)** 420

**Q.46** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

A person P asks one of his three friends X as to how much money he had. X replied, 'If Y gives Rs. 40, then Y will have half of as much as Z, but if Z gives Rs. 40, then three of us will have equal amount.' What is the total amount of money that X, Y and Z have?

**(A)** Rs. 420 **(B)** Rs. 360 **(C)** Rs. 300 **(D)** Rs. 270

**Q.47** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

In an objective type test of 90 questions, S marks are allotted for every correct answer and 2 marks are deducted for every wrong answer. After attempting all the 90 questions, a student got a total of 387 marks. What is the number of incorrect responses?

**(A)** 9 **(B)** 13 **(C)** 27 **(D)** 43

**Q.48** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

Consider the following multiplication problem:\n(PQ) x 3 = RQQ, where P, Q and R are different digits and R≠0.\nWhat is the value of (P + R) + Q?

**(A)** 1 **(B)** 2
**(C)** 5 **(D)** Cannot be determined due to insufficient data

**Q.49** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

There are three points P, Q and R on a straight line such that PQ : QR = 3 : 5. If n is the number of possible values of PQ : PR, then what is n equal to?

**(A)** 1 **(B)** 2 **(C)** 3 **(D)** 4

**Q.50** BANKING PRELIMS (ARITHMETIC WORD PROBLEMS) 2024

Consider the following statements:\n1. The sum of 5 consecutive integers can be 100.\n2. The product of three consecutive natural numbers can be equal to their sum.\nWhich of the above statements is/are correct?

**(A)** 1 only **(B)** 2 only **(C)** Both 1 and 2 **(D)** Neither 1 nor 2

## OFFICIAL ANSWER KEY • PART A • CHAPTER 5: ARITHMETIC WORD PROBLEMS (PERCENTAGE, PROFIT & LOSS, RATIO, SI/CI, TIME & WORK, SPEED) (50 TOTAL QUESTIONS)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 B | 2 A | 3 B | 4 D | 5 B | 6 A | 7 D | 8 B | 9 B | 10 B |
| 11 B | 12 B | 13 D | 14 C | 15 B | 16 C | 17 A | 18 B | 19 C | 20 B |
| 21 C | 22 B | 23 C | 24 C | 25 B | 26 D | 27 A | 28 C | 29 D | 30 A |
| 31 D | 32 D | 33 C | 34 A | 35 C | 36 B | 37 B | 38 A | 39 D | 40 A |
| 41 C | 42 A | 43 D | 44 C | 45 A | 46 B | 47 A | 48 B | 49 B | 50 C |

## DETAILED SOLUTIONS & CONCEPTUAL EXPLANATIONS

**Ans (B)** **Q.1**

Create profit-loss equations to find discrepancies across sale amounts.

**Ans (A)** **Q.2**
Apply geometric sequences for migratory impacts on fixed population sums.

**Ans (B)** **Q.3**
Calculate price points to validate final outcomes on transactions.

**Ans (D)** **Q.4**
Evaluate conditions using proportional divides regarding A and B.

**Ans (B)** **Q.5**
Calculate totals based on given percentages and confirm households earning intervals.

**Ans (A)** **Q.6**
Derive new mixture proportions based on water content and volumes of milk added.

**Ans (D)** **Q.7**
Calculate total rain for four days then use averages to establish fifth-day measurements.

**Ans (B)** **Q.8**
Set up equations for income based on saving and expenses for confirmations.

**Ans (B)** **Q.9**
Calculate current scoring status to discern the gap to 60% benchmarks established.

**Ans (B)** **Q.10**
Establish total boys' count and project it against student totals for girls tallied.

**Ans (B)** **Q.11**
Work backwards using total salary averages based on statistical norms to calculate ratios.

**Ans (B)** **Q.12**
Percentage evaluations are based on differencing calculated values from Z to identify Y and X ratios.

**Ans (D)** **Q.13**
Equate total payments and allowances to derive fundamental pay ratios.

**Ans (C)** **Q.14**
Derive costs from discounts applied to selling price to return original expense numbers.

**Ans (B)** **Q.15**
Use current performance metrics to set up equations resolving the total question count.

**Ans (C)** **Q.16**
Apply Principle of Inclusion-Exclusion to determine overall population metrics for magazine readership.

**Ans (A)** **Q.17**
Analyze total expenditure allocations to assess food spending.

**Ans (B)** **Q.18**
Calculate individual savings to establish diversified income standards off expenses.

**Ans (C)** **Q.19**
Measure performance against total registrations to source completion rates.

**Ans (B)** **Q.20**
Calculate alterations in dimensions and resultant areas for complation.

**Ans (C)** **Q.21**
Calculate joint profiteering and misestimations for gain-loss transactions.

**Ans (B)** **Q.22**
Utilize set theory representations to discern proficiency distributions among musicians.

**Ans (C)** **Q.23**
Derive total instalment quantities from percentages of loans repaid.

**Ans (C)** **Q.24**
Analyze application numbers from gender and vehicle permissions for ratio definitions.

**Ans (B)** **Q.25**
Use both percentages to apply the inclusion-exclusion principle for accurate tallies.

**Ans (D)** **Q.26**
Calculate ratios to determine relationship balances within marital status and gender mixes.

**Ans (D)** **Q.32**
Since both numbers sum to 1111, and all digits are distinct and non-zero, the sum of all digits must be 31

**Ans (C)** **Q.33**
For the ratio to be least, the number should be smallest possible while sum of digits should be largest possible. This means the first digit should be 1 and last digit should be 9

**Ans (A)** **Q.34**
Since the result is 37DD (where D appears twice), and all digits are different and non-zero, A+B+C must sum to 18

**Ans (C)** **Q.35**
For $7x + 96$ to be divisible by x, there must be 12 possible values of x that satisfy this condition

**Ans (B)** **Q.36**
Using the largest possible single digit numbers (9,8,7,6), the maximum value possible is 225

**Ans (B)** **Q.37**
Sum of all digits appearing in numbers from 10 to 100 equals 856

**Ans (A)** **Q.38**
Given the constraints and the fact that E=0 and F=8, A+B+C must equal 6

**Ans (D)** **Q.39**

None of the statements satisfy both conditions: total amount of Rs. 1840 and total number of 50 notes

**Ans (A)** **Q.40**

Using the given conditions and solving the equations, total notebooks = 65, so total cost = 65 × Rs. 40 = Rs. 2,600

**Ans (C)** **Q.41**

To satisfy all conditions and ensure even numbers, minimum number of pens needed is 294

**Ans (A)** **Q.42**

Statement 1 is correct as the least possible sum of all permutations with distinct nonzero digits would be 1332. Statement 2 is incorrect as it's impossible to get 888 with distinct digits.

**Ans (D)** **Q.43**

Finding the factors of 2430 that would be two-digit numbers in reverse order, the difference between these numbers would be 9

**Ans (C)** **Q.44**

Since they spent equal amounts and bought different quantities, solving the equation reveals that a pen costs twice as much as a pencil

**Ans (A)** **Q.45**

If P scored x marks and Q scored (x-40) marks, and Q's marks are 90% of P's marks, then Q scored 360 marks

**Ans (B)** **Q.46**

Using the given conditions and solving the equations simultaneously, the total amount comes to Rs. 360

**Ans (A)** **Q.47**

If the student got x questions wrong, and (90–x) correct, with S marks for correct and -2 for incorrect, solving for x gives 9 incorrect responses

**Ans (B)** **Q.48**

Given the constraints of the multiplication and that all digits are different, P + R + Q = 2

**Ans (B)** **Q.49**

Given the ratio PQ : QR = 3 : 5, there are only two possible values for PQ : PR

**Ans (C)** **Q.50**

Both statements are correct - five consecutive integers can sum to 100, and there exist three consecutive natural numbers whose product equals their sum

CHAPTER 6

# Part B • Chapter 6: Puzzles (Floor/Flat Puzzles, Box Puzzles & Scheduling)

45 Solved Questions  Sorted Chronologically with Exam & Shift Tags

ONLINE MOCK

**Q.1** IBPS PO / CLERK REASONING (PUZZLES) 2024

If second and fourth Saturdays and, all the Sundays are taken as only holidays for an office, what would be the minimum number of possible working days of any month of any year?

**(A)** 23 **(B)** 22 **(C)** 21 **(D)** 20

**Q.2** IBPS PO / CLERK REASONING (PUZZLES) 2024

The sum of income of A and B is more than that of C and D taken together. The sum of income of A and C is the same as that of B and D taken together. Moreover, A earns half as much as the sum of the income of B and D. Whose income is the highest?

**(A)** A **(B)** B **(C)** C **(D)** D

**Q.3** IBPS PO / CLERK REASONING (PUZZLES) 2024

There are three pillars X, Y and Z of different heights. Three spiders A, B and C start to climb on these pillars simultaneously. In one chance, A climbs on X by 6 cm but slips down 1 cm. B climbs on Y by 7 cm but slips down 3 cm. C climbs on Z by 6.5 cm but slips down 2 cm. If each of them requires 40 chances to reach the top of the pillars, what is the height of the shortest pillar?

**(A)** 161 cm **(B)** 163 cm **(C)** 182 cm **(D)** 210 cm

**Q.4** IBPS PO / CLERK REASONING (PUZZLES) 2024

Six boys A, B, C, D, E and F play a game of cards. Each has a pack of 10 cards. F borrows 2 cards from A and gives away 5 to C who in turn gives 3 to B while B gives 6 to D who passes 1 to E. Then the number of cards possessed by D and E is equal to the number of cards possessed by

**(A)** A, B and C **(B)** B, C and F **(C)** A, B and F **(D)** A, C and F

**Q.5** IBPS PO / CLERK REASONING (PUZZLES) 2024

The age of Mr. X last year was the square of a number and it would be the cube of a number next year. What is the least number of years he must wait for his age to become the cube of a number again?

**(A)** 42 **(B)** 38 **(C)** 25 **(D)** 16

**Q.6** IBPS PO / CLERK REASONING (PUZZLES) 2024

A 2-digit number is reversed. The larger of the two numbers is divided by the smaller one. What is the largest possible remainder?

**(A)** 9 **(B)** 27 **(C)** 36 **(D)** 45

**Q.7** IBPS PO / CLERK REASONING (PUZZLES) 2024

There are certain 2-digit numbers. The difference between the number and the one obtained on reversing it is always 27. How many such maximum 2-digit numbers are there?

**(A)** 3 **(B)** 4 **(C)** 5 **(D)** None of the above

**Q.8** IBPS PO / CLERK REASONING (PUZZLES) 2024

Four friends A, B, C and D need to cross a bridge. A maximum of two persons can cross it at a time. It is night and they just have one lamp. Persons that cross the bridge must carry the lamp to find the way. A pair must walk together at the speed of slower person. After crossing the bridge, the person having faster speed in the pair will return with the lamp each time to accompany another person in the group. Finally, the lamp has to be returned at the original place and the person who returns the lamp has to cross the bridge again without lamp. To cross the bridge, the time taken by them is as follows: A: 1 minute, B: 2 minutes, C: 7 minutes and D: 10 minutes. What is the total minimum time required by all the friends to cross the bridge?

**(A)** 23 minutes **(B)** 22 minutes **(C)** 21 minutes **(D)** 20 minutes

**Q.9** IBPS PO / CLERK REASONING (PUZZLES) 2024

In aid of charity, every student in a class contributes as many rupees as the number of students in that class. With the additional contribution of Rs. 2 by one student only, the total collection is Rs. 443. Then how many students are there in the class?

**(A)** 12 **(B)** 21 **(C)** 43 **(D)** 45

**Q.10** IBPS PO / CLERK REASONING (PUZZLES) 2024

An agricultural field is in the form of a rectangle having length x1 meters and breadth x2 meters (x1 and x2 are variable). If x1 + x2 = 40 meters, then the area of the agricultural field will not exceed which one of the following values?

**(A)** 400 sq m **(B)** 300 sq m **(C)** 200 sq m **(D)** 80 sq m

**Q.11** IBPS PO / CLERK REASONING (PUZZLES) 2024

The sum of the ages of 5 members comprising a family, 3 years ago was 80 years. The average age of the family today is the same as it was 3 years ago, because of an addition of a baby during the intervening period. How old is the baby?

**(A)** 6 months **(B)** 1 year **(C)** 2 years **(D)** 2 years and 6 months

**Q.12** IBPS PO / CLERK REASONING (PUZZLES) 2024

In a race, a competitor has to collect 6 apples which are kept in a straight line on a track and a bucket is placed at the beginning of the track which is a starting point. The condition is that the competitor can pick only one apple at a time, run back with it and drop it in the bucket. If he has to drop all the apples in the bucket, how much total distance he has to run if the bucket is 5 meters from the first apple and all other apples are placed 3 meters apart?

**(A)** 40 m **(B)** 50 m **(C)** 75 m **(D)** 150 m

**Q.13** IBPS PO / CLERK REASONING (PUZZLES) 2024

A father is nine times as old as his son and the mother is eight times as old as the son. The sum of the father's and the mother's age is 51 years. What is the age of the son?

**(A)** 7 years **(B)** 5 years **(C)** 4 years **(D)** 3 years

**Q.14** IBPS PO / CLERK REASONING (PUZZLES) 2024

Each Of A, B, C and D has 100. A pays 20 to B, who pays 10 to C, who gets 30 from D. In this context, which one of the following statements is not correct?

**(A)** C is the richest. **(B)** D is the poorest.

**(C)** C has more than what A and D have together. **(D)** B is richer than D.

**Q.15** IBPS PO / CLERK REASONING (PUZZLES) 2024

In a parking area, the total number of wheels of all the cars (four-wheelers) and scooters/motorbikes (two-wheelers) is 100 more than twice the number of parked vehicles. The number of cars parked is

**(A)** 35 **(B)** 45 **(C)** 50 **(D)** 55

**Q.16** IBPS PO / CLERK REASONING (PUZZLES) 2024

A person ordered 5 pairs of black socks and some pairs of brown socks. The price of a black pair was thrice that of a brown pair. While preparing the bill, the bill clerk interchanged the number of black and brown pairs by mistake which increased the bill by 100%. What was the number of pairs of brown socks in the original order?

**(A)** 10 **(B)** 15 **(C)** 20 **(D)** 25

**Q.17** IBPS PO / CLERK REASONING (PUZZLES) 2024

The number of persons who read magazine X only is thrice the number of persons who read magazine Y. The number of persons who read magazine Y only is thrice the number of persons who read magazine X. Then, which of the following conclusions can be drawn?\n1. The number of persons who read both the magazines is twice the number of persons who read only magazine X.\n2. The total number of persons who read either one magazine or both the magazines is twice the number of persons who read both the magazines.

**(A)** 1 only **(B)** 2 only **(C)** Both 1 and 2 **(D)** Neither 1 nor 2

**Q.18** IBPS PO / CLERK REASONING (PUZZLES) 2024

If ABC x DEED = ABCABC; where A, B, C, D and E are different digits, what are the values of D and E?

**(A)** D=2, E=0 **(B)** D=0, E=1 **(C)** D=1, E=0 **(D)** D=1, E=2

**Q.19** IBPS PO / CLERK REASONING (PUZZLES) 2024

A cow costs more than 4 goats but less than 5 goats. If a goat costs between 600 and 800, which of the following is a more valid conclusion?

**(A)** A cow costs more than 2,500.
**(B)** A cow costs less than 3,600.
**(C)** A cow costs between 2,600 and 3,800.
**(D)** A cow costs between 2,400 and 4,000.

**Q.20** IBPS PO / CLERK REASONING (PUZZLES) 2024

In a box of marbles, there are three less white marbles than the red ones and five more white marbles than the green ones. If there are a total of 10 white marbles, how many marbles are there in the box?

**(A)** 26 **(B)** 28 **(C)** 32 **(D)** 36

**Q.21** IBPS PO / CLERK REASONING (PUZZLES) 2024

A group of 630 children is seated in rows for a group photo session. Each row contains three less children than the row in front of it. Which one of the following number of rows is not possible?

**(A)** 3 **(B)** 4 **(C)** 5 **(D)** 6

**Q.22** IBPS PO / CLERK REASONING (PUZZLES) 2024

A straight-line segment is 36 cm long. Points are to be marked on the line from both the end points. From each end, the first point is at a distance of 1 cm from the end, the second point is at a distance of 2 cm from the first point and the third point is at a distance of 3 cm from the second point and so on. If the points on the ends are not counted and the common points are counted as one, what is the number of points?

**(A)** 10 **(B)** 12 **(C)** 14 **(D)** 16

**Q.23** IBPS PO / CLERK REASONING (PUZZLES) 2024

A and B decide to travel from place X to place Y by bus. A has Rs. 10 with him and he finds that it is 80% of the bus fare for two persons. B finds that he has Rs. 3 with him and hands it over to A. In this context, which one of the following statements is correct?

**(A)** Now the money A has is just enough to buy two tickets.

**(B)** A still needs Rs. 2 for buying the tickets.

**(C)** After buying the two tickets A will be left with 50 paise.

**(D)** The money A now has is still not sufficient to buy two tickets

**Q.24** IBPS PO / CLERK REASONING (PUZZLES) 2024

Four persons, Alok, Bhupesh, Chander and Dinesh have a total of 100 among themselves. Alok and Bhupesh between them have as much money as Chander and Dinesh between them, but Alok has more money than Bhupesh; and Chander has only half the money that Dinesh has. Alok has in fact 5 more than Dinesh has. Who has the maximum amount of money?

**(A)** Alok **(B)** Bhupesh **(C)** Chander **(D)** Dinesh

**Q.25** IBPS PO / CLERK REASONING (PUZZLES) 2024

For a charity show, the total tickets sold were 420. Half of these tickets were sold at the rate of Rs.5 each, one-third at the rate of Rs.3 each and the rest for Rs.2 each. What was the total amount received?

**(A)** Rs. 900 **(B)** Rs. 1,540 **(C)** Rs. 1,610 **(D)** Rs. 2,000

**Q.26** IBPS PO / CLERK REASONING (PUZZLES) 2024

Four friends, A, B, C and D distribute some money among themselves in such a manner that A gets one less than B, C gets 5 more than D, D gets 3 more than B. Who gets the smallest amount?

**(A)** A **(B)** B **(C)** C **(D)** D

**Q.27** IBPS PO / CLERK REASONING (PUZZLES) 2024

There are some balls of red, green and yellow colour lying on a table. There are as many red balls as there are yellow balls. There are twice as many yellow balls as there are green ones. The number of red balls

**(A)** is equal to the sum of yellow and green balls. **(B)** is double the number of green balls.

**(C)** is equal to yellow balls minus green balls. **(D)** cannot be ascertained.

**Q.28** IBPS PO / CLERK REASONING (PUZZLES) 2024

In a rare coin collection, there is one gold coin for every three non-gold coins. 10 more gold coins are added to the collection and the ratio of gold coins to non-gold coins would be 1:2. Based on the information, the total number of coins in the collection now becomes

**(A)** 90 **(B)** 80 **(C)** 60 **(D)** 50

**Q.29** IBPS PO / CLERK REASONING (PUZZLES) 2024

A gardener has 1000 plants. He wants to plant them in such a way that the number of rows and the number of columns remains the same. What is the minimum number of plants that he needs more for this purpose?

**(A)** 14 **(B)** 24 **(C)** 32 **(D)** 34

**Q.30** IBPS PO / CLERK REASONING (PUZZLES) 2024

A sum of 700 has to be used to give seven cash prizes to the students of a school for their overall academic performance. If each prize is 20 less than its preceding prize, what is the least value of the prize?

**(A)** Rs 30 **(B)** Rs 40 **(C)** Rs 60 **(D)** Rs 80

**Q.31** BANKING PRELIMS (PUZZLES & CUBES) 2024

Each face of a cube can be painted in black or white colours. In how many different ways can the cube be painted?

**(A)** 9 **(B)** 10 **(C)** 11 **(D)** 12

**Q.32** BANKING PRELIMS (PUZZLES & CUBES) 2024

Consider the following three-dimensional figure: How many triangles does the above figure have?

**(A)** 18 **(B)** 20 **(C)** 22 **(D)** 24

**Q.33** BANKING PRELIMS (PUZZLES & CUBES) 2024

Rotated positions of a single solid are shown below. The various faces of the solid are marked with different symbols like dots, cross and line. Answer the three items that follow the given figures What is the symbol on the face opposite to that containing a single dot?

**(A)** Four dots **(B)** Three dots **(C)** Two dots **(D)** Cross

**Q.34** BANKING PRELIMS (PUZZLES & CUBES) 2024

Rotated positions of a single solid are shown below. The various faces of the solid are marked with different symbols like dots, cross and line. Answer the three items that follow the given figures What is the symbol on the face opposite to that containing two dots?

**(A)** Single dot **(B)** Three dots **(C)** Four dots **(D)** Line

**Q.35** BANKING PRELIMS (PUZZLES & CUBES) 2024

Rotated positions of a single solid are shown below. The various faces of the solid are marked with different symbols like dots, cross and line. Answer the three items that follow the given figures What is the symbol on the face opposite to that containing the cross?

**(A)** Single dot **(B)** Two dots **(C)** Line **(D)** Four dots

**Q.36** BANKING PRELIMS (PUZZLES & CUBES) 2024

A solid cube of 3 cm side, painted on all its faces, is cut up into small cubes of 1 cm side. How many of the small cubes will have exactly two painted faces?

**(A)** 12 **(B)** 8 **(C)** 6 **(D)** 4

**Q.37** BANKING PRELIMS (PUZZLES & CUBES) 2024

There are 24 equally spaced points lying on the circumference of a circle. What is the maximum number of equilateral triangles that can be drawn by taking sets of three points as the vertices?

**(A)** 4 **(B)** 6 **(C)** 8 **(D)** 12

**Q.38** BANKING PRELIMS (PUZZLES & CUBES) 2024

Twelve equal squares are placed to fit in a rectangle of diagonal 5 cm. There are three rows containing four squares each. No gaps are left between adjacent squares. What is the area of each square?

**(A)** 5/7 sq cm **(B)** 7/5 sq cm **(C)** 1 sq cm **(D)** 25/12 sq cm

**Q.39** BANKING PRELIMS (PUZZLES & CUBES) 2024

There are 4 horizontal and 4 vertical lines, parallel and equidistant to one another on a board. What is the maximum number of rectangles and squares that can be formed?

**(A)** 16 **(B)** 24 **(C)** 36 **(D)** 42

**Q.40** BANKING PRELIMS (PUZZLES & CUBES) 2024

The outer surface of a 4 cm x 4 cm x 4 cm cube is painted completely in red. It is sliced parallel to the faces to yield sixty-four 1 cm x 1 cm x 1 cm small cubes. How many small cubes do not have painted faces?

**(A)** 8 **(B)** 16 **(C)** 24 **(D)** 36

**Q.41** BANKING PRELIMS (PUZZLES & CUBES) 2024

Two walls and a ceiling of a room meet at right angles at a point P. A fly is in the air 1 m from one wall, 8 m from the other wall and 9 m from the point P. How many meters is the fly from the ceiling?

**(A)** 4 **(B)** 6 **(C)** 12 **(D)** 15

**Q.42** BANKING PRELIMS (PUZZLES & CUBES) 2024

consider the given information and answer the three items that follow. Eight railway stations A, B, C, D, E, F, G and H are connected either by two-way passages or one-way passages. One-way passages are from C to A, E to G, B to F, D to H, G to C, E to C and H to G. Two-way passages are between A and E, G and B, F and D, and E and D. While travelling from C to H, which one of the following stations must be passed through?

**(A)** F **(B)** E **(C)** B **(D)** F

**Q.43** BANKING PRELIMS (PUZZLES & CUBES) 2024

consider the given information and answer the three items that follow. Eight railway stations A, B, C, D, E, F, G and H are connected either by two-way passages or one-way passages. One-way passages are from C to A, E to G, B to F, D to H, G to C, E to C and H to G. Two-way passages are between A and E, G and B, F and D, and E and D. In how many different ways can a train travel from F to A without passing through any station more than once?

**(A)** 1 **(B)** 2 **(C)** 3 **(D)** 4

### Q.44

BANKING PRELIMS (PUZZLES & CUBES) 2024

consider the given information and answer the three items that follow. Eight railway stations A, B, C, D, E, F, G and H are connected either by two-way passages or one-way passages. One-way passages are from C to A, E to G, B to F, D to H, G to C, E to C and H to G. Two-way passages are between A and E, G and B, F and D, and E and D. If the route between G and C is closed, which one of the following stations need not be passed through while travelling from H to C?

**(A)** E **(B)** D **(C)** A **(D)** B

### Q.45

BANKING PRELIMS (PUZZLES & CUBES) 2024

A piece of tin is in the form of a rectangle having length 12 cm and width 8 cm. This is used to construct a closed cube. The side of the cube is:

**(A)** 2 cm **(B)** 3 cm **(C)** 4 cm **(D)** 7 cm

## OFFICIAL ANSWER KEY • PART B • CHAPTER 6: PUZZLES (FLOOR/FLAT PUZZLES, BOX PUZZLES & SCHEDULING)

(45 TOTAL QUESTIONS)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 B | 2 B | 3 B | 4 B | 5 B | 6 D | 7 D | 8 A | 9 B | 10 A |
| 11 B | 12 D | 13 D | 14 C | 15 C | 16 D | 17 D | 18 C | 19 D | 20 B |
| 21 D | 22 B | 23 C | 24 A | 25 C | 26 A | 27 B | 28 A | 29 B | 30 B |
| 31 B | 32 B | 33 B | 34 C | 35 C | 36 A | 37 C | 38 C | 39 C | 40 A |
| 41 A | 42 B | 43 D | 44 C | 45 C | | | | | |

## DETAILED SOLUTIONS & CONCEPTUAL EXPLANATIONS

**Ans (B) Q.1**

Maximum holidays possible: 5 Sundays + 2 Saturdays = 7 days (in a 31-day month). Therefore minimum working days = 31−7 = 22 days.

**Ans (B) Q.2**

Let a,b,c,d be incomes. Given: a+b > c+d, a+c = b+d, a = (b+d)/2. Solving these equations shows that b must be the highest income.

**Ans (B) Q.3**

Net progress per chance: A=(6−1)=5cm, B=(7−3)=4cm, C=(6.5−2)=4.5cm. In 40 chances: A=200cm, B=160cm, C=180cm. Therefore shortest pillar is Y at 163cm (rounded up from 160cm).

**Ans (B) Q.4**

Final cards: A=8, B=7, C=12, D=15, E=11, F=7. D+E=26 cards, and B+C+F=26 cards.

**Ans (B) Q.5**

Let current age be n. Then (n-1) is square of some number and (n+1) is cube of some number. Closest possible values: n-1=36 ($6^2$) and n+1=27 ($3^3$). So n=37. Next cube is 64. Therefore wait time = 64−37 = 38 years.

**Ans (D)** **Q.6**

For maximum remainder, we need maximum difference between reversed numbers. Largest possible case: 91 and 19. 91÷19 = 4 remainder 15. Therefore largest remainder is 45.

**Ans (D)** **Q.7**

Let number be 10×+y and reversed be 10y+x. Given: (10×+y)-(10y+x)=27, or 9(x-y)=27. Therefore x-y=3. Only 2 possible pairs (4,1) and (5,2), giving 41 and 52. Answer is 2, not in options.

**Ans (A)** **Q.8**

Optimal solution: A&B cross (2min), A returns (1min), C&D cross (10min), B returns (2min), A&B cross (2min). Total = 23 minutes.

**Ans (B)** **Q.9**

Let number of students be n. Each student contributes n rupees. Total = $n^2 + 2 = 443$. Therefore $n^2 = 441 = 21^2$. Hence number of students = 21.

**Ans (A)** **Q.10**

Area = x1×x2, where x1+x2=40. Using calculus or algebraic proof, maximum area occurs when x1=x2=20. Maximum area = 20×20 = 400 sq m.

**Ans (B)** **Q.11**

Let baby's current age be x. Original sum = 80. Current sum = (80+15+x) for 6 members. For same average: 80/5 = (95+x)/6. Solving: x = 1.

**Ans (D)** **Q.12**

Distances: 1st apple=5m, 2nd=8m, 3rd=11m, 4th=14m, 5th=17m, 6th=20m. Total = 2(5+8+11+14+17+20) = 2(75) = 150m (round trip for each apple).

**Ans (D)** **Q.13**

Let son's age be x. Father's age = 9×, Mother's age = 8×. Given: 9× + 8× = 51. Therefore 17× = 51. x = 3 years.

**Ans (C)** **Q.14**

Final amounts: A=80, B=110, C=140, D=70. C has 140, A+D=150. Therefore statement C is incorrect.

**Ans (C)** **Q.15**

Let cars=x, two-wheelers=y. Total vehicles=x+y. Total wheels=4×+2y. Given: 4×+2y = 2(x+y)+100. Solving: 2× = 100. Therefore x = 50 cars.

**Ans (D)** **Q.16**

Let brown pairs=x, price of brown pair=p. Original bill=15p+xp, Wrong bill=5p+3×p. Given: 5p+3×p=2(15p+xp). Solving: x=25.

**Ans (D)** **Q.17**

Given conditions lead to a contradiction. If x people read X only and y people read Y only: x=3y and y=3×. This means x=9×, which is impossible unless x=0.

**Ans (C)** **Q.18**

ABC × 1001 = ABCABC (as DEED must be 1001 for this to work). Therefore D=1 and E=0 is the only possible solution.

**Ans (D)** **Q.19**

Minimum cow cost = 4×600+1 = 2,401. Maximum cow cost = 5×800−1 = 3,999. Therefore cow costs between 2,400 and 4,000.

**Ans (B)** **Q.20**

White marbles = 10. Red marbles = 13 (3 more than white). Green marbles = 5 (5 less than white). Total = 10 + 13 + 5 = 28 marbles.

**Ans (D)** **Q.21**

For n rows, total children = n(first row + last row)/2 = n(2a-(n-1)×3)/2 = 630, where a is first row. Try n=3,4,5,6. Only n=6 gives non-integer solution.

**Ans (B)** **Q.22**

From left: points at 1,3,6,10,15 cm. From right: points at 35,33,30,26,21 cm. Total unique points = 12 (including overlap at 18 cm).

**Ans (C)** **Q.23**

Total fare = Rs. 10/0.8 = Rs. 12.50. A has Rs. 10 + Rs. 3 = Rs. 13. After buying tickets worth Rs. 12.50, Rs. 0.50 remains.

**Ans (A)** **Q.24**

Let Dinesh have x. Then Chander has x/2, Alok has x+5. Total=100, A+B=C+D. Solving: x=30. Therefore amounts: A=35, B=15, C=15, D=30. Alok has maximum.

**Ans (C)** **Q.25**

210 tickets at Rs.5 = 1050, 140 tickets at Rs.3 = 420, 70 tickets at Rs.2 = 140. Total = 1050 + 420 + 140 = Rs.1,610

**Ans (A)** **Q.26**

Let B get x. Then A gets (x-1), D gets (x+3), C gets (x+8). Clearly, A gets the least amount as x-1 is smallest.

**Ans (B)** **Q.27**

Let green balls = x. Then yellow balls = 2× (twice of green), and red balls = 2× (equal to yellow). Therefore red balls are double of green balls.

**Ans (A)** **Q.28**

Let initial gold coins = x. Then non-gold = 3×. After adding 10 gold coins: (x+10)/(3×) = 1/2. Solving: x = 20. Total coins after = 30 gold + 60 non-gold = 90.

**Ans (B)** **Q.29**

Need a perfect square number ≥ 1000. Next perfect square after 1000 is $32^2 = 1024$. Therefore additional plants needed = 1024 - 1000 = 24.

**Ans (B)** **Q.30**

Let smallest prize be x. Then prizes are: x, x+20, x+40, x+60, x+80, x+100, x+120. Sum = 7× + 420 = 700. Therefore x = 40.

CHAPTER 7

# Part B • Chapter 7: Seating Arrangement (Linear Row, Circular Table & Facing In/Out)

45 Solved Questions  Sorted Chronologically with Exam & Shift Tags

ONLINE MOCK

**Q.1** IBPS / SBI PO (SEATING ARRANGEMENT) 2024

In a survey regarding a proposal measure to be introduced, 2878 persons took part of which 1652 were males. 12 persons voted against the proposal which 796 were males. 1425 persons vote for the proposal. 196 females were undecided. How many females voted for the proposal?

**(A)** 430 **(B)** 600 **(C)** 624 **(D)** 640

**Q.2** IBPS / SBI PO (SEATING ARRANGEMENT) 2024

In a survey regarding a proposal measure to be introduced, 2878 persons took part of which 1652 were males. 12 persons voted against the proposal which 796 were males. 1425 persons vote for the proposal. 196 females were undecided. How many males were undecided?

**(A)** 31 **(B)** 227 **(C)** 426 **(D)** 581

**Q.3** IBPS / SBI PO (SEATING ARRANGEMENT) 2024

In a survey regarding a proposal measure to be introduced, 2878 persons took part of which 1652 were males. 12 persons voted against the proposal which 796 were males. 1425 persons vote for the proposal. 196 females were undecided. How many females were not in favour of the proposal?

**(A)** 430 **(B)** 496 **(C)** 586 **(D)** 1226

**Q.4** IBPS / SBI PO (SEATING ARRANGEMENT) 2024

Raj has ten pairs of red, nine pairs of white and eight pairs of black shoes in a box. If he randomly picks shoes one by one (without replacement) from the box to get a red pair of shoes to wear, what is the maximum number of attempts he has to make?

**(A)** 27 **(B)** 36 **(C)** 44 **(D)** 45

**Q.5** IBPS / SBI PO (SEATING ARRANGEMENT) 2024

In how many ways can a batsman score exactly 25 runs by scoring single runs, fours and sixes only, irrespective of the sequence of scoring shots?

**(A)** 18 **(B)** 19 **(C)** 20 **(D)** 21

**Q.6** IBPS / SBI PO (SEATING ARRANGEMENT) 2024

There are four letters and four envelopes and exactly one letter is to be put in exactly one envelope with the correct address. If the letters are randomly inserted into the envelopes, then consider the following statements: 1. It is possible that exactly one letter goes into an incorrect envelope. 2. There are only six ways in which only two letters can go into the correct envelopes. Which of the statements given above is/are correct?

**(A)** 1 only **(B)** 2 only **(C)** Both 1 and 2 **(D)** Neither 1 nor 2

**Q.7** IBPS / SBI PO (SEATING ARRANGEMENT) 2024

A box contains 14 black balls, 20 blue balls, 26 green balls, 28 yellow balls, 38 red balls and 54 white balls. Consider the following statements: 1. The smallest number n such that any n balls drawn from the box randomly must contain one full group of at least one colour is 175. 2. The smallest number m such that any m balls drawn from the box randomly must contain at least one ball of each colour is 167. Which of the above statements is/are correct?

**(A)** 1 only **(B)** 2 only **(C)** Both 1 and 2 **(D)** Neither 1 nor 2

**Q.8** IBPS / SBI PO (SEATING ARRANGEMENT) 2024

What is the sum of all 4-digit numbers less than 2000 formed by the digits 1, 2, 3 and 4, where none of the digits is repeated?

**(A)** 7998 **(B)** 8028 **(C)** 8878 **(D)** 9238

**Q.9** IBPS / SBI PO (SEATING ARRANGEMENT) 2024

What is the number of selections of 10 consecutive things out of 12 things in a circle taken in the clockwise direction?

**(A)** 3 **(B)** 11 **(C)** 12 **(D)** 66

**Q.10** IBPS / SBI PO (SEATING ARRANGEMENT) 2024

A flag has to be designed with 4 horizontal stripes using some or all of the colours red, green and yellow. What is the number of different ways in which this can be done so that no two adjacent stripes have the same colour?

**(A)** 12 **(B)** 18 **(C)** 24 **(D)** 36

**Q.11** IBPS / SBI PO (SEATING ARRANGEMENT) 2024

There are five persons P, Q, R, S and T each one of whom has to be assigned one task. Neither P nor Q can be assigned Task-1 Task-2 must be assigned to either R or S. In how many ways can the assignment be done?

**(A)** 6 **(B)** 12 **(C)** 18 **(D)** 24

**Q.12** IBPS / SBI PO (SEATING ARRANGEMENT) 2024

The digits 1 to 9 are arranged in three rows in such a way that each row contains three digits, and the number formed in the second row is twice the number formed in the first row; and the number formed in the third row is thrice the number formed in the first row. Repetition of digits is not allowed. If only three of the four digits 2, 3, 7 and 9 are allowed to use in the first row, how many such combinations are possible to be arranged in the three rows?

**(A)** 4 **(B)** 3 **(C)** 2 **(D)** 1

**Q.13** IBPS / SBI PO (SEATING ARRANGEMENT) 2024

In a tournament of chess having 150 entrants, a player is eliminated whenever he loses a match. It is given that, no match results in a tie/draw. How many matches are played in the entire tournament?

**(A)** 151 **(B)** 150 **(C)** 149 **(D)** 148

**Q.14** IBPS / SBI PO (SEATING ARRANGEMENT) 2024

How many 3-digit natural numbers (without repetition of digits) are there such that each digit is Odd and the number is divisible by 5?

**(A)** 8 **(B)** 12 **(C)** 16 **(D)** 24

**Q.15** IBPS / SBI PO (SEATING ARRANGEMENT) 2024

The letters A, B, C, D and E are arranged in such a way that there are exactly two letters between A and E. How many such arrangements are possible?

**(A)** 12 **(B)** 18 **(C)** 24 **(D)** 36

**Q.16** IBPS / SBI PO (SEATING ARRANGEMENT) 2024

A, B and C are three places such that there are three different roads from A to B, four different roads from B to C and three different roads from A to C. In how many different ways can one travel from A to C using these roads?

**(A)** 10 **(B)** 13 **(C)** 15 **(D)** 36

**Q.17** IBPS / SBI PO (SEATING ARRANGEMENT) 2024

There is a numeric lock which has a 3-digit PIN. The PIN contains digits 1 to 7. There is no repetition of digits. The digits in the PIN from left to right are in decreasing order. Any two digits in the PIN differ by at least 2. How many maximum attempts does one need to find out the PIN with certainty?

**(A)** 6 **(B)** 8 **(C)** 10 **(D)** 12

**Q.18** IBPS / SBI PO (SEATING ARRANGEMENT) 2024

One non-zero-digit, one vowel and one consonant from English alphabet (in capital) are to be used in forming passwords, such that each password has to start with a vowel and end with a consonant. How many such passwords can be generated?

**(A)** 105 **(B)** 525 **(C)** 945 **(D)** 1050

**Q.19** IBPS / SBI PO (SEATING ARRANGEMENT) 2024

There are 9 cups placed on a table arranged in equal number of rows and columns out of which 6 cups contain coffee and 3 cups contain tea. In how many ways can they be arranged so that each row should contain at least one cup of coffee?

**(A)** 18 **(B)** 27 **(C)** 54 **(D)** 81

**Q.20** IBPS / SBI PO (SEATING ARRANGEMENT) 2024

The sum of three consecutive integers is equal to their product. How many such possibilities are there?

**(A)** Only one **(B)** Only two

**(C)** Only three **(D)** No such possibility is there

**Q.21** IBPS / SBI PO (SEATING ARRANGEMENT) 2024

What is the number of numbers of the form 0•XY, where X and Y are distinct non-zero digits?

**(A)** 72 **(B)** 81 **(C)** 90 **(D)** 100

**Q.22** IBPS / SBI PO (SEATING ARRANGEMENT) 2024

On a chess board, in how many different ways can 6 consecutive squares be chosen on the diagonals along a straight path?

**(A)** 4 **(B)** 6 **(C)** 8 **(D)** 12

**Q.23** IBPS / SBI PO (SEATING ARRANGEMENT) 2024

Using 2, 2, 3, 3, 3 as digits, how many distinct numbers greater than 30000 can be formed?

**(A)** 3 **(B)** 6 **(C)** 9 **(D)** 12

**Q.24** IBPS / SBI PO (SEATING ARRANGEMENT) 2024

There are 6 persons arranged in a row. Another person has to shake hands with 3 of them so that he should not shake hands with two consecutive persons. In how many distinct possible combinations can the handshakes take place?

**(A)** 3 **(B)** 4 **(C)** 5 **(D)** 6

**Q.25** IBPS / SBI PO (SEATING ARRANGEMENT) 2024

How many different 5-letter words (with or without meaning) can be constructed using all the letters of the word 'DELHI' so that each word has to start with D and end with I?

**(A)** 24 **(B)** 18 **(C)** 12 **(D)** 6

**Q.26** BANKING PRELIMS (SEATING & ARRANGEMENTS) 2024

There were 50 faculty members comprising 30 males and the rest females. No male faculty member knew music, but many of the female faculty members did. The Head of the institution invited six faculty members to a tea party by draw of lots. At the party it was discovered that no members knew music. The conclusion is that:

**(A)** the party comprised male faculty members only.

**(B)** the party comprised only those female faculty members who could not give renderings in music.

**(C)** the party comprised both male and female faculty members.

**(D)** nothing can be said about the gender composition of the party.

**Q.27** BANKING PRELIMS (SEATING & ARRANGEMENTS) 2024

Consider the following statement: 'We shall go either for a picnic or for trekking'. Which of the following, if true, would falsify this claim?

**(A)** We go for a picnic but not for trekking.

**(B)** Activities such as picnic and trekking are encouraged by the health authorities.

**(C)** We go for trekking and not for picnic.

**(D)** We do not go either for picnic or for trekking.

**Q.28** BANKING PRELIMS (SEATING & ARRANGEMENTS) 2024

There are some nectar-filled flowers on a tree and some bees are hovering on it. If one bee lands on each flower, one bee will be left out. If bees land on each flower, one flower will be left out. The number of flowers and bees respectively are:

**(A)** 2 and 4 **(B)** 3 and 2 **(C)** 3 and 4 **(D)** 4 and 3

**Q.29** BANKING PRELIMS (SEATING & ARRANGEMENTS) 2024

Consider the following statements: 1. A man had a wife, two sons and two daughters in his family. 2. The daughters were invited to a feast and the male members of the family went out to take part in a picnic. 3. The man's father did not return from his work. Which of the following statements is true?

**(A)** Only the man's wife was left at home.

**(B)** It is likely that the man's wife was left at home.

**(C)** None was left at home.

**(D)** More than one person was left at home.

**Q.30** BANKING PRELIMS (SEATING & ARRANGEMENTS) 2024

Geeta: Naresh has become a better boxer since he started meditation. Radha: Impossible. A boxer's most important asset is his aggressiveness. Radha's statement reflects her belief that

**(A)** meditation tends to make a person less aggressive.

**(B)** meditation has little or no effect on the person who practises it.

**(C)** Naresh was a poor boxer earlier because he was not aggressive enough.

**(D)** Naresh would not have taken to meditation as he was a boxer.

**Q.31** BANKING PRELIMS (SEATING & ARRANGEMENTS) 2024

The mangroves can shed tons of leaves per acre every year; fungi and bacteria break down this leaf litter and consume it. they then are consumed by tiny worms and crustaceans, which in turn feed small fish, which feed larger fish and birds and crocodiles. Which among the following is the most logical inference of the above statement?

**(A)** Coastal areas cannot have food chains without mangroves.

**(B)** Mangroves are an essential component of all marine ecosystems.

**(C)** Mangroves have a crucial role in some of the coastal food chains.

**(D)** The composition of marine flora and fauna is largely determined by mangroves.

**Q.32** BANKING PRELIMS (SEATING & ARRANGEMENTS) 2024

By liberty I mean the eager maintenance Of that atmosphere in which men have the opportunity to be their best selves.' Which one of the following expresses the view implied in the above statement?

**(A)** Liberty is the absence of restraint on human action.

**(B)** Liberty is what law permits people to perform.

**(C)** Liberty is the ability to do what one desires.

**(D)** Liberty is the maintenance of conditions for the growth of human personality.

**Q.33** BANKING PRELIMS (SEATING & ARRANGEMENTS) 2024

Consider the following statements: 1. Some claim to have seen UFOs (Unidentified Flying Objects). 2. Life on other heavenly bodies is considered to be a possibility. 3. Voyage to space is now an established fact. From the above statements, it may be concluded that

**(A)** UFOs are heavenly bodies.

**(B)** UFOs are sent from other heavenly bodies.

**(C)** Some living species in other heavenly bodies are more intelligent than man.

**(D)** Nothing definite can be said about the UFOs.

**Q.34** BANKING PRELIMS (SEATING & ARRANGEMENTS) 2024

Price is not the same thing as value. Suppose that on a day the price of everything viz., coal, bread, postage stamps, a day's labour, the rent of houses, etc. were to double. Prices then would certainly rise, but values of all things except one would not.' The writer wants to say that if prices of all things were doubled

**(A)** the values of all things would remain constant.

**(B)** the values of the things sold would be doubled.

**(C)** the values of the things bought would be halved.

**(D)** the value of money only would be halved.

**Q.35** BANKING PRELIMS (SEATING & ARRANGEMENTS) 2024

Liberty, therefore, is never real unless the Government can be called to account when it invades rights.' Which one of the following is the best justification of the above statement?

**(A)** In the realization that the government can be brought to book in a court of law.

**(B)** In identifying a man as a political unit in a way which distinguishes him from other citizens.

**(C)** In a decentralized society wherein the basic needs of men can find satisfaction.

**(D)** In the understanding that liberty and restraints are complementary.

**Q.36** BANKING PRELIMS (SEATING & ARRANGEMENTS) 2024

The number of deaths among the army personnel is 8 in 1000, but among the civilian population it is 20 per 1000. Which one of the following inferences can be drawn from this statement?

**(A)** It is better to join the army.

**(B)** The relationship is fortuitous.

**(C)** Quality of Life Index is very high within the armed forces.

**(D)** The groups cannot be compared due to their heterogeneity.

**Q.37** BANKING PRELIMS (SEATING & ARRANGEMENTS) 2024

Given the statement: 'Buses are the cause of more accidents than cars, and trucks cause fewer accidents than buses.' which of the following conclusions can we draw?

**(A)** There are more buses on the road than trucks.

**(B)** Car drivers are more careful than bus drivers.

**(C)** Truck drivers are more skilled than either car or bus drivers.

**(D)** None of the above.

**Q.38** BANKING PRELIMS (SEATING & ARRANGEMENTS) 2024

If political leadership fails to emerge, there is likelihood of military taking over power in developing countries. Radical student groups or labour may try to raise revolution but they are not likely to compete with the military. Military intervention, rule, and withdrawal from politics is closely related to a society's level of political development. In the context of political development, the assumption in the above passage is that

**(A)** political leadership is not an effective instrument.

**(B)** military fills in political vacuum.

**(C)** military intervention is inevitable for development.

**(D)** None of the above.

**Q.39** BANKING PRELIMS (SEATING & ARRANGEMENTS) 2024

Consider the following statements: (i) A primary group is relatively smaller in size. (ii) Intimacy is an essential characteristic of a primary group. (iii) A family may be an example of a primary group. In the light of the above statements, which one of the following is true?

**(A)** All families are primary groups.

**(B)** All primary groups are families.

**(C)** A group of smaller size is always a primary group.

**(D)** Members of a primary group know each other intimately.

## Q.40

BANKING PRELIMS (SEATING & ARRANGEMENTS) 2024

Geeta is older than her cousin Meena. Meena's brother Bipin is older than Geeta. When Meena and Bipin visit Geeta, they like to play chess. Meena wins the game more often than Geeta. Based on the above information, four conclusions, as given below, have been made. Which one of these logically follows from the information given above?

**(A)** While playing chess with Geeta and Meena, Bipin often loses.

**(B)** Geeta is the oldest among the three.

**(C)** Geeta hates to lose the game.

**(D)** Meena is the youngest of the three.

## Q.41

BANKING PRELIMS (SEATING & ARRANGEMENTS) 2024

Given below are six items. Each item describes a situation and is followed by four possible responses. Indicate the response you find most appropriate. Choose only one response for each item. The responses will be evaluated based on the level of appropriateness for the given situation. Please attempt all the items. There is no penalty for wrong answers for these six items. You are the head of your office. There are certain houses reserved for the allotment to the office staff and you have been given the discretion to do so. A set of rules for the allotment of the houses has been laid down by you and has been made public. Your personal secretary, who is very close to you, comes to you and pleads that as his father is seriously ill, he should be given priority in allotment of a house. The office secretariat that examined the request as per the rules turns down the request and recommends the procedure to be followed according to the rules. You do not want to annoy your personal secretary. In such circumstances, what would you do?

**(A)** Call him over to your room and personally explain why the allotment cannot be done.

**(B)** Allot the house to him to win his loyalty.

**(C)** Agree with the office note to show that you are not biased and that you do not indulge in favouritism.

**(D)** Keep the file with you and not pass any orders.

## Q.42

BANKING PRELIMS (SEATING & ARRANGEMENTS) 2024

Given below are six items. Each item describes a situation and is followed by four possible responses. Indicate the response you find most appropriate. Choose only one response for each item. The responses will be evaluated based on the level of appropriateness for the given situation. Please attempt all the items. There is no penalty for wrong answers for these six items. While travelling in a Delhi-registered commercial taxi from Delhi to an adjacent city (another State), your taxi driver informs you that as he has no permit for running the taxi in that city, he will stop at its Transport Office and pay the prescribed fee of forty for a day. While paying the fee at the counter you find that the transport clerk is taking an extra fifty rupees for which no receipt is being given. You are in a hurry for your meeting. In such circumstances, what would you do?

**(A)** Go up to the counter and ask the clerk to give back the money which he has illegally taken.

**(B)** Do not interfere at all as this is a matter between the taxi driver and the tax authorities.

**(C)** Take note of the incident and subsequently report the matter to the concerned authorities.

**(D)** Treat it as a normal affair and simply forget about it.

## Q.43

BANKING PRELIMS (SEATING & ARRANGEMENTS) 2024

Given below are six items. Each item describes a situation and is followed by four possible responses. Indicate the response you find most appropriate. Choose only one response for each item. The responses will be evaluated based on the level of appropriateness for the given situation. Please attempt all the items. There is no penalty for wrong answers for these six items. A person lives in a far-off village which is almost two hours by bus. The villager's neighbour is a very powerful landlord who is trying to occupy the poor villager's land by force. You are the District Magistrate and busy in a meeting called by a local Minister. The villager has come all the way, by bus and on foot, to see you and give an application seeking protection from the powerful landlord. The villager keeps on waiting outside the meeting hall for an hour. You come out of the meeting and are rushing to another meeting. The villager follows you to submit his application. What would you do?

**(A)** Tell him to wait for another two hours till you come back from your next meeting.

**(B)** Tell him that the matter is actually to be dealt by a junior officer and that he should give the application to him.

**(C)** Call one of your senior subordinate officers and ask him to solve the villager's problem.

**(D)** Quickly take the application from him, ask him a few relevant questions regarding his problem and then proceed to the meeting.

## Q.44

BANKING PRELIMS (SEATING & ARRANGEMENTS) 2024

Given below are six items. Each item describes a situation and is followed by four possible responses. Indicate the response you find most appropriate. Choose only one response for each item. The responses will be evaluated based on the level of appropriateness for the given situation. Please attempt all the items. There is no penalty for wrong answers for these six items. There is a shortage of sugar in your District where you are the District Magistrate. The Government has ordered that only a maximum amount of 30 kg sugar is to be released for wedding celebrations. A son of your close friend is getting married and your friend requests you to release at least 50 kg sugar for his son's wedding. He expresses annoyance when you tell him about the Government's restrictions on this matter. He feels that since you are the District Magistrate you can release any amount. You do not want to spoil your friendship with him. In such circumstances, how would you deal with the situation?

**(A)** Release the extra amount of sugar which your friend has requested for.

**(B)** Refuse your friend the extra amount and strictly follow the rules.

**(C)** Show your friend the copy of the Government instructions and then persuade him to accept the lower amount as prescribed in the rules.

**(D)** Advise him to directly apply to the allotting authority and inform him that you do not interfere in this matter.

## Q.45

BANKING PRELIMS (SEATING & ARRANGEMENTS) 2024

Given below are six items. Each item describes a situation and is followed by four possible responses. Indicate the response you find most appropriate. Choose only one response for each item. The responses will be evaluated based on the level of appropriateness for the given situation. Please attempt all the items. There is no penalty for wrong answers for these six items. You are in-charge of implementing the Family Planning programme in an area where there is a strong opposition to the present policy. You want to convince the residents of the need for keeping small families. What would be the best way of communicating this message?

**(A)** By logically explaining to the residents the need for family planning to improve the health and living standards.

**(B)** By encouraging late marriages and proper spacing of children.

**(C)** By offering incentives for adopting family planning devices.

**(D)** By asking people who have been sterilized or are using contraceptives to directly talk to the residents.

## OFFICIAL ANSWER KEY • PART B • CHAPTER 7: SEATING ARRANGEMENT (LINEAR ROW, CIRCULAR TABLE & FACING IN/OUT)

(45 TOTAL QUESTIONS)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 B | 2 A | 3 A | 4 B | 5 B | 6 B | 7 C | 8 A | 9 C | 10 C |
| 11 A | 12 D | 13 C | 14 B | 15 C | 16 C | 17 C | 18 C | 19 D | 20 C |
| 21 A | 22 B | 23 B | 24 B | 25 D | 26 A | 27 D | 28 C | 29 B | 30 A |
| 31 C | 32 D | 33 D | 34 D | 35 A | 36 D | 37 D | 38 B | 39 D | 40 D |
| 41 A | 42 A | 43 D | 44 C | 45 D | | | | | |

## DETAILED SOLUTIONS & CONCEPTUAL EXPLANATIONS

**Ans (A)** **Q.41**

This shows transparency and upholds the integrity of the allocation rules while maintaining a cordial relationship.

**Ans (D)** **Q.43**

This way, you are able to address his concern promptly while still attending your meeting.

CHAPTER 8

# Part B • Chapter 8: Syllogism & Coded Inequalities (Statements, Conclusions & Reverse Syllogism)

45 Solved Questions Sorted Chronologically with Exam & Shift Tags

ONLINE MOCK

**Q.1** IBPS & SBI PRELIMS (SYLLOGISMS & LOGIC) 2024

Examine the following statements: 1. All colours are pleasant. 2. Some colours are pleasant. 3. No colour is pleasant. 4. Some colours are not pleasant. Give that statement 4 is true, what can be definitely concluded?

**(A)** 1 and 2 are true. **(B)** 3 is true. **(C)** 2 is false. **(D)** 1 is false.

**Q.2** IBPS & SBI PRELIMS (SYLLOGISMS & LOGIC) 2024

All good athletes want to win and all athletes who want to win eat a well-balanced diet; therefore, all athletes who do not eat a well-balanced diet are bad athletes. The best conclusion from this statement is that

**(A)** no bad athlete wants to win.

**(B)** no athlete who does not eat a well-balanced diet is a good athlete.

**(C)** every athlete who eats a well-balanced diet is a good athlete.

**(D)** all athletes who want to Win are good athletes.

**Q.3** IBPS & SBI PRELIMS (SYLLOGISMS & LOGIC) 2024

Consider the following statements followed by two conclusions: Statements: Some men are great. Some men are wise. Conclusion I: Men are either great or wise. Conclusion II Some men are neither great nor Wise. Which one of the following is correct?

**(A)** Only conclusion I is valid **(B)** Only conclusion II is valid

**(C)** Both the conclusions are valid **(D)** Neither of the conclusions is valid

**Q.4** IBPS & SBI PRELIMS (SYLLOGISMS & LOGIC) 2024

Consider the following statements: 1. All artists are whimsical. 2. Some artists are drug addicts. 3. Frustrated people are prone to become drug addicts. From the above three statements it may be concluded that:

**(A)** Artists are frustrated **(B)** Some drug addicts are whimsical

**(C)** All frustrated people are drug addicts. **(D)** Whimsical people are generally frustrated

**Q.5** IBPS & SBI PRELIMS (SYLLOGISMS & LOGIC) 2024

Examine the following statements: 1. Either A & B are of same age or A is older than B 2. Either C & D are of same age or D is older than C 3. B is older than C Which of the following conclusions can be drawn from the above statements?

**(A)** A is older than B **(B)** B and D are of the same age

**(C)** D is older than C **(D)** A is older than C

**Q.6** IBPS & SBI PRELIMS (SYLLOGISMS & LOGIC) 2024

Examine the following statements: 1. Only those who have a pair of binoculars can become the member of the birdwatcher's club. 2. Some members of the birdwatcher's club have cameras. 3. Those members who have cameras can take part in photo-contests. Which of the following conclusions can be drawn from the above statements?

**(A)** All those who have a pair of binoculars are members of the birdwatcher's club.

**(B)** All members of the birdwatcher's club have a pair of binoculars.

**(C)** All those who take part in photo-contests are members of the birdwatcher's club.

**(D)** No conclusion can be drawn.

**Q.7** IBPS & SBI PRELIMS (SYLLOGISMS & LOGIC) 2024

Examine the following statements: 1. None but students are the members of the club. 2. Some members of the club are married. 3. All married persons are invited for dance. Which one of the conclusions can be drawn from the above statements?

**(A)** All students are invited for dance

**(B)** All married students are invited for dance

**(C)** All members of the club are married person

**(D)** None of the above conclusions can be drawn

**Q.8** IBPS & SBI PRELIMS (SYLLOGISMS & LOGIC) 2024

Consider the following statements: 1. All X-brand cars parked here are white. 2. Some of them have radial tyres. 3. All X-brand cars manufactured after 1986 have radial tyres are parked here. 4. All cars are not X-brand. Which one of the following conclusions can be drawn from the above statements?

**(A)** Only white cars are parked here.

**(B)** Some white X-brand cars with radial tyres are parked here.

**(C)** Cars other than X-brand cannot have radial tyres.

**(D)** Most of the X-brand cars are manufactured before 1986.

**Q.9** IBPS & SBI PRELIMS (SYLLOGISMS & LOGIC) 2024

Consider the following statements: 1. All machines consume energy 2. Electricity provides energy 3. Electrically operated machines are cheap to maintain 4. Electrically operated machines do not cause pollution. Which one of the following inferences can be drawn from the above statements?

**(A)** All machines are run by electric energy.

**(B)** There is no form of energy other than electricity

**(C)** Most machines are operated on electric energy.

**(D)** Electrically operated machines are preferable to use.

**Q.10** IBPS & SBI PRELIMS (SYLLOGISMS & LOGIC) 2024

Examine the following statements: 1. None but the rich ran affords air-travel. 2. Some of those who travel by air become sick 3. Some of those who become sick require treatment Which one of the following conclusions can be drawn from the above statements?

**(A)** All the rich persons travel by air.

**(B)** Those who travel by air become sick

**(C)** All the rich persons become sick.

**(D)** All those who travel by air are rich

**Q.11** IBPS & SBI PRELIMS (SYLLOGISMS & LOGIC) 2024

Consider the following three statements: 1. Only students can participate in the race. 2. Some participants in the race are girls. 3. All girl participants in the race are invited for coaching. Which one of the following conclusions can be drawn from the above statements?

**(A)** All participants in the race are invited for coaching.

**(B)** All students are invited for coaching.

**(C)** All participants in the race are students.

**(D)** None of the statements (a), (b) and (c) given above is correct.

**Q.12** IBPS & SBI PRELIMS (SYLLOGISMS & LOGIC) 2024

Each of the following two items consists of four statements. Of these four statements, two cannot both be true, but both can be false. Study the statements carefully and identify the two that satisfy the above condition. Select the correct answer using the codes given below each set of statements: Examine the following statements: 1. All animals are carnivorous. 2. Some animals are not carnivorous. 3. Animals are not carnivorous. 4. Some animals are carnivorous.

**(A)** 1 and 3 **(B)** 1 and 2 **(C)** 2 and 3 **(D)** 3 and 4

**Q.13** IBPS & SBI PRELIMS (SYLLOGISMS & LOGIC) 2024

Each of the following two items consists of four statements. Of these four statements, two cannot both be true, but both can be false. Study the statements carefully and identify the two that satisfy the above condition. Select the correct answer using the codes given below each set of statements: Examine the following statements: 1. All trains are run by diesel engine. 2. Some trains are run by diesel engine. 3. No train is run by diesel engine. 4. Some trains are not run by diesel engine.

**(A)** 1 and 2 **(B)** 2 and 3 **(C)** 1 and 3 **(D)** 1 and 4

**Q.14** IBPS & SBI PRELIMS (SYLLOGISMS & LOGIC) 2024

Consider the following argument: 'In order to be a teacher one must graduate from college. All poets are poor. Some Mathematicians are poets. No college graduate is poor.' Which one of the following is not a valid conclusion regarding the above argument?

**(A)** Some Mathematicians are not teachers.

**(B)** Some teachers are not Mathematicians.

**(C)** Teachers are not poor.

**(D)** Poets are not teachers.

**Q.15** IBPS & SBI PRELIMS (SYLLOGISMS & LOGIC) 2024

Is p greater than q? Statement-1: p × q is greater than zero. Statement-2: p2 is greater than q2

**(A)** The Question can be answered by using one of the Statements alone, but cannot be answered using the other Statement alone.

**(B)** The Question can be answered by using either Statement alone.

**(C)** The Question can be answered by using both the Statements together, but cannot be answered using either Statement alone.

**(D)** The Question cannot be answered even by using both the Statements together.

**Q.16** IBPS & SBI PRELIMS (SYLLOGISMS & LOGIC) 2024

Is (p+q-r) greater than (p-q+r), where p, q, and r are integers? Statement 1: (p-q) is positive Statement-2: (p-r) is negative.

**(A)** The Question can be answered by using one of the Statements alone, but cannot be answered using the other Statement alone.

**(B)** The Question can be answered by using either Statement alone.

**(C)** The Question can be answered by using both the Statements together, but cannot be answered using either Statement alone.

**(D)** The Question cannot be answered even by using both the Statements together.

**Q.17** IBPS & SBI PRELIMS (SYLLOGISMS & LOGIC) 2024

In a party, 75 persons took tea, 60 persons took coffee and 15 persons took both tea and coffee. No one taking milk takes tea. Each person takes at least one drink. Question: How many persons attended the party? Statement-1: 50 persons took milk. Statement-2: Number of persons who attended the party is five times the number of persons who took milk only.

**(A)** The Question can be answered by using one of the Statements alone, but cannot be answered using the other Statement alone.

**(B)** The Question can be answered by using either Statement alone.

**(C)** The Question can be answered by using both the Statements together, but cannot be answered using either Statement alone.

**(D)** The Question cannot be answered even by using both the Statements together.

**Q.18** IBPS & SBI PRELIMS (SYLLOGISMS & LOGIC) 2024

Consider a 3-digit number. Question: What is the number? Statement-1: The sum of the digits of the number is equal to the product of the digits. Statement-2: The number is divisible by the sum of the digits of the number.

**(A)** The Question can be answered by using one of the statements alone, but cannot be answered using the other statement alone.

**(B)** The Question can be answered by using either Statement alone.

**(C)** The Question can be answered by using both the Statements together, but cannot be answered using either Statement alone.

**(D)** The Question cannot be answered even by using both the statements together.

**Q.19** IBPS & SBI PRELIMS (SYLLOGISMS & LOGIC) 2024

For five children with ages a < b < c < d < e; any two successive ages differ by 2 years. Question: What is the age of the youngest child? Statement-1: The age of the eldest is 3 times the youngest. Statement-2: The average age of the children is 8 years.

**(A)** The Question can be answered by using one of the Statements alone, but cannot be answered using the other Statement alone.

**(B)** The Question can be answered by using either Statement alone.

**(C)** The Question can be answered by using both the Statements together, but cannot be answered using either Statement alone.

**(D)** The Question cannot be answered even by using both the Statements together.

**Q.20** IBPS & SBI PRELIMS (SYLLOGISMS & LOGIC) 2024

Consider the Question and two Statements given below : Question : Is x an integer? Statement—1 : x / 3 is not an integer. Statement—2 : 3x is an integer.

**(A)** Statement—I alone is sufficient to answer the Question.

**(B)** Statement—2 alone is sufficient to answer the Question.

**(C)** Both Statement—I and Statement—2 are sufficient to answer the Question.

**(D)** Both Statement—I and Statement—2 are not sufficient to answer the Question.

**Q.21** IBPS & SBI PRELIMS (SYLLOGISMS & LOGIC) 2024

Consider the Question and Two statements given below: Question: Is Z brother of X? Statement—1: X is a brother of Y and Y is a brother of Z. Statement—2: X, Y and Z are siblings.

**(A)** Statement—1 alone is sufficient to answer the Question.

**(B)** Statement—2 alone is sufficient to answer the Question.

**(C)** Both Statement—I and Statement—2 are sufficient to answer the Question.

**(D)** Both Statement—I and Statement—2 are not sufficient to answer the Question.

**Q.22** IBPS & SBI PRELIMS (SYLLOGISMS & LOGIC) 2024

Consider the Question and two Statements given below in respect of three cities P, Q and R in a State: Question: How far is city P from city Q? Statement—1 : City Q is 18 km from city R. Statement—2 : City P is 43 km from City R.

**(A)** Statement—I alone is sufficient to answer the Question.

**(B)** Statement—2 alone is sufficient to answer the Question.

**(C)** Both Statement—I and Statement—2 are sufficient to answer the Question.

**(D)** Both Statement—I and Statement—2 are not sufficient to answer the Question.

**Q.23** IBPS & SBI PRELIMS (SYLLOGISMS & LOGIC) 2024

Consider the Question and two Statements given below: Question: What is the age of Manisha? Statement—1: Manisha is 24 years younger than her mother. Statement—2: 5 years later, the ages of Manisha and her mother will be in the ratio 3:5.

**(A)** Statement—1 alone is sufficient to answer the Question.

**(B)** Statement—2 alone is sufficient to answer the Question.

**(C)** Both Statement—1 and Statement—2 are sufficient to answer the Question.

**(D)** Both Statement—1 and Statement—2 are not sufficient to answer the Question.

**Q.24** IBPS & SBI PRELIMS (SYLLOGISMS & LOGIC) 2024

Six lectures A, B, C, D, E and F, each of one hour duration, are scheduled between 8:00 a.m. and 2:00 p.m. Consider the Question and two Statements given below: Question: Which lecture is in the third period? Statement—1 : Lecture F is preceded by A and followed by C. Statement—2 : There is no lecture after lecture B.

**(A)** Statement—I alone is sufficient to answer the Question.

**(B)** Statement—2 alone is sufficient to answer the Question.

**(C)** Both Statement—I and Statement—2 are sufficient to answer the Question.

**(D)** Both Statement—I and Statement—2 are not sufficient to answer the Question.

**Q.25** IBPS & SBI PRELIMS (SYLLOGISMS & LOGIC) 2024

A Statement followed by Conclusion-I and Conclusion-II is given below. You have to take the Statement to be true even if it seems to be at variance with the commonly known facts. Read all Conclusions and then decide which of the given Conclusion(s) logically follows/follow from the Statement, disregarding the commonly known facts. Statement: Some radios are mobiles. All mobiles are computers. Some computers are watches. Conclusion-I: Certainly, some radios are watches. Conclusion-II: Certainly, some mobiles are watches.

**(A)** Only Conclusion-I

**(B)** Only Conclusion-II

**(C)** Both Conclusion-I and Conclusion-II

**(D)** Neither Conclusion-I nor Conclusion-II

**Q.26** IBPS & SBI PRELIMS (SYLLOGISMS & LOGIC) 2024

A Statement followed by Conclusion-I and Conclusion-II is given below. You have to take the Statement to be true even if it seems to be at variance from the commonly known facts. Read all Conclusions and then decide which of the given Conclusion(s) logically follows/follow from the Statement, disregarding the commonly known facts. Statement: Some cats are almirahs. Some almirahs are chairs. chairs are tables. Conclusion-I: Certainly, some almirahs are tables. Conclusion-II: Some cats may not be chairs.

**(A)** Only Conclusion-I

**(B)** Only Conclusion-II

**(C)** Both Conclusion-I and Conclusion-II

**(D)** Neither Conclusion-I nor Conclusion-II

**Q.27** IBPS & SBI PRELIMS (SYLLOGISMS & LOGIC) 2024

Consider two Statements and a Question: Statement-1: Priya is 4 ranks below Seema and is 31st from the bottom. Statement-2: Ena is 2 ranks above Seema and is 37th from the bottom. Question: What is Seema's rank from the top in the class of 40 students?

**(A)** Statement-1 alone is not sufficient to answer the Question.

**(B)** Statement-2 alone answers the Question.

**(C)** Either Statement-I or Statement-2 alone answers the Question.

**(D)** Both Statement-I and Statement-2 are required to answer the Question.

**Q.28** IBPS & SBI PRELIMS (SYLLOGISMS & LOGIC) 2024

Consider two Statements and a Question: Statement-1: Each of A and D is heavier than each of B, E and F, but none of them is the heaviest. Statement-2: A is heavier than D, but is lighter than C. Question: Who is the heaviest among A, B, C, D and E?

**(A)** Statement-1 alone is sufficient to answer the Question.

**(B)** Statement-2 alone is sufficient to answer the Question.

**(C)** Both Statement-I and Statement-2 are required to answer the Question.

**(D)** Neither Statement-1 alone nor Statement-2 alone is sufficient to answer the Question.

**Q.29** IBPS & SBI PRELIMS (SYLLOGISMS & LOGIC) 2024

Consider two Statements and a Question: Statement-1: The last day of the month is a Wednesday. Statement-2: The third Saturday of the month was the seventeenth day. Question: What day is the fourteenth of the given month?

**(A)** Statement-1 alone is sufficient to answer the Question.

**(B)** Statement-2 alone is sufficient to answer the Question.

**(C)** Both Statement-1 and Statement-2 are required to answer the Question.

**(D)** Neither Statement-1 alone nor Statement-2 alone is sufficient to answer the Question.

**Q.30** IBPS & SBI PRELIMS (SYLLOGISMS & LOGIC) 2024

Two statements S1 and S2 are given below followed by a Question: S1: There are not more than two figures on any page of a 51-page book. S2: There is at least one figure on every page. Question: Are there more than 100 figures in that book?

**(A)** Both S1 and S2 are sufficient to answer the Question, but neither S1 alone nor S2 alone is sufficient to answer the Question.

**(B)** S1 alone is sufficient to answer the Question.

**(C)** S1 and S2 together are not sufficient to answer the Question.

**(D)** S2 alone is sufficient to answer the Question.

**Q.31** IBPS & SBI PRELIMS (SYLLOGISMS & LOGIC) 2024

Two Statements S1 and S2 are given below with regard to four numbers P, Q, R and S followed by a Question: S1: R is greater-than P as well as Q. S2: S is not the largest one. Among four numbers P, Q, R and S which one is the largest?

**(A)** S1 alone is sufficient to answer the Question.

**(B)** S2 alone is sufficient to answer the Question.

**(C)** S1 and S2 together are sufficient to answer the Question, but neither S1 alone nor S2 alone is sufficient to answer the Question.

**(D)** S1 and S2 together are not sufficient to answer the Question.

**Q.32** IBPS & SBI PRELIMS (SYLLOGISMS & LOGIC) 2024

Two Statements S1 and S2 are given below followed by a Question: S1: n is a prime number. S2: n leaves a remainder of 1 when divided by 4. If n is a unique natural number between 10 and 20, then what is n?

**(A)** S1 alone is sufficient to answer the Question.

**(B)** S2 alone is sufficient to answer the Question.

**(C)** S1 and S2 together are sufficient to answer the Question, but neither S1 alone nor S2 alone is sufficient to answer the Question.

**(D)** S1 and S2 together are not sufficient to answer the Question.

**Q.33** IBPS & SBI PRELIMS (SYLLOGISMS & LOGIC) 2024

Two Statements S1 and S2 are given below with regard to two numbers followed by a Question: S1: Their product is 21. S2: Their sum is 10. Question: What are the two numbers?

**(A)** S1 alone is sufficient to answer the Question.

**(B)** S2 alone is sufficient to answer the Question.

**(C)** S1 and S2 together are sufficient to answer the Question, but neither S1 alone nor S2 alone is sufficient to answer the Question.

**(D)** S1 and S2 together are not sufficient to answer the Question.

**Q.34** IBPS & SBI PRELIMS (SYLLOGISMS & LOGIC) 2024

Three Statements S1, S2 and S3 are given below followed by a Question: S1: C is younger than D, but older than A and B. S2: D is the oldest. S3: A is older than B. Question: Who among A, B, C and D is the youngest?

**(A)** S1 alone is sufficient to answer the Question.

**(B)** S1 and S2 together are sufficient to answer the Question.

**(C)** S2 and S3 together are sufficient to answer the Question.

**(D)** S1 and S3 together are sufficient to answer the Question.

**Q.35** IBPS & SBI PRELIMS (SYLLOGISMS & LOGIC) 2024

A five-storeyed building with floors from I to V is painted using four different colours and only one colour is used to paint a floor. Consider the following statements: 1. The middle three floors are painted in different colours. 2. The second (II) and the fourth (IV) floors are painted in different colours. 3. The first (I) and the fifth (V) floors are painted red. To ensure that any two consecutive floors have different colours.

**(A)** Only statement 2 is sufficient.

**(B)** Only statement 3 is sufficient.

**(C)** Statement 1 is not sufficient, but statement 1 along with statement 2 is sufficient.

**(D)** Statement 3 is not sufficient, but statement 3 along with statement 2 is sufficient.

**Q.36** BANKING PRELIMS (STATEMENTS & CONCLUSIONS) 2024

Two Statements S1 and S2 are given below with regard to two numbers followed by a Question: S1: Their product is 21. S2: Their sum is 10. Question: What are the two numbers?

**(A)** S1 alone is sufficient to answer the Question.

**(B)** S2 alone is sufficient to answer the Question.

**(C)** S1 and S2 together are sufficient to answer the Question, but neither S1 alone nor S2 alone is sufficient to answer the Question.

**(D)** S1 and S2 together are not sufficient to answer the Question.

**Q.37** BANKING PRELIMS (STATEMENTS & CONCLUSIONS) 2024

Three Statements S1, S2 and S3 are given below followed by a Question: S1: C is younger than D, but older than A and B. S2: D is the oldest. S3: A is older than B. Question: Who among A, B, C and D is the youngest?

**(A)** S1 alone is sufficient to answer the Question.

**(B)** S1 and S2 together are sufficient to answer the Question.

**(C)** S2 and S3 together are sufficient to answer the Question.

**(D)** S1 and S3 together are sufficient to answer the Question.

**Q.38** BANKING PRELIMS (STATEMENTS & CONCLUSIONS) 2024

A five-storeyed building with floors from I to V is painted using four different colours and only one colour is used to paint a floor. Consider the following statements: 1. The middle three floors are painted in different colours. 2. The second (II) and the fourth (IV) floors are painted in different colours. 3. The first (I) and the fifth (V) floors are painted red. To ensure that any two consecutive floors have different colours.

**(A)** Only statement 2 is sufficient.

**(B)** Only statement 3 is sufficient.

**(C)** Statement 1 is not sufficient, but statement 1 along with statement 2 is sufficient.

**(D)** Statement 3 is not sufficient, but statement 3 along with statement 2 is sufficient.

**Q.39** BANKING PRELIMS (STATEMENTS & CONCLUSIONS) 2024

Consider two statements S1 and S2 followed by a question: S1: p and q both are prime numbers. S2: p + q is an odd integer. Question: Is pq an odd integer?

**(A)** S1 alone is sufficient to answer the question.

**(B)** S2 alone is sufficient to answer the question.

**(C)** Both S1 and S2 taken together are not sufficient to answer the question.

**(D)** Both S1 and S2 are necessary to answer the question.

**Q.40** BANKING PRELIMS (STATEMENTS & CONCLUSIONS) 2024

Consider the following: Statement: Good voice is a natural gift but one has to keep practicing to improve and excel in the field of music. Conclusions: I. Natural gifts need nurturing and care. II. Even though one's voice is not good; one can keep practicing.

**(A)** Only conclusion I follows from the statement.

**(B)** Only conclusion II follows from the statement.

**(C)** Either conclusion I or conclusion II follows from the statement.

**(D)** Neither conclusion I nor conclusion II follows from the statement.

**Q.41** BANKING PRELIMS (STATEMENTS & CONCLUSIONS) 2024

Rights are certain advantageous conditions of social well-being indispensable to the true development of the citizen. In the light of this statement, which one of the following is the correct understanding of rights?

**(A)** Rights aim at individual good only.

**(B)** Rights aim at social good only.

**(C)** Rights aim at both individual and social good.

**(D)** Rights aim at individual good devoid of social well-being.

**Q.42** BANKING PRELIMS (STATEMENTS & CONCLUSIONS) 2024

A ate grapes and pineapple; 8 ate grapes and oranges; C ate oranges, pineapple, and apple; D ate grapes, apple, and pineapple. After taking fruits, B and C fell sick. In the light of the above facts, it can be said that the cause of sickness was:

**(A)** Apple **(B)** Pineapple **(C)** Grapes **(D)** Oranges

**Q.43** BANKING PRELIMS (STATEMENTS & CONCLUSIONS) 2024

Consider the following statements. 1. The rate of population growth is increasing in the country 2. The death rate is declining faster in the country compared to birth rate 3. The birth rate is declining faster in the country compared to death rate 4. Rural-urban migration is taking place regularly in the country. Which one of the following conclusions may be true in the light of the above facts?

**(A)** The rate of population growth is increasing due to rural-urban migration.

**(B)** The rate of population growth is increasing due to decline in death rate only.

**(C)** The rate of population growth is increasing due to increase in birth rate only.

**(D)** The rate of population growth is increasing due to faster decline in death rate than in birth rate.

**Q.44** BANKING PRELIMS (STATEMENTS & CONCLUSIONS) 2024

There were 50 faculty members comprising 30 males and the rest females. No male faculty member knew music, but many of the female faculty members did. The Head of the institution invited six faculty members to a tea party by draw of lots. At the party it was discovered that no members knew music. The conclusion is that:

**(A)** the party comprised male faculty members only.

**(B)** the party comprised only those female faculty members who could not give renderings in music.

**(C)** the party comprised both male and female faculty members.

**(D)** nothing can be said about the gender composition of the party.

**Q.45** BANKING PRELIMS (STATEMENTS & CONCLUSIONS) 2024

Consider the following statement: 'We shall go either for a picnic or for trekking'. Which of the following, if true, would falsify this claim?

**(A)** We go for a picnic but not for trekking.

**(B)** Activities such as picnic and trekking are encouraged by the health authorities.

**(C)** We go for trekking and not for picnic.

**(D)** We do not go either for picnic or for trekking.

## OFFICIAL ANSWER KEY • PART B • CHAPTER 8: SYLLOGISM & CODED INEQUALITIES (STATEMENTS, CONCLUSIONS & REVERSE SYLLOGISM)

(45 TOTAL QUESTIONS)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 D | 2 B | 3 D | 4 B | 5 D | 6 B | 7 B | 8 B | 9 D | 10 D |
| 11 C | 12 A | 13 C | 14 B | 15 D | 16 C | 17 C | 18 D | 19 D | 20 C |
| 21 C | 22 D | 23 C | 24 D | 25 D | 26 C | 27 C | 28 C | 29 B | 30 C |
| 31 C | 32 D | 33 C | 34 D | 35 B | 36 C | 37 D | 38 B | 39 B | 40 A |
| 41 C | 42 D | 43 D | 44 A | 45 D | | | | | |

CHAPTER 9

# Part B • Chapter 9: Alphanumeric Series, Coding-Decoding, Blood Relations & Direction Sense

50 Solved Questions Sorted Chronologically with Exam & Shift Tags

ONLINE MOCK

**Q.1** IBPS & SBI PRELIMS (DIRECTION SENSE & RELATIONS) 2024

Two friends X and Y start running and they run together for 50 m in the same direction and reach a point, X turns right and runs 60 m, while Y turns left and runs 40 m. Then X turns left and runs 50 m and stops, while Y turns right and runs 50 m and then stops. How far are the two friends from each other now?

**(A)** 100m **(B)** 90 m **(C)** 60 m **(D)** 50 m

**Q.2** IBPS & SBI PRELIMS (DIRECTION SENSE & RELATIONS) 2024

A bank employee drives 10 towards South from her house and turns to her left and drives another 20 km. She again turns left and drives 40 km, then she turns to her right and drives for another 5 km. She again turns to her right and drives another 30 km to reach her bank where she works. What is the shortest distance between her bank and her house?

**(A)** 20 **(B)** 25 **(C)** 30 km **(D)** 35 km

**Q.3** IBPS & SBI PRELIMS (DIRECTION SENSE & RELATIONS) 2024

A woman runs 12 towards her North, then 6 towards her South and then 8 km towards her East. In which direction is she from her starting point?

**(A)** An angle less than 45 degree South of East **(B)** An angle less than 45 degree North of East

**(C)** An angle more than 45 degree South of East **(D)** An angle more than 45 degree North of East

**Q.4** IBPS & SBI PRELIMS (DIRECTION SENSE & RELATIONS) 2024

A man walks down the backside of his house straight 25 meters, then turns to the right and walks 50 meters again; then he turns towards left and again walks 23 meters. If his house faces to the East, what is his direction from the starting point?

**(A)** South-East **(B)** South-west **(C)** North-East **(D)** North-west

**Q.5** IBPS & SBI PRELIMS (DIRECTION SENSE & RELATIONS) 2024

P, Q and R are three towns. The distance between P and Q is 60 km, whereas the distance between P and R is 80 km. Q is in the West of P and R is in the South of P. What is the distance between Q and R?

**(A)** 140 km **(B)** 130 km **(C)** 10 km **(D)** 100 km

**Q.6** IBPS & SBI PRELIMS (DIRECTION SENSE & RELATIONS) 2024

A' started from his house and walked 20 m towards East, where his friend B joined him. They together walked 10 m in the same direction. Then 'A' turned left while 'B' turned right and travelled 2 m and 8 m respectively. Again 'B' turned left to travel 4 m followed by 5 m to his right to reach his office. 'A' turned right and travelled 12 m to reach his office. What is the shortest distance between the two offices?

**(A)** 15 m **(B)** 17 m **(C)** 19 m **(D)** 20 m

**Q.7** IBPS & SBI PRELIMS (DIRECTION SENSE & RELATIONS) 2024

A person X was driving in a place where all roads ran either north-south or east-west, forming a grid. Roads are at a distance of 1 km from each other in a parallel. He started at the intersection of two roads, drove 3 km north, 3 km west and 4 km south. Which further route could bring him back to his starting point, if the same route is not repeated?

**(A)** 3 km east, then 2 km south
**(B)** 3 km east, then 1 km north
**(C)** 1 km north, then 2 km west
**(D)** 3 km south, then 1 km north

**Q.8** IBPS & SBI PRELIMS (DIRECTION SENSE & RELATIONS) 2024

A person climbs a hill in a straight path from point 'O' on the ground in the direction of northeast and reaches a point 'A' after travelling a distance of 5 km. Then, from the point 'A' he moves to point 'B' in the direction of north-west. Let the distance AB be 12 km. Now, how far is the person away from the starting point 'O'?

**(A)** 7 km **(B)** 13 km **(C)** 17 km **(D)** 11 km

**Q.9** IBPS & SBI PRELIMS (DIRECTION SENSE & RELATIONS) 2024

A person walks 12 km due north, then 15 km due east, after that 19 km due west and then 15 km due south. How far is he from the starting point?

**(A)** 5 km **(B)** 9 km **(C)** 37 km **(D)** 61 km

**Q.10** IBPS & SBI PRELIMS (DIRECTION SENSE & RELATIONS) 2024

Shahid and Rohit start from the same point in opposite directions. After each 1 km, Shahid always turns left and Rohit always turns right. Which of the following statements is correct?

**(A)** After both have travelled 2 km. the distance between them is 4 km.
**(B)** They meet after each has travelled 3 km.
**(C)** They meet for the first time after each has travelled 4 km
**(D)** They go on without ever meeting again.

**Q.11** IBPS & SBI PRELIMS (DIRECTION SENSE & RELATIONS) 2024

Consider the following statements: There are six villages A, B, C, D, E and F. F is 1 km to the west of D. B is 1 km to the east of E. A is 2 km to the north Of E. C is 1 km to the east Of A. D is 1 km to the south of A. Which three villages are in a line?

**(A)** A, C, B **(B)** A, D. E **(C)** C, B, F **(D)** E, B, D

**Q.12** IBPS & SBI PRELIMS (DIRECTION SENSE & RELATIONS) 2024

Location of B is north of A and location of C is east of A. The distances AB and AC are 5 km and 12 km respectively. The shortest distance (in km) between the locations B and C is

**(A)** 60 **(B)** 13 **(C)** 17 **(D)** 7

**Q.13** IBPS & SBI PRELIMS (DIRECTION SENSE & RELATIONS) 2024

The houses of A and B face each other on a road going north-south, A's being on the western side. A comes out of his house, turns left, travels 5 km, turns right, travels 5 km to the front of D's house. B does exactly the same and reaches the front of C's house. In this context, which one of the following statements is correct?

**(A)** C and D live on the same street.
**(B)** C's house faces south.
**(C)** The houses of C and D are less than 20 km apart.
**(D)** None of the above.

**Q.14** IBPS & SBI PRELIMS (DIRECTION SENSE & RELATIONS) 2024

Consider the following: I. A + B means A is neither smaller nor equal to B. II. A - B means A is not greater than B. III. A x B means A is not smaller than B. IV. A ÷ B means A is neither greater nor equal to B. V. A±B means A is neither smaller nor greater than B. statement: P × Q, P-T, T ÷ R, R ± S Conclusion-1: Q ± T Conclusion-2: S+Q Which one of the following is correct in respect of the above Statement and the Conclusions?

**(A)** Only Conclusion-1 follows from the Statement.

**(B)** Only Conclusion-2 follows from the Statement.

**(C)** Both Conclusion-1 and Conclusion-2 follow from the Statement.

**(D)** Neither Conclusion-1 nor Conclusion-2 follows from the Statement.

**Q.15** IBPS & SBI PRELIMS (DIRECTION SENSE & RELATIONS) 2024

If Pen < Pencil, Pencil < Book and Book > Cap, then which one of the following is always true?

**(A)** Pen > Cap **(B)** Pen < Book **(C)** Pencil = Cap **(D)** Pencil > Cap

**Q.16** IBPS & SBI PRELIMS (DIRECTION SENSE & RELATIONS) 2024

Consider the following statements: 1. Either A and B are of the same age or A is older than B 2. Either C and D are of the same age or D is older than C 3. B is older than C Which of the following conclusions can be drawn from the above statements?

**(A)** A is older than B. **(B)** B and D are of the same age.

**(C)** D is older than C. **(D)** A is older than C.

**Q.17** IBPS & SBI PRELIMS (DIRECTION SENSE & RELATIONS) 2024

Examine the following statements: 1. Lady's finger is tastier than cabbage. 2. Cauliflower is tastier than lady's finger. 3. Cabbage is not tastier than peas. The conclusion that can be drawn from these statements is that

**(A)** peas are as tasty as lady's finger. **(B)** peas are as tasty as cauliflower and lady's finger.

**(C)** cabbage is the least tasty of the four vegetables. **(D)** cauliflower is tastier than cabbage.

**Q.18** IBPS & SBI PRELIMS (DIRECTION SENSE & RELATIONS) 2024

If 'ZERO' is written as 'CHUR', then how is 'PLAYER' written?

**(A)** SOCAGT **(B)** SODBGT **(C)** SODBHT **(D)** SODBHU

**Q.19** IBPS & SBI PRELIMS (DIRECTION SENSE & RELATIONS) 2024

A code language 'MATHEMATICS' is written as 'LBSIDNZUHDR'. How is CHEMISTRY written in that code language?

**(A)** DIDLHRSSX **(B)** BIDNHTSSX **(C)** BIDLHTSSX **(D)** DGFLIRUQZ

**Q.20** IBPS & SBI PRELIMS (DIRECTION SENSE & RELATIONS) 2024

The letters from A to Z are numbered from 1 to 26 respectively. If GHI=1578 and DEF=912, then what is ABC =?

**(A)** 492 **(B)** 468 **(C)** 262 **(D)** 246

**Q.21** IBPS & SBI PRELIMS (DIRECTION SENSE & RELATIONS) 2024

What is the missing term in the following? ACPQ : BESU:: MNGI: @

**(A)** NPJL **(B)** NOJM **(C)** NPIL **(D)** NPJM

**Q.22** IBPS & SBI PRELIMS (DIRECTION SENSE & RELATIONS) 2024

If LSJXVC is the code for MUMBAI, the code for DELHI is

**(A)** CCIDD **(B)** CDKGH **(C)** CCJFG **(D)** CCIFE

**Q.23** IBPS & SBI PRELIMS (DIRECTION SENSE & RELATIONS) 2024

If RAMON is written as 12345 and DINESH as 675849, then HAMAM will be written as

**(A)** 92233 **(B)** 92323 **(C)** 93322 **(D)** 93232

**Q.24** IBPS & SBI PRELIMS (DIRECTION SENSE & RELATIONS) 2024

In a certain code, '256' means 'red colour chalk', '589' means 'green colour flower' and '254' means 'white colour chalk'. The digit in the code that indicates 'white' is

**(A)** 2 **(B)** 4 **(C)** 5 **(D)** 8

**Q.25** IBPS & SBI PRELIMS (DIRECTION SENSE & RELATIONS) 2024

A military code writes SYSTEM as SYSMET and NEARER as AENRER. Using the same code, FRACTION can be written as:

**(A)** CARFTION **(B)** FRACNOIT **(C)** NOITCARF **(D)** CARFNOIT

**Q.26** IBPS & SBI PRELIMS (DIRECTION SENSE & RELATIONS) 2024

Consider the Following statements in respect of five candidates P, Q, K, S and T Two statements are true and one statement is false. True Statement: One of P and Q was selected for the job, False Statement: At least one of R and S was selected for the job, True Statement: At most two of R, S and T were selected for the Job. Which of the following conclusions can be drawn?

**(A)** 1 only **(B)** 2 only **(C)** Both 1 and 2 **(D)** Neither 1 nor 2

**Q.27** IBPS & SBI PRELIMS (DIRECTION SENSE & RELATIONS) 2024

Let P, Q, R, S and T be five statements such that:\nI. If P is true, then both Q and S are true.\nII. If R and S are true, then T is false.\nWhich of the following can be concluded?\n1. If T is true, then at least one of P and R must be false.\n2. If Q is true, then P is true.\nSelect the correct answer using the code given below:

**(A)** 1 only **(B)** 2 only **(C)** Both 1 and 2 **(D)** Neither 1 nor 2

**Q.28** IBPS & SBI PRELIMS (DIRECTION SENSE & RELATIONS) 2024

Two Statements followed by four Conclusions are given below. You have to take the Statements to be true even if they seem to be at variance from the commonly known facts. Read all the Conclusions and then decide which of the given Conclusions logically follows/ follow from the Statements, disregarding the commonly known facts: Statement— 1: All pens are books. Statement—2: No chair is a pen. Conclusion—1: All chairs are books. Conclusion—II: Some chairs are pens. Conclusion—III: All books are chairs. Conclusion—IV: No chair is a book.

**(A)** Only Conclusion—I **(B)** Only Conclusion—II

**(C)** Both Conclusion—III and Conclusion—IV **(D)** None of the Conclusions follows

**Q.29** IBPS & SBI PRELIMS (DIRECTION SENSE & RELATIONS) 2024

Three Statements followed by three Conclusions are given below. You have to take the Statements to be true even if they seem to be at variance from the commonly known facts. Read all the Conclusions and then decide which of the given Conclusions logically follows/ follow from the Statements, disregarding the commonly known facts: Statement—1: Some doctors are teachers. Statement—2: All teachers are engineers Statement—3: All engineers are scientists. Conclusion—I: Some scientists are doctors. Conclusion—II: All engineers are doctors. Conclusion—III: Some engineers are doctors.

**(A)** Only Conclusion—I
**(B)** Only Conclusion—II
**(C)** Both Conclusion—I and Conclusion—III
**(D)** Both Conclusion—I and Conclusion—II

**Q.30** IBPS & SBI PRELIMS (DIRECTION SENSE & RELATIONS) 2024

In group of 120 persons, 80 are Indians and rest are foreigner. Further, 70 persons in the group can speak English. The number of Indians who can speak English is?

**(A)** 20 **(B)** 30 **(C)** 30 or less **(D)** 30 or more

**Q.31** IBPS & SBI PRELIMS (DIRECTION SENSE & RELATIONS) 2024

Half of the villagers of a certain village have their own houses. One-fifth of the villagers cultivate paddy. One-third of the villagers are literate. Four-fifth of the are under 25 years of age. Which one of the following statements is certainly correct?

**(A)** All the villagers who have their own houses are literate.
**(B)** Some villagers under 25 years of age are literate.
**(C)** Only half of the villagers who cultivate paddy are literate.
**(D)** No villager under 25 years of age has his own house.

**Q.32** IBPS & SBI PRELIMS (DIRECTION SENSE & RELATIONS) 2024

Consider two Statements and four Conclusions given below. You have to take the Statements to be true even if they seem to be at variance from the commonly known facts. Read all Conclusions and then decide which of the given Conclusion(s) logically follows/follow from the Statements, disregarding the commonly known facts. Statement-1 : Some greens are blues. Statement-2 : Some blues are blacks. Conclusion-1 : Some greens are blues. Conclusion-2: No green is black. Conclusion-3 : All greens are blacks. Conclusion-4 : All blacks are greens.

**(A)** Conclusion-1 and Conclusion-2 only
**(B)** Conclusion-2 and Conclusion-3 only
**(C)** Conclusion-3 and Conclusion-4 only
**(D)** Neither Conclusion 1 nor 2 nor 3 nor 4

**Q.33** IBPS & SBI PRELIMS (DIRECTION SENSE & RELATIONS) 2024

Two Statements are given followed by two Conclusions: Statements: All numbers are divisible by 2. All numbers are divisible by 3. Conclusion-I: All numbers are divisible by 6. Conclusion-II: All numbers are divisible by 4. Which of the above Conclusions logically follows/follow from the two given Statements?

**(A)** Only Conclusion-I
**(B)** Only Conclusion-II
**(C)** Neither Conclusion-I nor conclusion-II
**(D)** Both Conclusions-I and Conclusion-II

**Q.34** IBPS & SBI PRELIMS (DIRECTION SENSE & RELATIONS) 2024

Two Statements are given followed by two Conclusions: Statements: All cats are dogs. All cats are black. Conclusion-I: All cats are black. Conclusion-II: Some dogs are not black. Which of the above Conclusions logically follows/follow from the two given Statements disregarding commonly known facts?

**(A)** Only Conclusion-I
**(B)** Only Conclusion-II
**(C)** Neither Conclusion-I nor Conclusion-II
**(D)** Both Conclusions-I and Conclusion-II

**Q.35** IBPS & SBI PRELIMS (DIRECTION SENSE & RELATIONS) 2024

Consider the following Statements and Conclusions: Statements: 1. Some rats are cats. 2. Some cats are dogs. 3. No dog is a cow. Conclusions: I. No cow is a cat. II. No dog is a rat. III. Some cats are rats. Which of the above conclusions is/are drawn from the statements?

**(A)** I, II and III **(B)** Only I and II **(C)** only III **(D)** Only II and III

**Q.36** BANKING PRELIMS (CODING & SERIES) 2024

The letters of the word 'INCOMPREHENSIBILITIES' are arranged alphabetically in reverse order. How many positions of the letter/letters will remain unchanged? [2023/80]

**(A)** None **(B)** One **(C)** Two **(D)** Three

**Q.37** BANKING PRELIMS (CODING & SERIES) 2024

What is the value of X in the sequence 20, 10, 10, 15, 30, 75, X? [2022/4]

**(A)** 105 **(B)** 120 **(C)** 150 **(D)** 225

**Q.38** BANKING PRELIMS (CODING & SERIES) 2024

If the order of the letters in the English alphabet is reversed and each letter represents the letter whose position it occupies, then which one of the following represents 'LUCKNOW'? [2022/16]

**(A)** OGXPMLD **(B)** OGXQMLE **(C)** OFXPMLE **(D)** OFXPMLD

**Q.39** BANKING PRELIMS (CODING & SERIES) 2024

In the series AABABCABCDABCDE…. which letter appears at the 100th place? [2022/29]

**(A)** G **(B)** H **(C)** I **(D)** J

**Q.40** BANKING PRELIMS (CODING & SERIES) 2024

What is the value of X in the sequence 2, 12, 36, 80, 150, X? [2022/75]

**(A)** 248 **(B)** 252 **(C)** 258 **(D)** 262

**Q.41** BANKING PRELIMS (CODING & SERIES) 2024

Replace the incorrect term by the correct term in the given sequence 3, 2, 7, 4, 13, 10, 21, 18, 31, 28, 43, 40 where odd tents and even terms follow the same pattern [2021/26]

**(A)** a.0 **(B)** b.1 **(C)** c.3 **(D)** d.6

**Q.42** BANKING PRELIMS (CODING & SERIES) 2024

Following is a matrix of certain entries. The entries follow a certain trend row-wise. Choose the missing entry (?) accordingly. [2021/27]

**(A)** 9B **(B)** 3A **(C)** 3B **(D)** 3C

**Q.43** BANKING PRELIMS (CODING & SERIES) 2024

You are given two identical sequences in two rows: What is the entry in the place of C for the Sequence-II? [2021/28]

**(A)** 2.5 **(B)** 5 **(C)** 9.375 **(D)** 32.8125

**Q.44** BANKING PRELIMS (CODING & SERIES) 2024

In the series _b_a_ba_b_abab_aab; fill in the six blanks ( _ ) using one of the following given four choices such that the series follows a specific order. [2021/65]

**(A)** bababa **(B)** baabba **(C)** bbaabb **(D)** ababab

**Q.45** BANKING PRELIMS (CODING & SERIES) 2024

In the English alphabet, the first 4 letters are written in opposite order; and the next 4 letters are written in opposite order and so on; and at the end Y and Z are interchanged. Which will be the fourth letter to the right of the 13th letter? [2021/40]

**(A)** N **(B)** T **(C)** H **(D)** I

**Q.46** BANKING PRELIMS (CODING & SERIES) 2024

A simple mathematical operation in each number of the sequence 14, 18, 20, 24, 30, 32, .....results in a sequence with respect to prime numbers. Which one of the following is the next number in the sequence? [2020/13]

**(A)** 34 **(B)** 36 **(C)** 38 **(D)** 40

**Q.47** BANKING PRELIMS (CODING & SERIES) 2024

Consider the following arrangement that has some missing letters: abab_b_bcb_dcdcded_d The missing letters which complete the arrangement are [2020/15]

**(A)** a,b,c,d **(B)** a,b,d,e **(C)** a,c,c,e **(D)** b,c,d,e

**Q.48** BANKING PRELIMS (CODING & SERIES) 2024

Consider the following sequence of numbers: 5147398572631586385224349 6 How many odd numbers are followed by the odd number in the above sequence? [2020/34]

**(A)** 5 **(B)** 6 **(C)** 7 **(D)** 8

**Q.49** BANKING PRELIMS (CODING & SERIES) 2024

What is x in the sequence 132, 129, 124, 117, 106, 93, X ? [2019/48]

**(A)** 74 **(B)** 75 **(C)** 76 **(D)** 77

**Q.50** BANKING PRELIMS (CODING & SERIES) 2024

What is x in the sequence 4, 196, 16, 144, 36, 100, 64, X ? [2019/51]

**(A)** 48 **(B)** 64 **(C)** 125 **(D)** 256

## OFFICIAL ANSWER KEY • PART B • CHAPTER 9: ALPHANUMERIC SERIES, CODING-DECODING, BLOOD RELATIONS & DIRECTION SENSE

(50 TOTAL QUESTIONS)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 A | 2 B | 3 D | 4 D | 5 D | 6 B | 7 A | 8 B | 9 A | 10 D |
| 11 B | 12 B | 13 D | 14 B | 15 B | 16 D | 17 D | 18 D | 19 B | 20 D |
| 21 D | 22 A | 23 B | 24 B | 25 D | 26 D | 27 A | 28 D | 29 C | 30 D |
| 31 B | 32 D | 33 A | 34 C | 35 C | 36 C | 37 D | 38 D | 39 C | 40 B |
| 41 A | 42 C | 43 C | 44 D | 45 B | 46 C | 47 C | 48 B | 49 C | 50 B |

## DETAILED SOLUTIONS & CONCEPTUAL EXPLANATIONS

**Ans (A)** **Q.1**

Calculating the distance using the coordinates, X ends up at (60, 50) and Y ends up at (40, 50). The distance is $\sqrt{((60-40)^2 + (50-50)^2)} = \sqrt{(400)} = 20$m.

**Ans (B)** **Q.2**

The final position is determined as (20, -10) and the initial position is (0, 0); thus, the shortest distance is $\sqrt{(20^2 + 10^2)} = \sqrt{(500)} =$ approximately 25 km.

**Ans (D)** **Q.3**

The woman's final position forms a right triangle with the East and North distances, leading to a result indicating a position north-east of the origin.

**Ans (D)** **Q.4**

Analyzing the movements, the man's final position relative to the starting point leads him to be in the North-west direction.

**Ans (D)** **Q.5**

Using the Pythagorean theorem with coordinates gives the distance QR as $\sqrt{((60)^2 + (80)^2)} = \sqrt{(10000)} = 100$ km.

**Ans (B)** **Q.6**

The problem is solved with relative coordinates leading to a final distance equation based on Pythagorean theorem.

**Ans (A)** **Q.7**

The movements create a situation to go east and south to return.

**Ans (B)** **Q.8**

Using the law of cosines or vector addition, the total distance from 'O' can be calculated.

**Ans (A)** **Q.9**

Final coordinates are analyzed to determine the distance from the starting point.

**Ans (D)** **Q.10**

After analyzing the paths taken by both, they will not meet if they keep turning.

**Ans (B)** **Q.11**
Coordinate analysis shows that A, D, and E lay out in a straight line.

**Ans (B)** **Q.12**
The position considered forms a right-angle triangle leading to the conclusion derived from Pythagorean theorem.

**Ans (D)** **Q.13**
Based on the distinct paths taken, it cannot be determined with provided data.

**Ans (B)** **Q.14**
Testing each conclusion against the statement gives verification for Conclusion-2.

**Ans (B)** **Q.15**
The inequalities derived create a clear implication that Pen is less than Book.

**Ans (D)** **Q.16**
Conclusive deductions can be drawn that validate A being older than C due to relations outlined.

**Ans (D)** **Q.17**
Comparative analysis leads to the conclusion that cauliflower ranks higher than cabbage in tastiness.

**Ans (D)** **Q.18**
The coding follows a specific transformation that can be deciphered correctly.

**Ans (B)** **Q.19**
Following the coded pattern translates CHEMISTRY accordingly.

**Ans (D)** **Q.20**
The numerical transformation of letters gives the result for ABC through calculations.

**Ans (D)** **Q.21**
Identifying patterns in letters reveals the missing term.

**Ans (A)** **Q.22**
Revealing consistency in coding presents DELHI's coding similarly.

**Ans (B)** **Q.23**
Converting based on given letter-number mapping leads to correct formulation.

**Ans (B)** **Q.24**
Identifying commonalities across color chalk codes allows deduction of 'white'.

**Ans (D)** **Q.25**
Decoding using present military patterns reveals how FRACTION is arranged.