ATHIYAMAN ACADEMY, COIMBATORE

TNPSC GROUP 2 & 2A PRELIMS 2026 — 01.11.2026 — BOOKLET 1112 (CCSE2-2AT/2026)

Aptitude & Mental Ability — Answer Key with Workings

All 25 questions, each worked out step by step

Where the aptitude questions are in this booklet

Q38–50 and Q89–100. They are not printed as one block: the booklet heads Part-A and Part-B together as "Questions 1–100, Total Marks 150", so the aptitude questions sit in two runs with General Studies on either side. Booklet codes shuffle question order, so these numbers apply to booklet 1112.

This is our key, not the Commission's.

Worked out by Athiyaman Academy faculty on exam day from booklet 1112. The Tamil Nadu Public Service Commission's provisional key is the only authority. Where the two differ, the Commission's key stands and this document will be revised. Q47 is flagged in the workings as needing confirmation.

Answers at a glance

Q38 **D**	Q39 **C**	Q40 **D**	Q41 **D**	Q42 **A**
Q43 **A**	Q44 **B**	Q45 **B**	Q46 **C**	Q47 **B**
Q48 **D**	Q49 **D**	Q50 **D**	Q89 **B**	Q90 **C**
Q91 **C**	Q92 **D**	Q93 **C**	Q94 **C**	Q95 **A**
Q96 **C**	Q97 **C**	Q98 **D**	Q99 **D**	Q100 **C**

Question by question

Q38 Time and Work

A works 3 times faster than B and completes a work in 24 days less than the days taken by B. If they both work together, find the time they would take to complete the work.

Answer: (D) 9 days

Working: A is 3x faster, so B's time = 3 x A's time. B - B/3 = 24 ⇒ B = 36, A = 12. Together 1/12 + 1/36 = 4/36 = 1/9. Nine days.

Q39 Time and Work

9 children can complete a piece of work in 360 days. 18 men can complete the same piece of work in 72 days. 12 women can complete it in 162 days. In how many days can 4 men, 12 women and 10 children together complete the piece of work?

Answer: (C) 81 days

Working: One child = 1/3240 per day, one man = 1/1296, one woman = 1/1944. 4 men + 12 women + 10 children = 1/324 + 1/162 + 1/324 = 4/324 = 1/81. Eighty-one days.

Q40 Compound Interest

Find the difference between compound interest and simple interest if P = Rs. 10,000, rate of interest is 10% per annum, n = 3 years.

Answer: (D) Rs. 310

Working: CI = 10000(1.1^3 - 1) = 3310. SI = 10000 × 0.10 × 3 = 3000. Difference 310.

Q41 Compound Interest

The compound interest on Rs. 16,000 at 20% per annum for 9 months compounded quarterly is _____.

Answer: (D) Rs. 2,522

Working: Quarterly rate 5%, three quarters. Amount = 16000 × 1.05^3 = 18,522. Interest = 18,522 - 16,000 = 2,522. Note the trap: 18,522 is the amount, not the interest.

Q42 Simple Interest

Find the simple interest on Rs. 68,000 at 16 2/3 % per annum for 9 months.

Answer: (A) Rs. 8,500

Working: Rate = 50/3 %, time = 3/4 year. SI = 68000 x (50/3)/100 × 3/4 = 8,500.

Q43 Fractions

Arrange the fractions 17/18, 31/36, 43/45, 59/60 in the ascending order.

Answer: (A) 31/36 < 17/18 < 43/45 < 59/60

Working: As decimals: 31/36 = 0.861, 17/18 = 0.944, 43/45 = 0.956, 59/60 = 0.983.

Q44 Percentage

When a number is decreased by 60%, it becomes 200. Find the number.

Answer: (B) 500

Working: 40% of the number is 200, so the number is 500.

Q45 Simplification

Simplify : 24 + 2 × 8 / 2 - 1

Answer: (B) 31

Working: BODMAS. 2 × 8 = 16, 16 / 2 = 8. Then 24 + 8 - 1 = 31.

Q46 Letter Series

If we write like this AEBFCGDH .... write the letters which come near to J.

Answer: (C) F, G, M, N

Working: The series interleaves A,B,C,D,... with E,F,G,H,... giving A E B F C G D H E I F J G K H L I M J N. J appears twice: once between F and G, once between M and N.

Q47 Odd One Out

6 7 4 8 5 9 8 4 8 3 2 5 8 6 7 8 3 8. Using the above sequence find the number that does not belong to the group 688, 426, 542, 287.

Answer: (B) 287

Working: FLAGGED FOR REVIEW. On the plain reading, 688, 426 and 542 are even and 287 is the only odd number, so 287 is the odd one out. None of the four appears as a run of digits in the printed sequence, so confirm this one against the Commission's key before relying on it.

Q48 Dice

Select the correct answer choice which is formed by folding the unfolded dice.

Answer: (D) Only (iii)

Working: The net is a vertical strip 1, 2, 3, 4 with 6 beside 2 and 5 beside 4, so the opposite pairs are 1-3, 2-4 and 5-6. Figure (i) shows 2 with 4, figures (ii) and (iv) show 6 with 5 - all impossible. Only (iii), showing 2, 3 and 6, can be folded.

Q49 Seating and Ranking

Six persons A, B, C, X, Y and Z sit around a circular table facing outside, all of different ages. Y is third youngest. B is elder than A and Z; Z is elder than A and C but is not the eldest. C is 20 years of age, the second oldest is 24, the youngest is under 20 and A is not younger than Y. What will be the possible age

of A?

Answer: (D) 22 Years

Working: B > Z > A and A is not younger than Y, which puts A fourth youngest, Z fifth and B eldest. C at 20 is second youngest, so Y is above 20 and Z, the second oldest, is 24. A lies between Y and 24, so A is 21 to 23. Only 22 is offered.

Q50 Letter Coding

If each of the letters in the English alphabet is assigned odd numerical value beginning A = 1, B = 3, and so on, the total value of the letters of the word FILM HINDI is _____.

Answer: (D) 159

Working: F=11, I=17, L=23, M=25, H=15, I=17, N=27, D=7, I=17. The sum is 159.

Q89 Mensuration

The perimeter of an equilateral triangle is 180 cm. Find the area of it.

Answer: (B) 1558.8 cm2

Working: Side = 60 cm. Area = (root 3 / 4) x 60^2 = 900 root 3 = 1558.8 sq cm.

Q90 Mensuration

Four cows are tethered at four corners of a square plot of side 84 feet so that they just cannot reach one another. The ungrazed area is _____.

Answer: (C) 1512 sq.feet

Working: Each rope is half the side, 42 feet. Four quarter-circles make one full circle: (22/7) x 42^2 = 5,544. Plot area 84^2 = 7,056. Ungrazed = 7056 - 5544 = 1,512.

Q91 Simple Interest

Adam borrowed some money at the rate of interest 6% p.a. for the first two years, 9% p.a. for the next three years and 14% p.a. for the period beyond five years. If he pays a total interest of Rs. 11,400 at the end of nine years, how much money did he borrow?

Answer: (C) Rs. 12,000

Working: Total rate = 6×2 + 9×3 + 14×4 = 12 + 27 + 56 = 95% of the principal. P = 11400 / 0.95 = 12,000.

Q92 Ratio and Proportion

The ratio of milk and water in 72 litres of mixture is 5 : 3. What amount of water is added to make the ratio

of milk and water 3 : 5 respectively?

Answer: (D) 48

Working: Milk 45 litres, water 27 litres. For 45 : (27 + x) = 3 : 5, 27 + x = 75, so x = 48 litres.

Q93 Ratio and Proportion

A sum of Rs. 5,200 is divided between A, B, C and D such that A's share / B's share = B's share / C's share = C's share / D's share = 2/3. Find A's share.

Answer: (C) Rs. 640

Working: The shares are in the ratio 8 : 12 : 18 : 27, totalling 65. A = 5200 × 8 / 65 = 640.

Q94 HCF

There are 336 English books, 240 Maths books and 96 Science books. These have to be stacked in such a way that all the books are stored subject-wise and the height of each stack is the same. The total number of stacks will be _____.

Answer: (C) 14

Working: HCF of 336, 240 and 96 is 48. Stacks = 7 + 5 + 2 = 14.

Q95 Percentage

If the difference between 90% of a number and 72% of the same number is 256 then 54% of that number is _____.

Answer: (A) 768

Working: The difference is 18% = 256. 54% is three times 18%, so 3 × 256 = 768. The number itself is never needed.

Q96 Number Series

Find the next number in the given sequence 1, 3, 11, 31, 69, _____.

Answer: (C) 131

Working: First differences 2, 8, 20, 38; second differences 6, 12, 18, so the next second difference is 24 and the next first difference is 62. 69 + 62 = 131.

Q97 Squares

Which one of the following cannot be the square of a natural number?

Answer: (C) 42438

Working: A perfect square never ends in 2, 3, 7 or 8. 42438 ends in 8. The other three are 181^2, 285^2 and 142^2.

Q98 Cubes

If B is at the top, find the letter which will be opposite to it, by using the following figures.

Answer: (D) F

Working: Views 1 and 3 share the front face A. Turning view 1 so that D moves from the right to the top reproduces view 3, which puts B on the face hidden at the bottom of view 1 - the face opposite the top, F. So B is opposite F.

Q99 Calendar

Mathi and Deepika are friends. Mathi says, Today is my birthday, and she asks Deepika, When did you celebrate your birthday? Deepika replies, Today is Monday and I celebrated my birthday 75 days ago. Find the day when Deepika celebrated her birthday.

Answer: (D) Wednesday

Working: 75 = 10 weeks and 5 days, so count back 5 days from Monday: Sunday, Saturday, Friday, Thursday, Wednesday.

Q100 Coding

Select the combination of numbers that form a meaningful word based on the given code P O L I C M A N T / 1 2 3 4 5 6 7 8 9.

Answer: (C) 5, 2, 6, 1, 3, 4, 7, 8, 9

Working: 5, 2, 6, 1, 3, 4, 7, 8, 9 reads C O M P L I A N T. The other three options give no English word.