रेल भर्ती बोर्ड / RAILWAY RECRUITMENT BOARD
सी ई एन - 06/2025 - CEN - 06/2025
एनटीपीसी (स्नातक स्तर) की भर्ती / Recruitment of NTPC Graduate Level

RRB NTPC Graduate 2025 CBT-2

NTPC Graduate Level · CEN 06/2025 · CBT-2 · Mathematics · Question Paper

English

Complete Paper · 35 Questions · Mathematics Section · Official Answer Key

About this Compilation

This booklet contains the complete question paper of the **RRB NTPC Graduate 2025 CBT-2** examination in **English** (**Mathematics** section only), with the correct option marked as per the official answer key.

✓ Correct option (highlighted green)

Sections. The saved NTPC Graduate CBT-2 paper carries no section labels and mixes the subjects. In this book the questions are grouped into the three exam sections (Mathematics, General Intelligence and Reasoning, General Awareness incl. General Science), assigned from our topic tags (35 / 35 / 50, same as the notified pattern). Question numbers and answers are the same as in our complete paper book.

How to use

- Use the **Index** page to jump directly to any set (clickable).
- Questions appear section by section in the order of the paper, numbered 1 onward.
- Diagram and wide-table questions appear at full width at the end of their section.
- The correct answer is highlighted in green with a tick.

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Index — All Sets (click to open)

Set 1
10 Jul 2026
9:00 AM - 10:30 AM

Mathematics

35 Questions • Answer Key

Q1 Mathematics

In a linear race of 750 meters, X can beat Y by 10 meters. In a race of 444 meters, Y can beat Z by 6 meters. In a race of 150 meters, X will beat Z by how many meters?

A. 2
B. 3
C. 4 ✓
D. 6

Q2 Mathematics

Sushant and Varun are running on a circular track of 400 metres. Sushant completes one round in 100 seconds, and Varun completes one round in 80 seconds. They start simultaneously from the same point and run in opposite directions. How many times do they meet before they both return together to the starting point again?

A. 10
B. 9
C. 8 ✓
D. 12

Q3 Mathematics

In a Δ XYZ, XT is the bisector of ∠X meeting side YZ at T. If XY = 5.6 cm, YZ = 6 cm, and YT = 3.2 cm, find XZ.

A. 5.4 cm
B. 6 cm
C. 4.2 cm
D. 4.9 cm ✓

Q4 Mathematics

A rectangular field measures 68.5 m by 45.6 m. A path of uniform width 2.4 m is constructed around the outside of the field. Find the difference between the outer perimeter of the path and the perimeter of the original field.

A. 20 m
B. 19.2 m ✓
C. 18.5 m
D. 17 m

Q5 Mathematics

A sum of ₹3059 is divided into three parts such that half of the first part, one-fourth of the second part, and one-eighth of the third part are equal. Find the value (in ₹) of the third part.

A. 1748 ✓
B. 1548
C. 1848
D. 1948

Q6 Mathematics

If 40% of a number is added to 240, then the result is the same number. 50% of the same number is:

A. 440
B. 300
C. 200 ✓
D. 220

Q7 Mathematics

If the mean proportional between (x + 3) and (x – 3) is 4, what is the value of x; x>0?

A. 4
B. 6
C. 5 ✓
D. 3

Q8 Mathematics

The ratio of Rahul's age to his son's age is 7 : 2. If Rahul is 49 years old, what is his son's age?

A. 13 years
B. 15 years
C. 12 years
D. 14 years ✓

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Q9 Mathematics

A and B complete a work in 35 days. If A alone can do it in 60 days, then B alone can do one-third of the same work in _____days.

A. 84
B. 36
C. 42
D. 28 ✓

Q10 Mathematics

Find the vertex C (x, y) of a ΔABC whose other vertices are A(1, 5) and B(4, 7), and the centroid is D(4, 5).

A. C (6, 3)
B. C (7, 4)
C. C (3, 6)
D. C (7, 3) ✓

Q11 Mathematics

Choose the correct statements about quadrilaterals from the ones given below.

A. In an isosceles trapezium, the parallel sides are equal.
B. Kite is a type of parallelogram.
C. All squares are rhombus.
D. The quadrilateral formed by joining the mid-points of the sides of any quadrilateral is a trapezium.

A. A, B, D
B. Only C ✓
C. A, D
D. B, C

Q12 Mathematics

Find the mean deviation about the mean for the data.

5, 10, 15, 20, 25.

A. 5
B. 7
C. 8
D. 6 ✓

Q13 Mathematics

Which of the options below is equivalent to $27x^3 + 343y^3 + 189x^2y + 441xy^2$?

A. $(5x + 7y)^3$
B. $(3x + 7y)^3$ ✓
C. $(3x + 10y)^3$
D. $(7x + 3y)^3$

Q14 Mathematics

If 12 workers can complete a wall in 18 days, in how many days will 8 workers complete it?

A. 36 days
B. 27 days ✓
C. 32 days
D. 30 days

Q15 Mathematics

The given system of linear equations possesses infinitely many solutions.

$3x + 7y = 15$
$ax + by = 30$

What are the values of a and b?

A. a = 7; b = 3
B. a = 6; b = 14 ✓
C. a = 14; b = 6
D. a = 3; b = 7

Q16 Mathematics

Find the median of the data: 4, 6, 8, 10, 12, 14.

A. 11
B. 10
C. 9 ✓
D. 8

Q17 Mathematics

The price of a shirt is increased by 20% and then decreased by 20%. What is the net percentage change in the price?

A. No change
B. 0.4% increase
C. 8% decrease
D. 4% decrease ✓

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Q18 Mathematics

Five interior angles of a 10-sided figure are each 185 degrees. If the remaining five interior angles are equal, then each of the five angles (in degrees) is equal to:

A. 105
B. 107
C. 103 ✓
D. 101

Q19 Mathematics

A sum of money triples itself at a certain rate of compound interest, compounded annually in 7 years. In how many years will it amount to 27 times of itself?

A. 11 years
B. 31 years
C. 23 years
D. 21 years ✓

Q20 Mathematics

A metallic sheet is of the rectangular shape with length 56 cm and width 40 cm. From each corner, a square of 10 cm is cut-off. A closed box is made of the remaining sheet. How many match boxes of length 4.0 cm breadth 2.0 cm and height 1.5 cm it can accommodate?

A. 620 boxes
B. 600 boxes ✓
C. 550 boxes
D. 610 boxes

Q21 Mathematics

A person travels from place P to place Q to buy an article that costs 15% less at Q than at P. He spends ₹150 on travel and still saves ₹150 compared to buying the article at P. What is his percentage saving with respect to the price at P?

A. 4.5%
B. 3.5%
C. 7.5% ✓
D. 9%

Q22 Mathematics

A wholesaler offers a scheme discount of 2% on the total purchase if the customer buys more than 100 units of a product. If the price per unit is ₹20, what is the total amount payable if the customer buys 150 units?

A. ₹2,980
B. ₹3,020
C. ₹2,940 ✓
D. ₹3,000

Q23 Mathematics

The largest four-digit number which when divided by 8, 7 and 11 leaves remainder 4 in each case is:

A. 9811
B. 9624
C. 9860 ✓
D. 9956

Q24 Mathematics

Shivam borrowed a sum of ₹30,000 at a certain rate of simple interest for 3 years. If he paid an interest of ₹4,500 at the end of the period at x% per annum rate of interest, the value of x is:

A. 4
B. 5 ✓
C. 7
D. 6

Q25 Mathematics

A shopkeeper buys a laptop for ₹40,000. He first sells it at a 20% profit. Later, the buyer sells it to another person at a 10% loss. What is the final selling price of the laptop?

A. ₹43,200 ✓
B. ₹50,000
C. ₹48,000
D. ₹42,000

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Q26 Mathematics

Amit is standing on the ground and flying a kite using a 100 m long string at an angle of elevation of 30°. Nitin is standing on the roof of a building that is 10 m high and flying his kite at an angle of elevation of 45°. The two boys are standing on opposite sides of the point where the kites meet. Find the length (in m) of the string that Nitin must use so that both kites meet at the same point.

A. $40\sqrt{2}$ ✓

B. $40\sqrt{3}$

C. $50\sqrt{2}$

D. $50\sqrt{3}$

Q27 Mathematics

Two concentric circles with a common centre 'O' have a chord AB on the outer circle, which intersects the inner circle at points C and D. If the distance of the chord from the centre is 3 cm, the outer radius is 13 cm and the inner radius is 7 cm, then the length (in cm) of AC is:

A. $3\sqrt{10}$

B. $2\sqrt{10}$ ✓

C. $5\sqrt{10}$

D. $4\sqrt{10}$

Q28 Mathematics

If $10\sin A + \cos A = \sqrt{6}\sin A$, find the value of $\tan A$.

A. $\frac{-10-\sqrt{6}}{94}$ ✓

B. $\frac{-10-\sqrt{6}}{96}$

C. $\frac{-10-\sqrt{6}}{99}$

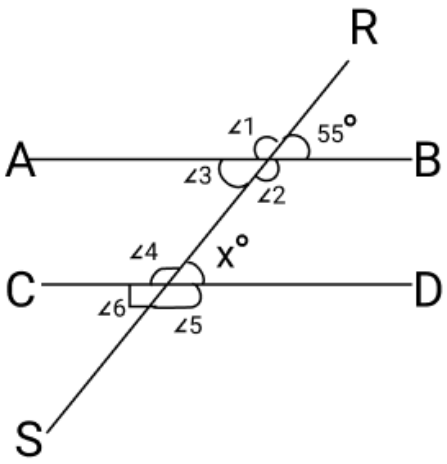
D. $\frac{-11-\sqrt{6}}{96}$

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Q29 Mathematics

In the given figure, AB is parallel to CD and RS is a transversal. Find the value of X.



- A. 55 ✓
- B. 35
- C. 65
- D. 45

Q30 Mathematics

Two cubes, each of volume 216 cm^3, are joined end to end. Find the length of the diagonal of the resulting cuboid.

- A. $6\sqrt{6}$ cm ✓
- B. $8\sqrt{7}$ cm
- C. $7\sqrt{3}$ cm
- D. $5\sqrt{2}$ cm

Q31 Mathematics

Simplify: $\frac{(2^4 \times 3^4 \times 5^4)}{(2^2 \times 3^2 \times 5^2)}$

- A. 909
- B. 910
- C. 905
- D. 900 ✓

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Q32 Mathematics

A can complete a work in 9 days and B can complete the same work in 22 days. If they work together for 2 days, what fraction of the work remains unfinished?

A. $\frac{71}{99}$

B. $\frac{68}{99}$ ✓

C. $\frac{76}{99}$

D. $\frac{73}{99}$

Q33 Mathematics

Two tangents, PQ and QR, are drawn from an external point Q to a circle of centre O. If $OQ = 41$ cm, $\angle PQR = 60°$ and the radius of the circle is 9 cm, find the perimeter of ΔPRQ.

A. 80 cm

B. 135 cm

C. 95 cm

D. 120 cm ✓

Q34 Mathematics

Solve the following equation for x involving mixed recurring decimals and express the solution as vulgar fraction.
3x + 2.3666... = 5.4666...

A. $\frac{31}{26}$

B. $\frac{31}{30}$ ✓

C. $\frac{29}{31}$

D. $\frac{31}{20}$

Q35 Mathematics

The base of a parallelogram is thrice its height. If the area of the parallelogram is 216 cm^2, then find its height.

A. $5\sqrt{2}$ cm

B. $7\sqrt{2}$ cm

C. $8\sqrt{2}$ cm

D. $6\sqrt{2}$ cm ✓

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