

SAMPLE PAPER SYLLABUS 2024-25



CLASS



MATHEMATICS OLYMPIAD

Total Ouestions: 50

	PATTERN & MARKING SCHEME (1) Logical (2) Mathematical (3) Everyday (4) Achievers Reasoning Mathematics Section			
Section	. , .			' '
No. of Questions	15	20	10	5
Marks per Ques.	1	1	1	3



Scan the QR code for more details

SYLLABUS

Section - 1: Verbal and Non-Verbal Reasoning.

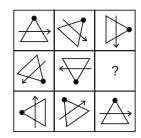
Section – 2: Integers, Fractions and Decimals, Exponents and Powers, Algebraic Expressions, Simple Equations, Lines and Angles, Comparing Quantities, The Triangle and its Properties, Symmetry, Rational Numbers, Perimeter and Area, Data Handling, Visualising Solid Shapes.

Section -3: Syllabus as per Section -2.

Section -4: Higher Order Thinking Questions - Syllabus as per Section -2.

LOGICAL REASONING

1. Find the missing figure in the given figure matrix.













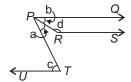
Time · 1 hr

- 2. If '+' means '÷', '-' means '×', '÷' means '+' and '×' means '-', then 320 ÷ 225 + 15 × 15 85 = ?
 - (A) 180
- (B) 140
- (C) 60
- (D) -940
- 3. In a certain code language, CHEMISTRY is written as NFIDITUSZ. How will BEANSTOCK be written in that language?
 - (A) CFBOSLDPU
- (B) CFBOSUPDL
- (C) OBFCSUPDL
- (D) OBFCSLDPU

MATHEMATICAL REASONING

- **4.** Solve for $x: \frac{1}{5}(x-8) + \frac{4+x}{4} + \frac{x-1}{7} = 7 \frac{23-x}{5}$.
 - (A) 7
- (B) 8
- (C) 5
- (D) 9
- 5. If 55% of 1000 \div 60% of 2000 = k : 2k + 2, then find the sum of digits of k.
 - (A) 4
- (B) 2
- (C) 5
- (D) 3

- 6. In the given figure, PQ, RS and UT are parallel lines. If $c = 75^{\circ}$ and a = (2/5)c, then find the value of b + d/2.
 - (A) 92°
 - (B) 115°
 - (C) 112.5°
 - (D) 135.5°



EVERYDAY MATHEMATICS

- Garima and Mohit deposited ₹ 3000 and ₹ 4000 in a company at the rate of 10% per annum for 3 years and 2¹/₂ years respectively. The difference
- of the amounts received by them will be
- (A) ₹100
- (B) ₹1000
- (C) ₹900
- (D) ₹1100

- 8. At Shimla, the temperature was -7°C on Tuesday. It then dipped by 3°C on Wednesday. On Thursday, it rose by 6°C. What was the temperature of Shimla on Wednesday and Thursday respectively?
- (A) $-4^{\circ}C$, $-10^{\circ}C$
- (B) -10° C, -4° C
- (C) -12°C, 8°C
- (D) -10°C, 4°C

ACHIEVERS SECTION

- 9. The ratio of the outer and the inner circumference of a circular path as shown in the figure is 26 : 25. If the path is 5 m wide, then find :
 - (i) the area enclosed by the path
 - (ii) the diameter of the inner circle

$$\left(\text{Take } \pi = \frac{22}{7}\right)$$
(i)

(ii)

- (A) 4007.14 m²
- 250 m
- (B) 4096.23 m²
- 256 m
- (C) 3345.17 m²
- 125 m
- (D) 3372.62 m²
- 130 m
- 5 m
- **10.** Read the given statements carefully and select the correct option.

Statement I : If four quantities a, b, c and d are such that the ratio a : b is equal to the ratio c : d, then we say ac = bd and a : d = b : c.

Statement II: If a: b = 5: 9 and b: c = 4: 7, then a: b: c = 20: 36: 63.

- (A) Both Statement I and Statement II are true.
- (B) Statement I is true but Statement II is false.
- (C) Statement I is false but Statement II is true.
- (D) Both Statement I and Statement II are false.

SPACE FOR ROUGH WORK