



Ramanujan Olympiad

by



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Affiliated to CBSE, INDIA

PRIMARY

FOR CLASS-V & VI

Time	: 2 Hours.
Maximum Marks	: 120
Total Number of Questions	: 40

Please read the instructions carefully. You are allotted 5 minutes specifically for this purpose.

GENERAL INSTRUCTIONS

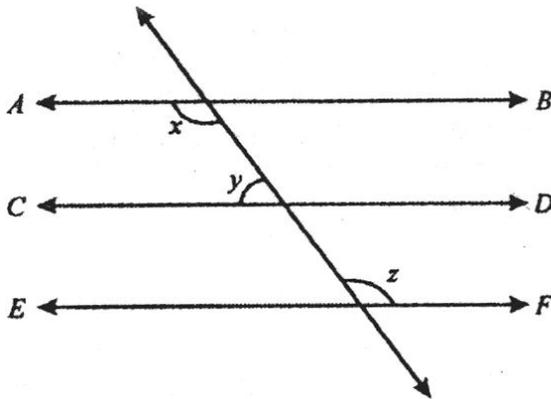
1. The question paper consists of **40 Objective Questions**, for each question you will be **awarded 3 marks** if you have darkened only the bubble corresponding to the correct answer and **zero mark** if no bubble is darkened. In case of bubbling of incorrect answer, **minus one (-1) marks** will be awarded.
2. It is mandatory to fill the required informations on the **OMR Sheet**.
3. Blank papers, clip boards, log tables, slide rule, calculators, mobile or any other electronic gadgets in any form are not allowed.
4. All rough work should be done only in the extra blank papers provided by the invigilator with the question paper.
5. Use Black or Blue Ball Pen to fill the bubbles on **OMR Sheet**.

NAME OF THE CANDIDATE

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1. In figure, if $AB \parallel CD$, $CD \parallel EF$ and $y : z = 3 : 7, x = ?$



- (A) 112° (B) 116° (C) 96° (D) 126°

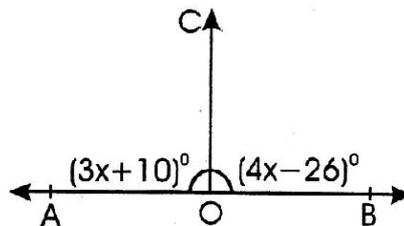
2. In the given figure, AOB is a straight line.

If $\angle AOC = (3x + 10)^\circ$ and

$\angle BOC = (4x - 26)^\circ$, then

$\angle BOC = ?$

- (A) 96° (B) 86°
 (C) 76° (D) 106°

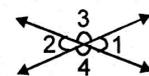


3. A shopkeeper sold two watches for Rs. 425 each, gaining 10% on one and losing 10% on the other. Then he
 (A) neither gains nor lossess (B) gains 1%
 (C) loses 1% (D) none of these

4. The decimal representation of a number is
 (A) always terminating (B) either terminating or repeating
 (C) either terminating or non-repeating (D) neither terminating nor repeating

5. For the following figures, Which of the following is FALSE ?

- (A) $\angle 1 = \angle 2$ (B) $\angle 4 = \angle 3$
 (C) $\angle 3 + \angle 1 = 180^\circ$ (D) $\angle 1 = \angle 4$

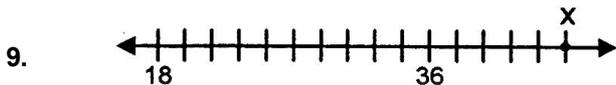


6. $6 + 12 \div 6 \times 2 + 1$ equals
 (A) 1 (B) 11 (C) 8 (D) 7

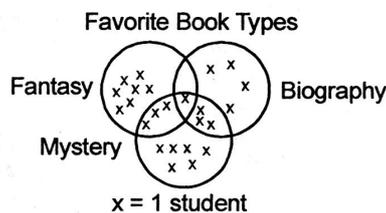
7. If $\square + 50 = \triangle$ and $\square - 50 = \bigcirc$
 What is the correct relation between \triangle and \bigcirc ?

- (A) $50 + \bigcirc = \triangle$ (B) $50 - \bigcirc = \triangle$ (C) $100 + \bigcirc = \triangle$ (D) $100 - \bigcirc = \triangle$

8. I thinks of a number, add 10 to it and divide the answer by 2.
 Let the resulting number be \bigcirc . Starting with \bigcirc , how can I get my original number back?
- (A) Multiply \bigcirc by 2 and then subtract 10 from the result
 (B) Divide \bigcirc by 2 and then add 10 to the result
 (C) Multiply \bigcirc by 2 and then add 10 to the result
 (D) Add 2 to \bigcirc and then divide the resulting number by 10

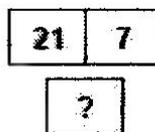
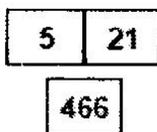
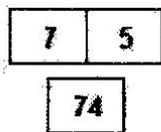


- Which best describes the location of point X ?
 (A) 58 (B) 40 (C) 45 (D) 54
10. Which can be solved by using the equation $K+10 = ?$
- (A) Mohan did 10 times as many push-ups as Kiran. If K is the number of push-up Kiran did, how many push-ups did Mohan do?
 (B) Sharon did 10 more sit-ups than Kevin. If K is the number of sit-ups kevin did, how many sit-ups did sharon do?
 (C) John ran 10 fewer meters than Kiran. If K is the number of meters Kiran ran, how many meters did john run?
 (D) Kavita takes 10 minutes to run each lap around the gymnasium. If K is the number of laps Kavita ran, how long did she run?
11. According to this diagram, how many students have more than one favourite type of book?



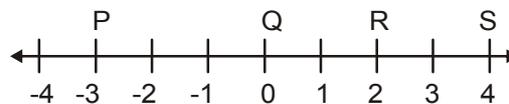
- (A) 3 (B) 5 (C) 7 (D) 8
12. What is the value of the following expression $3 + 3^2(4 + 3)$?
 (A) 38 (B) 42 (C) 45 (D) 66
13. The given figure is made up of 10 squares of the same size. The area of the figure is 40 cm^2 . Find the perimeter of the figure.
-
- (A) 32 cm (B) 28 cm
 (C) 24 cm (D) 36 cm
14. Find the value of $- 26 - 20 + 33 - (-33) +24 +21 - (-25) - 26 - 14$.
 (A) 60 (B) 56 (C) 50 (D) 24

15. Kartik is k years old. Rehaan's age, r , is 6 less than 2 times Kartik's age. Which of the following equations best represents Rehaan's age?
 (A) $r = (6-2)k$ (B) $k = 2r - 6$ (C) $r = 2k - 6$ (D) $k = (6 \times 2)r$
16. Sasha is using a wooden strip $\frac{9}{16}$ m long to make a picture frame. If she cuts off a piece that is $\frac{3}{8}$ m long, which fraction best represents the portion that is left of the original strip?
 (A) $\frac{13}{8}$ m (B) $\frac{15}{16}$ m (C) $\frac{3}{16}$ m (D) $\frac{1}{8}$ m
17. The cost price of 9 articles is equal to the selling price of 11 articles. Find the percentage loss.
 (A) $18\frac{2}{11}\%$ (B) $2\frac{9}{11}\%$ (C) $15\frac{1}{2}\%$ (D) $16\frac{1}{2}\%$
18. Number of two-digit numbers that give a remainder of 3 when they are divided by 7?
 (A) 11 (B) 13 (C) 12 (D) 14
19. A shopkeeper fixes the marked price of an item 35% above its cost price. The percentage of discount allowed to gain 8% is:
 (A) 20% (B) 27% (C) 31% (D) 43%
20. If an amount doubles itself in 5 years at simple interest, it will become three times in:
 (A) 10 year (B) 12 year (C) 8 year (D) None of these
21. Mihir was asked to solve the fraction $\frac{\frac{5}{3} + 1\frac{1}{2} \text{ of } \frac{7}{3}}{2 + 2\frac{2}{3}}$ and his answer was $\frac{1}{7}$. By how much times was his answer wrong?
 (A) $\frac{7}{10}$ (B) $\frac{29}{3}$ (C) $\frac{31}{4}$ (D) None of these
22. Which mathematical expression best describes the product of two numbers subtracted from a third number?
 (A) $(x \times y) + z$ (B) $(x + y) \times z$ (C) $(x \times y) - z$ (D) $z - (x \times y)$
23. Find the missing term.



- (A) 490 (B) 480 (C) 500 (D) 510

24. (Additive inverse of 3) + (Additive inverse of a number which is itself) + (Additive inverse of -7) denoted by one of the letters on the number line is _____.



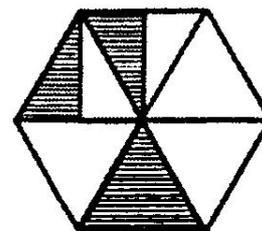
- (A) P (B) Q
(C) R (D) S

25. $35.7 - \left(3 + \frac{1}{3 + \frac{1}{3}} \right) - \left(2 + \frac{1}{2 + \frac{1}{2}} \right)$ is :

- (A) 30 (B) 34.8 (C) 36.6 (D) 41.1

26. P and Q are two integers such that $P \cdot Q = 64$. Which of the following cannot be the value of $P + Q$?
(A) 20 (B) 65 (C) 16 (D) 35

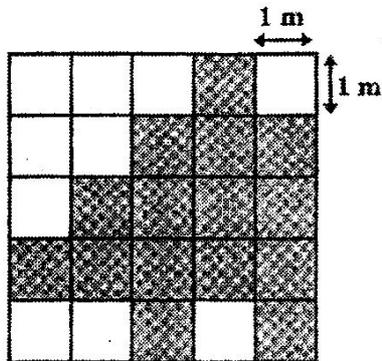
27. In the adjoining figure which fraction of the whole is represent by the shaded portion?



- (A) $\frac{3}{12}$ (B) $\frac{1}{4}$
(C) $\frac{1}{3}$ (D) $\frac{3}{8}$

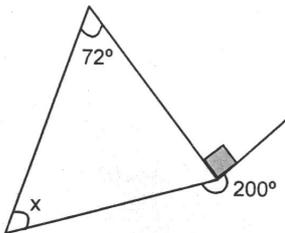
28. A student is ranked 9th from the top and 38th from the bottom in a class. The number of students in the class is:
(A) 45 (B) 46 (C) 47 (D) 48
29. Given that $(k-8)$ is the highest common factor of 56 and 77, the value of k is:
(A) 7 (B) 11 (C) 15 (D) 16
30. Which of the following has the same value as $150 \text{ g} \times 7$?
(A) $1.05 \text{ kg} \div 10$ (B) $1.5 \text{ kg} \div 10$ (C) $15 \text{ kg} \div 100$ (D) $105 \text{ kg} \div 100$
31. Mohan is 18th from either end of a row of boys? How many boys are there in that row?
(A) 26 (B) 32 (C) 24 (D) 35
32. How many 5's are there in the following sequence of numbers which are immediately preceded by 7?
8 9 5 3 2 5 3 8 5 5 6 8 7 3 3 5 7 7 5 3 6 5 3 3 7 3 8
(A) One (B) Two (C) Three (D) Four
33. If the digits of the number 5726489 are arranged in ascending order, how many digits will remain at the same position?
(A) One (B) Two (C) Three (D) Four

34. The perimeter of the shaded figure is.....m.



- (A) 20 (B) 22 (C) 24 (D) 26

35.



In the figure shown, calculate the value of x.

- (A) 35° (B) 36° (C) 37° (D) 38°

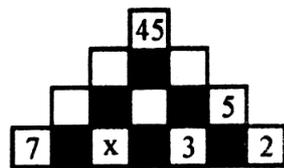
36.

If $2 = x + \frac{1}{1 + \frac{1}{3 + \frac{1}{4}}}$ then the value of x is:

- (A) $\frac{12}{17}$ (B) $\frac{13}{17}$ (C) $\frac{18}{17}$ (D) $\frac{21}{17}$

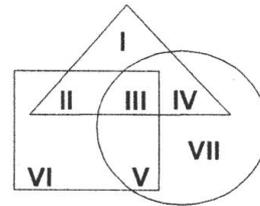
37.

The adjacent number pyramid is formed by filling up each unshaded square with the sum of the two numbers connected to it from the row below. (Thus 5 is obtained by adding 3 and 2). The top number is 45. The value of X is.

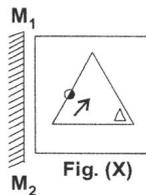


- (A) 6 (B) 9
(C) 17 (D) 12

38. The triangle, square and circle shown here represents urban, hard-working and educated people respectively. Which one of the areas represented by the urban educated people those who are not hard-working?
 (A) IV (B) II
 (C) V (D) VII

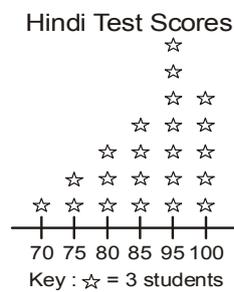


39. Find the mirror image of the Fig. (X) if mirror is placed along M_1M_2 .



- (A) (B) (C) (D)

40. The following pictograph shows how did students score in last week's Hindi test. (figure) How many students scored more than 74 but less than 96 marks ?



- (A) 44 students (B) 48 students (C) 18 students (D) 21 students

Our Top Performers in 2018



Shivam Shukla
JEE-Adv. : AIR-3788
JEE-Mains : 233 Marks
UPTU : AIR-85

Pawan Pandey
JEE-Adv. : AIR-2675
JEE-Mains : 217 Marks
UPTU : AIR-553

Aditya Pra. Singh
JEE-Adv. : AIR-667*
JEE-Mains : 208 Marks
UPTU : AIR-48*

Ayush Pandey
JEE-Adv. : AIR-2494
JEE-Mains : 200 Marks
UPTU : AIR-76

Tanu Modi
JEE-Adv. : AIR-4397
JEE-Mains : 165 Marks
M.M.M. : Rank-6*

CBSE 12th Board Results 2018



Shivam Shukla 93.6%

Shivansh Mishra 93.2%

Aditya Pratap Singh 92.8%

Deepak Singh 92.2%

Saket Sriva. 92.0%



Abhinav Raj Singh 91.6%



Pracheta Pathak 91.6%



Anmay Sriva. 91.2%



Ayush Shukla 90.8%

CBSE 10th Board Results 2018



Swapnil Rai 96.6%

Ayush Mishra 94.8%

Ayushi Pandey 94.6%

Ayushi Dubey 94.4%

Rajat Tiwari 93.2%

Anjali Ranjan 93.2%



Nancy Pandey 92.6%



Prince Yadav 91.8%



Siddhant Sriv. 91.8%



Akshit Verma 91.6%



Sheshwat Singh 91.0%



Sai Prakash Singh 90.2%



Shruti Pandey 90.0%