Note: (1) Think and Answer (2) Mind Choices (3) Neatness expected or -2 marks

(4) Marks will be awarded for right answers with appropriate steps

Areas of Improvement:

Maximum Marks	**26**
Marks Obtained	
%	

Parent Signature	**Parent Signature**

Previous Performance:

Date	Subject	Chapter Name	%
1st July 2024	Chemistry	Matter	68.97 %
10th July 2024	Math	Rational Number	Forfeit

Section A

[0.5 x 6 = 3]

Q1. A square of an even number is always

(a) even (b) odd (c) even or odd (d) none of these

Q2. 1+ 3 + 5 + 7 + ……. up to n terms is equal to

(a) $n^2 - 1$ (b) $(n + 1)^2$ (c) $n^2 + 1$ (d) n^2

Q3. The smallest number by which 75 should be divided to make it a perfect square is

(a) 1 (b) 2 (c) 3 (d) 4

Q4. The smallest number by which 162 should be multiplied to make it a perfect square is

(a) 4 (b) 3 (c) 2 (d) 1

Q5. If the area of a square field is 961 unit^2, then the length of its side is

(a) 29 units (b) 41 units (c) 31 units (d) 39 units

Q6. The smallest number that should be subtracted from 300 to make it a perfect square is

(a) 11 (b) 12 (c) 13 (d) 14

Section B (any two)

[2 x 3 = 6]

Q1. Find the square root of:

(i) 4761 (ii) 7744

Q2. By splitting into prime factors, find the square root of:

(i) 11025 (ii) 194481

Q3.
(i) Find the smallest number by which 2592 is multiplied so that the product is a perfect square.
(ii) Find the smallest number by which 12748 is multiplied so that the product is a perfect square.

Section C (any four) [2 x 4 = 8]

Q4. 13 and 31 is a strange pair of numbers such that their squares 169 and 961 are also mirror images of each other. Find two more such pairs.

Q5. Find the smallest number by which 1152 must be divided so that it becomes a perfect square. Also, find the number whose square is the resulting number.

Q6. In an auditorium, the number of rows is equal to a number of chairs in each row. If the capacity of the auditorium is 1764. Find the number of chairs in each row.

Q7. Find the least number that must be subtracted from 2311 to make it a perfect square.

Q8. Find the greatest number of 5 digits which is a perfect square.

Q9. 4225 plants are to be planted in a garden in such a way that each row contains as many plants as the number of rows. Find the number of rows and the number of plants in each row.

Section D (any three) [3 x 3 = 9]

Q10. (Any three)

Evaluate : (*i*) $\sqrt{3^2 \times 6^3 \times 24}$

(*ii*) $\sqrt{(0{\cdot}5)^3 \times 6 \times 3^5}$ (*iii*) $\sqrt{\left(5+2\frac{21}{25}\right) \times \frac{0{\cdot}169}{1{\cdot}6}}$

(*iv*) $\sqrt{5\left(2\frac{3}{4}-\frac{3}{10}\right)}$ (*v*) $\sqrt{248+\sqrt{52+\sqrt{144}}}$

Q11. Find the square root of:

(i) 245 correct to two places of decimal.
(ii) 496 correct to three places of decimal.

Q12. Find the value of √5 correct to 2 decimal places; then use it to find the square root $\sqrt{\frac{3-\sqrt{5}}{3+\sqrt{5}}}$ of correct to 2 significant digits.

Q13. Find three positive numbers in the ratio 2: 3: 5, the sum of whose squares is 950.

Q14. Find the greatest number of six digits which is a perfect square.