OBJECTIVE TYPE (1 Mark)

Q.1.	How many natural numbers lie between the squares of 108 and 109 is:						
	A	216	B		C		D	

Q.2.	The value of $1 + 3 + 5 + 7 + 9 + 11 + 13 + 15 + 17 + 19$ is:						
	A		B	100	C		D	

Q.3.	Which of the following is not a perfect square?						
	A		B	1128	C		D	

Q.4.	Which of the following is the square of an even number?						
	A		B		C	256	D	

Q.5.	Which of the following will have 4 at unit place?						
	A		B	38^2	C		D	

Q.6.	The sum of first n odd natural numbers is:						
	A		B		C		D	n^2

Q.7.	The hypotenuse of a right triangle with its legs of length 3x and 4x is:						
	A	5x	B		C		Q	

Q.8.	The possible unit digit in the square root of the number 1764 is:							
	A		B	2	C		D	

Q.9.	The square root of $2 \times 2 \times 7 \times 7 \times 5 \times 5$ is:							
	A		B		C		D	70

Q.10	The value of $\sqrt{\dfrac{11 \times 11 \times 3 \times 3}{25}}$ is:							
	A		B		C	$\dfrac{33}{5}$	D	

Fill in the blanks(1mark)

Q11.	There are _____ natural numbers between n^2 and $(n+1)^2$. **2n**

Q12.	The square root of 2.53 × 2.53 is ____**2.53**_____

Q13.	There are ___ **0**___perfect square numbers between 90 and 100.

Q14.	The square of 9.5 is _____: **90.25**

Q15.	The number of digits in the square root of 10404 _____ : **3**

SECTION B (2 marks)

Q16.	Area of a square is 9801 m^2. The side of the given square $= \sqrt{9801} = 99$

Q17.	**Find the square root of 6241 by division method.**

	<pre> 7 9
	        7
		62 41
		
			49
			          -------- 	
			      14**9**
				13 41
				
					13 41
					          -------- 	
					
						0</pre>
						 $\sqrt{6241} = 79$

Q18.	Find the smallest square number which is divisible by 4, 6 and 10?

Q18.

Find the smallest square number which is divisible by 4, 6 and 10?
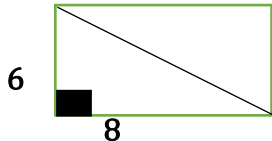
LCM of 4, 6 and 10 = $2 \times 2 \times 3 \times 5 = 60$

2	4	6	10
2	2	3	5
3	1	3	5
5	1	1	5
	1	1	1

The smallest square number which is divisible by 4, 6 and 10

$= 60 \times 3 \times 5 = 900$

Q19.

The length and breadth of a rectangle are 6cm and 8cm respectively.

$6^2 + 8^2 = 36 + 64 = 100$

6

8

The length of its diagonal $= \sqrt{100} = 10$

Q20.

5929 students were sitting in a lecture room in such a manner that there were as many students in the row as there were rows in the lecture room. How many students were there in each row of the lecture room?

Let the number of students in each row = x

Then number of students = x

Total no. of students $= x \times x = 5929$

$X = \sqrt{5929} = 77$

The number of students in each row = The number of students = 77

SECTION C (4marks)

Q21.

Find the value of $\sqrt{77.44} - \sqrt{16.81}$

$8.8 - 4.1 = 4.7$

Q22.

Find the smallest whole number multiplied by 1458 to get a perfect square number. Also find the square root of the square number so obtained.

2	1458
3	729
3	243
3	81
3	27
3	9
3	3
	1

$1458 = 2 \times \underline{3} \times \underline{3} \times \underline{3} \times \underline{3} \times \underline{3} \times \underline{3}$

smallest whole number multiplied = 2

The required square root $= 2 \times \underline{3} \times \underline{3} \times \underline{3} = 18$

Q23.	$$\begin{array}{r} 65 \\ \hline 6\,|\,42\ \ 30 \\ 36 \\ \hline 125\,|\,6\ \ 30 \\ 6\ \ 25 \\ \hline 05 \end{array}$$

Least number which must be subtracted from 4230 to make it a perfect square = 5

The square root of the number so obtained = 65

Q24. The smallest whole number multiplied by 1620 to get a perfect square number. Also find the square root of the square number so obtained.

$$\begin{array}{r|l} 2 & 1620 \\ \hline 2 & 810 \\ \hline 5 & 405 \\ \hline 3 & 81 \\ \hline 3 & 27 \\ \hline 3 & 9 \\ \hline 3 & 3 \\ \hline & 1 \end{array}$$

1458 = 2 × <u>2</u> × <u>5</u> × <u>3</u> × <u>3</u> × <u>3</u> × <u>3</u>

smallest whole number multiplied = 5

The required square root = 2 × <u>3</u> × <u>3</u> = 18

Q25.

$$\begin{array}{r} 46 \\ \hline 4\,|\,20\ \ 28 \\ 16 \\ \hline 86\,|\,4\ \ 28 \\ 5\ \ 16 \\ \hline 88 \end{array}$$

More children would be required to make the number of rows equal to the number of columns.

=Least number which must be added to 2028 to make it as a perfect square = 88