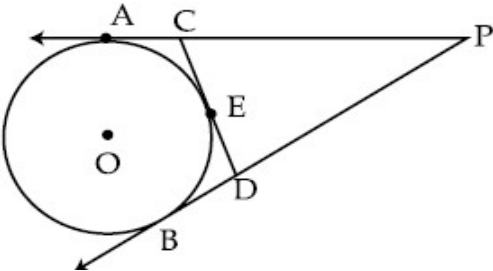


**SECTION A**

10 x 1 = 10

<b>Q.1</b>	The smallest number by which $\sqrt{27}$ should be multiplied so as to get a rational number is:			
	(a) $\sqrt{27}$	(b) 3	(c) $3\sqrt{3}$	(d) $\sqrt{3}$
<b>Q.2</b>	If one root of the polynomial $f(x) = 5x^2 + 13x + k$ is reciprocal of the other, then the value of k is:			
	(a) 0	(b) 5	(c) $\frac{1}{6}$	(d) 6
<b>Q.3</b>	The area of the triangle formed by the lines $y=x$ , $x=6$ and $y=0$ is ____ sq units.			
	(a) 36	(b) 18	(c) 9	(d) 72
<b>Q.4</b>	If $\tan^2 45^\circ - \cos^2 30^\circ = x \sin 45^\circ \cos 45^\circ$ , then $x =$ ____			
	(a) 2	(b) -2	(c) $-\frac{1}{2}$	(d) $\frac{1}{2}$
<b>Q.5</b>	If $\tan \theta + \cot \theta = 2$ then the value of $\tan^2 \theta + \cot^2 \theta =$ ____ .			
	(a) 0	(b) 2	(c) 1	(d) $\frac{1}{2}$
<b>Q.6</b>	If ABC is a right triangle at B such that $BC = 6\text{cm}$ and $AB = 8\text{cm}$ then the radius of its incircle is ____.			
	(a) 7	(c) 2		
	(b) 10	(d) 8		
<b>Q.7</b>	$2\cos 3\theta = 1$ then $\theta =$ ____ . ( $0^\circ < \theta < 90^\circ$ )			
	(a) $60^\circ$	(b) $20^\circ$	(c) $30^\circ$	(d) $45^\circ$
<b>Q.8</b>	$\frac{1}{x} + \frac{1}{y} = 1.5$ and $\frac{1}{x} - \frac{1}{y} = 0.5$ then value of x and y is ____.			
	(a) (0.5,1)	(b) (1.5,0.5)	(c) (1,0.5)	(d) (1,2)
<b>Q.9</b>	If the sum of first $m$ terms of an A.P. is the same as the sum of its $n$ terms, then sum of its $m+n$ terms is ____.			
	(a) $mn$	(b) $m+n$	(c) 0	(d) 1

<p><b>Q.10</b></p>	<p>In fig. , from an external point P, PA and PB are tangents to the circle with centre O. If CD is another tangent at point E to the circle and PA = 12 cm. Find the perimeter of <math>\Delta PCD</math>.</p> 		
	(a) 12 cm	(b) 24 cm	(c) 30 cm (d) none of these

**SECTION B**

5x 4 = 20

<p><b>Q.11</b></p>	<p>A person standing between two posts, finds that the angle subtended at his eyes by the tops of the posts is right angle. If the height of two posts are two times and four times the height of the person and the distance between the two posts is equal to the length of longer posts, find the ratio of the distance of the person from the shorter to the longer post.</p>
<p><b>Q.12</b></p>	<p>Name the quadrilateral formed by given points, also find its area. A(-1,-2), B(1,0), C(-1,2), D (-3,0)</p>
<p><b>Q.13</b></p>	<p>The sum of n, 2n, 3n terms of an AP are <math>S_1, S_2, S_3</math> respectively. Prove that <math>S_3 = 3(S_2 - S_1)</math></p>
<p><b>Q.14</b></p>	<p>In a flight of 600 km, a aircraft was slowed down due to bad weather. Its average speed for the trip was reduced by 200 km/hr and the time of flight increased by 30 minutes. Find the duration of flight.</p>
<p><b>Q.15</b></p>	<p>If <math>\sec \theta = x + \frac{1}{4x}</math>, prove that <math>\sec \theta + \tan \theta = 2x, or, \frac{1}{2x}</math></p>

ALL THE BEST

YES, I CAN.....