Note: Please attempt any 10 short questions from Question 2. Also, attempt both parts of Question 3. Cutting and removal of any content is strictly prohibited.

Question.No.01: - Choose the correct answer. **(10x01=10)**

i.	Sin θ =0.5791 then θ is:	35.3872	34.3872	33.9876	Undefined
ii.	When two angles and one side are given then using	Sine law	Tangent law	Cosine law	None of these
iii.	The period of $\sin 3x =$	$\dfrac{2\pi}{3}$	$\dfrac{3\pi}{2}$	$\dfrac{2\pi}{5}$	$\dfrac{3\pi}{5}$
iv.	The circle drawn inside a triangle touching its three sides is called	In-circle	Inscribed circle	Ex-circle	Both A and B
v.	$cos\,\dfrac{\alpha}{2} =$	$\dfrac{\sqrt{s(s-c)}}{2}$	$\dfrac{\sqrt{s(s-b)}}{2}$	$\dfrac{\sqrt{(s-a)}}{2}$	$\dfrac{\sqrt{s(s-a)}}{2}$
vi.	$cosine\ law$ is using when	Two angles and one side is given	Two sides and one angle is given	one angle and one side is given	Both A and B
vii.	$\cos 52^0 13^/$	0.6127	0.517	0.6227	0.7456
viii.	Period of $cosec\,\theta$ is	3π	4π	2π	5π
ix.	If a = 17 , b = 10 , c = 21 then 'S' is	49	24	48	74
x.	Area of triangle when a , b sides and angle α are given then using formula is	$\dfrac{1}{2}bc\,sin\beta$	$\dfrac{1}{2}bc\,sin\,\gamma$	$\dfrac{1}{2}bc\,sin\,\alpha$	None of these

Question.No.02:-Solve all parts. **(02x10=20)**

i.	Find the measure of the greatest angle, if sides of the triangle are 16, 20, 33.
ii.	Find area of the triangle ABC, if b= 25.4 , γ =36°41 , α =45°17
iii.	Define ex-circle and in-circle.
iv.	Find r, r_1, and r_3 , if measure of the sides a = 34 , b = 20 ,c = 42
v.	The area of triangle is 2437. If $\alpha = 79$ and c = 97 , then find angle β
vi.	Find the area of triangle ABC when a = 18 , b = 24 , c = 30
vii.	Prove the Hero's formula.
viii.	Show that r_2 = $s\,tan\dfrac{\beta}{2}$
ix.	Prove that $abc\ (\ \sin\alpha + \sin\beta + \sin\gamma\ ) = 4\Delta s$
x.	Show that $r\,r_1\,r_2\,r_3 = \Delta^2$

Question.No.03: -Attempt All Questions. **(02x05=10)**

A.	Prove that in an equilateral triangle;	r : R : r_1 = 1 : 2 : 3
B.	Prove that	$r_2 = 4R\,cos\,\dfrac{\alpha}{2}\,sin\,\dfrac{\beta}{2}\,cos\,\dfrac{\gamma}{2}$