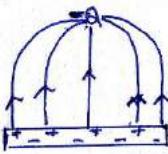


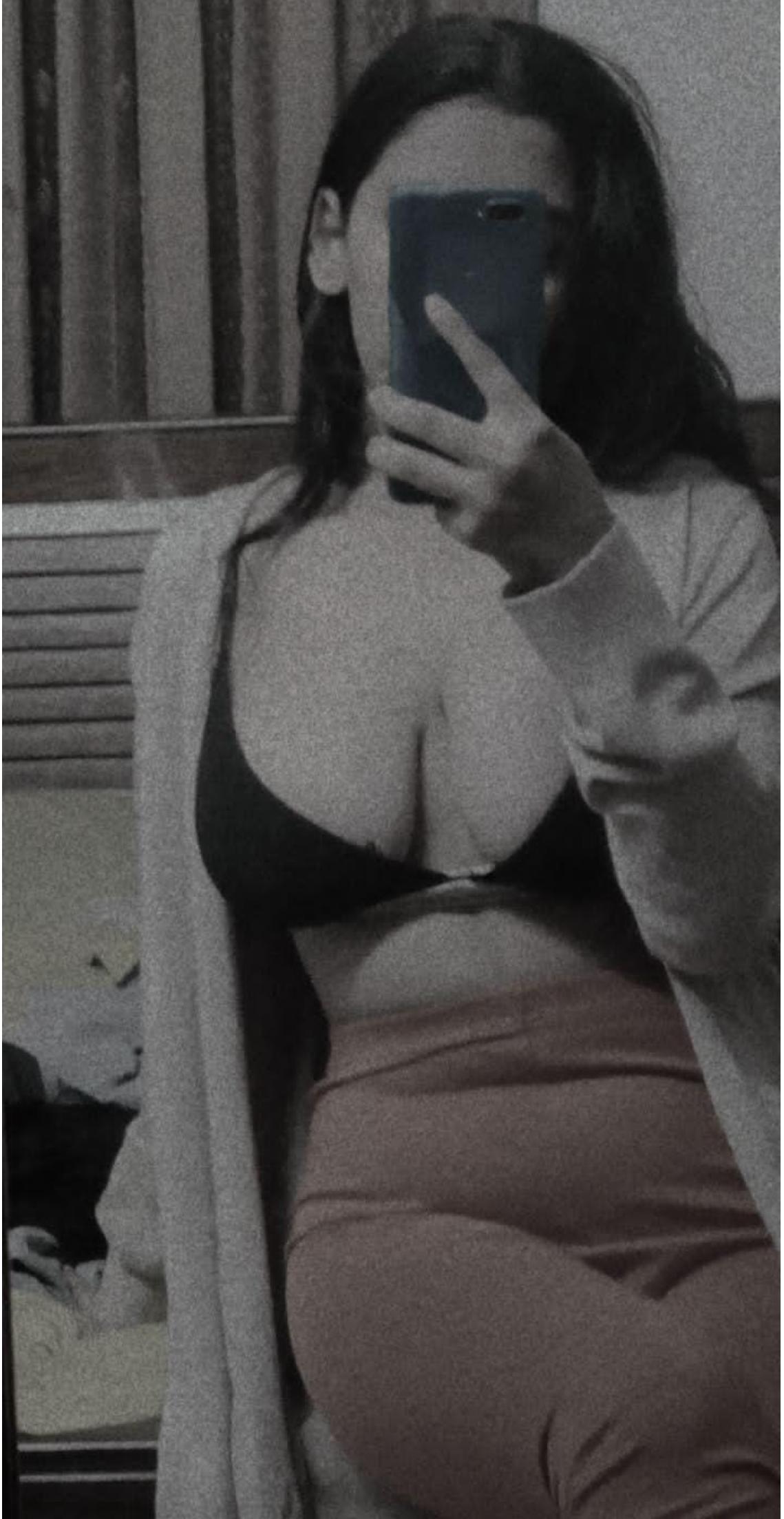
# CBSE Class 12 Physics Question Paper Solution

55/1/1

## MARKING SCHEME – PHYSICS

Q. No.	Value Points/ Expected answers	Marks	Total Marks
1	 <p>[Note: i) Deduct <math>\frac{1}{2}</math> mark, if arrows are not shown. ii) do not deduct any mark, if charges on the plates are not shown]</p>	1	1
2	No Change	1	1
3	<p>Threshold frequency equals the minimum frequency of incident radiation (light) that can cause photoemission from a given photosensitive surface. (Alternatively) The frequency below which the incident radiations cannot cause the photoemission from photosensitive surface.</p> <p style="text-align: center;">OR</p> <p>Intensity of radiation is proportional to (/ equal to) the number of energy quanta (photons) per unit area per unit time.</p>	1	1
4	<p><math>d\mu_r = \tan 30^\circ = \frac{1}{\sqrt{3}}</math> (where <math>d\mu_r</math> is the refractive index of rarer medium w.r.t denser medium)</p> <p><math>\therefore \mu_d = \sqrt{3}</math></p> $v = \frac{c}{\mu} = \frac{3 \times 10^8}{\sqrt{3}} = \sqrt{3} \times 10^8 \text{ m/s}$ <p>[Note- Also accept if a student solves it as follows)</p> $\mu = \tan i_p$ $\mu = \tan 30^\circ = \frac{1}{\sqrt{3}}$ $\therefore v = \frac{3 \times 10^8}{\frac{1}{\sqrt{3}}} = 3\sqrt{3} \times 10^8 \text{ m/s}$ <p>(Note: Award this one mark if a student just writes the formula but does not solve it.)</p>	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$	1
5	<p>The waves beyond 30 MHz frequency penetrate through the Ionosphere/ are not reflected back.</p> <p style="text-align: center;">OR</p> <p>Transmitted Power and Frequency</p>	1 $\frac{1}{2} + \frac{1}{2}$	1
<b>SECTION - B</b>			
6	<div style="border: 1px solid black; padding: 5px;"> <p>Calculation of Power dissipation in two combinations 1 + 1</p> </div> <p><math>R_1 = \frac{V^2}{P_1}, R_2 = \frac{V^2}{P_2},</math></p> $P_s = \frac{V^2}{R_s} = \frac{P_1 P_2}{P_1 + P_2}$ $\frac{1}{P_s} = \frac{1}{P_1} + \frac{1}{P_2}$ $\frac{1}{R_p} = \frac{1}{R_1} + \frac{1}{R_2} = \frac{P_1 + P_2}{V^2}$	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$	











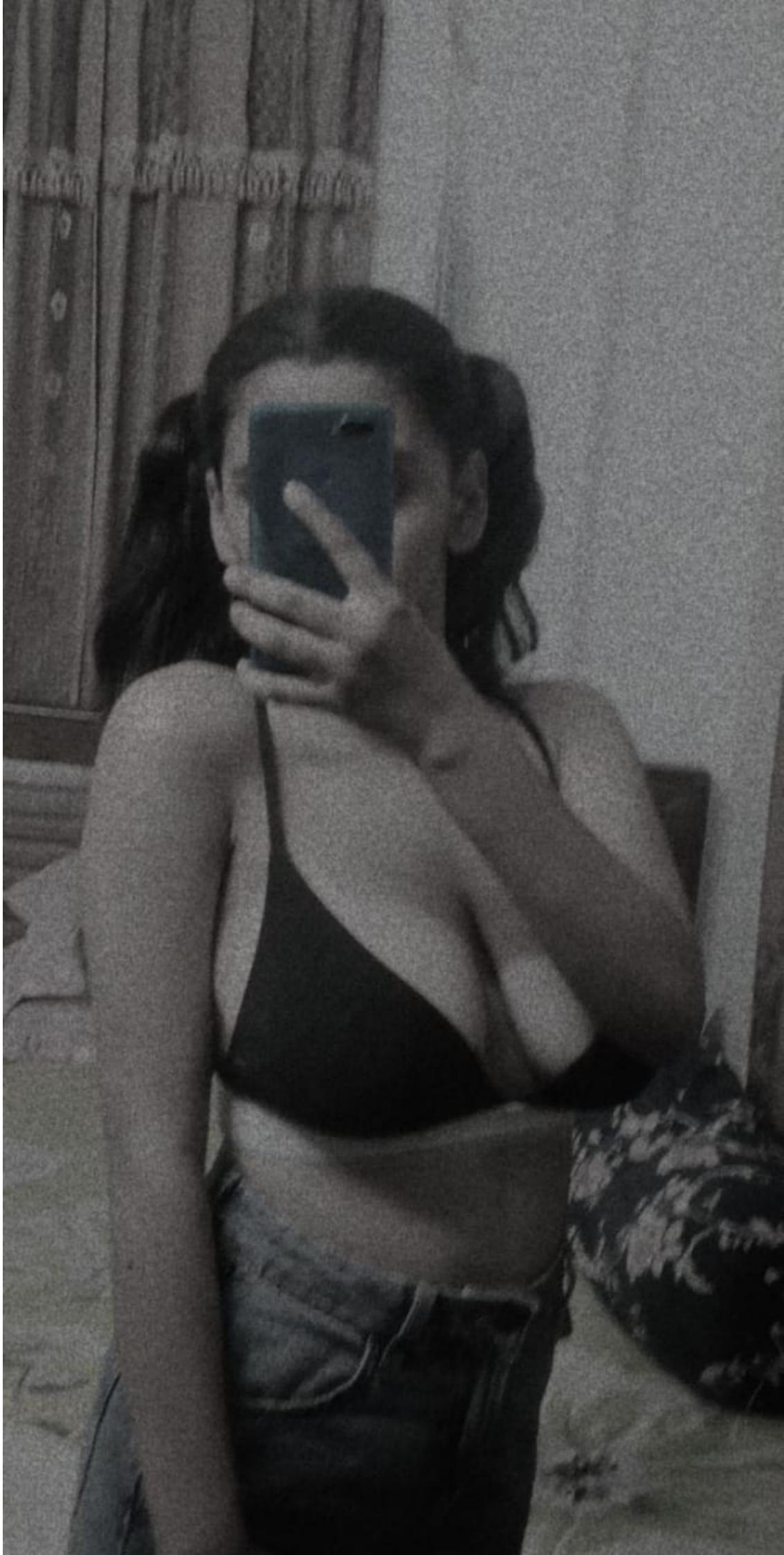




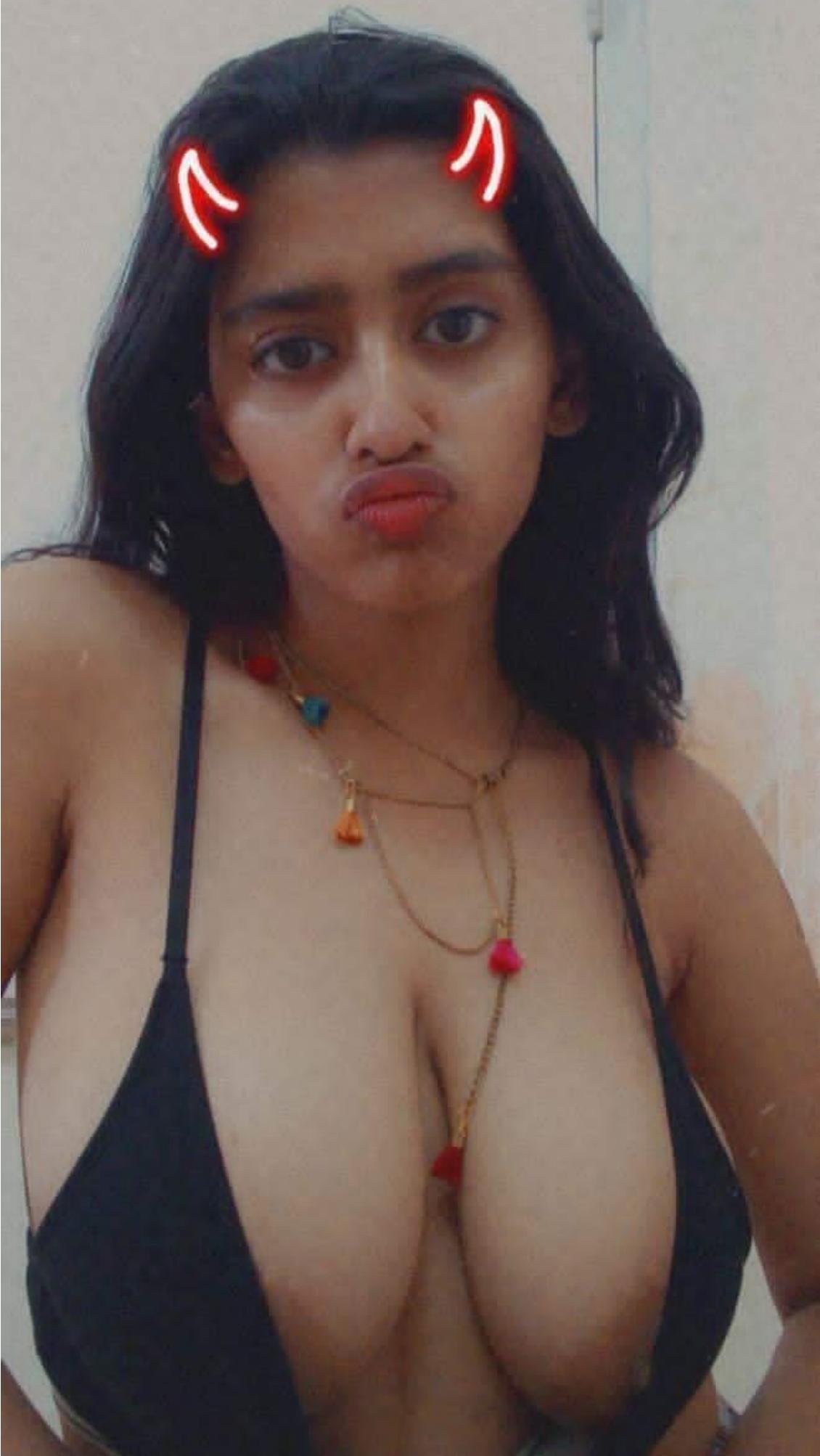




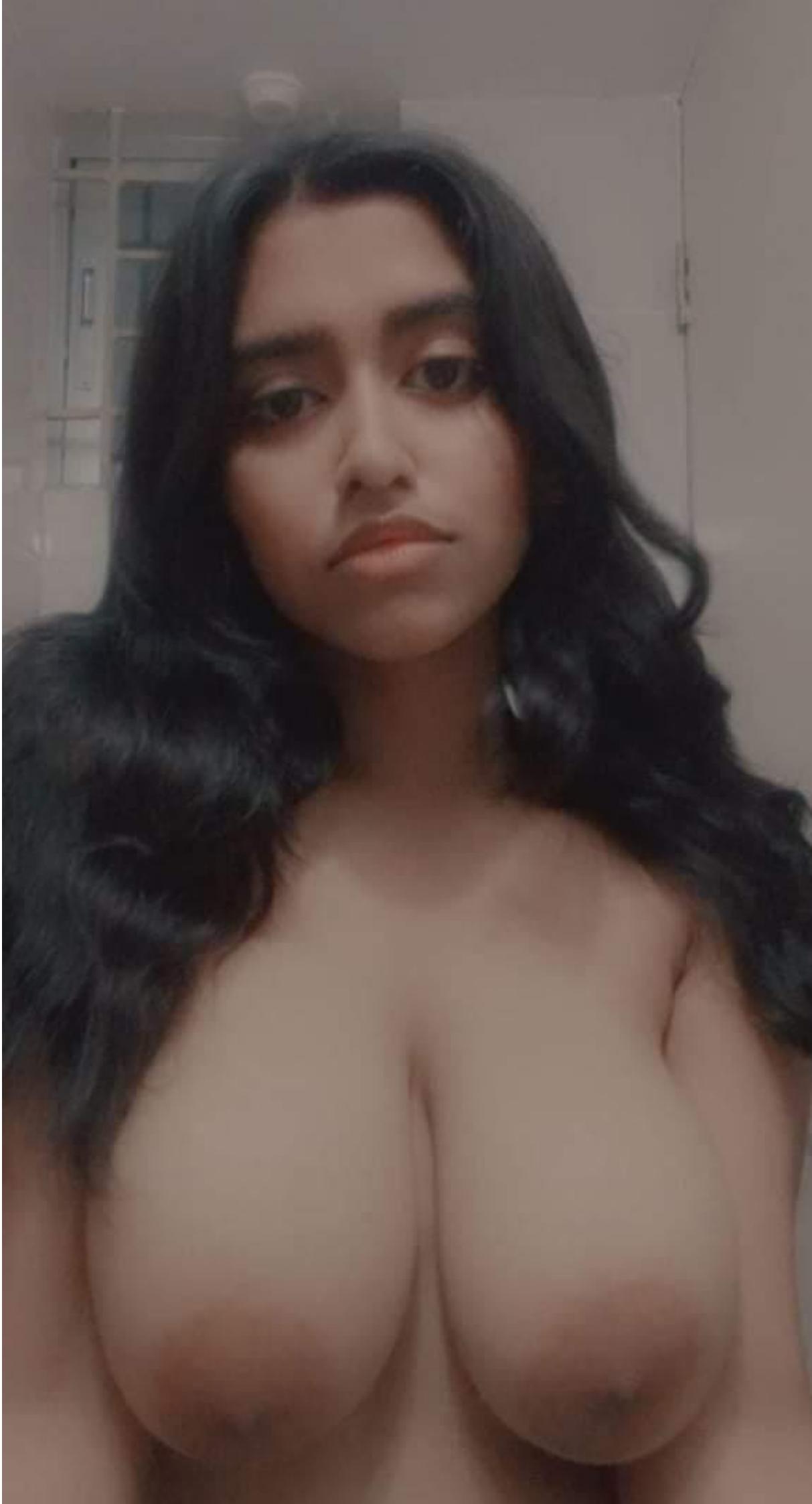










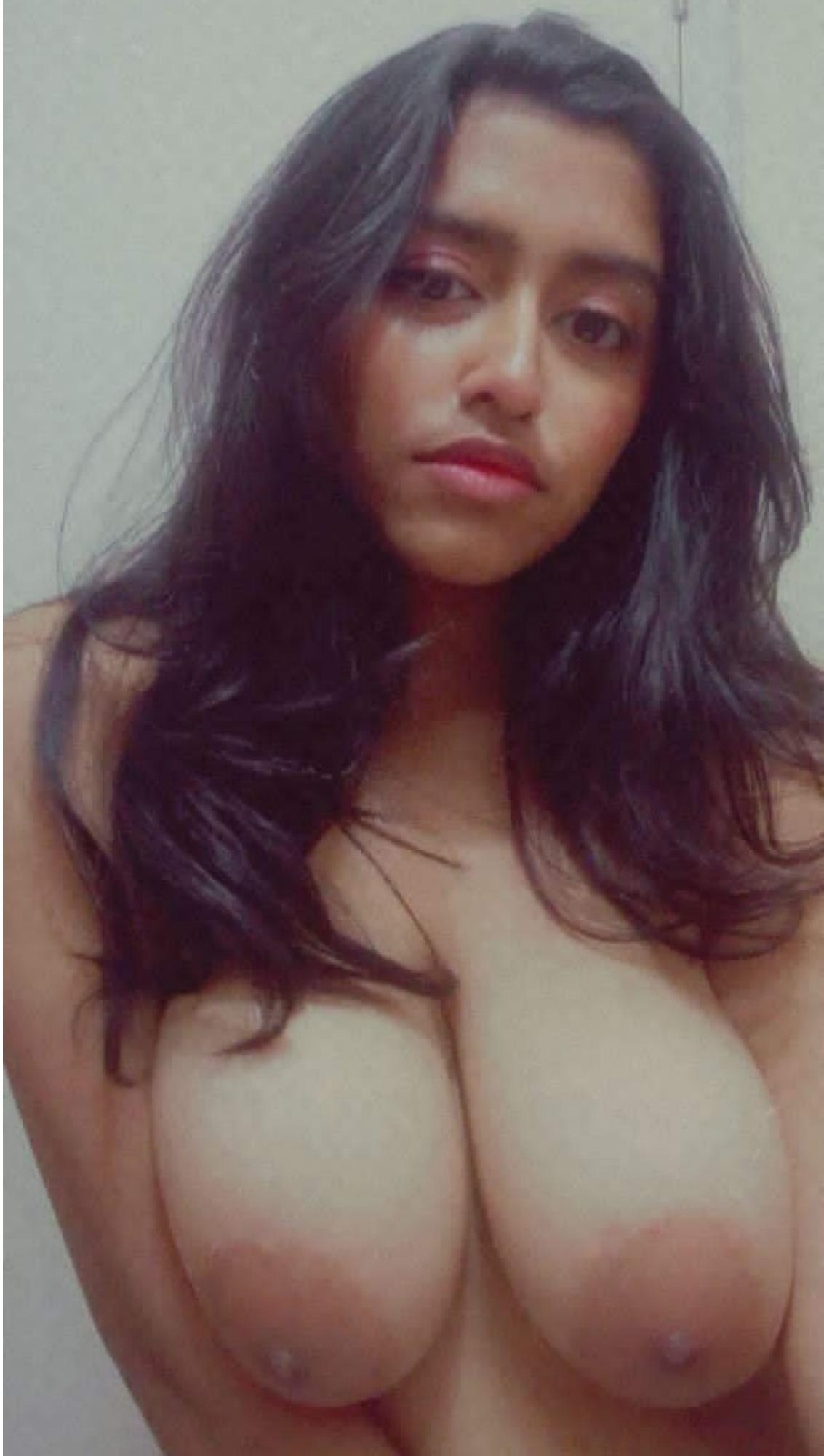


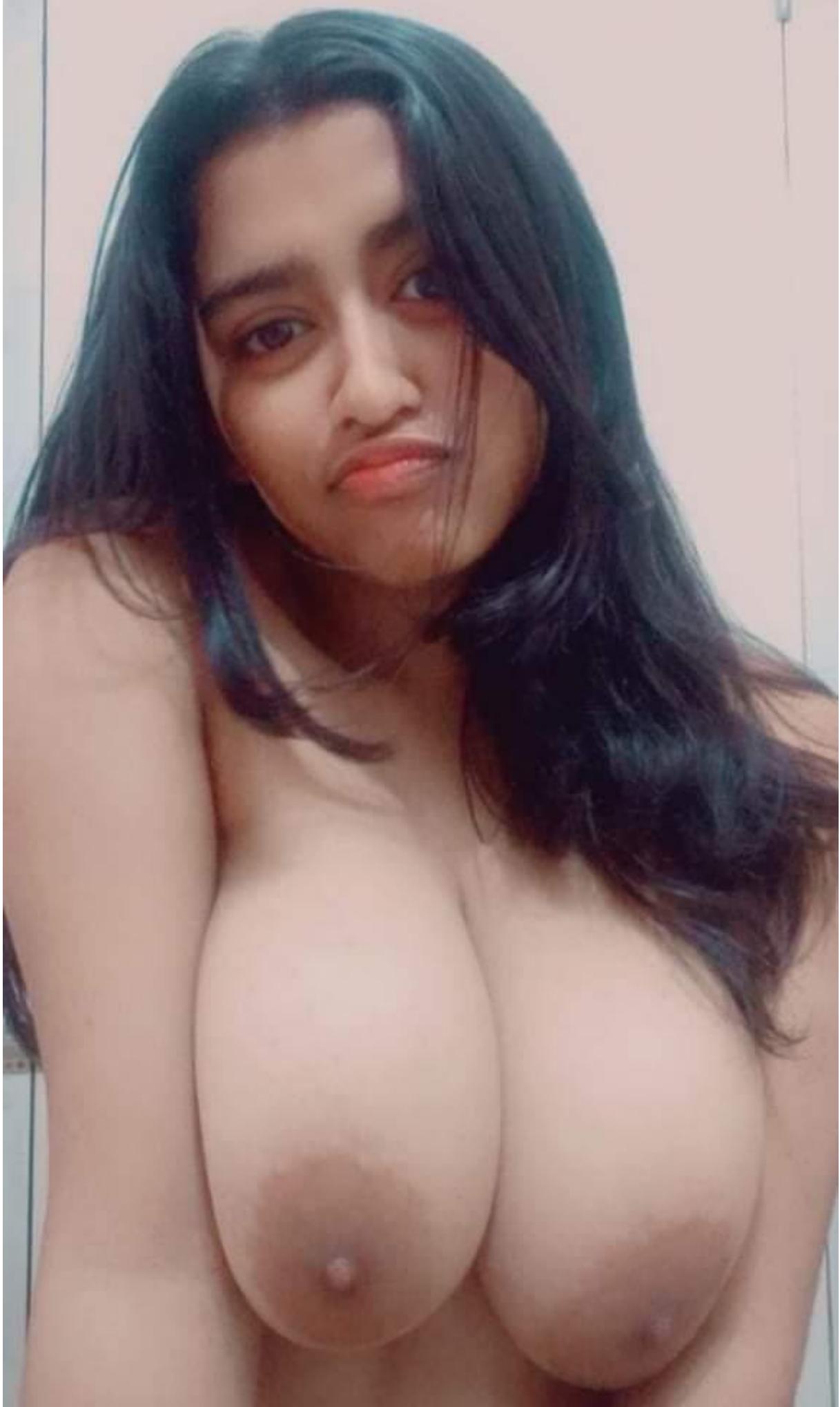


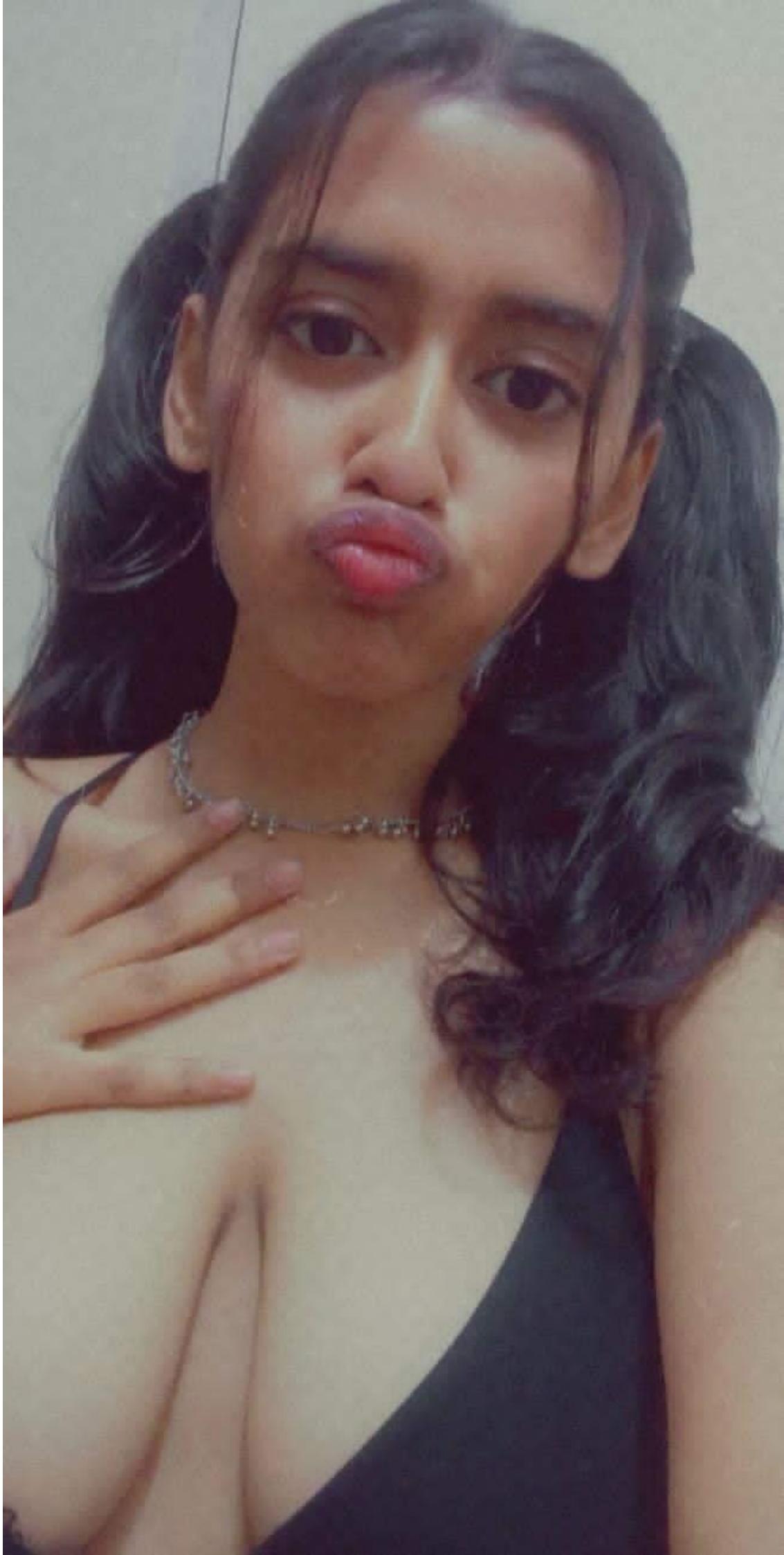


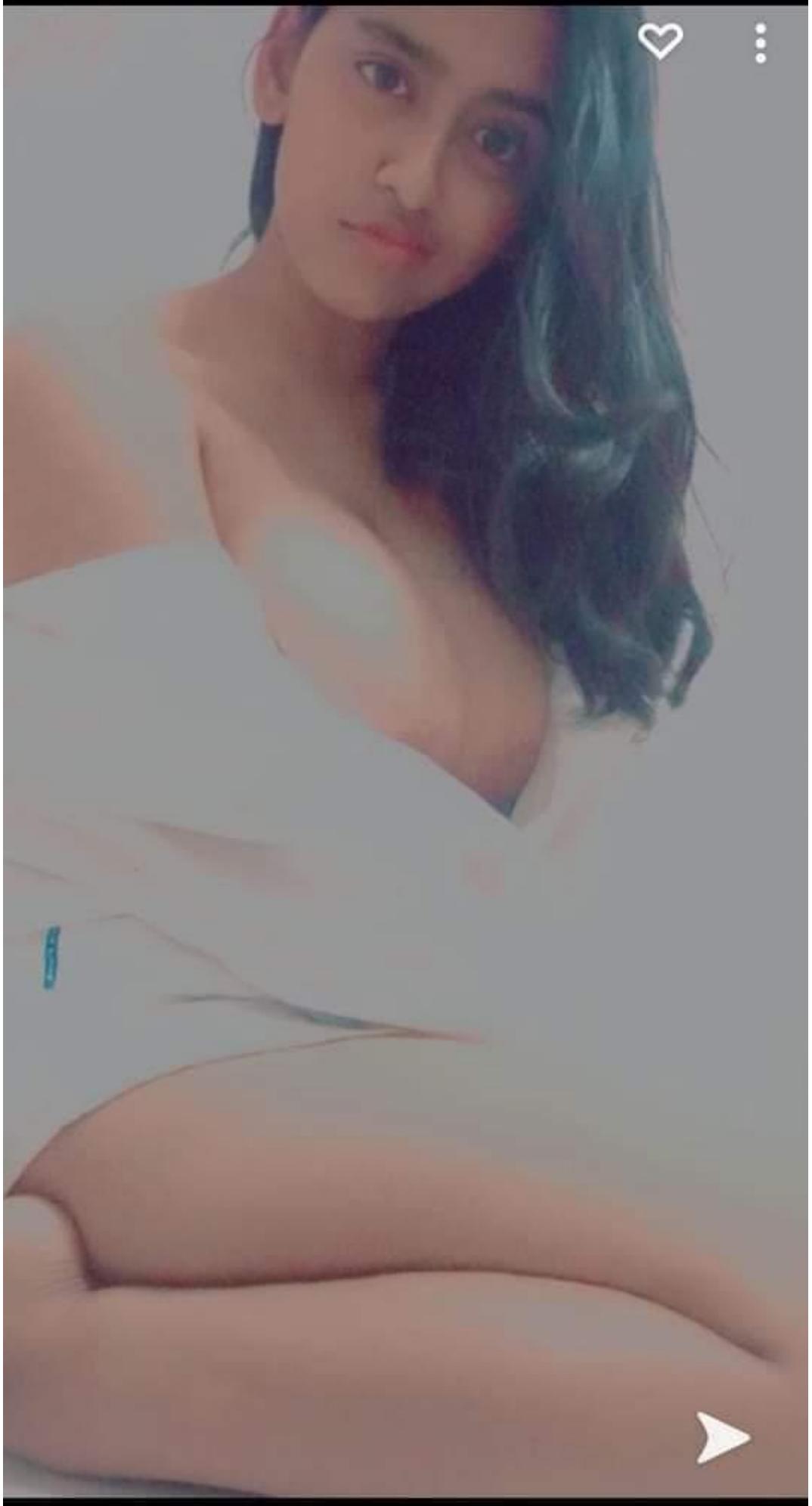


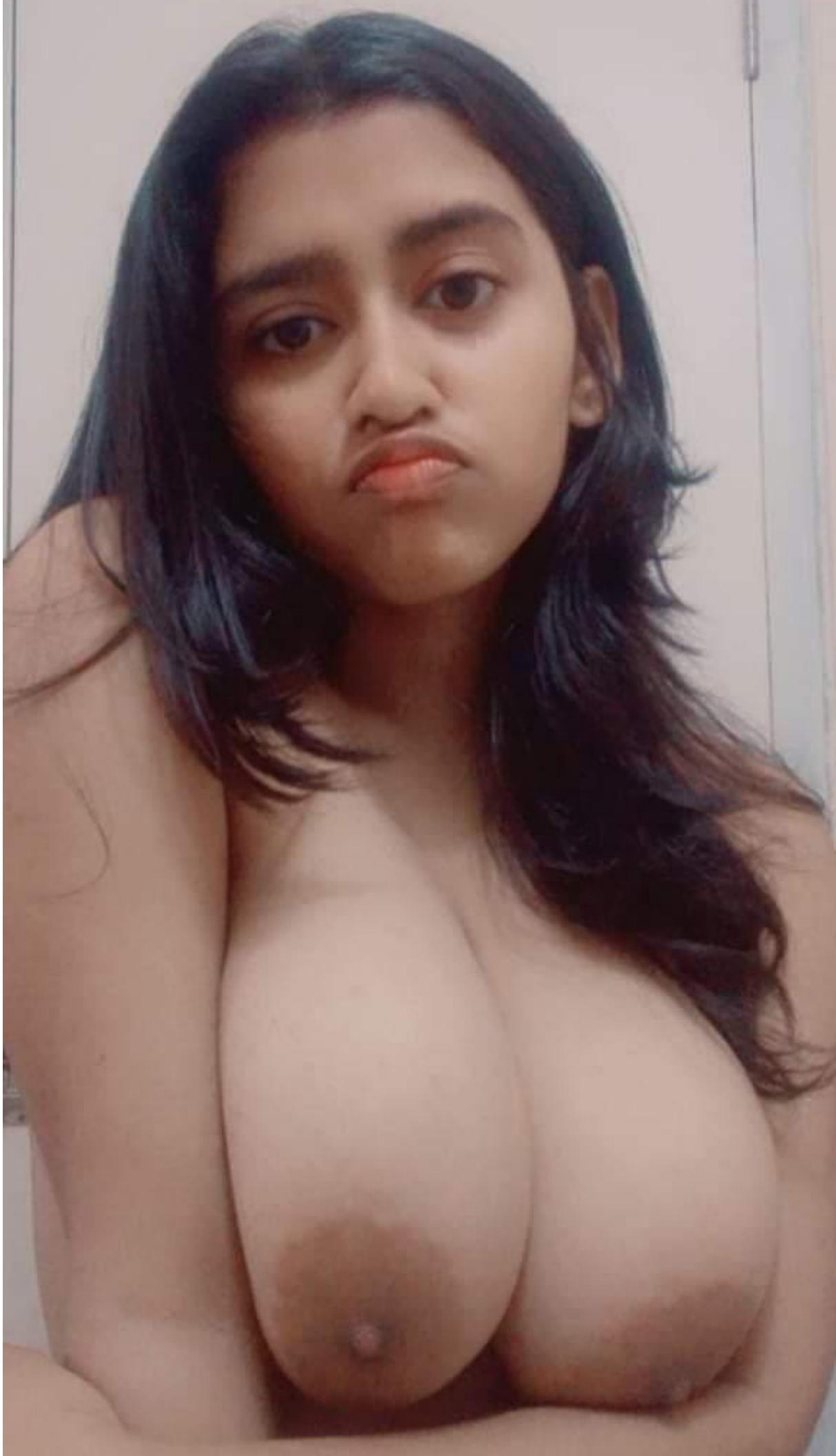


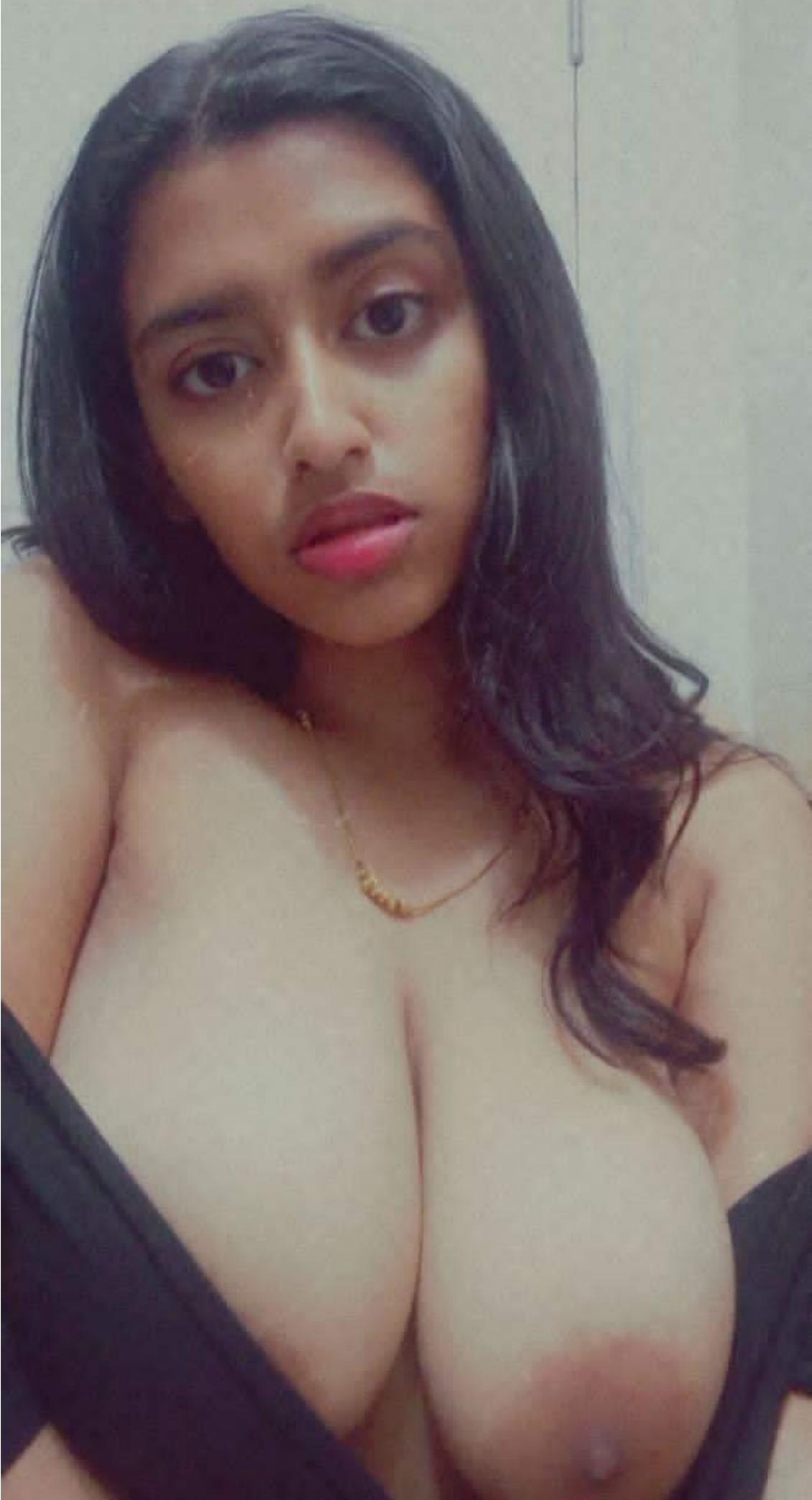


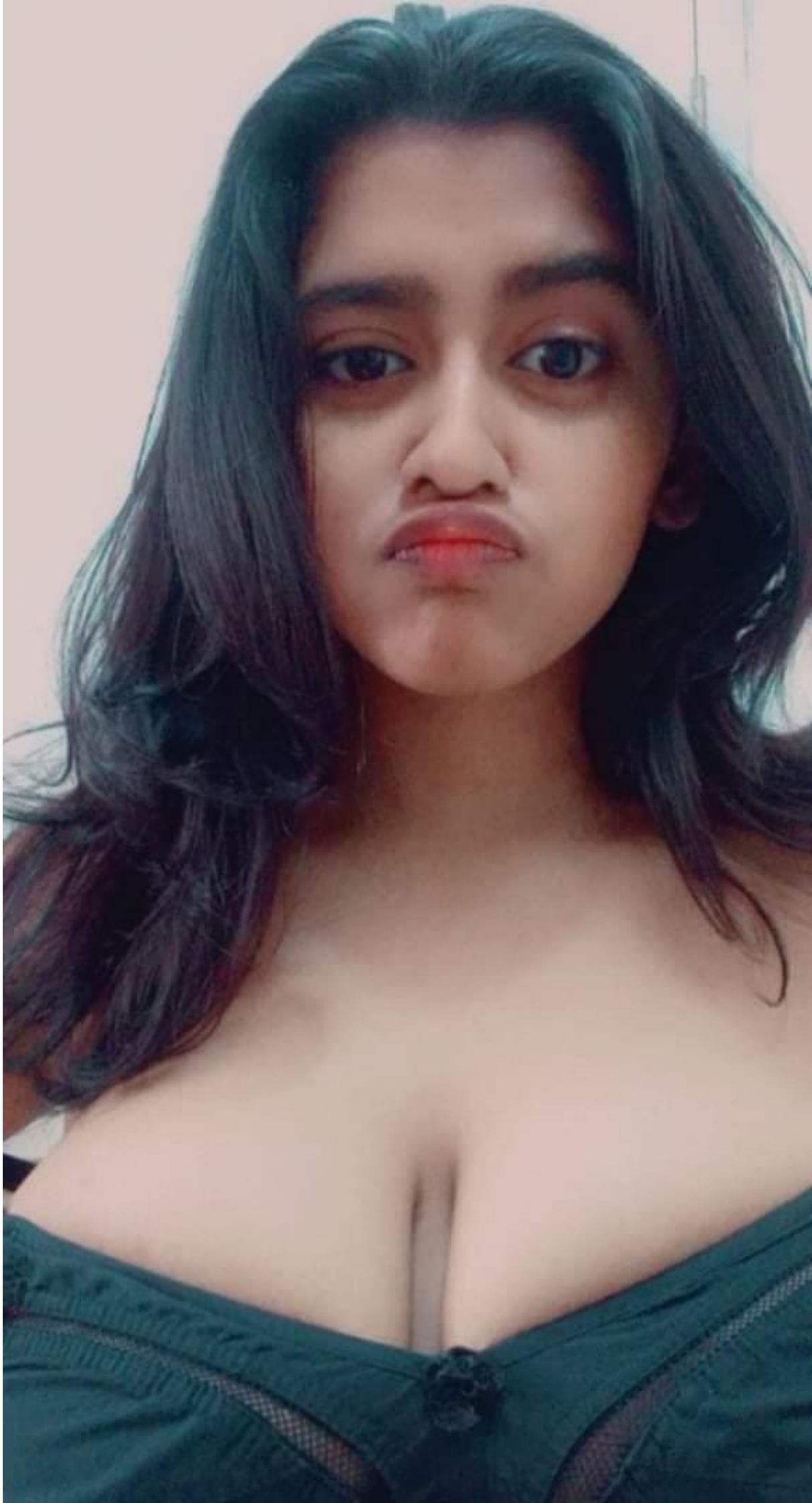


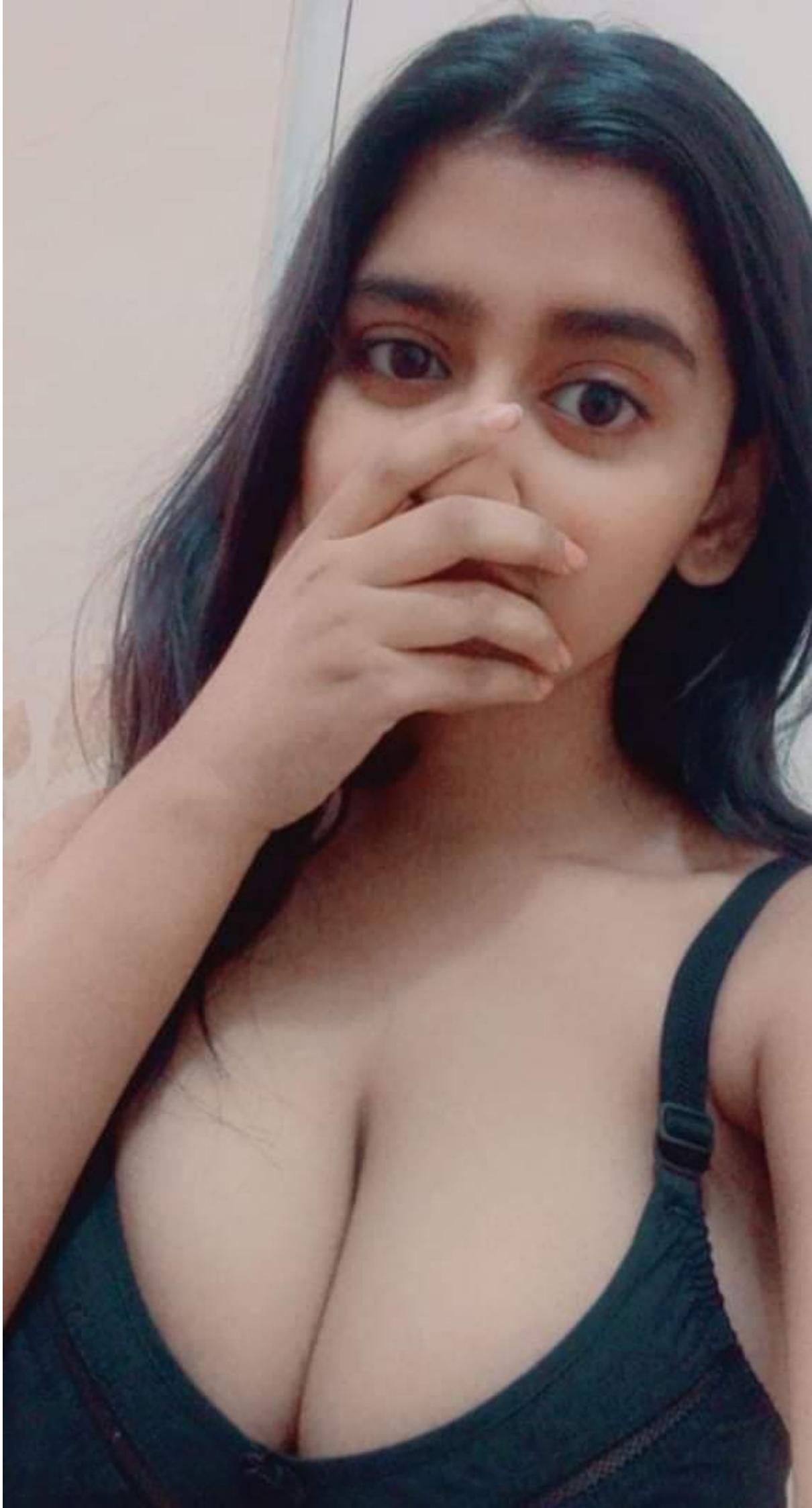


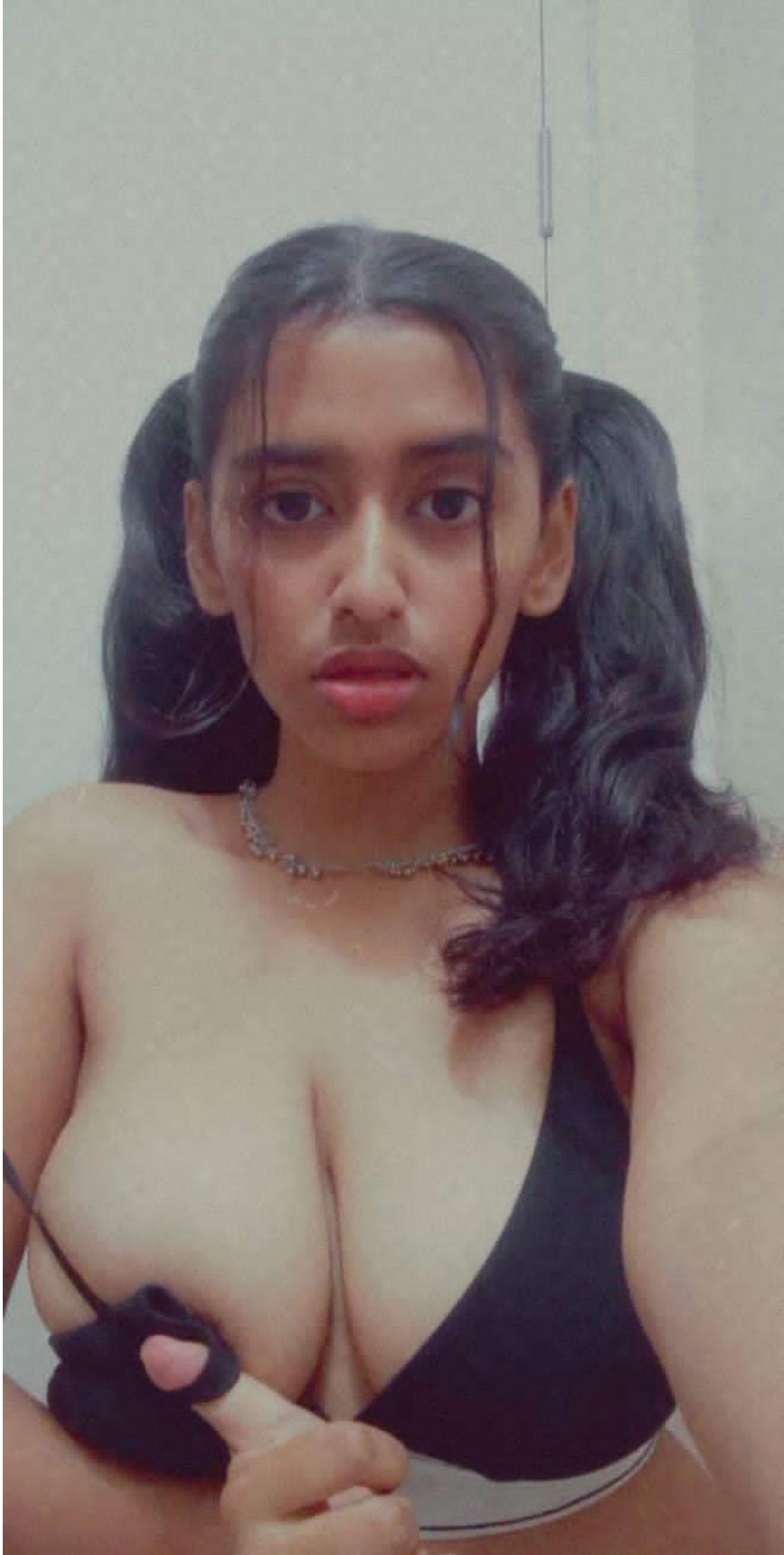


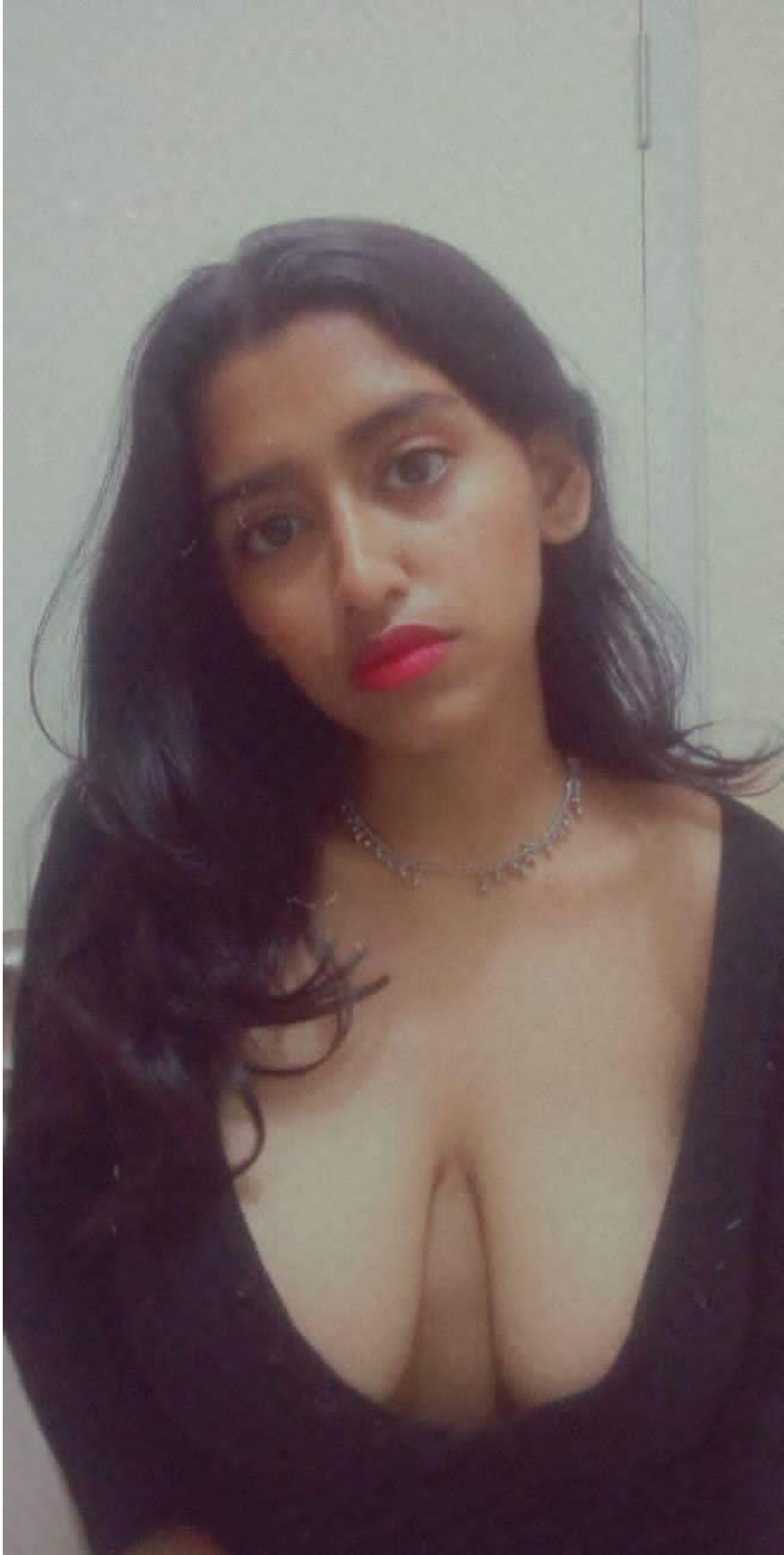




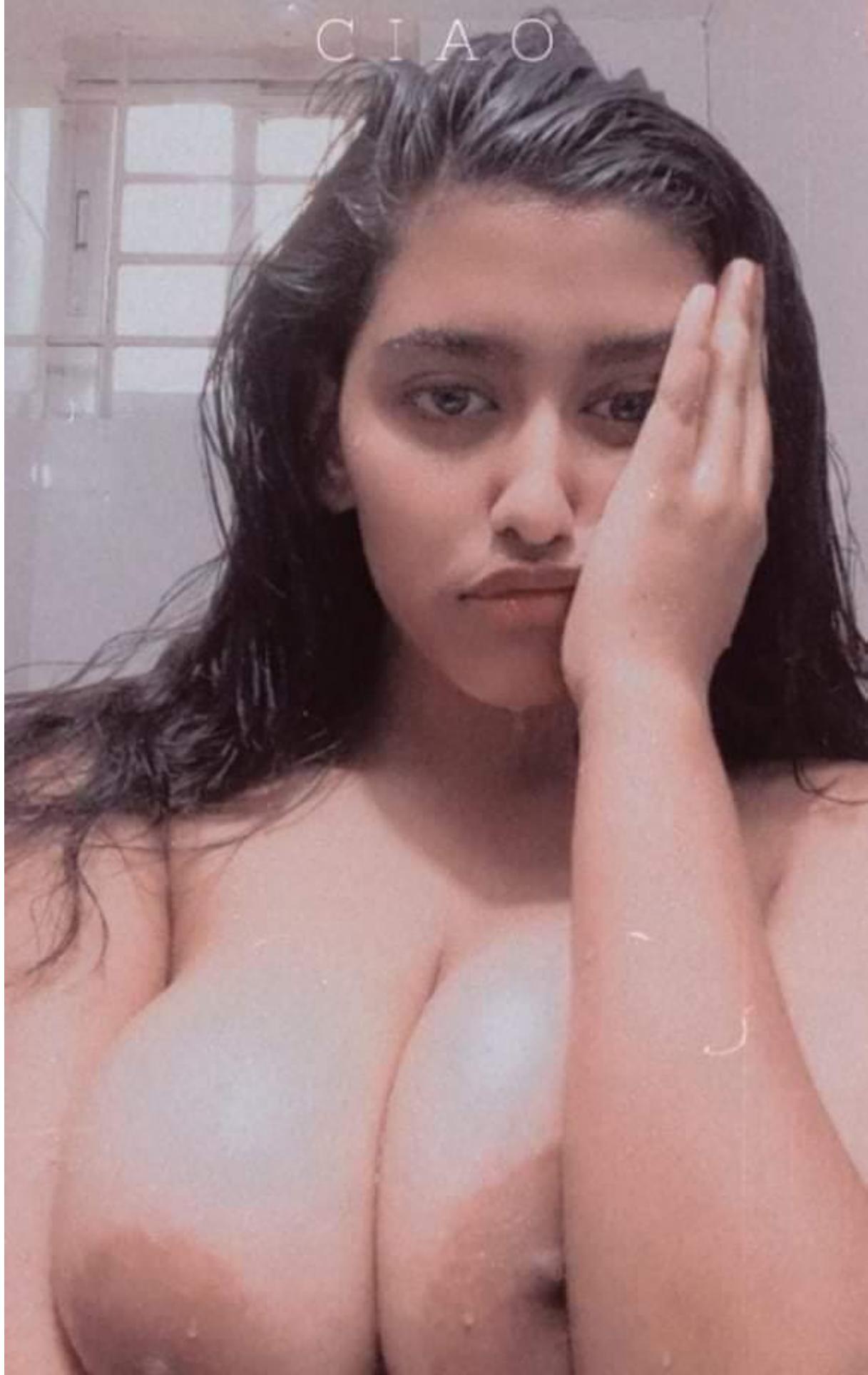


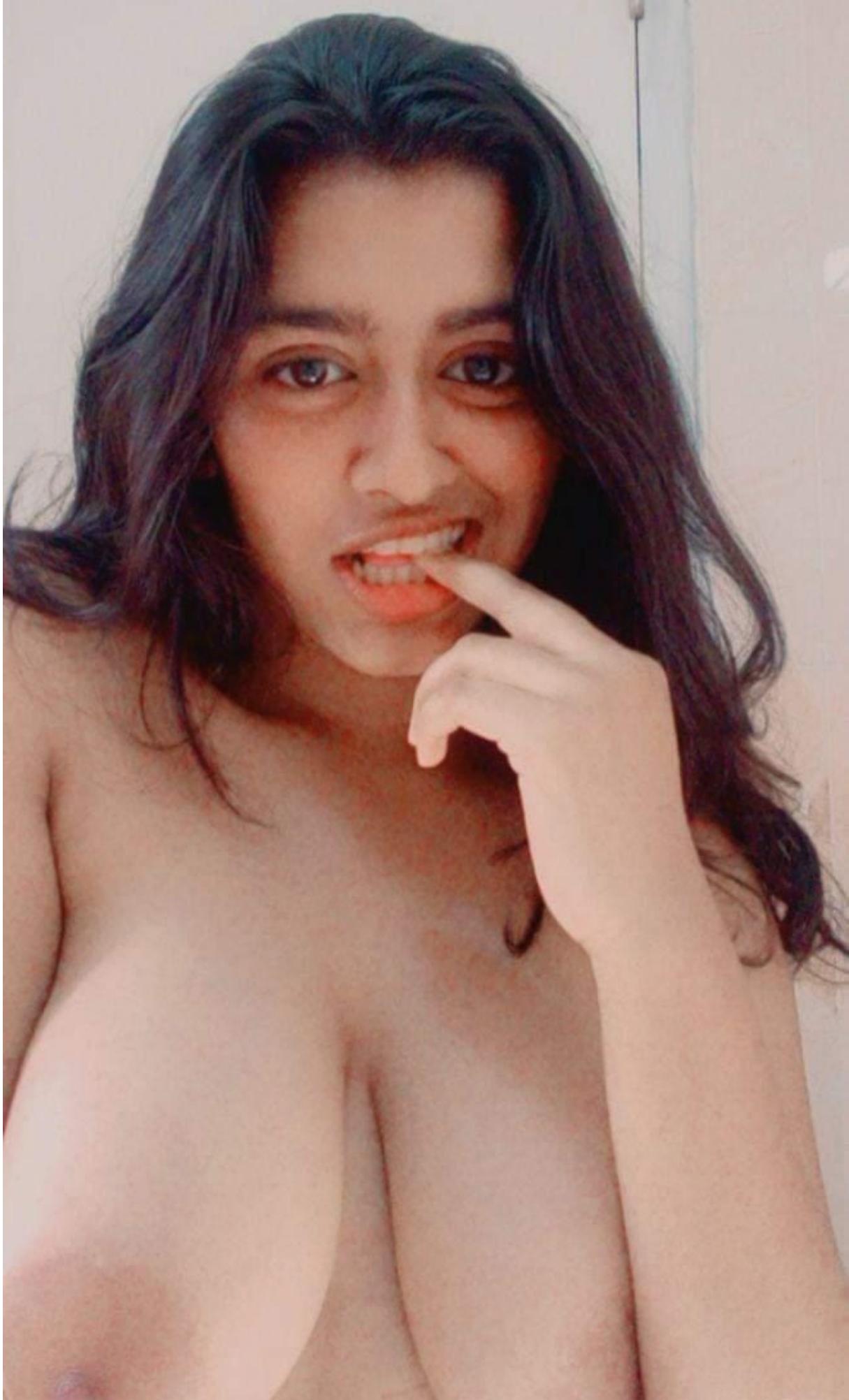


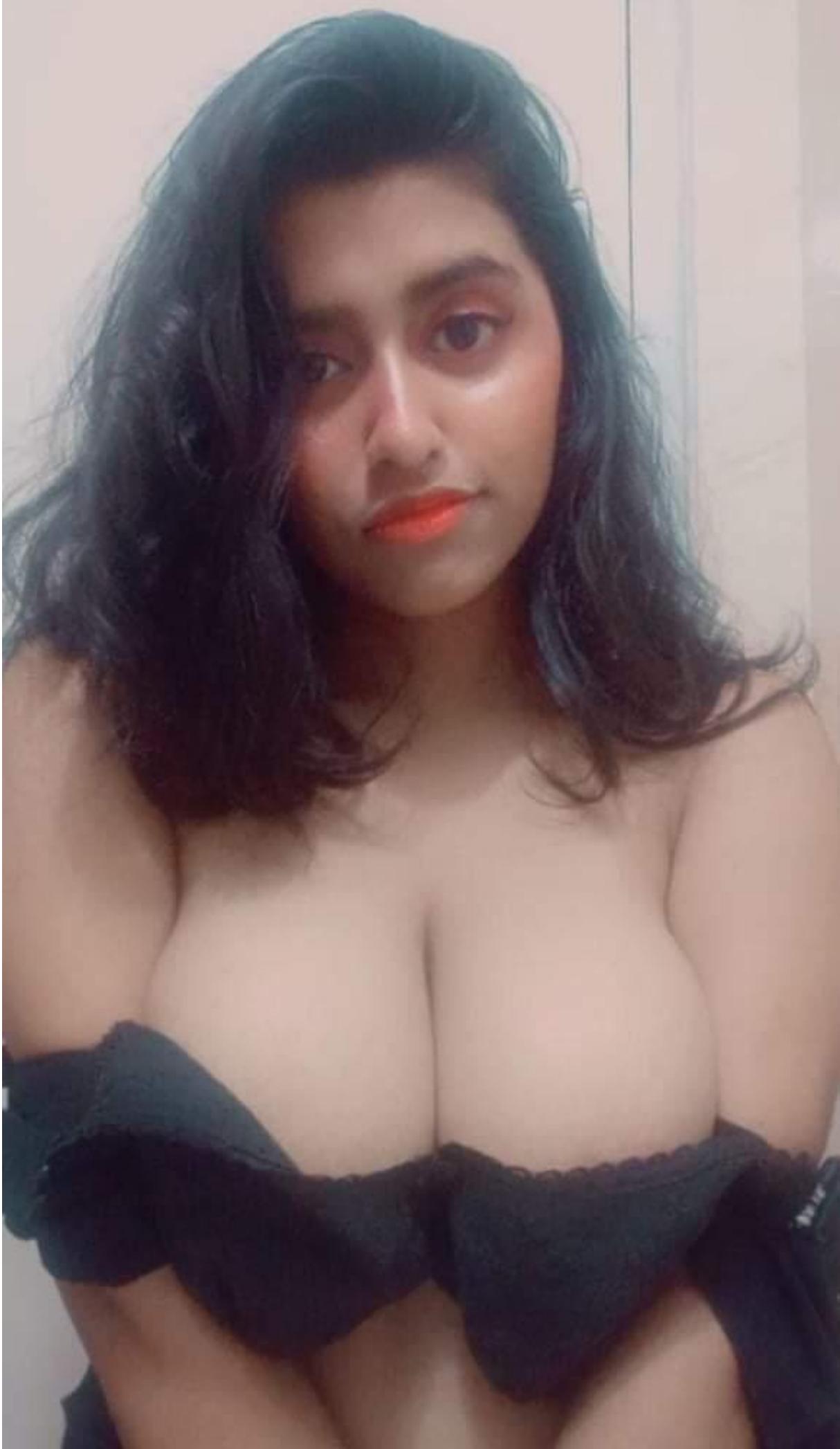


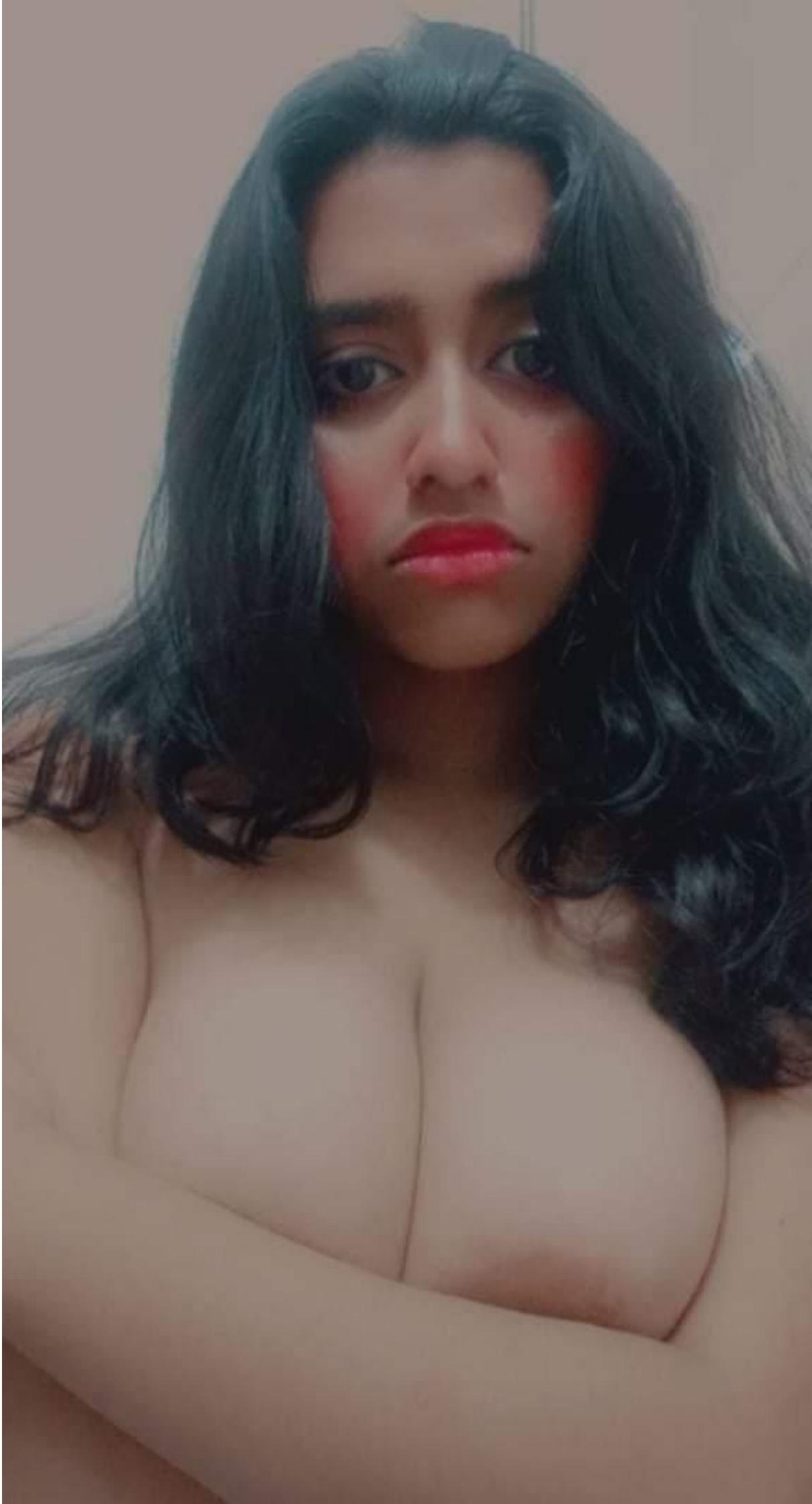


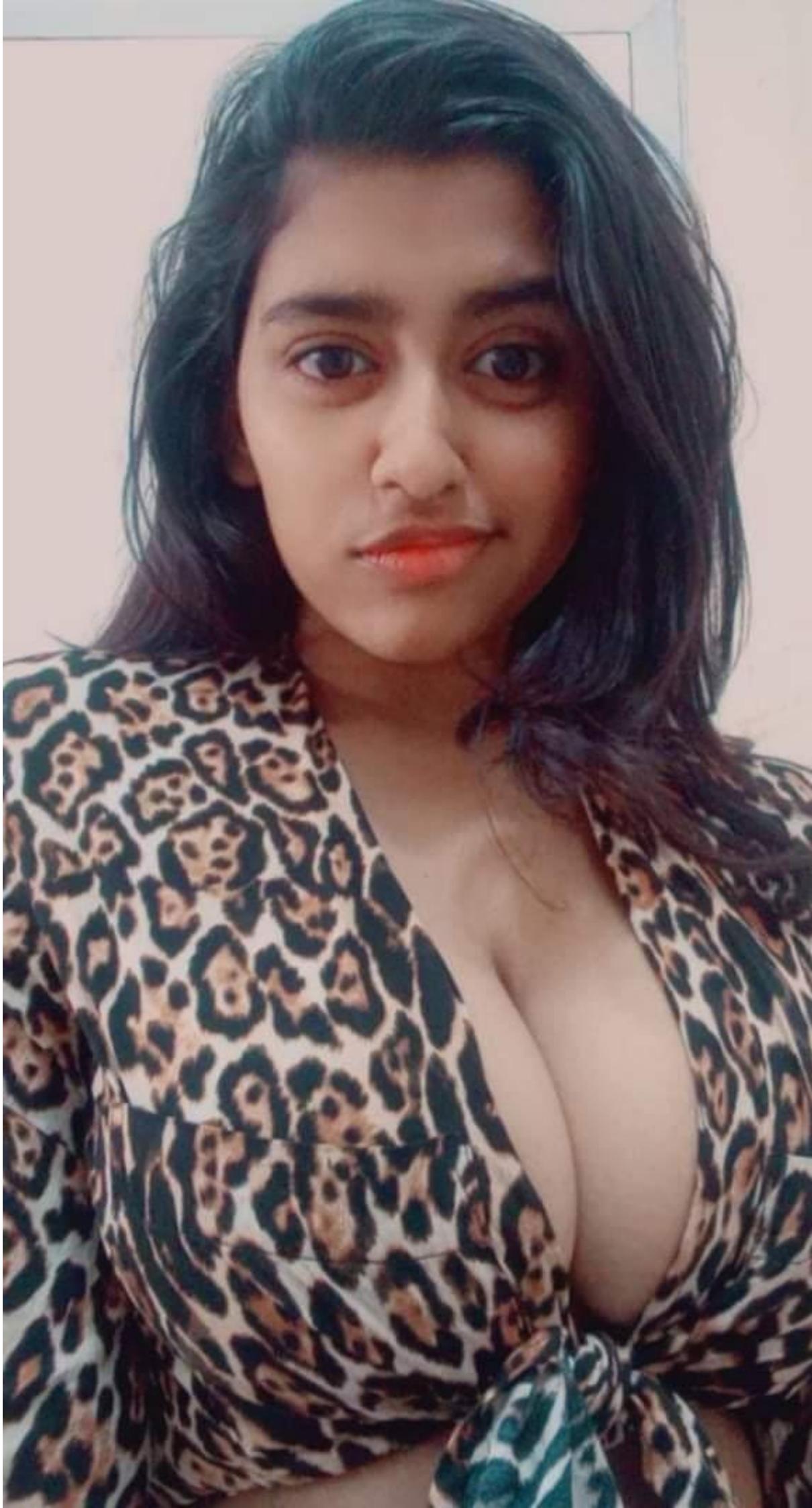
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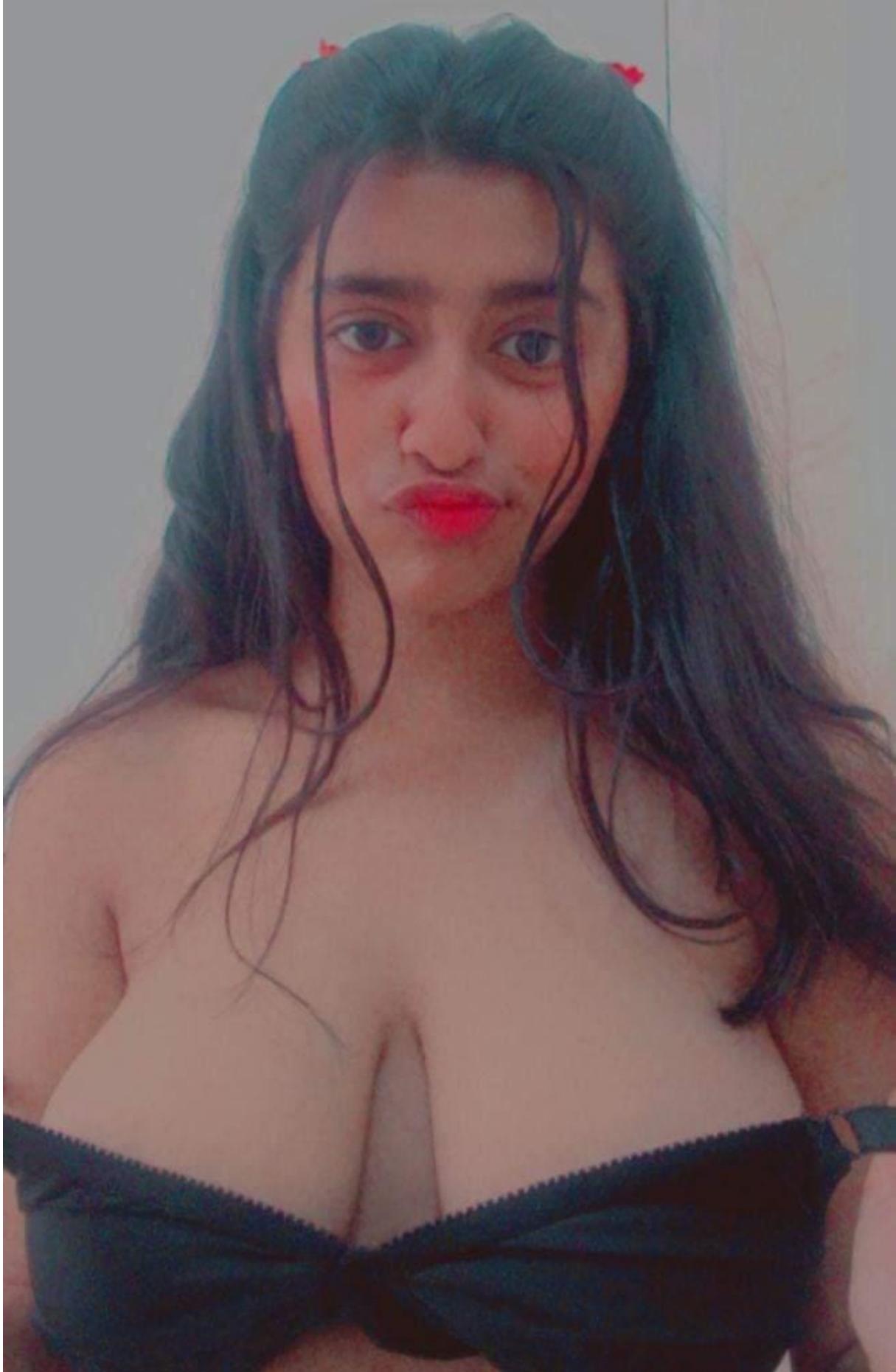






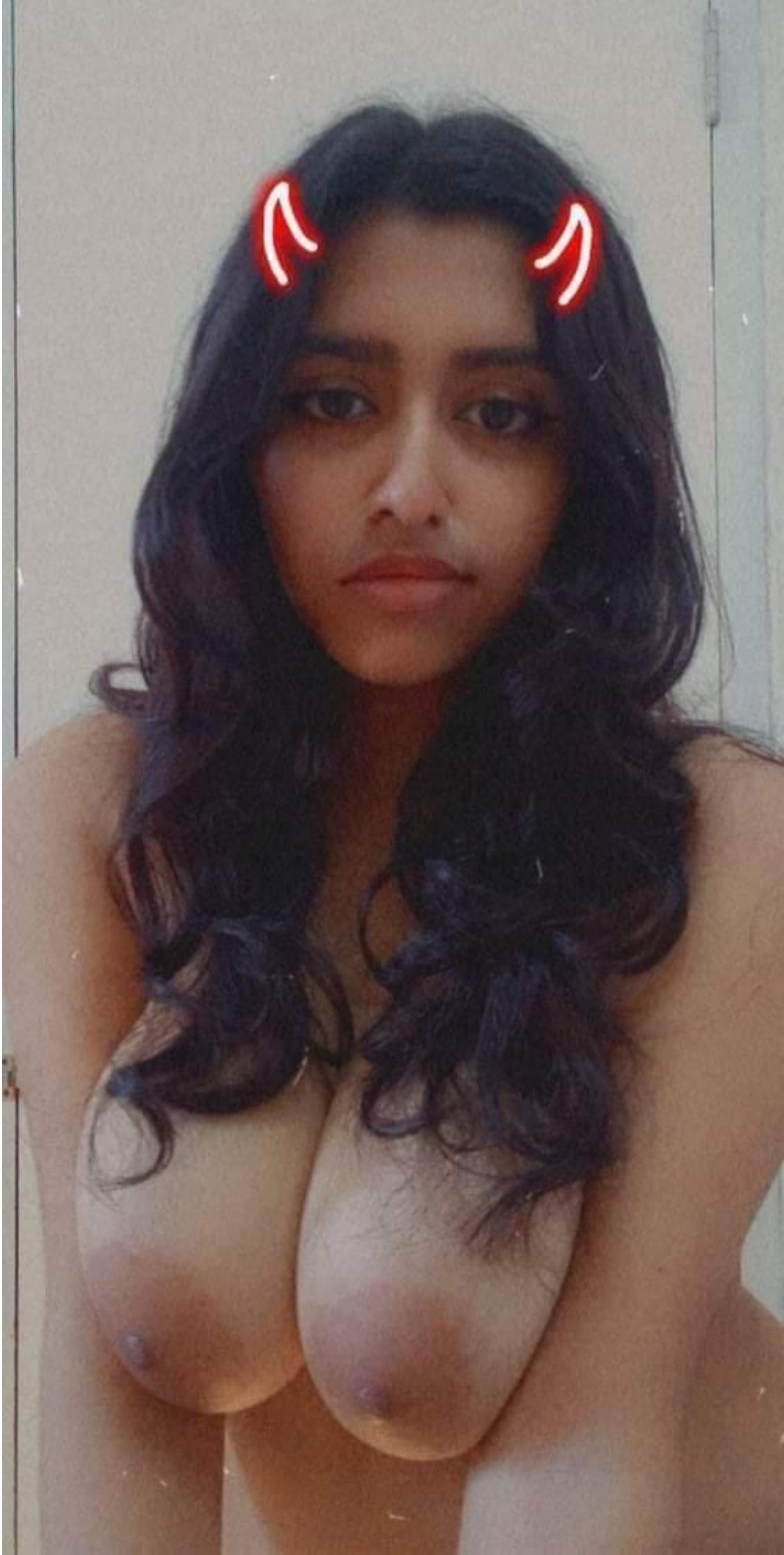




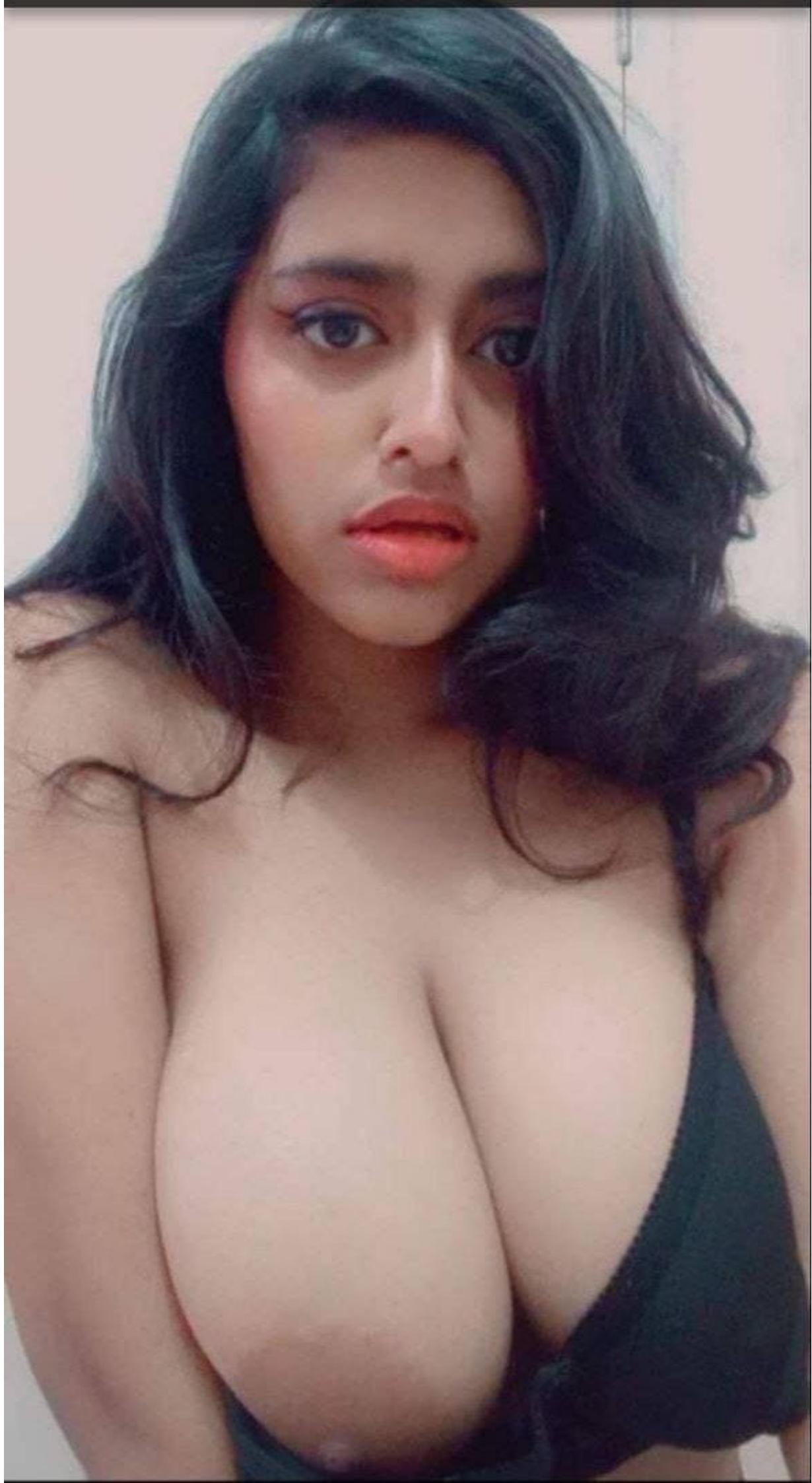


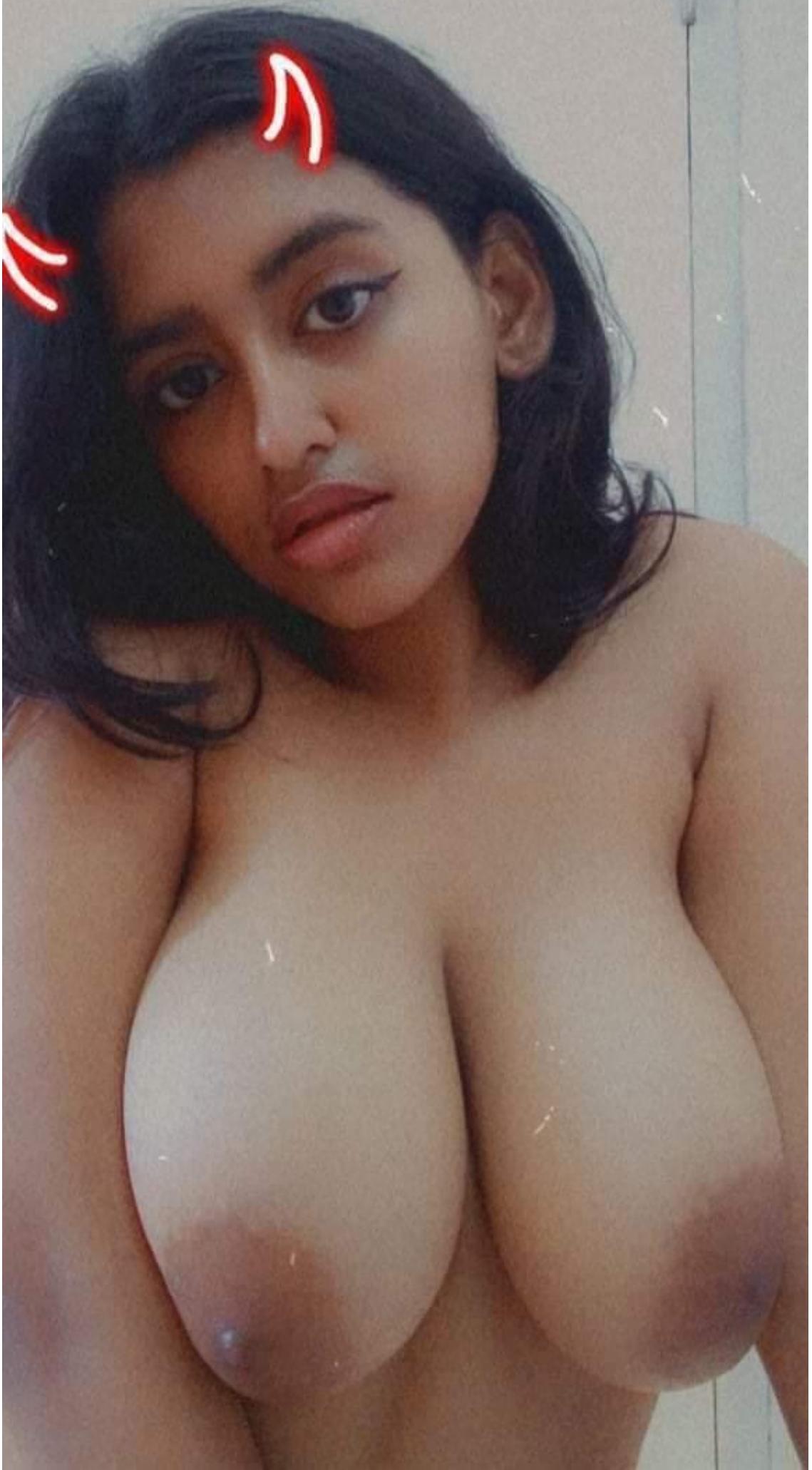








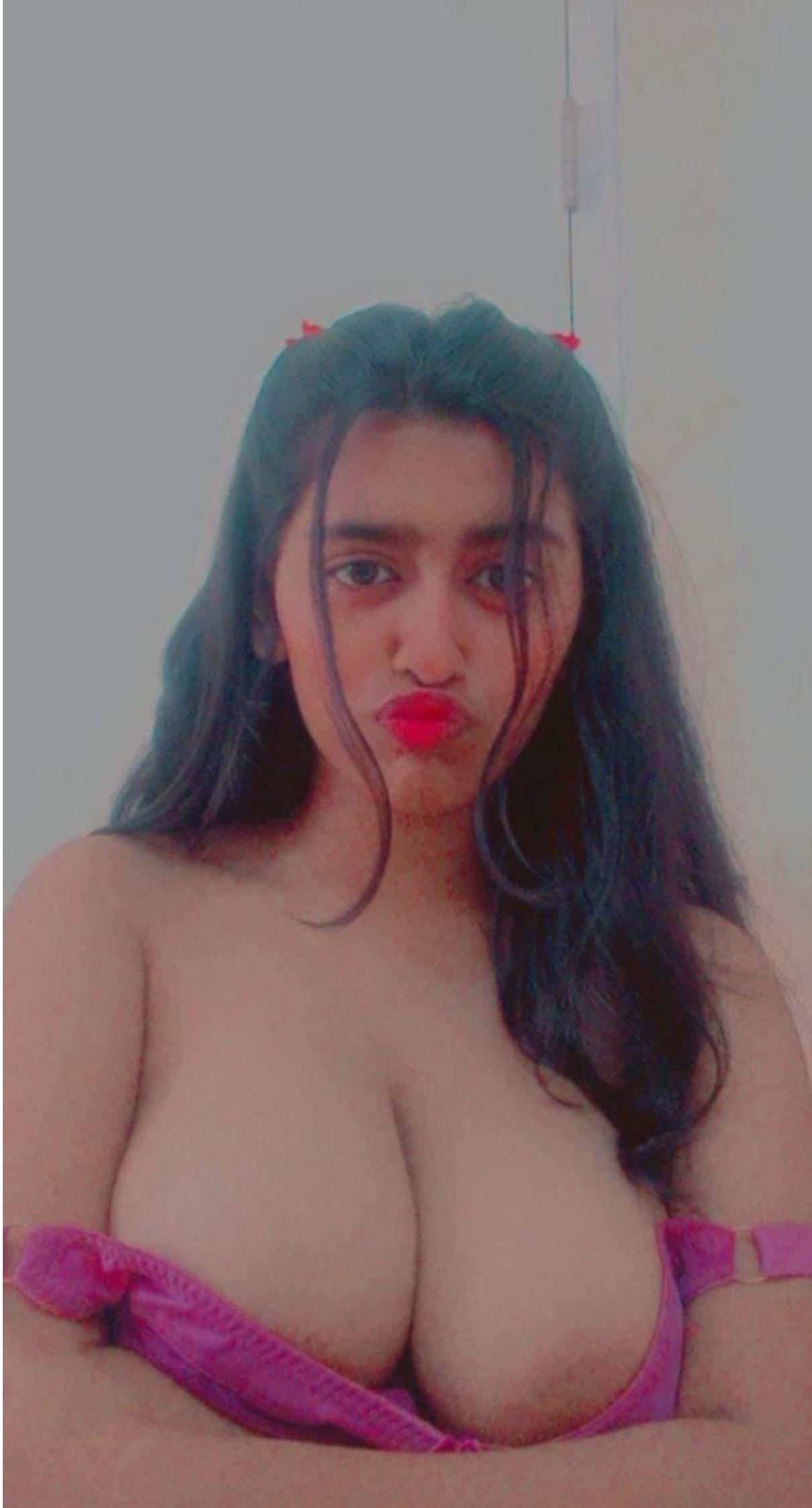




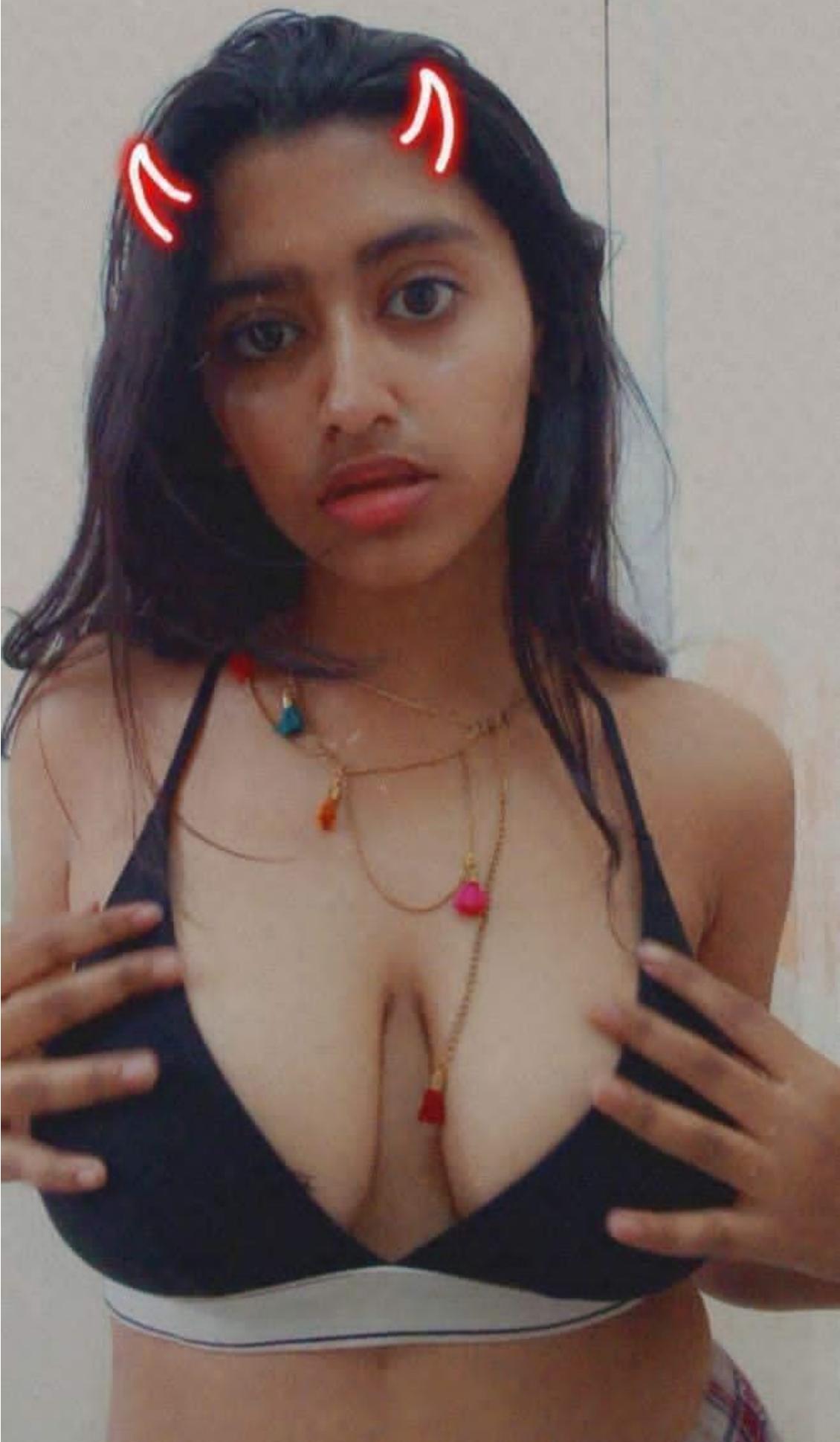


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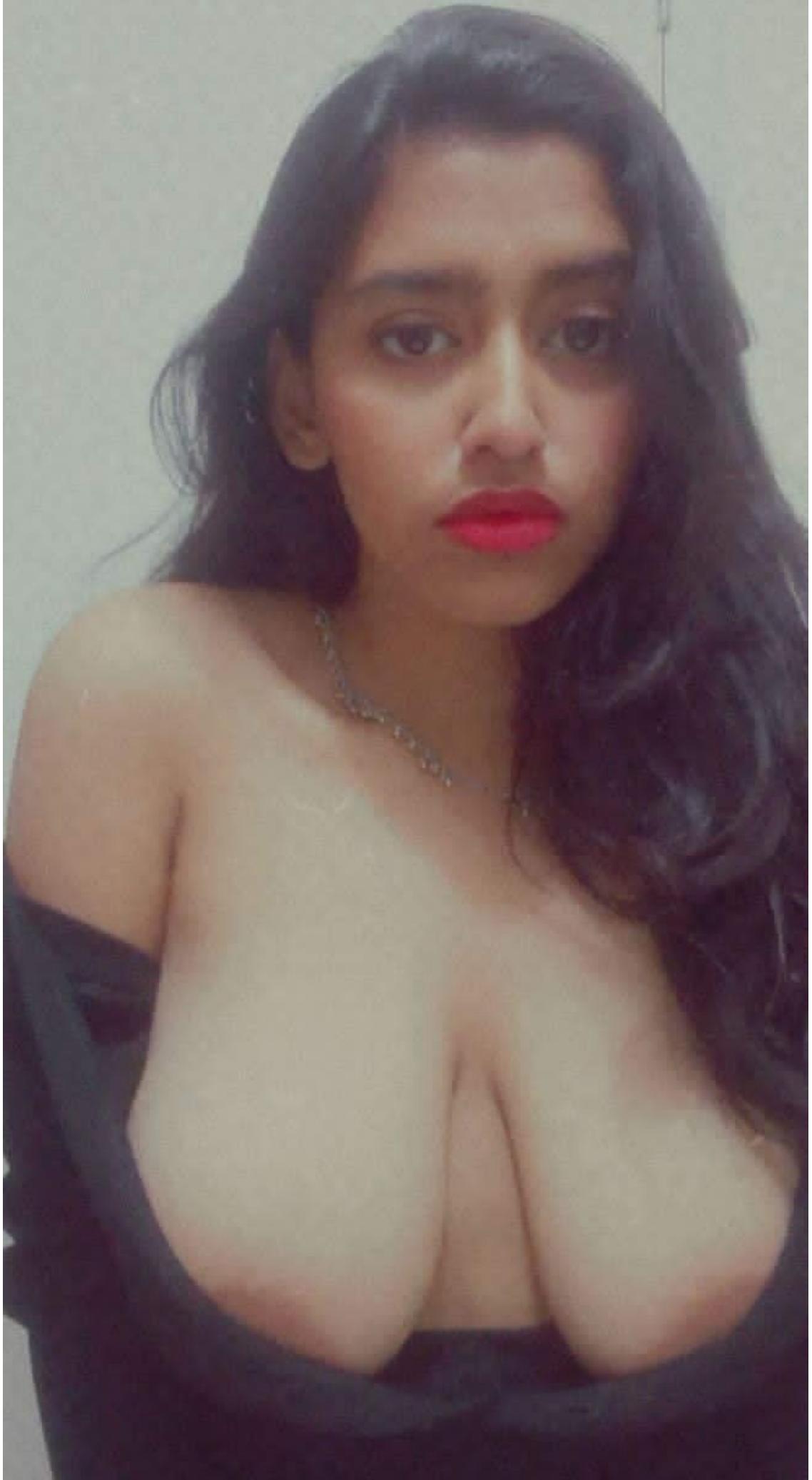


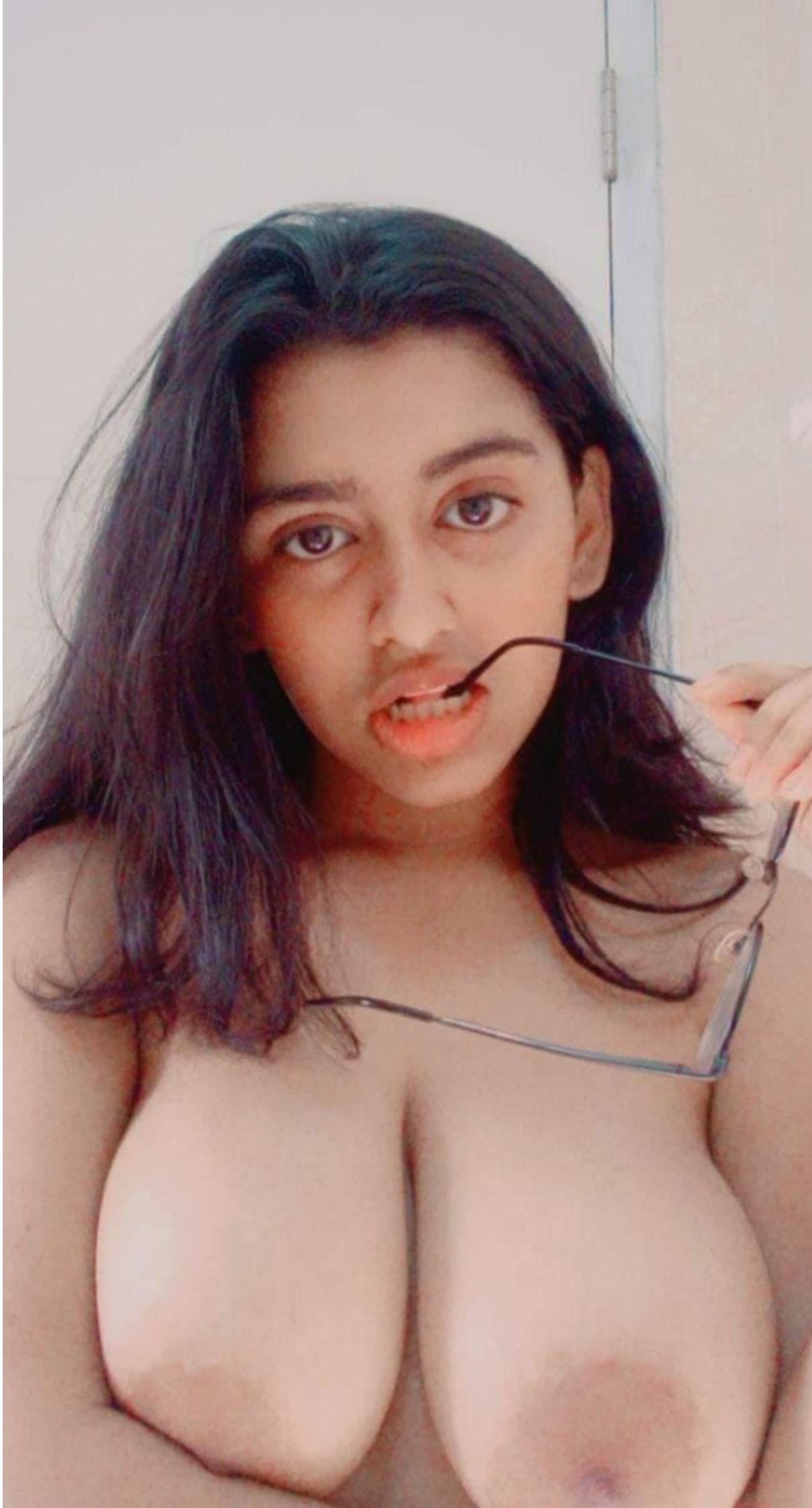
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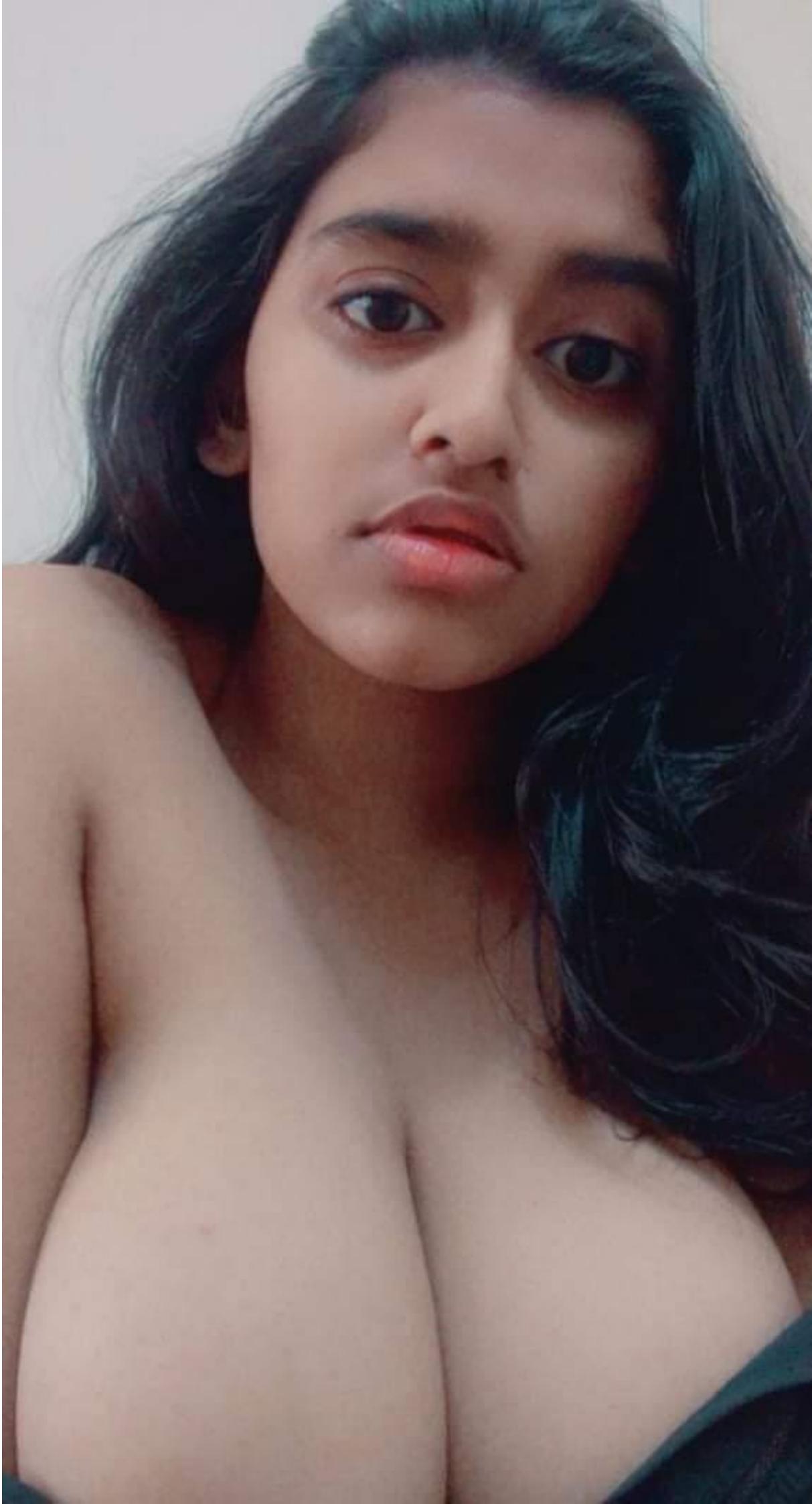


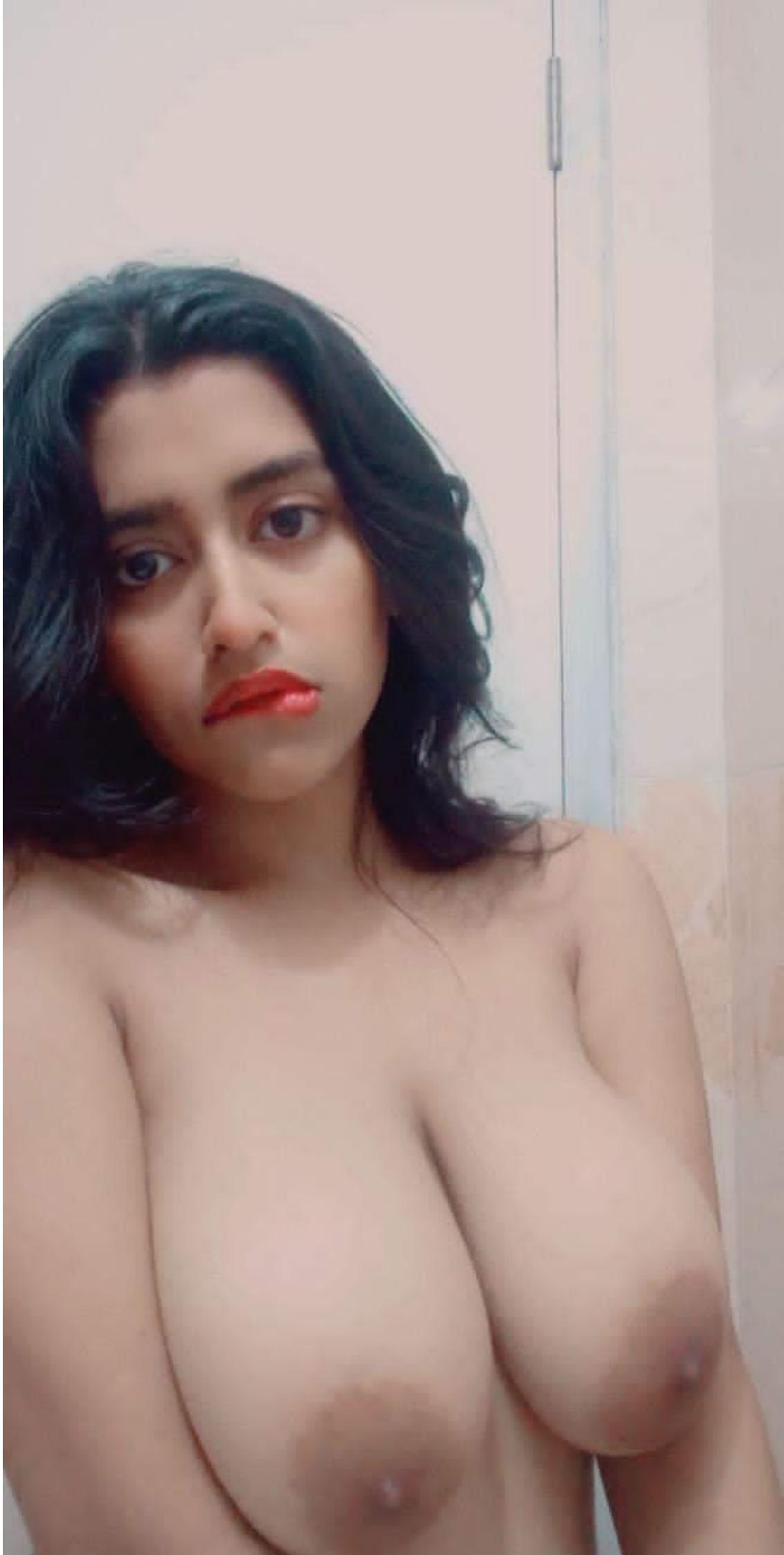


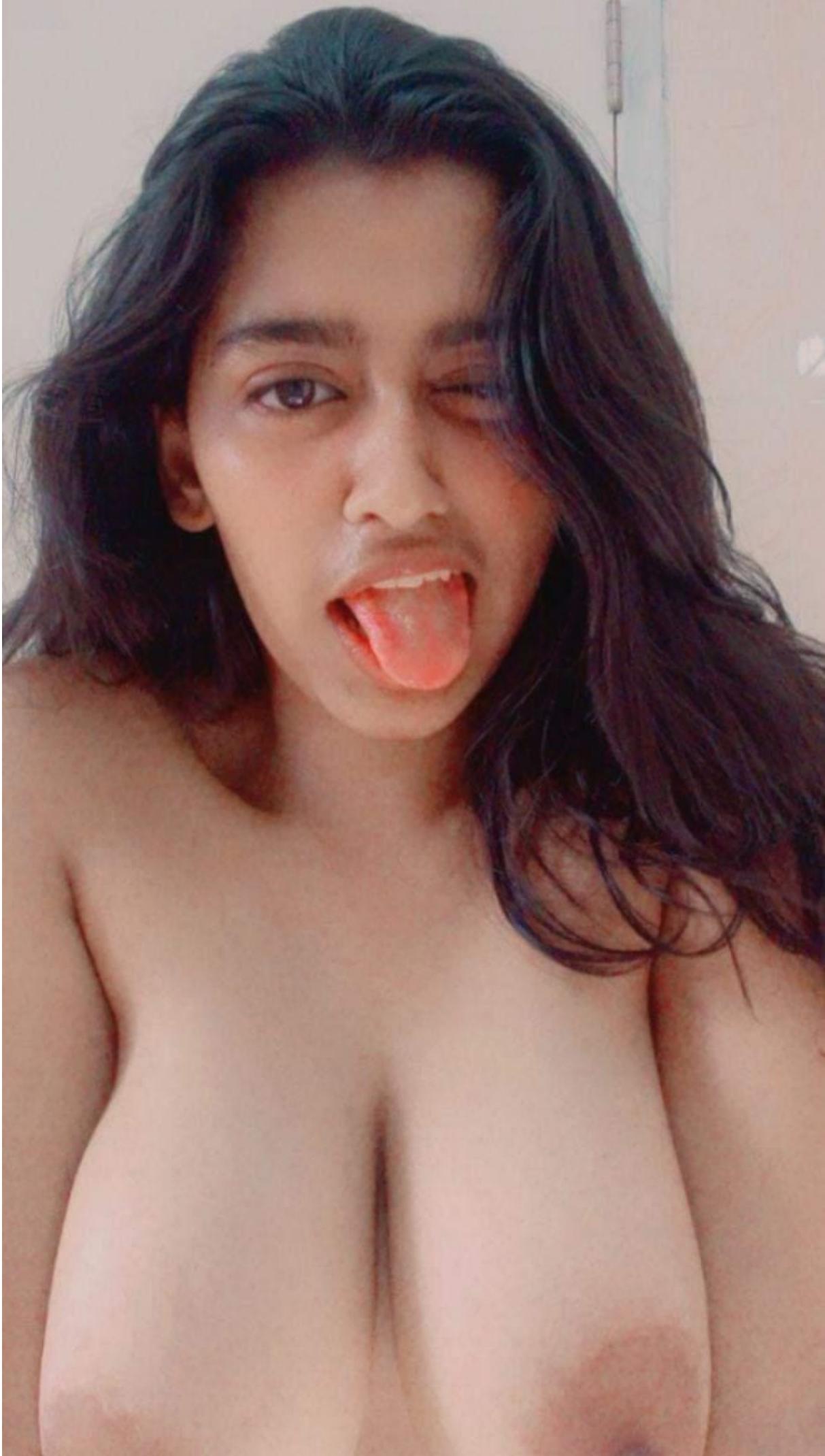
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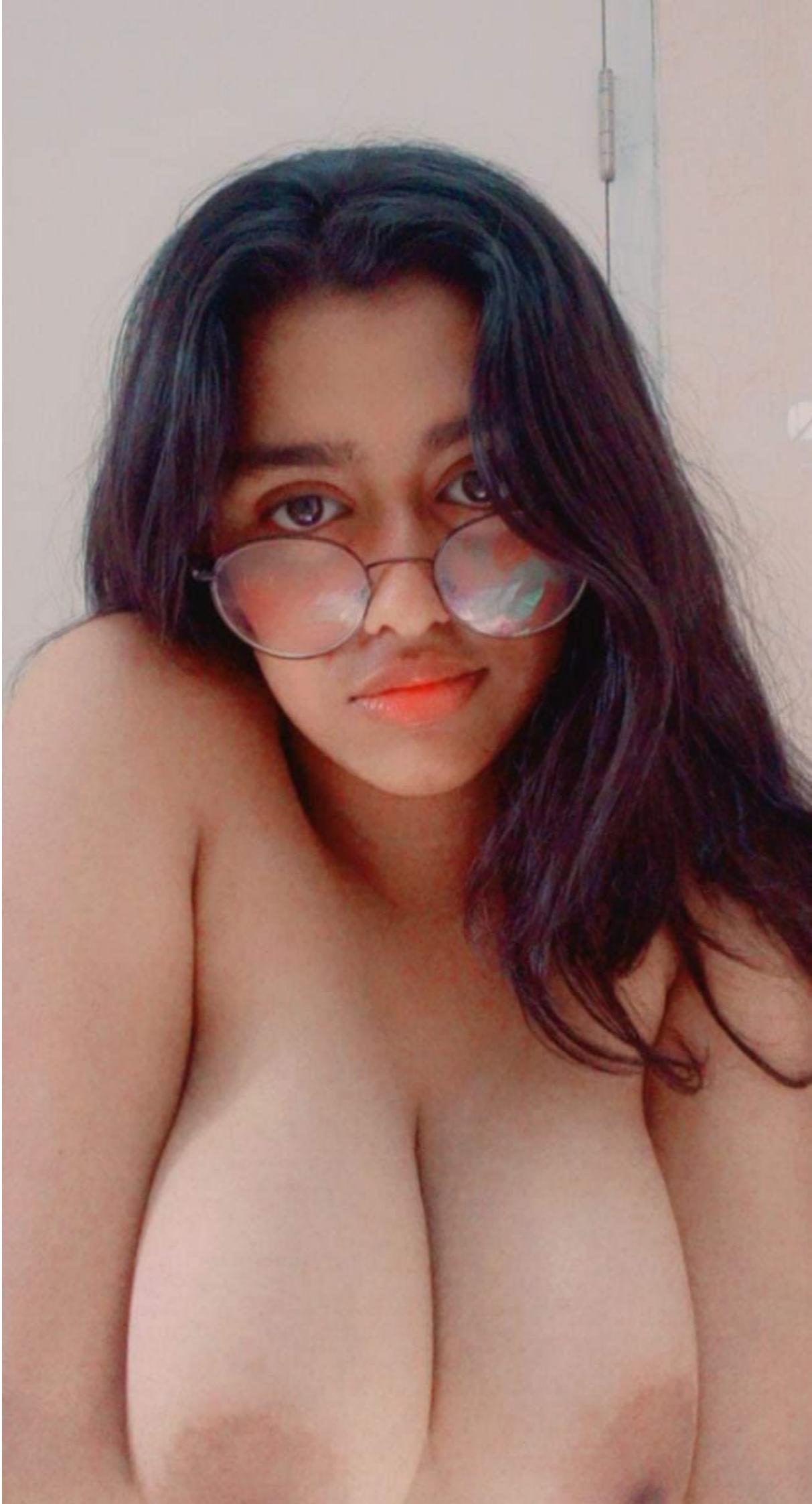






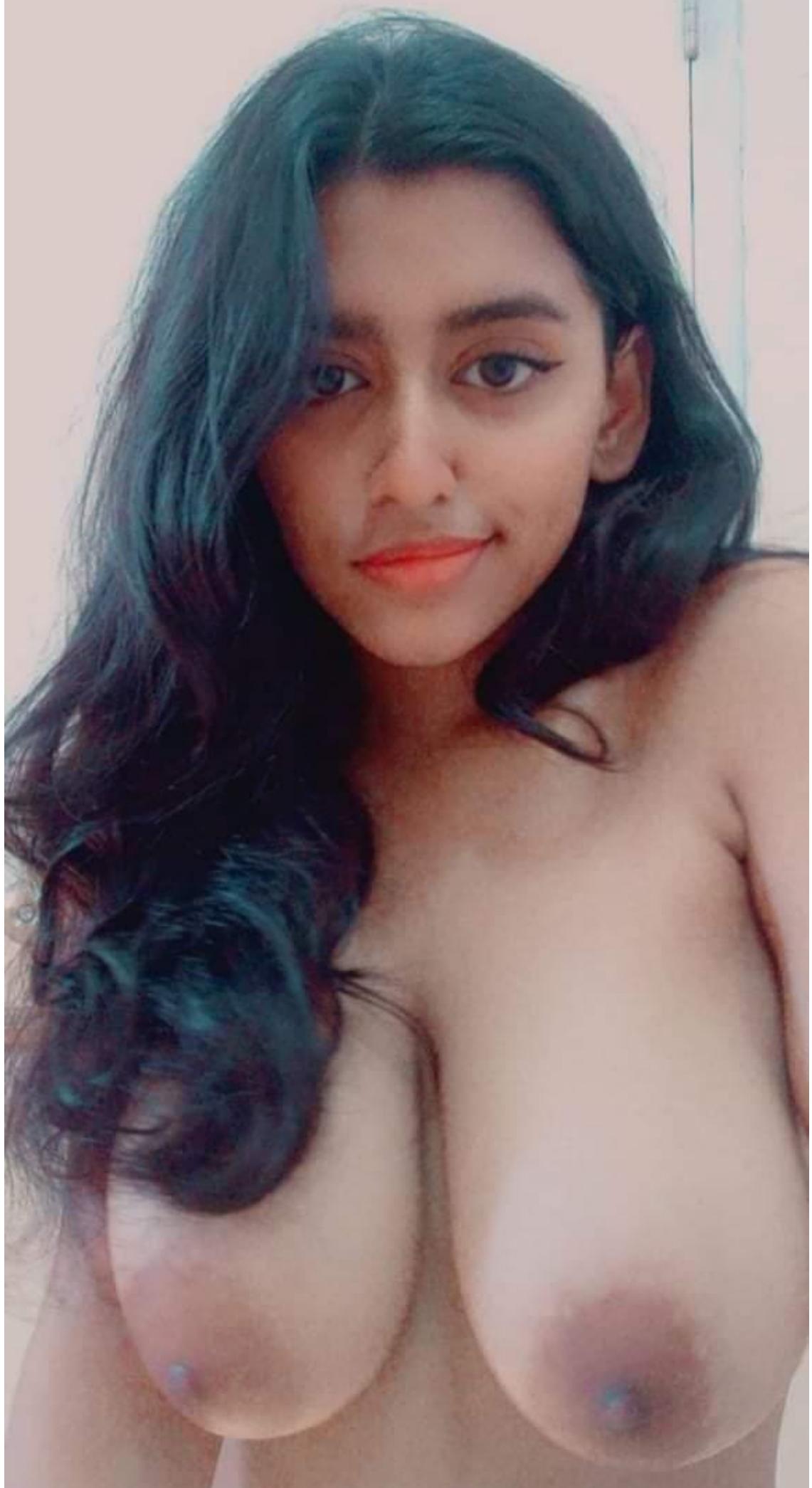


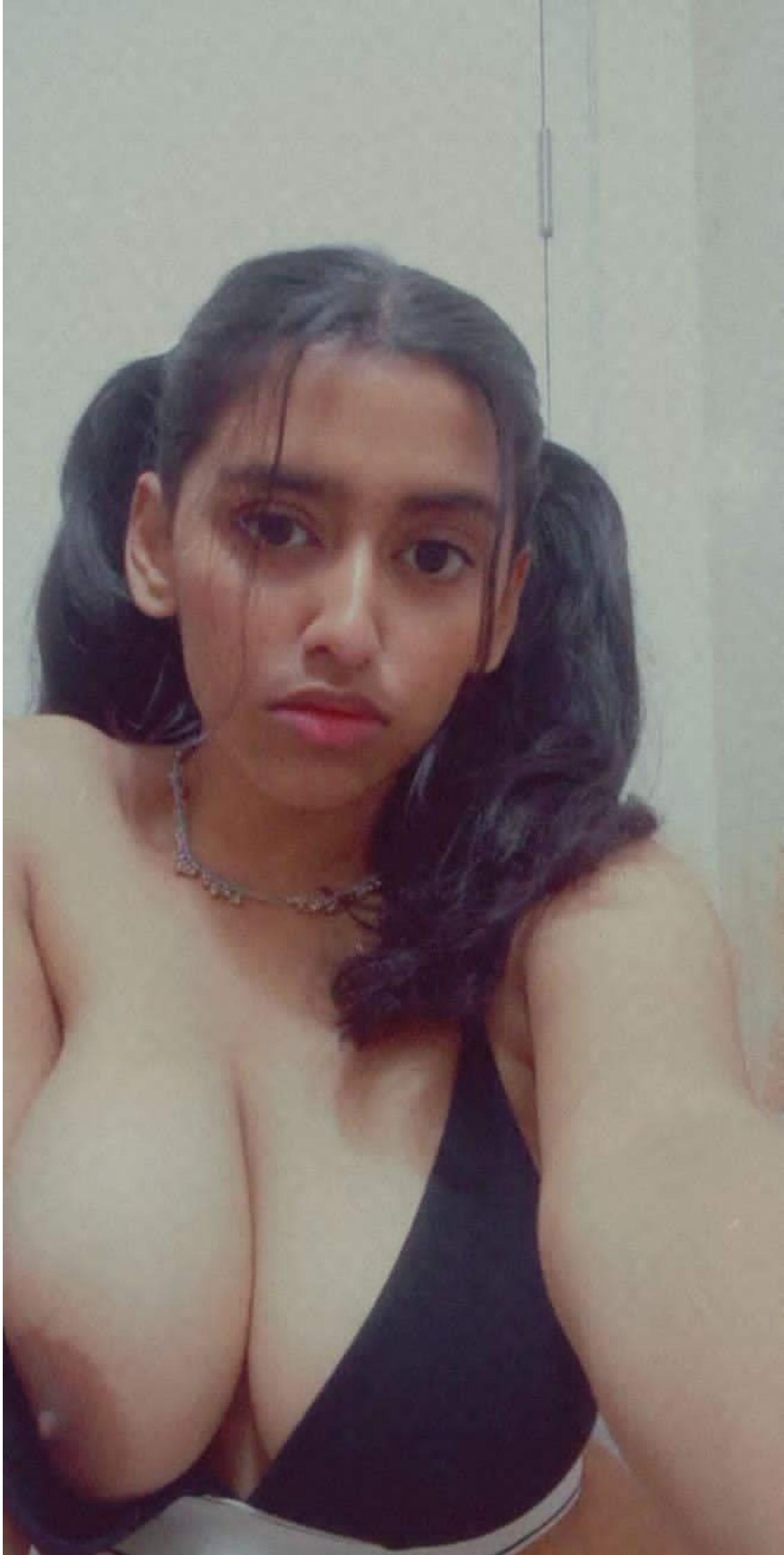




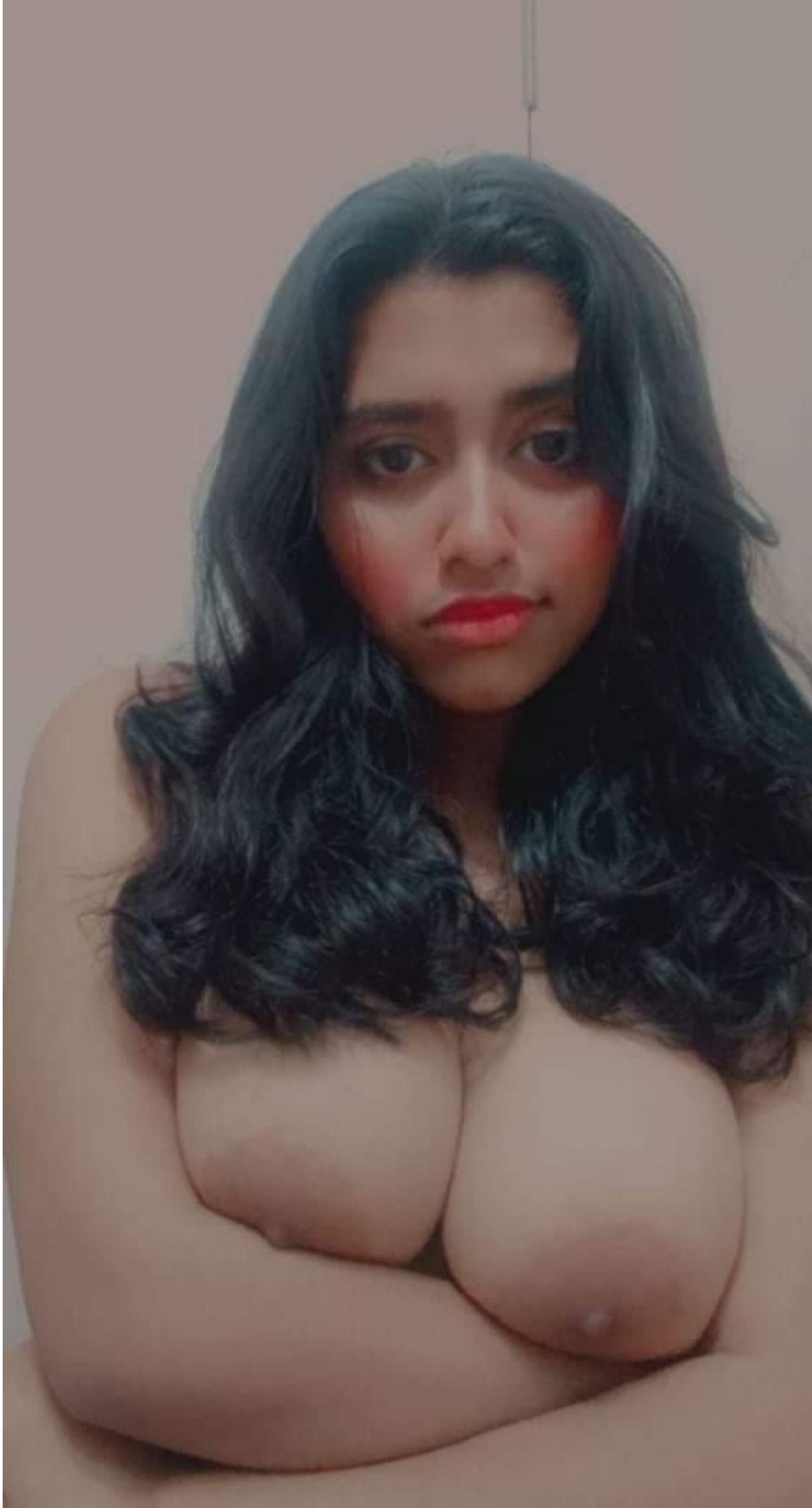


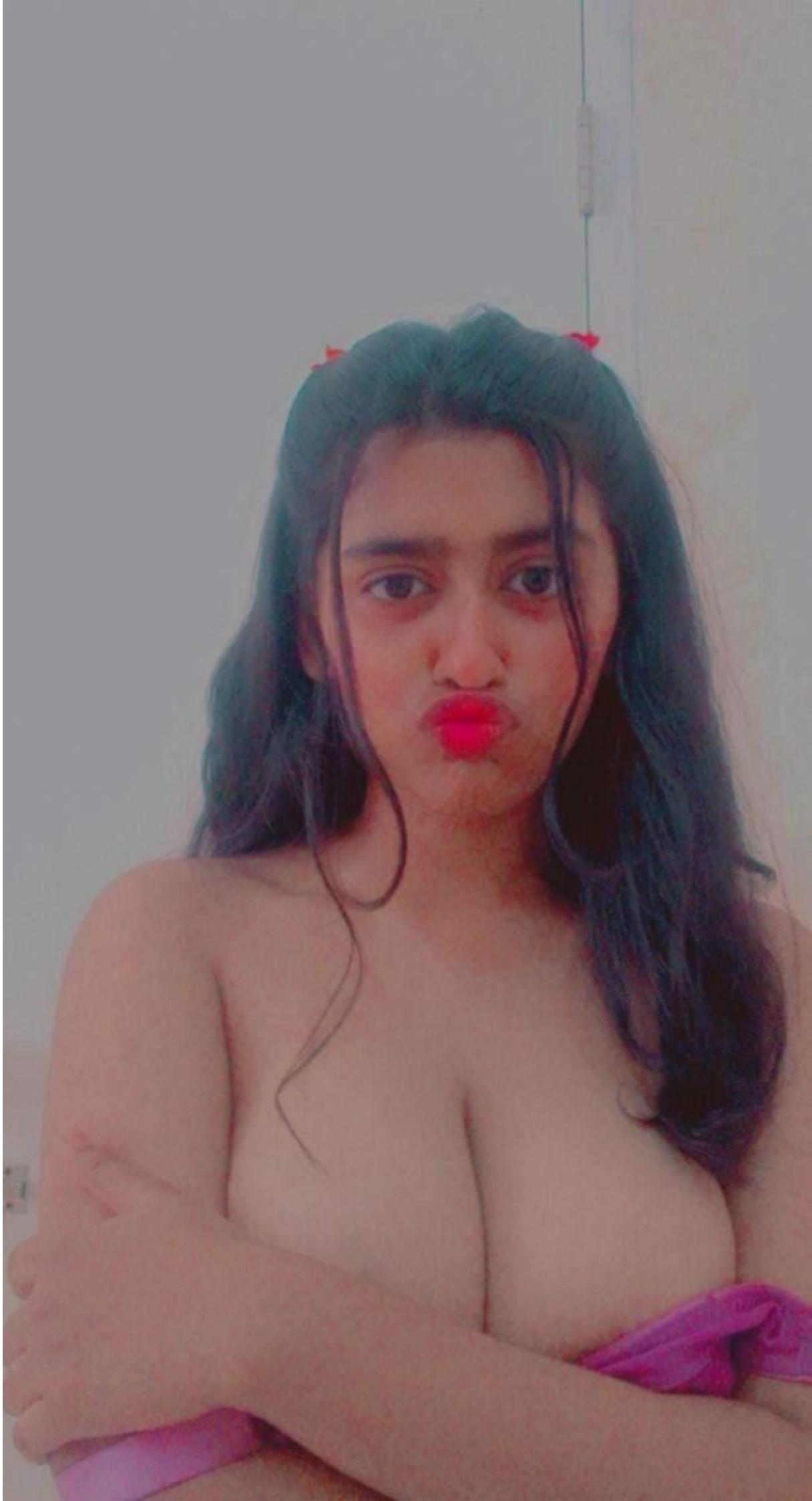








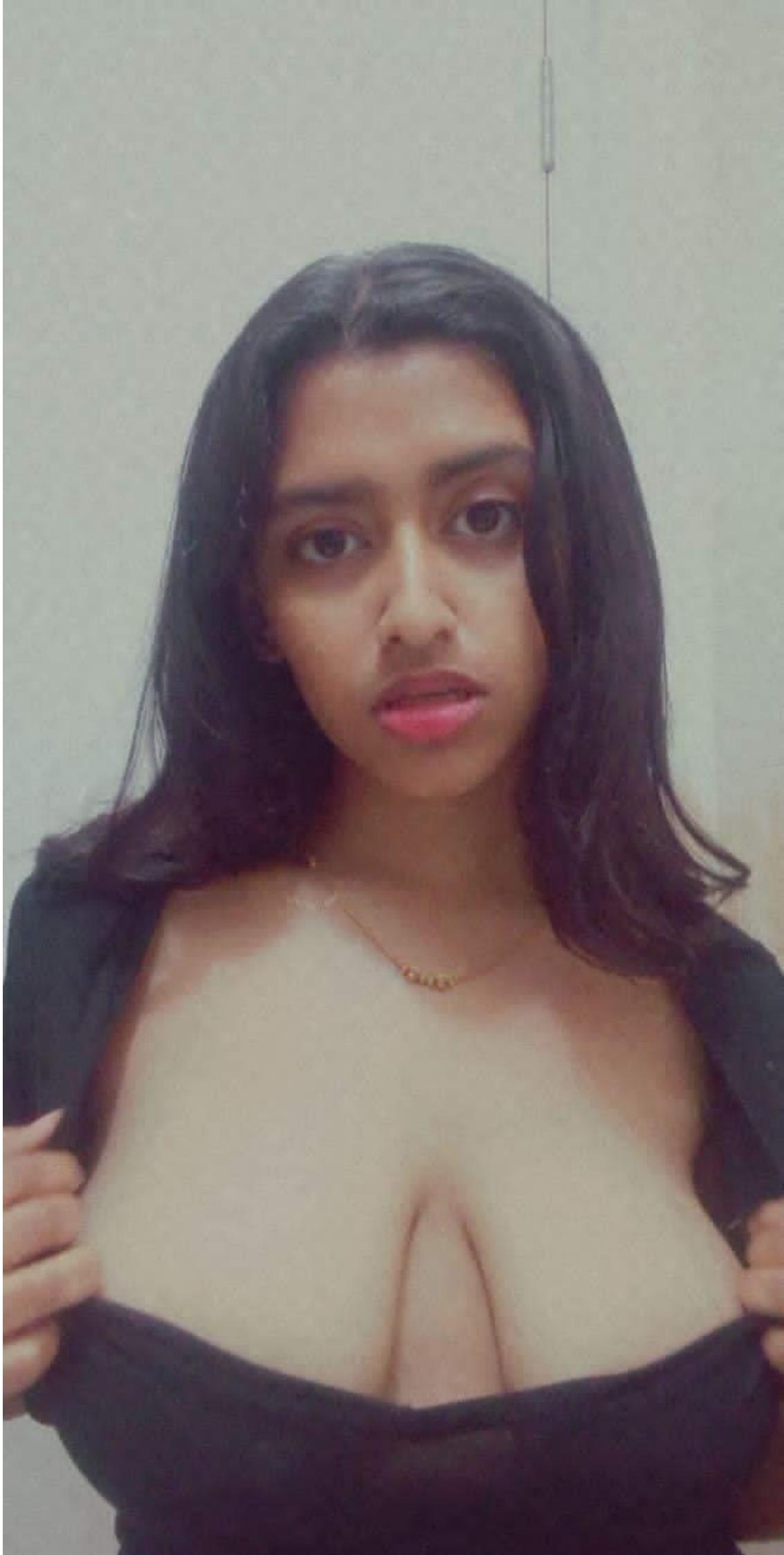














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