

**BCM SCHOOL BASANT AVENUE DUGRI ROAD LUDHIANA  
CLASS XI(MATHS ASSIGNMENT)**

|   |                                                                                                                             |  |
|---|-----------------------------------------------------------------------------------------------------------------------------|--|
| 1 | $\lim_{x \rightarrow \frac{\pi}{2}} \frac{1 - \sin x}{\cos x}$ is equal to<br><br>1. 0<br>2. -1<br>3. 1<br>4. does not exit |  |
| 2 | $\lim_{x \rightarrow 0} \frac{\sin x}{\sqrt{x+1} - \sqrt{1-x}}$ is equal to<br><br>1. 2<br>2. 0<br>3. 1<br>4. -1            |  |
| 3 | <b>Differentiate <math>\sin^3 x \cos^3 x</math> w.r.t x</b>                                                                 |  |
| 4 | <b>Find the derivative of <math>f(x) = \sqrt{\sin x}</math>, by first principle.</b>                                        |  |
| 5 | Evaluate: $\lim_{x \rightarrow 0} \frac{\sqrt{1+x^3} - \sqrt{1-x^3}}{x^2}$                                                  |  |
| 6 | <b>Differentiate <math>(3x + 5)(1 + \tan x)</math> w.r.t to x</b>                                                           |  |
| 7 | Evaluate $\lim_{h \rightarrow 0} \frac{(a+h)^2 \sin(a+h) - a^2 \sin a}{h}$                                                  |  |