|  | BCM SCHOOL BASANT AVENUE DUGRI ROAD LUDHIANA ASSIGNMENT (RELATION AND FUNCTIONS) CLASS XII SC |  |
| :---: | :---: | :---: |
| 1 | The area bounded by the $y$-axis, $y=\cos x$ and $y=\sin x$ when $0 \leq x \leq \frac{\pi}{2}$ is <br> (A) $(2 \sqrt{2}-1)$ sq units <br> (B) $(\sqrt{2}-1)$ sq units <br> (C) $(2 \sqrt{2}+1)$ sq units <br> (D) $(\sqrt{3}-1)$ sq units |  |
| 2 | Area lying in the first quadrant and bounded by the circle $x^{2}+y^{2}=4$ and the lines $x=0$ and $x=2$ is <br> (A) $\pi$ <br> (B) $4 \pi$ <br> (C) $2 \pi$ <br> (D) $\frac{\pi}{2}$ | 1 |
| 3 | Find the area of the region bounded by the curve $a y^{2}=x^{3}$, the $y$-axis and the lines $y=a$ and $y=2 a$ |  |
| 4 | Find the area of the region bounded by the curve $y=x^{3}$ and $y$ $=x+6$ and $\mathrm{x}=0$. | 2 |
| 5 | Find the area of a minor segment of the circle $x^{2}+y^{2}=a^{2}$ cut off by the line $x=\frac{a}{2}$. | 2 |
| 6 | Find the area of the region included between the parabola $y=\frac{3}{4} x^{2}$ and the line $3 \mathrm{x}-2 \mathrm{y}+12=0$ | 3 |
| 7 | Draw a rough sketch of the given curve $y=1+\|x+1\|, x=-3$, $x=3, y=0$ and find the area of the region bounded by them, using integration. | 4 |

