

**LAQ**  
**UNIT - IV**

1	Show that $\beta(m, n) = \frac{\gamma m \gamma n}{\gamma(m+n)}$	CO4	BTL4
2	Show that $\beta(m, n) = \int_0^{\infty} \frac{x^{m-1}}{(1+x)^{m+n}} dx.$	CO4	BTL4
3	Prove that $\beta(m, n) = \int_0^1 \frac{x^{m-1} + x^{n-1}}{(1+x)^{m+n}} dx.$	CO4	BTL4
4	Show that $\gamma\left(\frac{1}{2}\right) = \sqrt{\pi}.$	CO4	BTL4
5	Evaluate $\int_0^1 x^{\frac{3}{2}}(1 - \sqrt{x})^{\frac{1}{2}} dx$ using Beta and gamma function.	CO4	BTL4