i) $\psi(x_1, x_2, x_3) = \psi_a(x_1)\psi_b(x_2)\psi_c(x_3)$

or

$\psi(x_1, x_2, x_3) = \psi_b(x_1)\psi_a(x_2)\psi_c(x_3)$

or any other similar product

ii)

$$\psi(x_1, x_2, x_3) = \frac{1}{\sqrt{6}}\Big[\psi_a(x_1)\psi_b(x_2)\psi_c(x_3) + \psi_b(x_1)\psi_a(x_2)\psi_c(x_3) +$$

$$+ \psi_b(x_1)\psi_c(x_2)\psi_a(x_3) + \psi_c(x_1)\psi_b(x_2)\psi_a(x_3) + \psi_c(x_1)\psi_a(x_2)\psi_b(x_3) +$$

$$+ \psi_a(x_1)\psi_c(x_2)\psi_b(x_3)\Big]$$

the above expression includes all $6 = 3!$ permutations of particles. It is symmetric with respect to all permutations and is normalized such that

$$\int |\psi(x_1, x_2, x_3)|^2 dx_1 dx_2 dx_3 = 1$$

ii) The situation here is similar, except that even and odd permutations enter with different sign. This can be represented as a Slater determinant:

$$\psi(x_1, x_2, x_3) = \frac{1}{\sqrt{6}} \begin{vmatrix} \psi_a(x_1) & \psi_a(x_2) & \psi_a(x_3) \\ \psi_b(x_1) & \psi_b(x_2) & \psi_b(x_3) \\ \psi_c(x_1) & \psi_c(x_2) & \psi_c(x_3) \end{vmatrix} =$$

$$= \frac{1}{\sqrt{6}}\Big[\psi_a(x_1)\psi_b(x_2)\psi_c(x_3) - \psi_b(x_1)\psi_a(x_2)\psi_c(x_3) + \psi_b(x_1)\psi_c(x_2)\psi_a(x_3)$$

$$- \psi_c(x_1)\psi_b(x_2)\psi_a(x_3) + \psi_c(x_1)\psi_a(x_2)\psi_b(x_3) - \psi_a(x_1)\psi_c(x_2)\psi_b(x_3)\Big]$$