11. $\int \frac{y^2}{(y^3+5)^2}\,dy = \int y^2 (y^3+5)^{-2}\,dy$

$= \frac{1}{3}\int 3y^2 (y^3+5)^{-2}\,dy$

$= \frac{1}{3}\,\frac{(y^3+5)^{-1}}{(-1)} = \boxed{-\frac{1}{3}\,\frac{1}{(y^3+5)} + C}$

12. $\int (3x^2-1)\, e^{x^3-x}\,dx = \boxed{e^{x^3-x} + C}$

13. $\int \frac{10x^3-5x}{\sqrt{x^4-x^2+6}}\,dx = \int (10x^3-5x)\,(x^4-x^2+6)^{-1/2}\,dx$

$4x^3-2x = 2(2x^3-x)$

$= 5\int (2x^3-x)\,(x^4-x^2+6)^{-1/2}\,dx$

$= 5\cdot\frac{1}{2}\int 2\cdot(2x^3-x)\cdot(x^4-x^2+6)^{-1/2}\,dx$

$= \frac{5}{2}\,\frac{(x^4-x^2+6)^{1/2}}{(\frac{1}{2})} = 5\,(x^4-x^2+6)^{1/2}$

$= \boxed{5\sqrt{x^4-x^2+6} + C}$