**Answer:**

$$p(y; \lambda) = \frac{e^{-\lambda} \lambda^y}{y!} = (1/y!) \exp(y \log \lambda - \lambda)$$

$$\text{i.e.} \quad T(y) = y; \ \eta = \log \lambda; \ a(\eta) = e^{\eta}; \ b(y) = (1/y!)$$

$$\text{in the form} \quad p(y; \lambda) = p(y; \eta) = b(y) \exp(\eta^T T(y) = a(\eta))$$