We shall give a detailed derivation of (9.18).
From (9.16)

$$\mathbf{A}(\mathbf{x}) = -\frac{i\mu_0\omega}{4\pi}\mathbf{p}\frac{e^{ikr}}{r} \tag{1}$$

Then by (9.4)

$$\begin{aligned}\mathbf{H} &= \frac{1}{\mu_0}\nabla\times\mathbf{A} = -\frac{i\omega}{4\pi}\nabla\times\left(\mathbf{p}\frac{e^{ikr}}{r}\right) = -\frac{i\omega}{4\pi}\hat{\mathbf{e}}_k\epsilon_{ijk}\frac{\partial}{\partial x_i}\left(p_j\frac{e^{ikr}}{r}\right)\\ &= -\frac{i\omega}{4\pi}\hat{\mathbf{e}}_k\epsilon_{ijk}p_j\left(\frac{r\cdot ike^{ikr}\frac{x_i}{r} - e^{ikr}\frac{x_i}{r}}{r^2}\right) = -\frac{i\omega}{4\pi}\hat{\mathbf{e}}_k\epsilon_{ijk}n_ip_j\left(\frac{ik}{r}-\frac{1}{r^2}\right)e^{ikr}\\ &= -\frac{i\omega ik}{4\pi}(\mathbf{n}\times\mathbf{p})\left(1-\frac{1}{ikr}\right)\frac{e^{ikr}}{r} = \frac{ck^2}{4\pi}(\mathbf{n}\times\mathbf{p})\frac{e^{ikr}}{r}\left(1-\frac{1}{ikr}\right)\end{aligned} \tag{2}$$

And by (9.5)

$$\begin{aligned}\mathbf{E} &= \frac{i}{k}\sqrt{\frac{\mu_0}{\epsilon_0}}\nabla\times\mathbf{H} = \frac{i}{k}\sqrt{\frac{\mu_0}{\epsilon_0}}\cdot\frac{k^2}{4\pi\sqrt{\mu_0\epsilon_0}}\nabla\times\left[(\mathbf{n}\times\mathbf{p})\frac{e^{ikr}}{r}\left(1-\frac{1}{ikr}\right)\right]\\ &= \frac{ik}{4\pi\epsilon_0}\nabla\times\left[(\mathbf{n}\times\mathbf{p})\frac{e^{ikr}}{r}\left(1-\frac{1}{ikr}\right)\right] = \frac{ik}{4\pi\epsilon_0}\left\{\overbrace{\nabla\left[\frac{e^{ikr}}{r}\left(1-\frac{1}{ikr}\right)\right]}^{\mathbf{a}}\times(\mathbf{n}\times\mathbf{p}) + \frac{e^{ikr}}{r}\left(1-\frac{1}{ikr}\right)\overbrace{\nabla\times(\mathbf{n}\times\mathbf{p})}^{\mathbf{b}}\right\}\end{aligned} \tag{3}$$

Let's calculate **a** first:

$$\left.\begin{cases}\nabla\left(\dfrac{e^{ikr}}{r}\right) &= \dfrac{r\cdot ike^{ikr}\mathbf{n} - e^{ikr}\mathbf{n}}{r^2} = \mathbf{n}\dfrac{e^{ikr}}{r}\left(ik-\dfrac{1}{r}\right)\\ \nabla\left(\dfrac{e^{ikr}}{r}\dfrac{1}{ikr}\right) &= \dfrac{1}{ik}\left(\dfrac{r^2\cdot ike^{ikr}\mathbf{n} - e^{ikr}\cdot 2r\mathbf{n}}{r^4}\right) = \dfrac{1}{ik}\mathbf{n}e^{ikr}\left(\dfrac{ik}{r^2}-\dfrac{2}{r^3}\right)\end{cases}\right\} \implies \mathbf{a} = \mathbf{n}e^{ikr}\left(\frac{ik}{r}-\frac{2}{r^2}+\frac{2}{ikr^3}\right) \tag{4}$$

For **b**, with the identity,

$$\nabla\times(\mathbf{n}\times\mathbf{p}) = -\mathbf{p}(\nabla\cdot\mathbf{n}) + (\mathbf{p}\cdot\nabla)\mathbf{n} \tag{5}$$

we have

$$\left.\begin{cases}\nabla\cdot\mathbf{n} &= \dfrac{\partial}{\partial x_i}\left(\dfrac{x_i}{r}\right) = \dfrac{3}{r} - \dfrac{x_i^2}{r^3} = \dfrac{2}{r}\\ (\mathbf{p}\cdot\nabla)\mathbf{n} &= p_i\dfrac{\partial}{\partial x_i}\left(\hat{\mathbf{e}}_j\dfrac{x_j}{r}\right) = \hat{\mathbf{e}}_jp_i\left(\dfrac{r\delta_{ij}-x_jn_i}{r^2}\right) = \dfrac{\mathbf{p}-\mathbf{n}(\mathbf{n}\cdot\mathbf{p})}{r}\end{cases}\right\} \implies \mathbf{b} = -\left[\frac{\mathbf{p}+\mathbf{n}(\mathbf{n}\cdot\mathbf{p})}{r}\right] \tag{6}$$

The curly brace of (3) is now

$$\begin{aligned}\{\} &= \mathbf{n}\times(\mathbf{n}\times\mathbf{p})e^{ikr}\left(\frac{ik}{r}-\frac{2}{r^2}+\frac{2}{ikr^3}\right) - \frac{e^{ikr}}{r}\left(1-\frac{1}{ikr}\right)\left[\frac{\mathbf{p}+\mathbf{n}(\mathbf{n}\cdot\mathbf{p})}{r}\right]\\ &= ik\frac{e^{ikr}}{r}\mathbf{n}\times(\mathbf{n}\times\mathbf{p}) + e^{ikr}\left(-\frac{2}{r^2}+\frac{2}{ikr^3}\right)\mathbf{n}\times(\mathbf{n}\times\mathbf{p}) - \frac{e^{ikr}}{r}\left(1-\frac{1}{ikr}\right)\left[\frac{\mathbf{p}+\mathbf{n}(\mathbf{n}\cdot\mathbf{p})}{r}\right]\\ &= ik\frac{e^{ikr}}{r}\mathbf{n}\times(\mathbf{n}\times\mathbf{p}) + e^{ikr}\left(-\frac{2}{r^2}+\frac{2}{ikr^3}\right)[\mathbf{n}(\mathbf{n}\cdot\mathbf{p})-\mathbf{p}] - \frac{e^{ikr}}{r}\left(1-\frac{1}{ikr}\right)\left[\frac{\mathbf{p}+\mathbf{n}(\mathbf{n}\cdot\mathbf{p})}{r}\right]\\ &= ik\frac{e^{ikr}}{r}\mathbf{n}\times(\mathbf{n}\times\mathbf{p}) + \mathbf{p}\left[\frac{e^{ikr}}{r^2}\left(2-\frac{2}{ikr}\right)-\frac{e^{ikr}}{r^2}\left(1-\frac{1}{ikr}\right)\right] + \mathbf{n}(\mathbf{n}\cdot\mathbf{p})\left[\frac{e^{ikr}}{r^2}\left(-2+\frac{2}{ikr}\right)-\frac{e^{ikr}}{r^2}\left(1-\frac{1}{ikr}\right)\right]\\ &= ik\frac{e^{ikr}}{r}\mathbf{n}\times(\mathbf{n}\times\mathbf{p}) - \frac{e^{ikr}}{r^2}\left(1-\frac{1}{ikr}\right)[3\mathbf{n}(\mathbf{n}\cdot\mathbf{p})-\mathbf{p}]\end{aligned} \tag{7}$$

which gives

$$\mathbf{E} = \frac{1}{4\pi\epsilon_0}\left[k^2\frac{e^{ikr}}{r}(\mathbf{n}\times\mathbf{p})\times\mathbf{n}\right] + [3\mathbf{n}(\mathbf{n}\cdot\mathbf{p})-\mathbf{p}]e^{ikr}\left(\frac{1}{r^3}-\frac{ik}{r^2}\right) \tag{8}$$