6.728 Applied Quantum and Statistical Physics:

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Errata for Introductory Quantum and Statistical Physics

Page xi: Change ‘Schweitzer’ to ‘Schweizer’ and ‘Steven Cohen’ to ‘Stephen Cohen.’

Page 23: Second line above Eqn. 2.45. Change “The second integral is a function of $x + ct,”$ to “The second integral is a function of $x - ct,”$

Figure 4.2: $y$-axis should read $P(x, t)/P(0, 0)$.

Figure 4.3: $y$-axis should read $P(x, t)/P(0, 0)$.

Page 106: Heading at the bottom should read “Commuting Operators can be made to have the Same Eigenfunctions.”

Page 107: The line below Eqn. 6.90 should read “then the energy eigenfunction $\phi_j$ can also be made to be an eigenfunction of the operator $\hat{Q}$...” See Problem 6.2.

Problem 6.2: The first term on the RHS should read

$Ae^{\omega(k_o) t} + \ldots$

Equation 8.21: The numerators should read $16E(V_o - E)$.

Page 176: The leading term for $\phi_1(y)$ should read

$\left[ \frac{\sqrt{2}}{\pi^{1/4}} \right]$

Problem 10.2: The line after the equation should read “where $\phi_n(x)$ is a ...

Problem 10.4: Part “(c)” should be labeled part “(b)”

Problem 11.2: The equation should read

$\psi(x, t = 0) = c_0 \phi_0(x) + c_2 \phi_2(x)$
Equation 14.73 $q_0$ should be $e$, the charge of the electron.

Page 290: The sentence after Eqn. 16.13 should read “The matrix eigenvalue equation can be solved...”

Page 293: The line above Eqn. 16.23 should read “For example, we could choose...”

Figure 17.2: The x-axis should read “$(E_2 - E_1)/(2\hbar)$ ”

Page 343: The sentence after Eqn. 18.72 should have the absolute value sign around the vector $\mathbf{E}$ so that it reads “The driving term here is proportional to $|\mathbf{E}_0|^2$”

Problem 18.4: In part (a) change “$V_0$” to “$V$”

Page 360: The third line of the subsection “Two-State Approximation” should read “Fig. 19.1” and not “Fig. 18.1”

Problem 19.3 In this problem $2W$ is the thickness of the capacitor.

Page 375: The last sentence should read “The particle dynamics in $x$ are independent...”

Page 461: The first sentence of section 23.8, change the word “involve” to “involving”

Problem 25.2: In part (b) change the word “probably” to “probable”

Page 549: The second to last sentence should read “The process is termed ...”

Page 576: The last sentence before the Summary should end as “...continue to focus on the relative dynamics.”

Page 733: The sentence after Eqn. M.2 should read “asserting that there are only two ...”

Page 734: The sentence between Eqn. M9 and Eqn. M10 should begin “This leads to the Hamiltonian”

Table of Constants, Endpiece: Speed of light is $2.99792458 \times 10^8$ m/s, not $2.99792458 \times 10^{10}$ m/s.