Honors Physics Final Exam Review Answers

1. E
2. C
3. D
4. D
5. C
6. A
7. D
8. A
9. B
10. D
11. D
12. D
13. C
14. D
15. E
16. C
17. C
18. B
19. C
20. C
21. C
22. B
23. E
24. A
25. A
26. E
27. B
28. A
29. D
30. B
31. A
32. B
33. A
34. A
35. A
36. D
37. E
38. B
39. B
40. B
41. A
42. E
43. C
44. E
45. D
46. E
47. E
48. A
49. C
50. C
51. A
52. D
53. C
54. D
55. A
56. C
57. B
58. B
59. D
60. B
61. A
62. B
63. D
64. A
65. C
66. A
67. B
68. C
69. A
70. A
71. B
72. C
73. E
74. C
75. B
76. A
77. E
78. A
79. E
80. A
81. B
82. A
83. B
84. B
85. D
86. D
87. E
88. D
89. B
90. C
91. E
92. B
93. A
94. E
95. D
96. D
97. B
98. B
99. A
100. B

1.
   a. 1.96J
   b. 3.96J
   c. 3.13 m/s
   d. 28.6N
   e. 13.9N
   f. 0.18m

2.
   a. 7.35J
   b. 7.35J
   c. 1.56 m/s
   d. 3.65J
   e. 6.2m
   f. 3.65J

3.
   a. 240Ω
   b. 360Ω
   c. 40W
   d. 0.33A
   e. 79.2V
   f. 40.8V

4.
   a. 9Ω
   b. 8A
   c. 2A
   d. 20V

5.
   a. $\frac{mv^2}{2e}$
   b.
   
   c. $\frac{mv}{eB}$
   d. i. vB
      ii. down

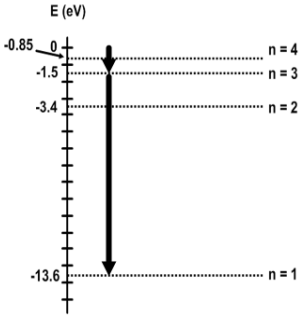
6.
   a. i. positive
      ii. out of the page
   b. i. $\sqrt{\frac{2qV}{m}}$
      ii. $qB\sqrt{\frac{2qV}{m}}$
      iii. $\frac{2}{B}\sqrt{\frac{2Vm}{q}}$
      iv. 0

7.
   a. 3m
   b. 24.2 m/s
   c. 8.1 Hz
   d. n will decrease

8.
   a. 7th
   b. 0.86m
   c. 56.5 Hz
   d. 169.4 Hz

9.
   a. interference
   b. 2×10^{-7}m
   c. 1.5×10^{15} Hz
   d. 1.5×10^{-7}m
   e. x increases

10.
   a. 5.26×10^{14} Hz
   b. 5.26×10^{14} Hz
   c. 2.4×10^{8} m/s
   d. 460nm
   e. 115nm
   f. 230nm

11.
   a. 827nm
   b. 12.1eV
   c. 102.5nm
   d.
   

   e. 3.3×10^{15} Hz

12.
   a. 4.62×10^{14} Hz
   b. 1.9 eV
   c. 1.6 eV
   d. 1.6V