Pre-Mid-Term

Resnick-Halliday (Fundamentals of Physics)

Chapter 21: Coulomb's Law (Electric Charge)

Solved Problems: 21.01 (p-616), 21.02 (p-618), 21.03 (p-619), 21.04 (p-620).

Checkpoints: 1 (p-613), 2 (p-615), 3 (p-618), 4 (p-620).

Exercise Problems: 10, 11, 12, 13 (ρ-625), 17 (ρ-626), 22 (ρ-626), 38, 39 (ρ-627), 42, 46, 54 (ρ-628), 60, 62 (ρ-629).

Chapter 22: Electric Fields

Solved Problems: 22.01 (p-634), 22.03 (p-641), 22.04 (p-647).

Checkpoints: 1 (p-625), 2 (p-643), 3 (p-646), 4 (p-649).

Exercise Problems: 7, 8, 9 (ρ-653), 15, 24 (ρ-654), 32 (ρ-655), 39, 43, 49 (ρ-656), 64 (ρ-657), 87 (ρ-658).

Chapter 23: Gauss's Law

Solved Problems: 23.01 (ρ-662), 23.02 (ρ-663), 23.03 (ρ-666), 23.04 (ρ-667), 23.05 (ρ-670), 23.07 (ρ-674).

Checkpoints: 1 (p-662), 2 (p-665), 3 (p-666), 4 (p-677).

Exercise Problems: 2, 3, 6, 9, 10, 11 (p-679), 24, 25 (p-680), 33, 36 (p-681), 39 (p-682), 69 (p-684).

Chapter: 24: Electric Potential

Solved Problems: 24.01 (ρ-689), 24.02 (ρ-693), 24.03, 24.04 (ρ-694), 24.05 (ρ-702), 24.06 (ρ-702).

Checkpoints: 1 (p-689), 2 (p-692), 3 (p-695), 4 (p-698), 5 (p-702).

Exercise Problems: 4, 6, 9, 14, 16 (ρ-710), 17, 19, 23, 24, 26 (ρ-711), 28 (ρ-712), 43, 50 (ρ-713), 59 (ρ-714), 74, 83 (ρ-715), 88 (ρ-716).

Chapter: 25: Capacitance

Solved Problems: 25.02 (ρ-726), 25.03, 25.05 (ρ-727), 25.06 (ρ-736).

Checkpoints: 1 (p-719), 2 (p-723), 3 (p-726).

Exercise Problems: 1 (ρ-739), 10, 11, 14, 15 (ρ-740), 19 (ρ-741), 34, 46 (ρ-742), 57, 59 (ρ-743), 64, 73 (ρ-744).

Chapter 26: Current and Resistance

Solved Problems: 26.02 (p-750), 26.03 (p-752), 26.04 (p-756), 26.06 (p-761).

Checkpoints: 1 (p-747), 2 (p-750), 3 (p-755), 5 (p-761).

Young-Freedman (University Physics)

<u>Electric Charge</u>: (Worked Out) Example 21.1 (ρ-715), 21.1 (ρ-716), 21.3, 21.4 (ρ-717), 21.6 (ρ-721), 21.7 (ρ-722), 21.8 (ρ-724), 21.9, 21.10 (ρ-725), 21.12 (ρ-727).

<u>Electric Field</u>: Exercises 21.3, 21.8 (b), 21.13, 21.16 (ρ-737), 21.20, 21.26, 21.27, 21.31 (ρ-738), 21.37, 21.38, 21.41, 21.44 (ρ-739), 21.51, 21.54, 21.55, 21.59 (ρ-740), 21.72, 21.73 (ρ-741), 21.78, 21.81 (ρ-742), 21.96 (ρ-744).

<u>Electric Flux and Gauss's Law</u>: (Worked Out) Example 22.1 (ρ-751), 22.2 (ρ-752), 22.10 (ρ-761), 22.12 (ρ-765).

Exercises 22.2, 22.4, 22.6, 22.9 (ρ -769), 22.14, 22.17, 22.19, 22.22, 22.24 (ρ -770), 22.37, 22.42 (ρ -771), 22.43 (ρ -772).

Electric Potential: (Worked Out) Example 23.1 (ρ-779), 23.2 (ρ-781), 23.4 (ρ-786), 23.7 (ρ-787).

Exercises 23.1, 23.4, 23.12 (ρ -801), 23.17, 23.19, 23.25, 23.27, 23.29 (ρ -802), 23.32, 23.34 (ρ -803), 23.50, 23.54 (ρ -804).

<u>Capacitor and Capacitance</u>: (Worked Out) Example 24.1 (p-812), 24.6 (p-817), 24.7, 24.8 (p-820), 24.10 (p-824).

Exercises 24.14, 24.16, 24.21 (p-834), 24.25, 24.26, 24.36 (p-835), 24.59 (p-837).

<u>Current, Resistance, and EMF</u>: (Worked Out) Example 25.1 (p-844), 25.2 (p-849), 25.5 (p-854), 25.8 (p-858), 25.10 (p-859).

Exercises 25.4, 25.6, 25.11, 25.13 (ρ-866), 25.26, 25.29, 25.33, 25.34 (ρ-867), 25.44 (ρ-868), 25.62 (ρ-869).

Post-Mid-Term

Resnick-Halliday (Fundamentals of Physics)

Chapter 27: DC Circuits

Solved Problems: 27.01 (ρ-780), 27.02 (ρ-784), 27.04 (ρ-787), 27.05.

Checkpoints: 1 (p-775), 2 (p-777), 3 (p-779), 4 (p-783), 5 (p-791).

Exercise Problems: 1 (ρ-795), 18, 22, 23 (ρ-796), 30, 33, 36 (ρ-797), 44, 45 (ρ-798), 92 (ρ-801), 103 (ρ-802).

Chapter: 28: Magnetic Fields

Solved Problems: 28.01 (p-808), 28.03 (p-816), 28.04 (p-817), 28.05 (p-819), 28.06 (p-822).

Checkpoints: 1 (p-806), 2 (p-810), 3 (p-816), 4 (p-821).

Exercise Problems: 3, 4, 6 (ρ-829), 18 (ρ-830), 41, 42 (ρ-831), 52 (ρ-832), 61, 63, 68 (ρ-833), 74, 77, 84, 85 (ρ-834).

Chapter 29: Magnetic Field Sources

Solved Problems: 29.01 (p-840), 29.02 (p-841), 29.03 (p-847), 29.04 (p-851).

Checkpoints: 1 (p-843), 2 (p-846), 3 (p-853).

Exercise Problems: 4, 5 (ρ-856), 7, 8, 10, 11, 12, 13 (ρ-857), 21, 23, 24, 27, 29 (ρ-858), 31, 35 (ρ-859), 36, 41, 45 (ρ-860), 66 (ρ-862), 82, 83 (ρ-863).

Chapter 30: Electromagnetic Induction

Solved Problems: 30.01 (ρ-867), 30.02 (ρ-870), 30.04 (ρ-878), 30.05, 30.06 (ρ-886).

Checkpoints: 1 (p-867), 2 (p-869), 5 (p-882), 6 (p-885).

Exercise Problems: 3, 5 (ρ-895), 7, 15 (ρ-896), 21, 26 (ρ-897), 36 (ρ-898), 41, 45, 55 (ρ-899), 61 (ρ-900), 78 (ρ-901).

Chapter 31: AC Circuits

Solved Problems: 31.01 (ρ-909), 31.02 (ρ-912), 31.03 (ρ-916), 31.04, 31.05 (ρ-920), 31.06 (ρ-926), 31.07 (ρ-929).

Checkpoints: 3 (p-916), 4 (p-918), 5 (p-919), 6 (p-926), 7 (p-928).

Exercise Problems: 1 (ρ-935), 3, 21 (ρ-936), 29, 32, 34, 37, 39, 41 (ρ-937), 44 (ρ-938), 68, 69, 71 (ρ-939), 80 (ρ-940).

Chapter 37: Special Relativity

Solved Problems: 37.01 (p-1124), 37.02 (p-1124), 37.03 (p-1127).

Checkpoints: 1 (p-1124), 2 (p-1131).

Exercise Problems: 1, 3, 4 (p-1145), 9, 11, 13 (p-1146).

Chapter 42: Nuclear Physics

Solved Problems: 42.04 (ρ-1288), 42.05 (ρ-1289), 42.06 (ρ-1291).

Checkpoints: 1 (p-1281), 2 (p-1288).

Exercise Problems: 26, 27, 28, 29 (p-1203), 30, 31, 34, 37, 38, 42, 43 (p-1304), 60 (p-1306).

Young-Freedman (University Physics)

<u>Direct Current, Circuit Solving</u>: (Worked Out) Example 26.2 (ρ-876), 26.3 (ρ-879), 26.4 (ρ-880), 26.5, 26.6 (ρ-881), 26.7 (ρ-882), 26.12, 26.13 (ρ-890).

Exercises 26.2, 26.4, 26.6, 26.12 (ρ -898), 26.19, 26.22 (ρ -899), 26.24, 26.25, 26.32 (ρ -900), 26.45, 26.47 (ρ -901), 26.58, 26.60, 26.63 (ρ -902).

<u>Magnetic Fields and Forces</u>: (Worked Out) Example 27.1 (ρ-912), 27.2 (ρ-915), 27.3, 27.4 (ρ-918), 27.7, 27.8 (ρ-924), 27.9 (ρ-928), 27.12 (ρ-933).

Exercises 27.1, 27.7, 27.8, 27.9, 27.14 (ρ-937), 27.19, 27.22, 27.23, 27.24, 27.29, 27.32 (ρ-938), 27.36, 27.38, 27.42 (ρ-939), 27.45, 27.47, 27.50, 27.53 (ρ-940), 27.64, 27.66, 27.67 (ρ-942).

Magnetic Field Sources: (Worked Out) Example 28.1 (ρ-948), 28.4 (ρ-953), 28.6 (ρ-957).

Exercises Problem 28.1, 28.4, 28.6 (ρ-973), 28.8, 28.12, 28.14, 28.19 (ρ-974), 28.25, 28.33, 28.36 (ρ-975), 28.43, 28.46, 28.49, 28.51 (ρ-976), 28.58 (ρ-977), 28.64 (ρ-978).

<u>Electromagnetic Induction</u>: (Worked Out) Example 29.1 (ρ-984), 29.2 (ρ-986), 295, 29.6 (ρ-989), 29.9 (ρ-994), 29.11 (ρ-997).

Exercises Problem 29.2, 29.3, 29.11, 29.12, 29.14, 29.15 (ρ-1008), 29.22, 29.24, 29.25 (ρ-1009), 29.29 (ρ-1010), 29.35, 29.36 (ρ-1011), 29.54 (ρ-1012), 29.59 (ρ-1013).

<u>Self and Mutual Induction</u>: (Worked Out) Example 30.1, 30.2 (ρ-1019), 30.3 (ρ-1022), 30.5 (ρ-1026), 30.6 (ρ-1029), 30.7 (ρ-1030), 30.8 (ρ-1033), 30.10 (ρ-1036).

Exercises Problem 30.5 (ρ-1039), 30.8, 30.13, 30.21, 30.24, 30.25 (ρ-1040), 30.32, 30.35, 30.38, 30.40 (ρ-1041).

<u>Alternating Current</u>: (Worked Out) Example 31.1 (ρ-1049), 31.2 (ρ-1052), 31.3 (ρ-1053), 31.4 (ρ-1057), 31.5 (ρ-1058), 31.6 (ρ-1061), 30.10 (ρ-1036).

Exercises Problem 31.1, 31.5 (p-1070), 31.11, 31.12, 31.14, 31.16, 31.18, 31.20, 31.25 (p-1071), 31.35 (p-1072).

Electromagnetic Waves: (Worked Out) Example 32.1 (p-1087), 32.3 (p-1092).

Exercises Problem 32.7 (p-1099), 32.10 (p-1100).