

|            | Question | Form A    | Form B  | Form C    | Form D |  |
|------------|----------|-----------|---------|-----------|--------|--|
| Answer Key | Q1       | D         | C       | B         | C      |  |
|            | Q2       | A         | A       | D         | C      |  |
|            | Q3       | D         | B       | B         | B      |  |
|            | Q4       | D         | C       | C         | D      |  |
|            | Q5       | C         | C       | A         | B      |  |
|            | Q6       | A         | B       | B         | C      |  |
|            | Q7       | C         | C       | D         | D      |  |
|            | Q8       | B         | A       | D         | D      |  |
|            |          |           |         |           |        | Class Average = 4.1  |
| Student ID |          | Raw Score | % Score | Responses |        | Please make sure that there is only one entry for your number. If there is more than one, email me at <a href="mailto:benheldt@physics.ucsd.edu">benheldt@physics.ucsd.edu</a> |
| #103       |          | 4         | 50      | DCDDAABD  |        |  |
| #104       |          | 7         | 87.5    | DADDBACB  |        |  |
| #105       |          | 2         | 25      | DBBBDADD  |        |  |
| #109       |          | 4         | 50      | DBDCDADB  |        |  |
| #112       |          | 5         | 62.5    | DADACAAD  |        |  |
| #115       |          | 2         | 25      | DBBCBADA  |        |  |
| #122       |          | 5         | 62.5    | DBDADACB  |        |  |
| #123       |          | 3         | 37.5    | DDDCAABD  |        |  |
| #126       |          | 4         | 50      | DBDBDACC  |        |  |
| #134       |          | 7         | 87.5    | DDDDCACB  |        |  |
| #137       |          | 5         | 62.5    | DCDDBABB  |        |  |
| #142       |          | 5         | 62.5    | DBDDAADB  |        |  |
| #147       |          | 5         | 62.5    | CADDAADB  |        |  |
| #148       |          | 4         | 50      | CADDAAAA  |        |  |
| #159       |          | 2         | 25      | CACBAABC  |        |  |
| #167       |          | 5         | 62.5    | DBDCCADB  |        |  |
| #169       |          | 7         | 87.5    | DADDAACB  |        |  |
| #170       |          | 6         | 75      | DBDDCADB  |        |  |
| #186       |          | 5         | 62.5    | DBDCAACB  |        |  |
| #193       |          | 7         | 87.5    | DADDBACB  |        |  |
| #195       |          | 6         | 75      | DADDBBCB  |        |  |
| #198       |          | 4         | 50      | DCDBCABA  |        |  |
| #202       |          | 4         | 50      | BADBAADB  |        |  |
| #204       |          | 5         | 62.5    | DBDCDACB  |        |  |
| #206       |          | 6         | 75      | DADDBAAB  |        |  |
| #210       |          | 5         | 62.5    | DADCBAAB  |        |  |
| #218       |          | 2         | 25      | CACBACBB  |        |  |
| #223       |          | 7         | 87.5    | DADCCACB  |        |  |
| #232       |          | 1         | 12.5    | CBABDADC  |        |  |
| #233       |          | 2         | 25      | CDDBCBBA  |        |  |
| #235       |          | 4         | 50      | DBDBDACD  |        |  |
| #236       |          | 4         | 50      | DADCBADA  |        |  |
| #243       |          | 5         | 62.5    | BDDCCACB  |        |  |
| #244       |          | 7         | 87.5    | BADDCACB  |        |  |
| #247       |          | 4         | 50      | DABCBAAB  |        |  |
| #248       |          | 7         | 87.5    | DADDAACB  |        |  |
| #257       |          | 4         | 50      | DADCDCCA  |        |  |
| #266       |          | 3         | 37.5    | DCDBAADC  |        |  |
| #269       |          | 3         | 37.5    | DBBDAAAD  |        |  |
| #273       |          | 5         | 62.5    | DBDDAACD  |        |  |
| #274       |          | 5         | 62.5    | DCDDCADC  |        |  |
| #282       |          | 7         | 87.5    | CADDCACB  |        |  |
| #292       |          | 3         | 37.5    | DBCCCBAB  |        |  |
| #300       |          | 4         | 50      | DBDCDABB  |        |  |

|      |  |   |      |           |  |  |
|------|--|---|------|-----------|--|--|
| #309 |  | 4 | 50   | DADBCDDA  |  |  |
| #311 |  | 2 | 25   | CDACBADB  |  |  |
| #314 |  | 7 | 87.5 | DBDDCACB  |  |  |
| #318 |  | 4 | 50   | DBDCAACD  |  |  |
| #322 |  | 6 | 75   | DADACADB  |  |  |
| #327 |  | 4 | 50   | DCDBAAAB  |  |  |
| #332 |  | 5 | 62.5 | DADBAADB  |  |  |
| #333 |  | 5 | 62.5 | DADDADDB  |  |  |
| #336 |  | 3 | 37.5 | CBDBCAAD  |  |  |
| #338 |  | 5 | 62.5 | DBDDCDAB  |  |  |
| #346 |  | 4 | 50   | DBDDBBDB  |  |  |
| #351 |  | 6 | 75   | AADDBACB  |  |  |
| #363 |  | 5 | 62.5 | DADDBDDB  |  |  |
| #401 |  | 3 | 37.5 | DBADCCBD  |  |  |
| #100 |  | 3 | 37.5 | CDDCCADD  |  |  |
| #102 |  | 4 | 50   | CADABBCB  |  |  |
| #107 |  | 6 | 75   | CDBCBBCA  |  |  |
| #115 |  | 3 | 37.5 | CDDCCAAD  |  |  |
| #117 |  | 6 | 75   | CABCABCC  |  |  |
| #118 |  | 5 | 62.5 | CADCCACB  |  |  |
| #119 |  | 6 | 75   | CABCCAAA  |  |  |
| #129 |  | 6 | 75   | CABCCBDC  |  |  |
| #133 |  | 2 | 25   | CACDBDAC  |  |  |
| #138 |  | 1 | 12.5 | BCDCDADC  |  |  |
| #139 |  | 2 | 25   | CDCBDACC  |  |  |
| #143 |  | 4 | 50   | CADCDBDC  |  |  |
| #145 |  | 4 | 50   | CBBCCAAD  |  |  |
| #153 |  | 4 | 50   | CABBCADD  |  |  |
| #161 |  | 2 | 25   | CBCBDBAC  |  |  |
| #162 |  | 2 | 25   | CADBDCAC  |  |  |
| #163 |  | 4 | 50   | CADC DABA |  |  |
| #174 |  | 6 | 75   | CABCCBDC  |  |  |
| #176 |  | 5 | 62.5 | CABCCABD  |  |  |
| #178 |  | 1 | 12.5 | BCCCDADB  |  |  |
| #179 |  | 6 | 75   | CADCCBAA  |  |  |
| #181 |  | 2 | 25   | CADBBDAD  |  |  |
| #187 |  | 6 | 75   | CABACBDA  |  |  |
| #188 |  | 2 | 25   | CBAAAACD  |  |  |
| #194 |  | 4 | 50   | CACDCBAD  |  |  |
| #201 |  | 0 | 0    | BBDDBADD  |  |  |
| #205 |  | 5 | 62.5 | CADCCBBB  |  |  |
| #209 |  | 6 | 75   | CADCCBAA  |  |  |
| #219 |  | 5 | 62.5 | CABBCBAC  |  |  |
| #220 |  | 4 | 50   | CACBCBAB  |  |  |
| #222 |  | 5 | 62.5 | CADCCBDC  |  |  |
| #230 |  | 5 | 62.5 | BABCCCAA  |  |  |
| #234 |  | 6 | 75   | CABCCACB  |  |  |
| #238 |  | 3 | 37.5 | BADCAACD  |  |  |
| #240 |  | 1 | 12.5 | CDAABDAC  |  |  |
| #241 |  | 5 | 62.5 | CACCCDCC  |  |  |
| #246 |  | 2 | 25   | CCDCBAAC  |  |  |
| #249 |  | 4 | 50   | CDDBCBCB  |  |  |
| #250 |  | 5 | 62.5 | CABACBDC  |  |  |
| #252 |  | 3 | 37.5 | CCCCDBC   |  |  |
| #258 |  | 3 | 37.5 | BBAACDCA  |  |  |
| #265 |  | 1 | 12.5 | CDDBAABC  |  |  |

|      |  |   |      |          |  |  |
|------|--|---|------|----------|--|--|
| #270 |  | 4 | 50   | CBCBCBDA |  |  |
| #271 |  | 4 | 50   | CBCACBDA |  |  |
| #272 |  | 5 | 62.5 | CABCBACC |  |  |
| #275 |  | 2 | 25   | ACBCBCAB |  |  |
| #278 |  | 5 | 62.5 | CABCBBBC |  |  |
| #280 |  | 4 | 50   | CADCCABC |  |  |
| #283 |  | 3 | 37.5 | CAABABBD |  |  |
| #295 |  | 4 | 50   | CABADACD |  |  |
| #299 |  | 3 | 37.5 | CADBCADC |  |  |
| #310 |  | 6 | 75   | CABCCACC |  |  |
| #321 |  | 3 | 37.5 | CAAABCAA |  |  |
| #328 |  | 6 | 75   | CABCCACB |  |  |
| #329 |  | 4 | 50   | CACCBBAB |  |  |
| #331 |  | 4 | 50   | CDBCBCCC |  |  |
| #341 |  | 6 | 75   | CACACBCA |  |  |
| #343 |  | 6 | 75   | CABCCBAB |  |  |
| #352 |  | 5 | 62.5 | CABCCADB |  |  |
| #353 |  | 6 | 75   | CABCBBCC |  |  |
| #359 |  | 3 | 37.5 | CBCCCAAB |  |  |
| #402 |  | 4 | 50   | CCBBCBAC |  |  |
| #403 |  | 2 | 25   | C?AACDBC |  |  |
| #120 |  | 4 | 50   | DDBBABBA |  |  |
| #125 |  | 5 | 62.5 | BDBAABCC |  |  |
| #127 |  | 3 | 37.5 | BDCACBBA |  |  |
| #135 |  | 3 | 37.5 | DDBAACBC |  |  |
| #144 |  | 3 | 37.5 | ADBACDAD |  |  |
| #150 |  | 2 | 25   | BBDDACAC |  |  |
| #151 |  | 7 | 87.5 | BDBCABDB |  |  |
| #152 |  | 4 | 50   | DDBBABBB |  |  |
| #154 |  | 4 | 50   | DDDCADAD |  |  |
| #157 |  | 3 | 37.5 | CDCBABBA |  |  |
| #158 |  | 2 | 25   | ADCAADBC |  |  |
| #160 |  | 4 | 50   | BEDCCBDC |  |  |
| #165 |  | 5 | 62.5 | BDCCACDA |  |  |
| #166 |  | 1 | 12.5 | ACCBDBAB |  |  |
| #172 |  | 4 | 50   | BDACACBA |  |  |
| #173 |  | 6 | 75   | BDBCABCC |  |  |
| #175 |  | 5 | 62.5 | BABCADDC |  |  |
| #177 |  | 5 | 62.5 | BDBAABAC |  |  |
| #180 |  | 4 | 50   | DDCCADDC |  |  |
| #183 |  | 2 | 25   | DDABCBCB |  |  |
| #184 |  | 4 | 50   | DDBAABAC |  |  |
| #189 |  | 7 | 87.5 | BDBCACDD |  |  |
| #191 |  | 2 | 25   | ADAAACAB |  |  |
| #192 |  | 7 | 87.5 | BDBCABCD |  |  |
| #196 |  | 3 | 37.5 | DDABBCDD |  |  |
| #197 |  | 2 | 25   | BCAACBAA |  |  |
| #199 |  | 2 | 25   | CDACBABA |  |  |
| #207 |  | 5 | 62.5 | DDBCADAD |  |  |
| #211 |  | 3 | 37.5 | DDCAABCA |  |  |
| #215 |  | 2 | 25   | ADCCDCB  |  |  |
| #22  |  | 3 | 37.5 | ADDAABAB |  |  |
| #224 |  | 5 | 62.5 | BDBAADCD |  |  |
| #226 |  | 3 | 37.5 | BAACBCA  |  |  |
| #227 |  | 2 | 25   | DDCAACBA |  |  |
| #228 |  | 2 | 25   | DDCCDABA |  |  |

|      |  |   |      |          |  |  |
|------|--|---|------|----------|--|--|
| #239 |  | 6 | 75   | BDBAABBD |  |  |
| #242 |  | 3 | 37.5 | CABAAACD |  |  |
| #251 |  | 4 | 50   | BABAADBD |  |  |
| #255 |  | 6 | 75   | BDBAABDB |  |  |
| #259 |  | 5 | 62.5 | BCBCABCA |  |  |
| #264 |  | 3 | 37.5 | ADDAABBB |  |  |
| #267 |  | 4 | 50   | DDBAADBD |  |  |
| #276 |  | 5 | 62.5 | BDACACCD |  |  |
| #284 |  | 7 | 87.5 | DDBCABDD |  |  |
| #286 |  | 2 | 25   | DDBACCCA |  |  |
| #294 |  | 5 | 62.5 | CDBCABBC |  |  |
| #296 |  | 6 | 75   | BDBCACCD |  |  |
| #298 |  | 7 | 87.5 | BDBBABDD |  |  |
| #301 |  | 6 | 75   | BDBCABBB |  |  |
| #312 |  | 4 | 50   | DDDAABBD |  |  |
| #313 |  | 7 | 87.5 | BDBAABDD |  |  |
| #316 |  | 4 | 50   | BDCCADBC |  |  |
| #317 |  | 3 | 37.5 | BABACBAC |  |  |
| #320 |  | 4 | 50   | BDCAADCD |  |  |
| #324 |  | 2 | 25   | DA-AABCC |  |  |
| #330 |  | 6 | 75   | BDBCADCD |  |  |
| #339 |  | 5 | 62.5 | BDBDADBD |  |  |
| #340 |  | 6 | 75   | BDBCADCD |  |  |
| #400 |  | 3 | 37.5 | BDAAACCA |  |  |
| #405 |  | 4 | 50   | DDBCDDDA |  |  |
| #101 |  | 3 | 37.5 | AADDBADA |  |  |
| #106 |  | 3 | 37.5 | BADDBCCB |  |  |
| #108 |  | 3 | 37.5 | BDBDBAAA |  |  |
| #110 |  | 4 | 50   | CACDBACD |  |  |
| #111 |  | 5 | 62.5 | CABDBADA |  |  |
| #113 |  | 3 | 37.5 | BAADBCCB |  |  |
| #116 |  | 4 | 50   | BABDACDA |  |  |
| #121 |  | 6 | 75   | CCBDBABD |  |  |
| #124 |  | 2 | 25   | DAACBADB |  |  |
| #128 |  | 4 | 50   | CABDBACB |  |  |
| #130 |  | 6 | 75   | CCBDBACD |  |  |
| #131 |  | 4 | 50   | DDBDBACD |  |  |
| #132 |  | 7 | 87.5 | CCBDBADD |  |  |
| #136 |  | 5 | 62.5 | CAADBCCD |  |  |
| #140 |  | 7 | 87.5 | CCBDBBDD |  |  |
| #146 |  | 4 | 50   | CCBBBACC |  |  |
| #149 |  | 4 | 50   | CCADBBA  |  |  |
| #155 |  | 2 | 25   | BACDBBCB |  |  |
| #156 |  | 6 | 75   | CBBDBCAD |  |  |
| #164 |  | 2 | 25   | CACDDBCA |  |  |
| #168 |  | 1 | 12.5 | BDDABDCA |  |  |
| #171 |  | 2 | 25   | DDBCBAAB |  |  |
| #182 |  | 3 | 37.5 | ADBDBACB |  |  |
| #185 |  | 4 | 50   | DABBBCCD |  |  |
| #200 |  | 4 | 50   | CCBDAABC |  |  |
| #203 |  | 0 | 0    | BBAAABAC |  |  |
| #208 |  | 3 | 37.5 | CDCDBBBA |  |  |
| #216 |  | 7 | 87.5 | CCBDBCAD |  |  |
| #217 |  | 2 | 25   | DDBDAACA |  |  |
| #221 |  | 6 | 75   | BCCDBCDD |  |  |
| #229 |  | 3 | 37.5 | BABDBBCC |  |  |

|      |  |   |      |          |  |  |
|------|--|---|------|----------|--|--|
| #231 |  | 4 | 50   | AABABCDB |  |  |
| #245 |  | 6 | 75   | CCBDBDCD |  |  |
| #256 |  | 5 | 62.5 | CDBDBBDA |  |  |
| #260 |  | 3 | 37.5 | CAACBCBC |  |  |
| #263 |  | 2 | 25   | BAAABCCC |  |  |
| #268 |  | 4 | 50   | CDADBDAD |  |  |
| #277 |  | 4 | 50   | DDBCBCDC |  |  |
| #279 |  | 3 | 37.5 | DBBDBABA |  |  |
| #281 |  | 5 | 62.5 | CAADBCDC |  |  |
| #285 |  | 3 | 37.5 | CDDDBABB |  |  |
| #290 |  | 3 | 37.5 | ADACBCAD |  |  |
| #291 |  | 5 | 62.5 | CCBDBACB |  |  |
| #293 |  | 2 | 25   | DADDBABB |  |  |
| #297 |  | 3 | 37.5 | CCAABACA |  |  |
| #315 |  | 1 | 12.5 | BAAABACB |  |  |
| #319 |  | 8 | 100  | CCBDBCDD |  |  |
| #323 |  | 3 | 37.5 | BABDBABC |  |  |
| #325 |  | 6 | 75   | CDBDBCCD |  |  |
| #334 |  | 4 | 50   | ACACBCCD |  |  |
| #335 |  | 4 | 50   | DABDBACD |  |  |
| #337 |  | 3 | 37.5 | BCCDBBCC |  |  |
| #344 |  | 6 | 75   | BCBDBCAD |  |  |
| #345 |  | 2 | 25   | CADDDBBC |  |  |
| #350 |  | 4 | 50   | CDADBCAC |  |  |
| #354 |  | 5 | 62.5 | CCBDBACE |  |  |
| #355 |  | 2 | 25   | DBABBADC |  |  |
| #357 |  | 5 | 62.5 | CCBDBABC |  |  |
| #360 |  | 4 | 50   | AADDBCDB |  |  |