ELECTRICIAN U

2023 Residential Code Practice Exam - 100 Question Answer Key

#	CORRECT ANSWER	ANSWER JUSTIFICATION OR CODE REFERENCE
1	D. Receptacles	242.8
2	B. designed	240.54(B)
3	C. 25,500VA	Table 220.54
4	B. 18,000 VA	220.60
5	A. at least equal to	110.9
6	D. a drop box	100
7	B. not less than 3 feet	230.9(A)
8	A. equipment grounding conductor	408.40
9	A. 5 ft	640.10(A)
10	E. all of these	250.92(B)
11	A. 4 in	225.14(A)
12	D. shall not	240.24(E)
13	B. 42.25A	**1)** Table 310.16 90°C column, 8 AWG THHN is listed at 55A. **2)** Table 310.15(B)(1)(1) - Because we used T310.16, we have to use Table 310.15(B)(1)(1), rather than Table 310.15(B)(1)(2). We see in the 87-95°F row, under 90°C conductors we have a 0.96 correction factor. **3)** Table 310.15(C)(1) - 4 conductors get an 80% adjustment factor applied to it **4)** 55A x 0.96 x 0.8 = 42.24A
14	E. B or C	404.9(B)

15	B. FALSE	680.12(A)
16	D. 7	Annex C, Table C.1
17	A. supplying multiple-occupancy buildings where there is no space available for supply equipment accessible to all occupants	225.3
18	C. 105.6A	310.16: 1/0 copper row under 75°C column for THWN shows 150A Table 310.15(B)(1)(1) row for 96-104°F, 75°C conductor column shows 0.88 correction factor Table 310.15(C)(1) 4-6 current carrying conductors get a 80% adjustment factor 150 x .08 x 0.88= 105.6A
19	A. 6 AWG	A continuous load must be calculated at 125% of its rated current per 210.19(A)(1), therefore a 35A load must be sized for conductors that are 35 x 1.25 = 43.75A. Table 310.16 lists TW as a 60°C conductor and the smallest size TW conductor which can carry 43.75A is a 6 AWG conductor.
20	B. be marked on the motor-compressor nameplate	440.4(A)
21	B. 25A	411.4
22	D. embedded in plaster finish or brick or other masonry except in wet locations	320.10 and 320.12
23	A. either vertical or horizontal	404.6(B)
24	C. is within sight	422.31(B)
25	D. Park Trailer	100
26	C. 80%	440.62(B)
27	B. in dry locations	380.10
28	A. grouped together	300.20(A)

29	A. 2 ft	552.41(A)
30	C. shall not	230.10
31	D. 75A	Table 310.16 THWN is a 75°C conductor and 6 AWG lists 65A. Table 310.15(B)(1)(1) shows 75°C conductors within 51 - 59°F get a 1.15 correction factor for the temperature of the environment. So 65 x 1.15 = 74.75A
32	B. where concealed	384.10
33	A. grounded conductor	410.51
34	B. 20 amperes or less	406.3(C)
35	C. 48A	680.10(A)
36	C. 90	590.3(B)
37	B. 60°C (140°F)	340.80
38	D. an effective grounding path	250.68(B)
39	A. only one feeder or branch circuit	225.30
40	D. Grounding Electrode	100
41	C. GFCI	210.8(A) - Kitchens
42	D. 32	406.5
43	B. clothes dryers	250.142(B) Exception 1
44	A. 12	334.30
45	C. tamper-resistant	406.12
46	B. 30 volts	690.31(A)(2)
47	A. 3	410.10(D)
48	D. bathrooms	210.8(A)
49	C. 24	210.52(C)(1)
50	A. Garages	210.12(B)

51	B. family rooms, living rooms, bedrooms	210.12(B)
52	B. ¾ inch	Annex C, Table C.11
53	B. 4 AWG Copper	Table 250.66
54	D. any connections to ground	110.7
55	A. Overhead Service Conductors	100
56	A. 3	210.52(D)
57	C. at least equal to	110.9
58	C. 18 inches	Table 300.5(A)
59	B. cutout box	100
60	D. permanently affixed to the equipment or wiring method and shall not be handwritten	110.21A(B)(2)
61	A. supported in a manner designed	110.36
62	B. 10	Table 250.122
63	C. 1500	220.52(B)
64	D. With no more than 6 operations of the hand	225.33(B)
65	C. suitable for the conditions of use	314.28(C)
66	B. 6 AWG	Table 250.122
67	A. CO/ALR	404.14(C)
68	B. 4 AWG	Table 250.66
69	D. Utilization	100
70	D. 9	**1) Chapter 9, Table 1, Note 4:** An 18-inch conduit is considered a nipple, and is allowed to have 60% of its cross-sectional-area filled. **2) Chapter 9, Table 4 (Article 356):** 1 1/4" LFNC volume @ 60% = 0.901 sq-in.

		3) Chapter 9, Table 5: #4 THW has an area of 0.0973 sq-in per conductor. **4) Calculation:** 0.901 sq-in / 0.0973 sq-in = 9.26 conductors, or 9 full conductors will fit in the 60% area of the nipple.
71	C. in-line	394.56
72	A. grounded conductor	200.2
73	D. nominal voltage system	200.6(D)
74	B. (4) 250 kcmil THWN	Our breaker is 1000A, so according to 240.4(C) "Where the overcurrent device is rated over 800 amperes, the ampacity of the conductors it protects shall be equal to or greater than the rating of the overcurrent device." This means that our conductors can not be smaller than the 1000A breaker, however they can be larger. So 1000A / 4 = 250A per conductor. Table 310.16 lists 250 THWN as a 255A conductor so (4) parallel 250 kcmil THWN conductors can handle 1020A and are acceptable for this application.
75	A. in parallel with a primary source	705.5
76	C. 30A	555.33(A)(4)
77	D. corrosive electrolyte	480.9
78	B. used where recommended by the battery manufacturer's installation and instruction manual.	480.4(A)
79	D. All of these	242.13(B)
80	A. luminaires equipped with mogul-base screw shell lampholders	210.6(C)
81	A. 120V	210.6(A)
82	B. 10 feet	706.15
83	C. 18 inches	230.6
84	B. Two	215.4(A)

85	B. 10 feet	230.26
86	D. each ungrounded conductor	242.20
87	A. 2 inches	342.10(C)
88	A. 24	552.45(B)
89	A. 12 inches	555.33
90	D. 20%	378.22
91	A. 300VA	422.31(A)
92	D. 7 feet	320.23(A)
93	C. ten times	330.24(A)
94	B. the rotary-phase converter has been started	455.21
95	B. bonded together	250.92(A)
96	C. 18 feet	225.18
97	A. Cords on the load side of a listed Class 2 power source are required to contain an equipment grounding conductor	605.6(B)
98	A. two or more	210.7
99	D. listed tamper-resistant receptacles	406.12
100	D. 125%	520.25(A)