Practice quiz: Texas Master Electrician

10 questions. The answer key is on page 2.

Name _____ Date _____

1. **Which NEC table gives the full-load current to use when you size the conductors for a three-phase induction motor?**
   A. The motor nameplate
   B. Table 430.248
   C. Table 430.250
   D. Table 310.16

2. **Which current is used to set a motor's overload protection?**
   A. The full-load current on the nameplate
   B. The full-load current from the table
   C. The locked-rotor current
   D. The ampacity of the branch-circuit conductors

3. **A 7.5 hp, 230 V, three-phase motor has a table full-load current of 22 A. What is the minimum ampacity of its branch-circuit conductors?**
   A. 22 A
   B. 25.3 A
   C. 33 A
   D. 27.5 A

4. **For the same motor with a table full-load current of 22 A, what is the largest standard inverse-time circuit breaker permitted for branch-circuit short-circuit and ground-fault protection, using the general percentage and the next higher standard size where the result is not a standard rating?**
   A. 40 A
   B. 60 A
   C. 50 A
   D. 70 A

5. **A motor has a nameplate full-load current of 18.6 A and a service factor of 1.15. What is the maximum overload setting before any starting exception is used?**
   A. 21.4 A
   B. 23.3 A
   C. 26.0 A
   D. 27.5 A

6. **A motor disconnecting means is rated in amperes. What is its minimum rating compared with the motor's full-load current?**
   A. Equal to the nameplate current
   B. 125% of the table full-load current
   C. Equal to the rating of the branch-circuit device
   D. 115% of the table full-load current

7. **A feeder supplies a 10 hp motor with a table full-load current of 14 A and a 5 hp motor with a table full-load current of 7.6 A, both 460 V, three-phase. What is the minimum ampacity of the feeder conductors?**
   A. 25.1 A
   B. 21.6 A
   C. 27.0 A
   D. 17.5 A

8. **The conductors from a generator's terminals to its first overcurrent device must have an ampacity of at least what percent of the generator nameplate current?**
   A. 100%
   B. 125%
   C. 115%
   D. 150%

9. **A legally required standby system must supply its loads within how many seconds after normal power fails?**
   A. 10 seconds
   B. 30 seconds
   C. 90 seconds
   D. 60 seconds

10. **What is the full-load current of a 50 kVA, 208 V, three-phase generator?**
    A. 138.8 A
    B. 159.6 A
    C. 240.4 A
    D. 60.1 A

Original practice questions, never real or recalled exam questions. Not affiliated with or endorsed by TDLR, PSI, Prov or NFPA. Exam names are used descriptively. Free 10-question check:
https://bondingjumper.com/tdlr-master?utm_source=print&utm_medium=pdf&utm_campaign=tdlr-master_content_202611&utm_content=quiz-pdf

Answer key

Texas Master Electrician. One line of why for each answer.

1. **C** Table 430.250 lists full-load currents for three-phase motors, and 430.6(A)(1) sends you to it for conductor sizing.
2. **A** Overload protection is sized from the nameplate current of the actual motor.
3. **D** Conductors take 125% of the table full-load current: 22 x 1.25 = 27.5 A.
4. **B** An inverse-time breaker is limited to 250% of the table current: 22 x 2.5 = 55 A.
5. **B** A motor with a service factor of 1.15 takes 125% of the nameplate current: 18.6 x 1.25 = 23.3 A.
6. **D** A disconnect rated in amperes must be at least 115% of the full-load current from the table.
7. **A** The feeder takes 125% of the largest motor plus the full-load current of the others: 14 x 1.25 + 7.6 = 17.5 + 7.6 = 25.1 A.
8. **C** The rule sets the minimum at 115% of the nameplate current rating.
9. **D** Legally required standby has a 60 second limit.
10. **A** Current is VA divided by volts times 1.732: 50,000 / (208 x 1.732) = 138.8 A.

Full explanations

Every question here has its full explanation in the free sample lesson. No signup.
bondingjumper.com/tdlr-master/sample

Take the free 10-question check

Original practice questions, never real or recalled exam questions. Not affiliated with or endorsed by TDLR, PSI, Prov or NFPA. Exam names are used descriptively. Free 10-question check:
https://bondingjumper.com/tdlr-master?utm_source=print&utm_medium=pdf&utm_campaign=tdlr-master_content_202611&utm_content=quiz-pdf