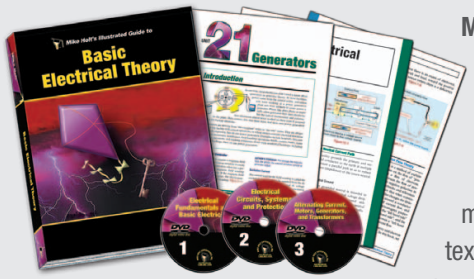
PART 1

Electrical Theory Exam (4 Hours)

Suggested Study Materials:



Mike Holt's Theory program will give you the foundation you need to pass this portion of your exam. This library includes *Mike Holt's Illustrated Guide to Basic Electrical Theory* textbook and DVDs that will help you understand what electricity is, how it is used and how it is produced. You will learn everything from a brief study of matter to a breakdown of circuits for controls, fire alarms, security and much more. You will also learn the basics for motors and transformers. The full-color textbook provides hundreds of illustrated graphics, detailed examples, practice questions and more to break down this topic for you.

Visit www.MikeHolt.com/Theory to see Mike's full selection of Theory materials.

1. Providing a path to the earth often helps reduce electrostatic charge.

   (a) True
   (b) False

2. Lightning frequently terminates to a point of elevation and it strikes nonmetallic as well as metallic objects with the same frequency.

   (a) True
   (b) False

3. The termination of the lightning strike is unlikely to ignite combustible materials.

   (a) True
   (b) False

4. Lightning protection is intended to protect the building structure itself, as well as the electrical equipment on or inside the building structure.

   (a) True
   (b) False

5. Nonmagnetic metals are ferrous, meaning they do not contain any iron, and cannot be magnetized.

   (a) True
   (b) False

6. Magnetic lines of force can cross each other and they are called flux lines.

   (a) True
   (b) False

7. It is not the force of the magnetic field through a conductor that produces electricity; it is the relative motion of the field to the electrons within the conductor that produces the movement of electrons.

   (a) True
   (b) False

8. People become injured and death may occur when voltage pushes electrons through the human body causing the heart to go into ventricular fibrillation.

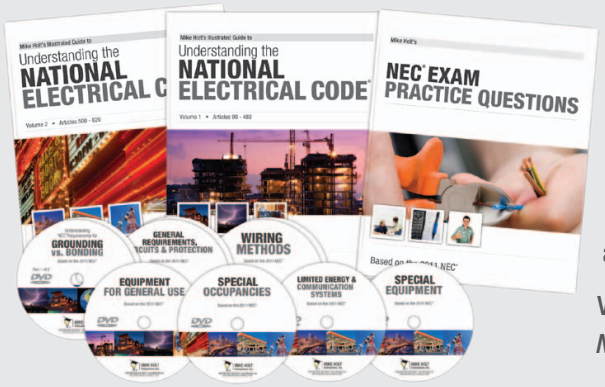
   (a) True
   (b) False

PART
2

National Electrical Code Exam (4 Hours)

Suggested Study Materials:

You will gain complete confidence in understanding the *National Electrical Code* when you choose **Mike's Detailed *NEC* Library**. This program is based on his best-selling *Understanding the National Electrical Code Volume 1 and 2* textbooks and DVDs and also includes *NEC Exam Practice Questions* book. You will learn how to use the *NEC*, general installation requirements, grounding vs. bonding, wiring methods, equipment for general use, special occupancies, special equipment, and limited energy and communication systems in a very easy-to-understand format that makes this program effective. The DVDs follow the text as Mike explains the *Code* with his dynamic teaching style.



Visit www.MikeHolt.com/Code to see Mike's full selection of *NEC* materials.

Please use the 2011 *Code* book to answer the following questions, which are based on the 2011 *NEC*.

1. For a grounded system, an unspliced _____ shall be used to connect the equipment grounding conductor(s) and the service disconnecting means to the grounded conductor of the system within the enclosure for each service disconnect.

   (a) grounding electrode
   (b) main bonding jumper
   (c) busbar
   (d) insulated copper conductor

2. Electric space-heating cables shall not be installed over cabinets whose clearance from the ceiling is less than the minimum _____ dimension of the cabinet to the nearest cabinet edge that is open to the room or area.

   (a) horizontal
   (b) vertical
   (c) overall
   (d) depth

3. Emergency systems are generally installed where artificial illumination is required for safe exiting and for panic control in buildings occupied by large numbers of persons, such as _____ and similar institutions.

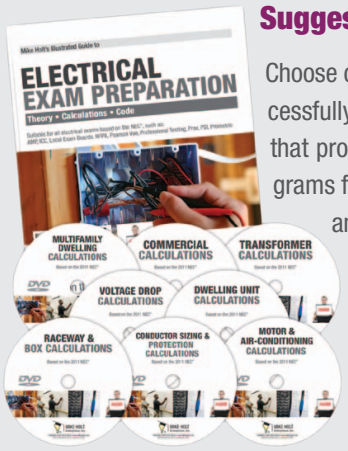
   (a) hotels
   (b) theaters and sports arenas
   (c) health care facilities
   (d) all of these

4. Fuses or circuit breakers for PV dc circuits must be _____ for use in dc circuits and shall have the appropriate voltage, current, and interrupt ratings.

   (a) identified
   (b) approved
   (c) recognized
   (d) listed

PART 3

Electrical Calculations Exam (3 Hours)



Suggested Study Materials:

Choose one of **Mike's Exam Preparation libraries** and you will find out why his study programs have successfully helped thousands of people pass their exams. Whether you choose his Comprehensive Library that provides a full study program for Theory, *Code* and Calculations or you choose his Intermediate programs for a streamlined study program, you will be satisfied. These programs provide full-color textbooks, and informative DVDs that will help you pass your exam the first time. For more information on these programs contact our office at 888.NEC.CODE (632-2633) and we can help you choose the right program for your needs.

Visit www.MikeHolt.com/ExamPrep to see Mike's full selection of Exam Preparation materials.

1. A 200A feeder installed in Schedule 80 rigid nonmetallic conduit has three 3/0 THHN conductors, one 2 THHN conductor, and one 6 THHN conductor. What trade size raceway is required?

   (a) 2
   (b) 2½
   (c) 3
   (d) 3½

2. What trade size rigid metal nipple is required for three 4/0 THHN conductors, one 1/0 THHN conductor, and one 4 THHN conductor?

   (a) 1½
   (b) 2
   (c) 2½
   (d) 3

3. What is the ampacity of four current-carrying 1/0 THHN conductors in a raceway?

   (a) 111A
   (b) 136A
   (c) 153A
   (d) 171A

4. A raceway contains eight current-carrying conductors. What size conductor is required to feed a 21A noncontinuous load? The overcurrent device is rated 30A.

   (a) 14 THHN
   (b) 12 THHN
   (c) 10 THHN
   (d) any of these

5. What is the ampacity of eight current-carrying 10 THHN conductors installed in an ambient temperature of 100°F?

   (a) 21A
   (b) 25A
   (c) 32A
   (d) 40A

6. The branch-circuit short-circuit protection device for a 10 hp, 230V, single-phase motor shall not exceed _____. Note: Use an inverse time breaker for protection.

   (a) 50A
   (b) 75A
   (c) 80A
   (d) 125A