



**COMMERCIAL FOOD EQUIPMENT  
SERVICE ASSOCIATION**

**A Guide to Certification**

Commercial Food Equipment Service Association  
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## **ABOUT CERTIFICATION**

The Commercial Food Equipment Service Association (CFESA) is committed to sponsoring professionalism in servicing food equipment. Knowledgeable servicers who can repair swiftly, efficiently and professionally are the foundation of the food equipment industry. To support quality service, CFESA has established a program whereby technicians are tested and certified only upon successful completion of an exam.

CFESA offers certification tests in the areas of Electricity, Gas, Steam and Refrigeration.

This guide will help the technician prepare for the CFESA test. It will be useful in determining the technical knowledge and additional reference materials needed to prepare for testing. The reference materials and the tests were written by servicers who have the hands-on experience in the field of food equipment repair.

Service technicians are encouraged to take the CFESA tests and earn certification credentials. Certified technicians promote consumer trust and add professionalism to the industry. Trust and professionalism are the first steps to a better, more prosperous business.

CFESA challenges technicians to take the tests and join the pros who wear the CFESA CERTIFIED TECHNICIAN seal of excellence.

## **HOW DO I BECOME CERTIFIED?**

If a technician passes one or more of the tests and has at least two years of hands-on experience in food equipment repair, they can become a CFESA CERTIFIED TECHNICIAN.

There is no need to travel in order to take the test. Testing is held locally providing that a suitable proctor, such as an equipment dealer, manufacturer's rep or technical school instructor, be obtained to administer the exam.

At least two weeks before the exam, notify CFESA Headquarters of the examination date, the name, address and phone number of the proctor and the technician being tested. The test packets and instructions will be sent directly to the proctor.

Testing takes approximately two hours. Afterwards, completed exams are sent back to CFESA Headquarters for grading.

If a test is failed, it may be taken again after 90 days during a scheduled test date.

## **TYPES OF KNOWLEDGE MEASURED BY THE TESTS**

The knowledge necessary to pass the tests is as follows:

- Basic technical knowledge of what makes up the food equipment system and how it works. This includes the proper procedures and precautions to be taken when repairing the equipment.
- A working knowledge of the National Codes that cover gas, electricity, refrigeration and steam power, plus the regulations of the National Sanitation Foundation and the AGA.
- Knowledge of testing equipment and usage tests your ability to use meters and measuring equipment to diagnose the problem and repair the equipment. It also tests your ability to use manufacturers' specifications, diagrams and drawings to trace the effects of a symptom and communicate the problem in writing to the manufacturers' engineers for a solution.

## **HOW DO I PREPARE FOR TESTING?**

An outline of information covered by the electric and gas tests are listed on the back of this brochure as well as on the CFESA website located at: [www.cfesa.com](http://www.cfesa.com).

Reference material necessary for study is listed below. The reference materials are the primary study books from which the theoretical materials were taken.

In addition, some technicians have attended local vo-tech schools to brush up on basic theory to enhance their hands-on training.

## **APPLYING FOR THE TEST**

Only technicians employed by a CFESA member may apply and take the test. If you have two years experience in food equipment service and are ready to take the test, notify your supervisor. Your supervisor will receive a confirmation of your test location and date by return mail.

## **AT THE TEST AREA**

Do not write in the test booklets.

Be well rested before the test. Bring pencils, a watch, a calculator, pressure temperature chart for the Refrigeration test and identification.

When arriving at the test area, present your ID to the proctor. He/she will tell you about the answer form and the amount of time you will have to finish the test. Your test and answer sheet will be in a sealed envelope with your name on the cover.

Once the test has begun, watch the time. Do not spend too much time on any one question. If you are not sure of an answer, mark the answer you think is correct and color in the corresponding answer on the answer sheet. Then go to the next question. If you finish before the allotted time, go back to the questions you have checked. Answer EVERY question. Your score will be based only on the number of correct answers that you give.

## **AFTER THE TEST**

Your test will be graded by CFESA Headquarters and you and your employer will be mailed the results of the test. If you pass, you will receive your certification patches and certificate. If you fail to pass the test, you may take the test again after ninety days and during any scheduled test date.

## **REFERENCE MATERIALS**

Those marked with an asterick (\*) may be purchased directly from CFESA Headquarters.

Barasch, Robert, Tech Train, Volume 1, Electrical Training for the Foodservice Equipment Industry.

Barasch, Robert, Tech Train, Volume 2, Steam Training for the Foodservice Equipment Industry.

\* National Fire Protection Association, National Fuel Gas Code.

\* National Fire Protection Association, National Electric Code.

\* American Gas Association Workbooks and "Six Pack"

Kiefer, Wm. G. (Ed), Basic Electricity - Commercial Kitchen Appliances.

Herrington, Donald and Meachum, Stanley, Handbook of Electronic Tables and Formulas.

Barban, P. and Schmidt, M., Understanding Electricity and Electronics.

## **ELECTRICITY TEST SYLLABUS**

### **(Examination Subsections)**

Safety & Electrical Code  
Electrical Theory  
Wiring Diagrams  
Electrical Components  
Practical Service Situations

### **Steam Test Syllabus**

#### **(Examination Subsections)**

Basic Steam Theory  
Boilers  
Boiler Maintenance  
Codes  
Cooking with Steam  
Corrosion  
Convection Steamers  
Installation  
Level Controls  
Piping  
Pressure Steaming  
Safety  
Steam Components  
Steam Kettles  
Water Quality and Treatment

## **GAS TEST SYLLABUS**

(from National Fuel Gas Code and AGA Six Pack & Workbooks)

### **Petroleum Fuels - properties and usefulness Makeup Of A Gas Flame**

#### **Gas Test Instruments**

- a. Leak detectors
- b. Millivolt Meters
- c. Manometers

#### **Gas Pressures and Pressure Regulators Orifices**

#### **Pilot Gas Burners and Main Gas Burners**

#### **Heat And Its Effect On Metals**

- a. Bimeters
- b. Rod and Tube Assembly
- c. Distats
- d. Heat Exchangers

#### **Gas Heating and Ventilation**

#### **Electromagnetic Sensing & Control System**

- a. Thermocouples
- b. Thermopiles
- c. Electromagnetic control units
- d. Millivolt Control Safety Systems
- e. Electromagnetic Safety Systems
- f. Millivolt Control Safety Systems
- g. Energy Cutoff Switches

#### **Other Gas Components**

- a. piping
- b. Fitting
- c. Valves
- d. Solenoid Valves
- e. Flues and Baffles
- f. Flash Tube Systems

#### **Special Applications**

- a. Infra Heating
- b. Hi-efficiency air driven burners

#### **Codes**

- a. AGA
- b. BOCA
- c. UL