# Skill Development Exercises for Chapter 11

**11-1.** The _____ is the generally accepted method of measuring air flow in duct systems.

a) Anemometer b) Psychrometer

c) Digital anemometer or pitot-tube traverse

d) All of the above

**Answer: c**

**11-2.** Most procedures for establishing accurate air flows in air-handling systems rely on measuring air volumes at the terminals.

a) True b) False

**Answer: b**

Terminal airflow measurements are used to set the relative flows to outlets. Flows in ducts are used to establish accurate airflows.

**11-3.** Pressure drops through equipment such as dampers or filters may be used to measure air flow.

a) True b) False

**Answer: b**

The pressure drop through equipment is not sufficiently accurate for flow measurement unless specifically designed, calibrated and installed for this purpose.

**11-4.** _____ is a necessary instrument for air balancing.

a) Pitot-tube or digital anemometer b) Flow hood

c) Digital or dial thermometers d) All of the above

**Answer: d**

**11-5.** Air leaks in casings and around coils and filter frames should be checked by:

a) Moving a bright light along the outside of joints against the duct

b) Red smoke introduced into the airstream

c) Halogen sniffers d) All of the above

**Answer: a**

**11-6.** _____ dampers should be used for major adjusting and _____ dampers for trim, or minor, adjustment only.

a) Branch, terminal b) Terminal, branch

c) Branch, subbranch d) All of the above

**Answer: a**

**11-7.** The _____ is frequently used to measure diffusers and slot air flows.

a) Anemometer b) Pitot-tube

c) Capture hood d) All of the above

**Answer: c**

**11-8.** _____ are commonly used to measure air flow into sidewall grilles.

a) Rotating vane anemometers b) Pitot-tubes

c) Flow hoods d) All of the above

**Answer: a**

**11-9.** Air volume measurements taken at terminals are generally more reliable than those obtained in the ducts.

a) True b) False

**Answer: b**

**11-10.** Pressures involved with air measurements include:

a) Barometric pressure b) Static pressure

c) Velocity pressure d) All of the above

**Answer: d**

**11-11.** Under certain conditions, air turbulence is desirable and necessary.

a) True b) False

**Answer: a**

Specifically when mixing.

**11-12.** To avoid your check on sound pressure levels being challenged, it is best to have agreed on _____.

a) The allowable levels

b) The method for determining reading locations

c) An adjustment to the readings if the spaces are unfurnished

d) Whether the levels are to be assessed against an A weighting, NC, RC or other scale

e) All of the above

**Answer: e**

**11-13.** The most useful item for initial assessment of the cause of noise and vibration problems is:

a) A complainer b) Your ears

c) A high quality sound meter with octave band filters

d) All of the above

**Answer: b**

Your ears due to their ability to detect change in sounds.

**11-14.** When recording sound pressure levels during a check to establish that levels are within specification, it is valuable to note any noticeable tones even when the levels are within specification because:

a) the tone indicates that the system causes significant vibration

b) the occupants may complain about the tone

c) the client's sound level meter may be more sensitive to the tone than yours

d) all of the above

**Answer: b**