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7. Upon passing, you will proceed to the next chapter. If you do not pass a chapter test, you will start again at the beginning of that chapter.

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Quiz 1

Question 1: Chapter 11 covers the following areas of refrigeration systems:

- design
- installation
- construction
- repair
- all of the above

Question 2: The code reference to the above question is

- 1101.1
- 1101.2
- 1101.3
- 1101.4
- 1101.5

Question 3: Refrigerant storage systems are considered part of the refrigeration system when they are

- permanently installed
- temporarily installed
- either permanently or temporarily installed

Question 4: The code reference to the above question is:

- 1101.1
- 1101.2
- 1101.3
- 1101.4
- 1101.5

Question 5: Factory built equipment that has been tested and meets UL 207, 412, 471 or 1995 and is installed per manufacture's direction is deemed to meet Chapter 11 requirements.

- true
- false

Question 6: The code reference to the above question is

- 1101.1
- 1101.2
- 1101.3
- 1101.4
- 1101.5

Question 7: Only exposed copper tubing of a refrigeration system that is subject to physical damage shall be protected in an approved manner.

- true
- false

Question 8: The code reference to the above question is

- 1101.1
- 1101.2
- 1101.3
- 1101.4
- 1101.5

Question 9: Water supply and discharge connections associated with refrigeration systems shall be made in accordance with the _____.

- International Plumbing Code
- National Plumbing Code
- Universal Plumbing Code
- Interurban Plumbing Code

Question 10: The code reference to the above question is

- 1101.1
- 1101.2
- 1101.3
- 1101.4
- 1101.5

Question 11: Fuel gas devices, equipment and appliances used with refrigeration systems shall be installed in accordance with the _____.

- International Fuel Gas Code
- National Combustion Code
- NEC
- Uniform Plumbing Code

Question 12: The code reference to the above question is

- 1101.3
- 1101.4
- 1101.5
- 1101.6
- 1101.7

Question 13: Ammonia-refrigeration systems are not covered by IMC Chapter 11.

- true
- false

Question 14: The code reference to the above question is

- 1101.3
- 1101.4
- 1101.5
- 1101.6
- 1101.7

Question 15: The 2009 IMC Chapter 11 requires that mechanical refrigeration systems shall be maintained in proper operating condition, free from accumulations of oil, dirt, waste, excessive corrosion, other debris and leaks.

- true
- false

Question 16: The code reference to the above question is

- 1101.5
- 1101.6
- 1101.7
- 1101.8
- 1101.9

Question 17: When changing refrigerant type in a system, the maximum system size must not exceed _____ of a Group A1 without prior notification to the code official.

- 30 pounds
- 100 pounds
- 220 pounds
- 500 pounds

Question 18: The code reference to the above question is

- 1101.5
- 1101.6
- 1101.7
- 1101.8
- 1101.9

Question 19: When changing refrigerant type in a system, the maximum system size must not exceed _____ of a any Group other than A1 refrigerant without prior notification to the code official.

- 30 pounds
- 100 pounds
- 220 pounds
- 500 pounds

Question 20: The code reference to the above question is

- 1101.5
- 1101.6
- 1101.7
- 1101.8
- 1101.9

Question 21: Notification of refrigerant discharge shall be provided in accordance with the International Fire Code
International Plumbing Code
National Plumbing Code
Universal Plumbing Code

Question 22: The code reference to the above question is

- 1101.5
- 1101.6
- 1101.7
- 1101.8
- 1101.9

Quiz 2:

Question 1: A refrigeration system's classification is determined in accordance with section 1103.1
section 1103.2
section 1103.3
section 1104.4

Question 2: The code reference to the above question is

- 1102.1
- 1102.2
- 1102.2.1
- 1102.2.2
- 1102.2.2.1

Question 3: A refrigerant classification in accordance with

- section 1103.1
- section 1103.2
- section 1103.3
- section 1104.4

Question 4: The code reference to the above question is

- 1102.1
- 1102.2
- 1102.2.1
- 1102.2.2
- 1102.2.2.1

Question 5: The maximum allowable quantity of refrigerant is determined in accordance with _____ based on type of refrigerant, system classification and occupancy.

- section 1103.1
- section 1103.2
- section 1103.3
- section 1104

Question 6: The code reference to the above question is

- 1102.1
- 1102.2
- 1102.2.1
- 1102.2.2
- 1102.2.2.1

Question 7: The refrigerant system enclosure requirements are determine in accordance with _____.

- section 1103.1
- section 1103.2
- section 1103.3
- section 1104

Question 8: The code reference to the above question is

- 1102.1
- 1102.2
- 1102.2.1
- 1102.2.2
- 1102.2.2.1

Question 9: Refrigeration equipment and appliance location and installation shall be subject to the limitations of _____ of the 2009 IMC

- chapter 2
- chapter 3
- chapter 4
- chapter 11

Question 10: The code reference to the above question is

- 1102.1
- 1102.2
- 1102.2.1
- 1102.2.2
- 1102.2.2.1

Question 11: Non-factory—tested, field—erected equipment and appliances shall be pressure tested in accordance with _____.

- section 1108
- section 1109
- section 1110
- not covered in the IMC

Question 12: The code reference to the above question is

- 1102.1
- 1102.2
- 1102.2.1
- 1102.2.2
- 1102.2.2.1

Question 13: The refrigerant shall be designed to utilize or converted to utilize. Refrigerants not identified in Table 1103.1 shall be approved before use.

- true
- false

Question 14: The code reference to the above question is

- 1102.1
- 1102.2
- 1102.2.1
- 1102.2.2
- 1102.2.2.1

Question 15: Refrigerants, including refrigerant blends, with different designations in ASHRAE 34 shall not be mixed in a system.

- true
- false

Question 16: The code reference to the above question is

- 1102.1
- 1102.2
- 1102.2.1
- 1102.2.2
- 1102.2.2.1

Question 17: Adding a second refrigerant is allowed when permitted by the equipment or appliance manufacturer to improve oil return at low temperatures.

- true
- false

Question 18: Which of the following types of refrigerant can NOT be used in a system?

- new
- recycled
- recovered
- reclaimed

Question 19: The code reference to the above question is:

- 1102.1
- 1102.2
- 1102.2.1
- 1102.2.2
- 1102.2.3

Question 20: New refrigerants shall be of a purity level specified by the equipment or appliance manufacturer.

- True
- False

Question 21: The code reference to the above question is

- 1102.1
- 1102.2
- 1102.2.1
- 1102.2.2
- 1102.2.2.1

Question 22: Refrigerants that are recovered from refrigeration and air-conditioning systems shall not be reused in other than the system.

- true
- false

Question 23: The code reference to the above question is

- 1102.2
- 1102.2.1
- 1102.2.2
- 1102.2.2.2
- 1102.2.2.3

Question 24: Recovered refrigerants shall be _____ and _____ before reuse.

- strained, relabeled
- weighed and marked
- dried and tested
- filters and dried

Question 25: The code reference to the above question is

- 1102.2
- 1102.2.1
- 1102.2.2
- 1102.2.2.2

1102.2.2.3

Question 26: A clearly contaminated recovered refrigerant can be reused when it is filtered when it is dried when it is reclaimed in accordance with Sec.

1102.2.2.3
never in a new system
never in any system

Question 27: The code reference to the above question is

1102.2
1102.2.1
1102.2.2
1102.2.2.2
1102.2.2.3

Question 28: Used refrigerants shall be reused in a different owner's equipment or appliances.

true
false

Question 29: The code reference to the above question is

1102.2
1102.2.1
1102.2.2
1102.2.2.2
1102.2.2.3

Question 30: Contaminated refrigerants shall not be used unless reclaimed and found to meet the purity requirements of ARI 700.

true
false

Question 31: The code reference to the above question is

1102.2
1102.2.1
1102.2.2
1102.2.2.2
1102.2.2.3

Quiz 3.

Question 1: Occupancy classification is determined by the locations of refrigerating systems that consider the ability of people to respond to potential exposure to refrigerants.

true
false

Question 2: The code reference to the above question is

1103.1
1103.2
1103.3
1103.3.1
1103.3.2

Question 3: When equipment is located outside a building and is within _____ of any building opening, the equipment shall be governed by the occupancy classification of the building.

10 feet
20 feet
30 feet
50 feet
100 feet

Question 4: The code reference to the above question is

1103.1
1103.2
1103.3
1103.3.1
1103.3.2

Question 5: Institutional occupancy is that portion of premises from which, because they are disabled, debilitated or confined, occupants cannot readily leave without the assistance of others. An example would be:

residential home
nursing home
grade school
high school
college dorm

Question 6: The code reference to the above question is

1103.1
1103.2
1103.3
1103.3.1
1103.3.2

Question 7: A public assembly occupancy is that portion of premises where larger numbers of people congregate and from which occupants cannot quickly vacate the space. An example would be

auditoriums,
ballrooms
classrooms
passenger depots
all of the above

Question 8: The code reference to the above question is

- 1103.1
- 1103.2
- 1103.3
- 1103.3.1
- 1103.3.2

Question 9: A Residential occupancy must provide occupants with

- provisions for living
- provisions for sleeping
- provisions for eating
- provisions for cooking
- all of the above

Question 10: The code reference to the above question is

- 1103.1
- 1103.2
- 1103.3
- 1103.3.1
- 1103.3.2

Question 11: Which of the following is NOT a Commercial occupancy.

- office building
- professional buildings
- markets
- large mercantile
- non industrial storage areas

Question 12: The code reference to the above question is

- 1103.1
- 1103.2
- 1103.3
- 1103.3.1
- 1103.3.2

Question 13: A large mercantile occupancy is where more than ____ persons congregate on levels above or below street level to purchase personal merchandise.

- 100
- 250
- 500
- 650

Question 14: The code reference to the above question is

- 1103.1
- 1103.2
- 1103.3
- 1103.3.1
- 1103.3.2

Question 15: An industrial occupancy _____ open to the public, where access by authorized persons is controlled and that is used to manufacture, process or store goods such as chemicals, food, ice, meat or petroleum.

- is
- is not

Question 16: The code reference to the above question is

- 1103.1
- 1103.2
- 1103.3
- 1103.3.1
- 1103.3.2

Question 17: Mixed occupancy occurs when ____ or more occupancies are located within the same building.

- 2
- 3
- 4

Question 18: The code reference to the above question is

- 1103.1
- 1103.2
- 1103.3
- 1103.3.1
- 1103.3.2

Question 19: Refrigeration systems shall be classified according to the degree of probability that refig. leaked from a failed connection entering and occupied area. The distinction is based on the basic design.

- true
- false

Question 20: The correct reference for the above question is:

- 1103.1
- 1103.2
- 1103.3
- 1103.3.1
- 1103.3.2

Question 21: Which of the following would be an example of a low-probability system.

- double-indirect open-spray systems
- indirect closed system
- indirect-vented closed system
- all of the above
- none of the above

Question 22: The code reference to the above question is
 1103.1
 1103.2
 1103.3
 1103.3.1
 1103.3.2

Question 23: An example of a high-probability system would be a direct or in-direct open-spray system
 true
 false

Question 24: The code reference to the above question is
 1103.1
 1103.2
 1103.3
 1103.3.1
 1103.3.2

Quiz 4:

Question 1: Two refrigerants are used in a blend, each with different classifications. The classification for the blend is based on the _____ of fractionation.
 worst case
 average
 best case

Question 2: The code reference to the above question is
 1104.1
 1104.2
 1104.2.1
 1104.2.2

Question 3: The location refrigeration systems exceeding allowable amounts as shown in Table 1103.1, shall be
 only outdoors
 only in a machinery room
 outdoors or in a machinery room
 none of the above

Question 4: The code reference to the above question is
 1104.1
 1104.2
 1104.2.1
 1104.2.2

Question 5: Refrigeration equipment that has less than 6.6 pounds of refrigerant does not need to be located in a machinery room.
 true
 false

Question 6: The code reference to the above question is
 1104.1
 1104.2
 1104.2.1
 1104.2.2

Question 7: In a nursing home, the amount of refrigerant normally allowed in Table 1103.1 is reduced by _____ percent.
 10
 50
 75
 100

Question 8: The code reference to the above question is
 1104.1
 1104.2
 1104.2.1
 1104.2.2

Question 9: The maximum amount of A2, B2, A3, B3 refrigerant allowed in an institutional occupancy must be less than _____ pounds except in kitchens, laboratories and mortuaries.
 100
 250
 500
 550
 1000

Question 10: The code reference to the above question is
 1104.1
 1104.2
 1104.2.1
 1104.2.2

Question 11: The refrigeration machinery is separated from other occupancies by tight construction with tight-fitting doors.
 true
 false

Question 12: The code reference to the above question is
 1104.1
 1104.2
 1104.2.1
 1104.2.2

Question 13: The access is restricted to authorized personnel.
 true
 false

Question 14: The code reference to the above question is
 1104.1
 1104.2
 1104.2.1
 1104.2.2

Question 15: The floor area per occupant is not less than _____ square feet (9.3m²) where machinery is located on floor levels with exits more than 6.6 feet above the ground.
 25
 50
 75
 100
 200

Question 16: The code reference to the above question is
 1104.1
 1104.2
 1104.2.1
 1104.2.2

Question 17: Where provided with egress directly to the outdoors or into approved building exits, does the minimum floor area apply?
 Yes
 No

Question 18: The code reference to the above question is
 1104.1
 1104.2
 1104.2.1
 1104.2.2

Question 19: Refrigerant detectors are installed as required for machinery rooms in accordance with Section 1105.3.
 true
 false

Question 20: The code reference to the above question is
 1104.1
 1104.2
 1104.2.1
 1104.2.2

Question 21: Surfaces having temperatures exceeding _____°F and open flames are not present where any group A2, B2, A3 or B3 refrigerant is used.
 300
 500
 800
 1200

Question 22: The code reference to the above question is
 1104.1
 1104.2
 1104.2.1
 1104.2.2

Question 23: Class 1, Division 2, hazardous locations. If all the refig. from Groups A2, B2, A3 or B3 from a single indep. circuit were released, it would not exceed 25% LFL.
 true
 false

Question 24: The code reference to the above question is
 1104.1
 1104.2
 1104.2.1
 1104.2.2

Question 25: All parts of the system which are greater than 100 hp, except for evap. dehumidification coils or cond ht coil etc. must be located outdoors or in a mach. room.
 Yes
 No

Question 26: The code reference to the above question is
 1104.1
 1104.2
 1104.2.1
 1104.2.2

Quiz 5:

Question 1: Air-conditioning systems for human comfort that are used in high probability systems shall not use refrigerant types;

- B1
- B2
- B3
- all of the above
- none of the above

Question 2: The code reference to the above question is

- 1104.3
- 1104.3.1
- 1104.3.2
- 1104.3.3
- 1104.3.4

Question 3: In non-industrial occupancies, Group A2 and B2 refrigerants shall not be used in high-probability systems where the quantity of refrigerant in any independent refrigerant circuit exceeds the amount shown in Table 1104.3.2.

- true
- false

Question 4: The code reference to the above question is

- 1104.3
- 1104.3.1
- 1104.3.2
- 1104.3.3
- 1104.3.4

Question 5: Group A3 and B3 refrigerants may be used in any application.

- true
- false

Question 6: The code reference to the above question is

- 1104.3
- 1104.3.1
- 1104.3.2
- 1104.3.3
- 1104.3.4

Question 7: The total of all Group A2, B2, A3 and B3 refrigerants other than R-717, ammonia, shall not exceed _____ pounds except where approved.

- 500
- 610
- 970
- 1100
- 1357

Question 8: The code reference to the above question is

- 1104.3
- 1104.3.1
- 1104.3.2
- 1104.3.3
- 1104.3.4

Question 9: If there is any device which has an open flame or if its surface temperature greater than 800°F is used in a room containing more than 6.6 pounds, then a hood and exhaust system will need to be installed which exhaust to the outdoors.

- true
- false

Question 10: The code reference to the above question is

- 1104.3
- 1104.3.1
- 1104.3.2
- 1104.3.3
- 1104.3.4

Question 11: Exceptions when a hood and exhaust system shall not be required is when: the refrigerant is R-717, R718, or R744

Where the combustion air is ducted from the outdoors in a manner the prevents leaked refrigerant from being combusted where a refrigerant detector is used to stop the combustion in the event of a refrigerant leak
all of the above

Question 12: The code reference to the above question is

- 1104.3
- 1104.3.1
- 1104.3.2
- 1104.3.3
- 1104.3.4

Question 13: When calculating the vol for non-communicating spaces, (spaces that do not communicate through perm. openings or HVAC ductwork) the volume of the largest enclosed occupied space shall be used to determine the permissible quantity of refig. in the system

- True
- False

Question 14: The code reference to the above question is

- 1104.4.1
- 1104.4.2
- 1104.4.3

Question 15: When calculating the volume of communicating spaces, where an evaporator or condenser is located in an air duct system, the volume of the smallest, enclosed occupied space served by the duct system shall be used to determine the maximum allowable quantity
 true
 false

Question 16: The code reference to the above question is
 1104.4.1
 1104.4.2
 1104.4.3

Question 17: Where the space above a suspended ceiling is continuous and part of the supply or return air plenum system, this, space shall be included in the calculation the volume of the enclosed space.
 true
 false

Question 18: The code reference to the above question is
 1104.4.1
 1104.4.2
 1104.4.3

Quiz 6

Question 1: Ducts and air handlers in the machinery room that operate at a lower pressure than the room shall be sealed to prevent any refrigerant leakage from entering the air stream.
 true
 false

Question 2: The code reference to the above question is
 1105.1
 1105.2
 1105.3
 1105.4
 1105.5

Question 3: Refrigerant detectors are required in machinery rooms.
 true
 false

Question 4: The code reference to the above question is
 1105.1
 1105.2
 1105.3
 1105.4

1105.5

Question 5: The frequency that periodic tests of the mechanical ventilating system is
 monthly
 semi-annually
 annually
 required by the code officials

Question 6: The code reference to the above question is
 1105.1
 1105.2
 1105.3
 1105.4
 1105.5

Question 7: Generally a gas fired water heater is allowed to be installed and operate in a machinery room.
 True
 False

Question 8: The code reference to the above question is
 1105.1
 1105.2
 1105.3
 1105.4
 1105.5

Question 9: A gas fired water heater is allowed to be installed and operate in a machinery room if the refrigerant is carbon dioxide or water the combustion air is ducted from outside the machinery room and sealed in such a manner as to prevent any refrigerant leakage from entering the combustion chamber
 a refrigerant vapor detector is employed to automatically shut off the combustion process in the event of refrigerant leakage
 all of the above
 none of the above

Question 10: The code reference to the above question is
 1105.1
 1105.2
 1105.3
 1105.4
 1105.5

Question 11: Machinery rooms shall be mechanically ventilated to the outdoors.
 true
 false

Question 12: The code reference to the above question is
 1105.6
 1105.6.1
 1105.6.2
 1105.6.3
 1105.6.4

Question 13: Mechanical ventilation shall be capable of exhausting the minimum quantity of air only at normal operating conditions.
 true
 false

Question 14: The code reference to the above question is
 1105.6
 1105.6.1
 1105.6.2
 1105.6.3
 1105.6.4

Question 15: Multiple fans or multi-speed fans shall be allowed in order to produce the emergency ventilation rate and to obtain a reduced airflow for normal ventilation.
 true
 false

Question 16: The code reference to the above question is
 1105.6
 1105.6.1
 1105.6.2
 1105.6.3
 1105.6.4

Question 17: If a refrigerating system is located outdoors more than 20 feet from any building opening and is enclosed by a penthouse, lean-to or other open structure, natural or mechanical ventilation shall be provided.
 true
 false

Question 18: The code reference to the above question is
 1105.6
 1105.6.1
 1105.6.2
 1105.6.3
 1105.6.4

Question 19: Exhaust from mechanical ventilation systems shall be discharged not less than _____ feet from a property line or openings into buildings.
 10
 20
 25
 50

Question 20: The code reference to the above question is
 1105.6
 1105.6.1
 1105.6.2
 1105.6.3
 1105.6.4

Question 21: Openings for makeup air shall be located to avoid intake of exhaust air.
 true
 false

Question 22: The code reference to the above question is
 1105.6
 1105.6.1
 1105.6.2
 1105.6.3
 1105.6.4

Question 23: Supply and exhaust ducts to the machinery room shall serve no other area.
 true
 false

Question 24: The code reference to the above question is
 1105.6
 1105.6.1
 1105.6.2
 1105.6.3
 1105.6.4

Question 25: Supply and exhaust ducts to the machinery room shall be covered with corrosion-resistant screen of not less than ____ inch mesh.
 $\frac{1}{4}$
 $\frac{1}{2}$
 1
 1 $\frac{1}{2}$

Question 26: The code reference to the above question is
 1105.6
 1105.6.1
 1105.6.2

1105.6.3
1105.6.4

Question 27: When a machinery room is occupied, mechanical ventilation must:
exceed 0.5 cfm per square foot of machinery room area
exceed 20 cfm per person
a volume required to limit the room temperature rise to 18°F taking into account the ambient heating effect of all machinery in the room
meet all of the above criteria
meet the highest volume of air for either a, b, or c

Question 28: The code reference to the above question is
1105.6
1105.6.1
1105.6.2
1105.6.3
1105.6.4

Question 29: Pressure relief devices, fusible plugs and purge systems located within the machinery room shall terminate outside of the structure at a location not less than _____ above the adjoining grade level
10 feet
15 feet
20 feet
30 feet
50 feet

Question 30: The code reference to the above question is
1105.6.3
1105.6.4
1105.7
1105.8
1105.9

Question 31: (continued from question 29).... and not less than _____ from any window, ventilation opening or exit.
10 feet
15 feet
20 feet
30 feet
50 feet

Question 32: The code reference to the above question is
1105.6.3
1105.6.4
1105.7
1105.8

1105.9

Question 33: Refrigeration systems containing more than _____ pounds of flammable, toxic or highly toxic refrigerant or ammonia shall be provided with an emergency pressure control system in accordance with Section 606.10 of the International Fire Code.

5.0
6.0
6.6
10

Question 34: The code reference to the above question is
1105.6.3
1105.6.4
1105.7
1105.8
1105.9

Quiz 7

Question 1: In a machinery room, there shall not be an open flame-producing device or continuously operating hot surface over 800°F permanently installed
true
false

Question 2: The code reference to the above question is
1106.1
1106.2
1106.3
1106.4
1106.5

Question 3: If exceptions to the code are not considered, in an ammonia machinery room, the ventilation system shall be operated continuously at the emergency ventilation rate
true
false

Question 4: The code reference to the above question is
1106.1
1106.2
1106.3
1106.4
1106.5

Question 5: An exception(s) to a continuous running ammonia room ventilation fan would be
 If the ammonia machinery rooms was equipped with a vapor detector that would automatically start the ventilation fans at the emergency rate and that will also actuate an alarm at a detection level not to exceed 1,000 ppm

If the ammonia machinery rooms conforming to the Class 1, Division 2, hazardous location classification requirements of NFPA 70
 both a and b
 neither a or b

Question 6: The code reference to the above question is

- 1106.1
- 1106.2
- 1106.3
- 1106.4
- 1106.5

Question 7: If a flammable refrigerant, Group A2, A3, B2, and B3 is used, the machinery room shall conform to the Class 1, Division 2, hazardous location classification requirements of the NFPA 70
 true – always the case

false – flammable refrigerants are never allowed to be used
 true with the exception of ammonia machinery rooms

Question 8: The code reference to the above question is

- 1106.1
- 1106.2
- 1106.3
- 1106.4
- 1106.5

Question 9: A clearly identified switch of the break-glass type shall provide off-only control of electrically energized equipment and appliances in the machinery room, other than refrigerant leak detectors and machinery room ventilation.

true – with no exceptions
 true with the exception that in machinery rooms where only nonflammable refrigerants are used, electrical equipment other than compressors, are not required to be provided with a cutoff switch
 false

Question 10: The code reference to the above question is

- 1106.4
- 1106.5
- 1106.5.1
- 1106.5.2
- 1106.6

Question 11: A clearly identified switch of the break-glass type shall provide on-only control of the machinery room ventilation fans.

true
 false

Question 12: The code reference to the above question is

- 1106.4
- 1106.5
- 1106.5.1
- 1106.5.2
- 1106.6

Question 13: Refrigeration units and systems shall be provided with approved emergency signs, charts, and labels in accordance with the International Fire Code

true
 false

Question 14: The code reference to the above question is

- 1106.4
- 1106.5
- 1106.5.1
- 1106.5.2
- 1106.6

Quiz 8

Question 1: Rigid or flexible metal enclosures or pipe ducts shall be provided for soft, annealed copper tubing and used for refrigerant piping erected on the premises and containing other than Group A1 or B1 refrigerants.

true
 false

Question 2: The code reference to the above question is

- 1107.1
- 1107.2
- 1107.3
- 1107.4
- 1107.4.1

Question 3: Enclosures shall not be required for connections between condensing units and the nearest riser box(es), provided such connections do not exceed _____ feet in length.

- 3
- 6
- 10
- 12

Question 4: The code reference to the above question is

- 1107.1
- 1107.2
- 1107.3
- 1107.4
- 1107.4.1

Question 5: Refrigeration piping that may sweat from the surrounding air and which may cause a safety hazard or structural problems will need to be protected in an approved manner.

- true
- false

Question 6: The code reference to the above question is

- 1107.1
- 1107.2
- 1107.3
- 1107.4
- 1107.4.1

Question 7: Carbon steel pipe at least Schedule _____ shall be used for Group A2, A3, B2 or B3 refrigerant liquid lines for sizes 1.5 inches and smaller.

- 40
- 60
- 80
- 120

Question 8: The code reference to the above question is

- 1107.2
- 1107.3
- 1107.4
- 1107.5
- 1107.5.1

Question 9: Carbon steel pipe at least Schedule _____ shall be used for Group A1 or B1 refrigerant liquid lines 6 inches and smaller,

- 40
- 60
- 80

120

Question 10: The code reference to the above question is

- 1107.2
- 1107.3
- 1107.4
- 1107.5
- 1107.5.1

Question 11: Type F steel pipe should be used for refrigerant lines having an operating temperature less than – 20°F.

- true
- false

Question 12: The code reference to the above question is

- 1107.2
- 1107.3
- 1107.4
- 1107.5
- 1107.5.1

Question 13: Red brass should not have less than _____ percent copper and conform to ASTM B 42 and ASTM B 43.

- 50
- 75
- 80
- 90

Question 14: The code reference to the above question is

- 1107.4.2
- 1107.4.3
- 1107.4.4
- 1107.4.5
- 1107.5.2

Question 15: Type ACR hard shall be used for pipe erected piping.

- true
- false

Question 16: The code reference to the above question is

- 1107.4.9
- 1107.5
- 1107.5.1
- 1107.5.2
- 1107.5.3

Question 17: Type ACR annealed shall not be used for pipe erected piping.
 true
 false

Question 18: The code reference to the above question is
 1107.4.9
 1107.5
 1107.5.1
 1107.5.2
 1107.5.3

Question 19: Copper tube for a pipe erected installation can be
 Type K
 Type L
 Type M
 any of the above – where approved
 none of the above

Question 20: The code reference to the above question is
 1107.4.9
 1107.5
 1107.5.1
 1107.5.2
 1107.5.3

Quiz 9

Question 1: Is deleted

Question 2: Is deleted

Question 3: Copper tubing joints used in refrigerating systems containing Group A2, A3, B2 or B3 refrigerants shall be soldered.
 true
 false

Question 4: The code reference to the above question is
 1107.5.1
 1107.5.2
 1107.5.3
 1107.5.4
 1107.5.5

Question 5: Type 3003-0 aluminum tubing with high-pressure fittings shall not be used with methyl chloride
 R 22
 R 410A
 all of the above
 none of the above

Question 6: The code reference to the above question is
 1107.5.1
 1107.5.2
 1107.5.3
 1107.5.4
 1107.5.5

Question 7: Joints and all refrigerant-containing parts of a refrigerating system located in an air duct of an air-conditioning system shall be leak proof at a pressure of _____ percent of the higher of the design pressure or pressure relief device setting.
 110
 150
 175
 200

Question 8: The code reference to the above question is
 1107.3
 1107.4
 1107.5
 1107.6
 1107.7

Question 9: Refrigerant pipe joints erected on the premises shall be exposed for visual inspection prior to being covered or enclosed.
 true
 false

Question 10: The code reference to the above question is
 1107.4
 1107.5
 1107.6
 1107.7
 1107.8

Question 11: All systems containing more than 6.6 pounds of a refrigerant in systems using positive-displacement compressors shall have stop valves installed as follows:
 a: at the inlet of each compressor, compressor unit or condensing unit.
 b: at the discharge outlet of each compressor, compressor unit or condensing unit and of each liquid receiver.
 c: both a and b
 d: neither a or b

Question 12: The code reference to the above question is
 1107.4
 1107.5
 1107.6
 1107.7
 1107.8

Question 13: Stop valves are not required on refrigeration systems when
 systems that have a refrigerant pump-out function capable of storing the entire refrigerant charge in a receiver or heat exchanger.
 systems that are equipped with provisions for pump-out of the refrigerant using either portable or permanently installed recovery equipment.
 self-contained systems
 all of the above
 none of the above

Question 14: The code reference to the above question is
 1107.4
 1107.5
 1107.6
 1107.7
 1107.8

Question 15: All systems containing _____ pounds or more of a refrigerant, other than systems utilizing non-positive displacement compressors, shall have stop valves on each inlet of each liquid receiver.
 10
 50
 100
 250

Question 16: The code reference to the above question is
 1107.5
 1107.6
 1107.7.1
 1107.7.2
 1107.8.1

Question 17: Stop valves used with soft annealed copper tubing or hard-drawn copper tubing 7/8-inch OD standard size or smaller shall be securely mounted independent of tubing fastenings or supports.
 true
 false

Question 18: The code reference to the above question is
 1107.6
 1107.7
 1107.8
 1107.8.1
 1107.8.2

Question 19: Stop valves shall be identified where their intended purpose is not obvious.
 Numbers shall not be
 true
 false

Question 20: The code reference to the above question is
 1107.8
 1107.8.1
 1107.8.2
 1107.8.3
 1107.8.4

Quiz 10.

Question 1: Every refrigerant-containing part of every system that is erected on the premises, except compressors, condensers, vessels, evaporators, safety devices, pressure gauges and control mechanisms that are listed and factory tested, shall be tested and proved
 true
 false

Question 2: The code reference to the above question is
 1108.1
 1108.1.1
 1108.1.2
 1108.2
 1108.3

Question 3: Pressure testing will include both the high and low-pressure sides of each system at not more than the design pressure or the setting of the pressure relief device(s).
 true
 false

Question 4: The code reference to the above question is
 1108.1
 1108.1.1
 1108.1.2
 1108.2
 1108.3

Question 5: The design pressures for testing shall be those listed on the condensing unit, compressor or compressor unit name-plate, as required by ASHRAE 15.

true
false

Question 6: The code reference to the above question is

1108.1
1108.1.1
1108.1.2
1108.2
1108.3

Question 7: Pressure testing exceptions Gas bulk storage tanks that are not permanently connected to a refrigeration system.

true
false

Question 8: The code reference to the above question is

1108.1
1108.1.1
1108.1.2
1108.2
1108.3

Question 9: Pressure testing exception would be a field erected limited-charge system equipped with a pressure relief device. It will need to be pressure tested at least _____ times the pressure setting of the relief device

1.5
2.0
2.5
3.0

Question 10: The code reference to the above question is

1108.1
1108.1.1
1108.1.2
1108.2
1108.3

Question 11: Centrifugal/non-positive displacement compressors. In field-testing systems using centrifugal or other non-positive displacement systems compressors, the entire system shall be considered as the low-side pressure for field test purposes.

true
false

Question 12: The code reference to the above question is

1108.1
1108.1.1
1108.1.2
1108.2
1108.3

Question 13: 1108.2 Test gases. Tests shall be performed with an inert dried gas including, but not limited to, nitrogen and carbon dioxide. Oxygen, air, combustible gases and mixtures containing such gasses should be used.

true
false

Question 14: The code reference to the above question is

1108.1
1108.1.1
1108.1.2
1108.2
1108.3

Question 15: An exception to the use of test gases would be the use of air test R-717, ammonia. However the system must be subsequently evacuated before charging with refrigerant.

true
false

Question 16: The code reference to the above question is

1108.1
1108.1.1
1108.1.2
1108.2
1108.3

Question 17: When pressure testing a unit, the test apparatus will need to have either a pressure-limiting device or a pressure-reducing device and a gauge on the outlet side.

true
false

Question 18: The code reference to the above question is

1108.1.1
1108.1.2
1108.2
1108.3
1108.4

Question 19: A certificate of test shall be provided for all systems containing 55 pounds or more of refrigerant. The certificate shall give the name of the refrigerant and the high and low side test pressures.

- 10
- 15
- 50
- 55
- not specified in the code

Question 20: The code reference to the above question is

- 1108.1.1
- 1108.1.2
- 1108.2
- 1108.3
- 1108.4

Question 21: The following emergency devices and systems shall be periodically tested in accordance with the manufacturer's instructions and as required by the code official:

- treatment and flaring systems
- valves and appurtenances necessary to the operation of emergency refrigeration control boxes
- fans and associated equipment intended to operate emergency pure ventilation systems
- detection and alarm systems
- all of the above

Question 22: The code reference to the above question is

- 1108.1
- 1108.2
- 1108.3
- 1108.4
- 1109.1