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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: A water cooled condenser must installed 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 2006 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 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 2006 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: A refrigeration system that was designed and listed to only run on R12 has been replaced with R22. This refrigerant substitution is allowed by current IMC requirements.
 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: Field mixing of two refrigerants with different designations in ASHRAE 34 other than to the improvement of oil flow is permitted by the 2006 IMC.

- 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: The most common refrigerant added to an existing system to improve oil flow is propane.

- 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
- 1102.2.3

Question 22: Recovered refrigerants shall be _____ and _____ before reuse.

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

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: 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 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: Recovered refrigerants may be returned to the same system that it was removed from.

- True
- False

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: Recovered refrigerants may be used in another refrigeration system that is owned by some one else other than the owner of the original equipment in which the refrigerant was initially recovered.

- 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: Used refrigerants shall may be reused in a different owner's equipment when it is tested and found to meet the purity requirements of ARI 700 it is the same type of refrigerant when is used in a non-critical application
NEVER

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
- 20
- 30
- 50
- 100

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
an indoor theater
mall parking lot
outdoor flea market
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 direct oven spray system
 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 _____

- 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: In industr. occ. rooms, conditions must be met if a machinery room is not needed. The refig. machinery is separated from other occupancies by tight construction with tight-fitting doors.

- Yes - no machinery room needed.
- No - machinery room still needed

Question 12: The code reference to the above question is

- 1104.1
- 1104.2
- 1104.2.1
- 1104.2.2

Question 13: In industr. occ. rooms, conditions must be met if a machinery room is not needed. The access is restricted to authorized personnel.

- Yes - a machinery room is NOT needed.
- No- a machinery room is needed

Question 14: The code reference to the above question is

- 1104.1
- 1104.2
- 1104.2.1
- 1104.2.2

Question 15: In industr. occ. rooms, conditions must be met if a machinery room is not needed. The floor area per occupant is not less than 100 square feet (9.3m²) where machinery is located on floor levels with exits more than 6.6 feet above the ground.

Yes - a machinery room is NOT needed.
 No - a machinery room is needed.

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: In industr. occ. rooms, conditions must be met if a machinery room is not needed. Refrigerant detectors are installed as required for machinery rooms in accordance with Section 1105.3.
 Yes - a machinery room is NOT needed.
 No - a machinery room is needed.

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

Question 21: In industr. occ. rooms, conditions must be met if a machinery room is not needed. There can not be any open flames or surface temperatures above 800 F if A2, B2, A3, B3 refrigerants are present.
 Yes - a machinery room NOT needed.
 No- a machinery room is needed.

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

Question 23: In an ind. occ. room, all the electrical equipment meets the standard of a Class 1, Division 2, hazardous locations. If all the refr.

from Groups A2, B2, A3 or B3 from a single indep. circuit were released, it would not exceed 25% LFL.
 Yes - a machinery room is NOT needed.
 No- a machinery room is needed.

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

Question 25: In an ind. occup.rooms conditions must be met to determine if a machinery room is not needed. 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 _____ 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
- determined by the AHJ

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 based on the relative density of the refrigerant to air

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
- 15
- 20
- 30
- 50

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
- 15
- 20
- 30
- 50

Question 32: The code reference to the above question is

- 1105.6.3
- 1105.6.4
- 1105.7
- 1105.8
- 1105.9

Question 33: Pressure relief valves for ammonia systems shall discharge in accordance with

- ASHRAE 15
- ASHRAE 20
- ASHRAE 25
- ASHRAE 30

Question 34: The code reference to the above question is

- 1105.6.3
- 1105.6.4
- 1105.7
- 1105.8
- 1105.9

Question 35: 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 36: 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 the ICC Electrical Code

- 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 ICC Electrical Code.

- 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

- 1107.1
- 1107.2
- 1107.3
- 1107.4
- 1107.4.1

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

- 1107.1
- 1107.2
- 1107.3
- 1107.4
- 1107.4.1

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

- 1107.1
- 1107.2
- 1107.3
- 1107.4
- 1107.4.1

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

Question 15: Field-erected copper tubing shall be of Type ACR hard.

- True
- False

Question 16: The code reference to the above question is

- 1107.4.2
- 1107.4.3
- 1107.4.4
- 1107.4.5
- 1107.5

Question 17: Type ACR annealed shall not be used for field-erected piping.

- True
- False

Question 18: The code reference to the above question is

- 1107.4.2
- 1107.4.3
- 1107.4.4
- 1107.4.5
- 1107.5

Question 19: Copper tube for a field-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

- 1107.4.2
- 1107.4.3
- 1107.4.4
- 1107.4.5
- 1107.5

Quiz 9

Question 1: Copper tubing joints used in refrigerating systems containing Group A2, A3, B2 or B3 refrigerants shall be soldered.

- True
- False

Question 2: The code reference to the above question is

- 1107.4.2
- 1107.4.3
- 1107.4.4
- 1107.4.5
- 1107.5

Question 3: 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 4: The code reference to the above question is

- 1107.4.2
- 1107.4.3
- 1107.4.4
- 1107.4.5
- 1107.5

Question 5: 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 6: The code reference to the above question is

- 1107.4.2
- 1107.4.3

- 1107.4.4
- 1107.4.5
- 1107.5

Question 7: Refrigerant pipe joints erected on the premises shall be exposed for visual inspection prior to being covered or enclosed.

- True
- False

Question 8: The code reference to the above question is

- 1107.4.5
- 1107.5
- 1107.6
- 1107.7.1
- 1107.7.2

Question 9: All systems containing more than 6.6 pounds of a refrigerant in systems using positive-displacement compressors shall have stop valves installed as follows:

At the inlet of each compressor, compressor unit or condensing unit.

At the discharge outlet of each compressor, compressor unit or condensing unit and of each liquid receiver.

- both a and b
- neither a or b

Question 10: The code reference to the above question is

- 1107.6
- 1107.7
- 1107.7.1
- 1107.7.2
- 1107.7.3

Question 11: 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 12: The code reference to the above question is

- 1107.6
- 1107.7
- 1107.7.1
- 1107.7.2
- 1107.7.3

Question 13: 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 14: The code reference to the above question is

- 1107.5
- 1107.6
- 1107.7.1
- 1107.7.2
- 1107.7.3

Question 15: 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 16: The code reference to the above question is

- 1107.5
- 1107.6
- 1107.7.1
- 1107.7.2
- 1107.7.3

Question 17: Stop valves shall be identified where their intended purpose is not obvious. Numbers shall not be

- True
- False

Question 18: The code reference to the above question is

- 1107.5
- 1107.6
- 1107.7.1
- 1107.7.2
- 1107.7.3

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.

Field erected systems using a maximum size of 5/8-inch Copper OD tubing, both A and B
neither A or B

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