

Duration: 60 Mins

Total Marks: 250

Q.ID: ITISKILL11617B

1. What is the advantage of universal colour coding of refrigerant cylinders?

- A) Make good appearance
- B) Prevent corrosion on cylinder
- C) Easy to identify
- D) Provide extra strength to cylinder

Answer: C) Easy to identify

2. Why the acetylene gas is avoided with copper pipe lines or fittings in oxy-acetylene welding set?

- A) Copper is expensive
- B) Copper pipe consumes more acetylene
- C) Copper is not flexible hose
- D) Copper and acetylene form explosive

Answer: D) Copper and acetylene form explosive

3. What is the function of refrigerant fluid in a refrigerator?

- A) Absorbs heat from bottom side cabinet
- B) Absorbs heat from inside the cabinet
- C) Absorbs heat from outside the cabinet
- D) Releases heat inside the cabinet

Answer: B) Absorbs heat from inside the cabinet

4. Which is the effective method for refrigerant recovery?

- A) Use of system's compressor
- B) Charge migration
- C) Push pull recovery
- D) Condensing unit

Answer: C) Push pull recovery

5. Which component defrosts in frost free refrigerator?

- A) Bulb
- B) Capillary tube
- C) Thermostat
- D) Heater

Answer: D) Heater

6. Which winding has low resistance in resistance start induction run motor?

- A) Running winding
- B) Starting winding
- C) Auxiliary winding
- D) Common winding

Answer: A) Running winding

7. How many terminals are there in a Silicon Controlled Rectifier (SCR)?

- A) Three
- B) Four
- C) Two
- D) One

Answer: A) Three

8. What is the area of room cooled by 1ton window air conditioner?

- A) 1000 sq.ft
- B) 2000 sq.ft
- C) 3000 sq.ft
- D) 5000 sq.ft

Answer: A) 1000 sq.ft

9. How the level of heat in a substance is expressed?

- A) Humidity
- B) Temperature
- C) Micron
- D) Pressure

Answer: B) Temperature

10. What is the boiling point of pure water in centigrade scale?

- A) 0 Degree Centigrade
- B) 212 Degree Centigrade
- C) 100 Degree Centigrade
- D) 32 Degree Centigrade

Answer: C) 100 Degree Centigrade

11. What is the precautionary measure taken if flame snaps out and back fires?

- A) Shut off both valve quickly and dip in water
- B) Shut off oxygen first and acetylene next
- C) Shut off both valve, oxygen first and dip in water
- D) Shut off acetylene first, oxygen next and dip in water

Answer: D) Shut off acetylene first, oxygen next and dip in water

12. What is the value of running capacitor used for 1.5 TR window air conditioner?

- A) 36 MFD
- B) 40 MFD
- C) 80 MFD
- D) 100 MFD

Answer: A) 36 MFD

13. Which gas is universally taken as the basic reference for GWP?

- A) AIR
- B) NH₃
- C) SO₂
- D) CO₂

Answer: D) CO₂

14. What is the effect of releasing HCFC refrigerants to atmosphere?

- A) Increases ODP and GWP
- B) Decreases TEWI
- C) Inactive to TEWI
- D) Decreases GWP and ODP

Answer: A) Increases ODP and GWP

15. Which winding has high inductance value in CSR

compressor motor?

- A) Common winding
- B) Starting winding
- C) Running winding
- D) Auxiliary winding

Answer: C) Running winding

16. What is the result if discharge reed is broken in open type compressor?

- A) Poor pumping
- B) No pumping
- C) Oil pumping
- D) More pumping

Answer: B) No pumping

17. What is the atmospheric pressure at sea level?

- A) 1.3 Kg/cm²
- B) 1.033 kg/cm²
- C) 1.6 Kg/cm²
- D) 1.5 Kg/cm²

Answer: B) 1.033 kg/cm²

18. Which gas is produced by the chemical reaction of carbide and water?

- A) Nitrogen
- B) Carbon dioxide
- C) Oxygen
- D) Acetylene

Answer: D) Acetylene

19. What is the tool used for holding hot metals?

- A) Spanner
- B) Bench vice
- C) Pipe vice
- D) Tongs

Answer: D) Tongs

20. Which process is done first in split AC for shifting from one place to another?

- A) Pump down
- B) Flushing
- C) Vacuumisation
- D) Evacuation

Answer: A) Pump down

21. Which motor has the least starting torque?

- A) CSIR
- B) CSR
- C) PSC
- D) RSIR

Answer: D) RSIR

22. What is smothering in fire extinguishing?

- A) Use water to lower temperature
- B) Cutting off oxygen supply to fire
- C) Pouring of CTC
- D) Flashing with dry powder

Answer: B) Cutting off oxygen supply to fire

23. Which compressor dome handles high pressure and high temperature vapour?

- A) Hermetic rotary compressor
- B) Semi hermetic reciprocating compressor
- C) Hermetic reciprocating compressor
- D) Open type reciprocating compressor

Answer: A) Hermetic rotary compressor

24. Which extinguishes the fire on electrical equipment?

- A) Halon
- B) Oil
- C) Water
- D) Foam

Answer: A) Halon

25. Which thermodynamic process the temperature is kept constant?

- A) Constant pressure process
- B) Isobaric process
- C) Isothermal process
- D) Constant volume process

Answer: C) Isothermal process

26. What is the reason for swash plate compressor failure in car AC?

- A) Thermostat not working
- B) Refrigerant charge normal
- C) Oil level is low
- D) Oil level is medium

Answer: C) Oil level is low

27. How the ability of a conductor is called if it induces the voltage in the same conductor?

- A) Self inductance
- B) Conductance
- C) Capacitance
- D) Resistance

Answer: A) Self inductance

28. What is the purpose of accumulator in a refrigerator?

- A) Avoids hunting of refrigerant
- B) Prevents liquid flood back to compressor
- C) Prevents surging of refrigerant
- D) Improves oil circulation

Answer: B) Prevents liquid flood back to compressor

29. Which winding has more inductance in refrigerator compressor motor?

- A) Common
- B) Start and common
- C) Start
- D) Run

Answer: D) Run

30. Which domestic system uses automatic defrost?

- A) Window air - conditioner
- B) Conventional refrigerator
- C) Frost free refrigerator
- D) Split air - conditioner

Answer: C) Frost free refrigerator

31. How the refrigerants are classified based on heat absorption by latent and sensible heat?

- A) Organic and inorganic
- B) Primary and secondary
- C) Halocarbons and hydrocarbons
- D) Zeotropic and azeotropic

Answer: B) Primary and secondary

32. Which component actuates the defrost cycle in frost free refrigerator?

- A) Defrost heater
C) Bimetal thermo
- B) Timer
D) Relay

Answer: B) Timer

33. What is the angle of the tip of centre punch?

- A) 90 Degree
C) 30 Degree
- B) 120 Degree
D) 60 Degree

Answer: A) 90 Degree

34. Which material is used to make ducts in split AC?

- A) GI sheet
C) Fibre
- B) Thermocol
D) Wood

Answer: A) GI sheet

35. What is the rate of doing work?

- A) Power
C) Force
- B) Duty
D) Velocity

Answer: A) Power

36. Where the thermal bulb is fixed in frost free refrigerator?

- A) Liquid line
C) Last coil of evaporator
- B) Last coil of condenser
D) Discharge line

Answer: C) Last coil of evaporator

37. Which component secures the hose with regulator union in gas welding set?

- A) Iron chain
C) Hose clamp
- B) Fibre clip
D) Steel wire

Answer: C) Hose clamp

38. Which material is used for making disc in energy meter?

- A) Aluminium
C) Zinc
- B) Copper
D) Brass

Answer: A) Aluminium

39. Which horizontal distance is preferred between indoor and outdoor units in ductable split AC installation?

- A) 20 meters
C) 15 meters
- B) 12 meters
D) 25 meters

Answer: B) 12 meters

40. Which refrigeration system works on directly by the heat energy?

- A) Vapour compression refrigeration
C) Vapour absorption refrigeration
- B) Mechanical refrigeration
D) Jet refrigeration

Answer: C) Vapour absorption refrigeration

41. How the zeotropic refrigerant is taken from the cylinder for charging it into RAC system?

- A) Liquid state
C) Vapour state
- B) Super heated vapour
D) Vapour and liquid

Answer: A) Liquid state

42. How numerical designations of inorganic refrigerants are assigned?

- A) Multiply 700 to molecular mass of compound
C) Divide 700 to molecular mass of compound
- B) Subtracting 700 from molecular mass of compound
D) Adding 700 to molecular mass of compound

Answer: D) Adding 700 to molecular mass of compound

43. Which is the point angle of a twist drill used for zinc alloy?

- A) 125 Degree
C) 100 Degree
- B) 118 Degree
D) 90 Degree

Answer: B) 118 Degree

44. Which factor determines the current setting during welding?

- A) Types of joint
C) Position of weld
- B) Length of electrode
D) Diameter of electrode

Answer: D) Diameter of electrode

45. Which law relates to voltage, current and resistance in an electrical circuit?

- A) Lenz's law
C) Newton's law
- B) Ohm's law
D) Faraday's law

Answer: B) Ohm's law

46. Which tool is used for skinning the insulation of cables and cleaning the wire surface?

- A) Hacksaw
C) Combination pliers
- B) Electrician's knife
D) Firmer chisel

Answer: B) Electrician's knife

47. Where the relay coil is internally connected in voltage relay?

- A) Across 2 and 4
C) Across 5 and 2
- B) Across 1 and 2
D) Across 5 and 1

Answer: C) Across 5 and 2

48. What is the cause for frequent tripping of circuit breaker while starting a single phase motor?

- A) Motor belt removed
C) No load on the motor
- B) Winding short
D) Winding open

Answer: B) Winding short

49. Which part of tube cutter is used for removing the burrs from copper tubes?

- A) Bender
B) Cutter

C) Roller

D) Reamer

Answer: B) Cutter

50. What is the name of joint between pieces located at right angle to each other?

A) Lap joint

B) T - Joint

C) Butt joint

D) Grooved joint

Answer: B) T - Joint

51. Which property limits the flow of electrons in an electrical circuit?

A) Voltage

B) Current

C) Conductance

D) Resistance

Answer: A) Voltage

52. What is the use of suction baffle in a scroll compressor?

A) Reduce noise of compressor

B) Increase noise of compressor

C) Allow liquid to enter into compressor

D) Reduce capacity of compressor

Answer: A) Reduce noise of compressor

53. What is top dead centre in reciprocating compressor cylinder?

A) The piston moves down from the point of cylinder

B) The piston starts in cylinder at bottom

C) The piston stops in cylinder at bottom

D) The piston moves up from the point of cylinder

Answer: A) The piston moves down from the point of cylinder

54. What is the advantage of periodical cleaning of air filter?

A) Decrease the cooling capacity

B) Increase the cooling capacity

C) Increase the speed of fan motor

D) Decrease the volume of air handling

Answer: B) Increase the cooling capacity

55. Which insulating material is poured as liquid?

A) Wood Shave

B) Glass Wool

C) Poly Urethane Foam (PUF)

D) Cork Board

Answer: C) Poly Urethane Foam (PUF)

56. Which is the green house gas?

A) Helium of atmospheric air

B) Chlorofluoro carbon in air

C) Neon of atmospheric air

D) Oxygen of atmospheric air

Answer: B) Chlorofluoro carbon in air

57. Which material is used for making fins of condenser in a window air conditioner?

A) Aluminium

B) Copper

C) Brass

D) Cast iron

Answer: A) Aluminium

58. Which group the acetylene gas belongs to?

A) HCFC

B) HFC

C) HC

D) CFC

Answer: C) HC

59. Which component is used in frost free refrigerator?

A) Plate coil evaporator

B) Oil separator

C) Liquid receiver

D) Timer switch

Answer: D) Timer switch

60. Which type of insulating material is used for making ice box to cool beverages?

A) Fibre glass

B) Glass wool

C) Thermocole

D) Tar felt

Answer: C) Thermocole

61. What is ensured before removing a leaky evaporator in a refrigerator?

A) Removal of the thermostat sensor

B) Check the drain tray of evaporator

C) Pressurize the system with refrigerant

D) Recharge refrigerant to the system

Answer: A) Removal of the thermostat sensor

62. How the difference between the synchronous speed and the actual rotor speed is specified?

A) Trip

B) Lag

C) Lead

D) Slip

Answer: D) Slip

63. How electrons flow in a battery circuit?

A) Phase to earth

B) Positive to negative polarity

C) Negative polarity to positive polarity

D) Phase to neutral

Answer: C) Negative polarity to positive polarity

64. Which position is safe for storing refrigerant cylinder?

A) Upright

B) Upside down

C) Inclined

D) Horizontal

Answer: A) Upright

65. Which device is used to exhaust the room air in window AC?

A) Air filter

B) Filter drier

C) Damper

D) Air washer

Answer: C) Damper

66. Which device protects the compressor motor from drawing more current?

- A) Thermostat
C) Relay
- B) OLP
D) Door switch

Answer: B) OLP

67. Which is the common terminal while Ohm meter reads AB = 10 Ohm, AC = 15 Ohm and BC = 25 Ohm if the motor terminals are A, B and C?

- A) Terminal A
C) Terminal B
- B) Terminal C
D) Earth Terminal

Answer: A) Terminal A

68. Which material is used for making zener diode?

- A) Lead
C) Platinum
- B) Titanium
D) Silicon

Answer: D) Silicon

69. What is the reason for air conditioner running continuously but no cooling effect ?

- A) Over charged oil
C) Refrigerant is more
- B) Condensation poor
D) Refrigerant leaked

Answer: D) Refrigerant leaked

70. Which gas is used for pressurising and testing leakage of RAC system?

- A) O₃
C) O₂
- B) SO₂
D) N₂

Answer: D) N₂

71. Which control opens the compressor motor circuit in the event of continuous overload?

- A) Fusible plug
C) Bimetal strip
- B) Spring loaded relief valve
D) Thermostat

Answer: C) Bimetal strip

72. Which type of rotor is used in split phase induction motor?

- A) Squirrel cage
C) Wound coil
- B) Eccentric
D) Permanent magnet

Answer: A) Squirrel cage

73. Which lubricant oil is used in swash plate of R 134a compressor?

- A) Mineral oil
C) Servo 20
- B) POE
D) SAE - 40

Answer: B) POE

74. Which component is turned off while defrost heater is energised?

- A) Thermostat sensor
C) Cabinet bulb
- B) Evaporator fan
D) Over load protector

Answer: B) Evaporator fan

75. Which winding is made of thick wire in single phase induction motor?

- A) Starting
C) Additional
- B) Running
D) Auxiliary

Answer: B) Running

76. What is the advantage of a hermetically sealed compressor in refrigerator?

- A) Easily serviceable
C) Silent operation
- B) Noise is more
D) Cost is high

Answer: C) Silent operation

77. Which type of compressor is used for domestic refrigerator?

- A) Centrifugal compressor
C) Open type compressor
- B) Hermetic compressor
D) Semi sealed compressor

Answer: B) Hermetic compressor

78. Which refrigerant is inactive to ozone layer?

- A) R 22
C) R 13
- B) R 12
D) R 134a

Answer: D) R 134a

79. What is the reason for poor compression?

- A) Lapped valve plate and reed seat
C) Good lubrication on the moving parts
- B) Less clearance volume
D) Scratches on the piston surface

Answer: D) Scratches on the piston surface

80. What is the advantage of sealed system compared to open type system?

- A) No shaft seal is required
C) Cylinder lubrication is easier
- B) Any refrigerant can be used
D) Mechanical efficiency is greater

Answer: A) No shaft seal is required

81. What is the condition of compressor motor if Ohm meter reads infinity across common and start terminals?

- A) Starting winding shorted
C) Starting winding open
- B) Running winding shorted
D) Running winding open

Answer: C) Starting winding open

82. Which is indicated by the arrow mark on filter drier component?

- A) Arrangement of desiccant and filter
C) Flow direction of refrigerant
- B) Flow direction of air
D) Position of capillary tube

Answer: C) Flow direction of refrigerant

83. What is the category of R 407c refrigerant?

- A) Organic
- B) Azeotropes
- C) Inorganic
- D) Zeotropes

Answer: D) Zeotropes

84. What is the total resistance if two resistors R1 and R2 are connected in series?

- A) $(R1 / R2)$ Ohms
- B) $(R1 + R2)$ Ohms
- C) $(R1 \times R2)$ Ohms
- D) $(R1 - R2)$ Ohms

Answer: B) $(R1 + R2)$ Ohms

85. Which component absorbs the maximum heat from the cabinet materials in frost free refrigerator?

- A) Condenser
- B) Compressor
- C) Evaporator
- D) Expansion valve

Answer: C) Evaporator

86. Which metal is alloyed with zinc to make brass?

- A) Iron
- B) Copper
- C) Aluminium
- D) Bronze

Answer: B) Copper

87. What is the value of starting capacitor used for 1.5TR capacity window air conditioner?

- A) 80 to 100 MFD
- B) 40 to 60 MFD
- C) 130 to 150 MFD
- D) 150 to 160 MFD

Answer: A) 80 to 100 MFD

88. Which is a positive displacement compressor?

- A) Oil pump
- B) Water pump
- C) Centrifugal compressor
- D) Scroll compressor

Answer: D) Scroll compressor

89. What is the equivalent of one microfarad in farad?

- A) 10^{-3} farad
- B) 10^{-6} farad
- C) 10^{-9} farad
- D) 10^{-12} farad

Answer: C) 10^{-9} farad

90. Which is connected in series with start capacitor in motor circuit?

- A) Running winding
- B) Running Terminal
- C) Starting winding
- D) Common terminal

Answer: C) Starting winding

91. Which components maintain the pressure difference in RAC system?

- A) Compressor and expansion device
- B) Condenser and filter
- C) Evaporator and motor
- D) Receiver and condenser

Answer: A) Compressor and expansion device

92. Which is the inorganic refrigerant?

- A) R 630
- B) R 717
- C) R 170
- D) R 500

Answer: B) R 717

93. What is the energy of a body by virtue of its position?

- A) Kinetic energy
- B) Wind energy
- C) Potential energy
- D) Electrical energy

Answer: C) Potential energy

94. What is the reason for the compressor does not start but the fan motor works normally in window AC?

- A) Defective compressor motor
- B) Defective fan capacitor
- C) Defective blower
- D) Defective fan motor

Answer: A) Defective compressor motor

95. What is the equivalent of one micron in millimeter?

- A) 0.0001 mm
- B) 0.001 mm
- C) 0.01 mm
- D) 0.1 mm

Answer: B) 0.001 mm

96. Which joint is made in either single or multi - strand conductors?

- A) Scarfed joint
- B) Britannia joint
- C) Western union joint
- D) Rat tail joint

Answer: D) Rat tail joint

97. What is done after gas charging and pinching the process tube in refrigerator?

- A) Charging
- B) Brazing
- C) Swaging
- D) Flaring

Answer: B) Brazing

98. What is the name of heat carrying medium in vapour compression system?

- A) Liquid
- B) Refrigerant
- C) Air
- D) Water

Answer: B) Refrigerant

99. Which component is used as a switching device in electronic circuit?

- A) Zener diode
- B) SCR
- C) Diode
- D) Capacitor

Answer: B) SCR

100. Which flame is used for welding brass?

- A) Carburising flame
- B) Wide flame
- C) Oxidising flame
- D) Neutral flame

Answer: C) Oxidising flame

101. What is the percentage range of silver in copper to copper pipes brazing rod?

- A) 45 to 60%
- B) 35 to 45%
- C) 60 to 100%
- D) 20 to 35%

Answer: B) 35 to 45%

102. Which type of fan blade is used with indoor unit?

- A) Vane|
- B) Blower
- C) Guide vane
- D) Axial

Answer: B) Blower

103. Which is adjusted to the size of electrode in welding process?

- A) Thickness
- B) Ampere
- C) Length
- D) Conductor

Answer: B) Ampere

104. Which type of condenser is used in window air conditioner?

- A) Fins and tube
- B) Bare tube
- C) Plate and coil
- D) Plate and tube

Answer: A) Fins and tube

105. Which capacitor is disconnected by relay in capacitor start and induction run motor?

- A) Power factor correction capacitor
- B) Boosting capacitor
- C) Running capacitor
- D) Starting capacitor

Answer: D) Starting capacitor

106. What is the tool used to remove the slag from the welding?

- A) Cross peen hammer
- B) Tongs
- C) Chipping hammer
- D) Ball peen hammer

Answer: C) Chipping hammer

107. What is the colour of oxygen hose pipe in oxy - acetylene welding set?

- A) Maroon
- B) Black
- C) Red
- D) Green

Answer: B) Black

108. Which component controls the thermostat and defrost heater in frost free refrigerator?

- A) Defrost timer
- B) OLP
- C) Relay
- D) Thermoheater

Answer: A) Defrost timer

109. What is the reason for Compressor does not start ?

- A) Defective oscillation motor
- B) Defective OLP

- C) Defective fan motor
- D) Defective fresh air damper

Answer: B) Defective OLP

110. Which is the hydrocarbon refrigerant?

- A) R 12
- B) R 600a
- C) R123
- D) R 500

Answer: B) R 600a

111. What is the unit of heat in M.K.S system?

- A) K.Cal (Kilo Calorie)
- B) K.W (Kilo Watt)
- C) KV (Kilo Volt)
- D) B.T.U (British thermal unit)

Answer: A) K.Cal (Kilo Calorie)

112. How the capacity of refrigerator is expressed?

- A) Weightage
- B) Litres
- C) Wattage
- D) Tonnage

Answer: B) Litres

113. Which part of the refrigerator cools the liquid refrigerant in capillary tube?

- A) Evaporator
- B) Suction line
- C) Condenser
- D) Discharge line

Answer: B) Suction line

114. Which method is used to connect the swaged joint in copper tubes?

- A) Lead soldering
- B) Silver brazing
- C) Fusion welding
- D) TIG welding

Answer: B) Silver brazing

115. What is the value of starting capacitor used for 1TR window air conditioner?

- A) 100 MFD
- B) 40 MFD
- C) 80 MFD
- D) 60 MFD

Answer: C) 80 MFD

116. How the potential relay coil is connected internally to the relay terminals?

- A) 5 and 1
- B) 5 and 2
- C) 2 and 4
- D) 5 and 4

Answer: B) 5 and 2

117. What is the maximum capacity of 3 phase squirrel cage induction motor used with direct on line (DOL) starter?

- A) 20 HP
- B) 15 HP
- C) 5 HP
- D) 10 HP

Answer: C) 5 HP

118. What is the unit of electric current?

- A) Volt
- B) Ohm

C) Farad D) Ampere

Answer: D) Ampere

119. What is the cooling capacity of 0.5 TR in BTU / hr?

- A) 18000 B) 6000
C) 12000 D) 24000

Answer: B) 6000

120. What is the fault if excess deposit of tiny metal globules formed on the job surface along weld?

- A) Spatters B) Incomplete penetration
C) Blow hole D) Slag inclusion

Answer: A) Spatters

121. Which condition is maintained for refrigerant in high side of vapour compression system?

- A) Above its critical temperature B) Below its freezing temperature
C) Below its critical temperature D) Above its freezing temperature

Answer: C) Below its critical temperature

122. What is the name of electronic circuit?

- A) Half wave rectifier B) Full wave rectifier
C) Quarter wave rectifier D) Bridge rectifier

Answer: D) Bridge rectifier

123. Which device maintains a constant DC output?

- A) Load regulators B) Voltage regulators
C) Current limiters D) Rectifier circuits

Answer: B) Voltage regulators

124. Which refrigerant is used in domestic refrigerator?

- A) R 407 c B) R 32
C) R 22 D) R 134 a

Answer: D) R 134 a

125. Which motor is used to drive the blower of indoor unit in ductable split air conditioners?

- A) Permanent split capacitor motor B) Three phase induction motor
C) Shaded pole motor D) Capacitor start capacitor run motor

Answer: A) Permanent split capacitor motor

126. Which type of fan motor is used in window air conditioner?

- A) Single phase double end shaft motor B) Three phase single shaft motor
C) Three phase double end shaft motor D) Single phase single shaft motor

Answer: A) Single phase double end shaft motor

127. How the pressure drop of refrigerant flow is minimised during installation of indoor and outdoor units in ductable split AC?

- A) With more horizontal distance B) Pipe lines with more joints
C) System pipes with minimum bends D) Install units as far as possible

Answer: C) System pipes with minimum bends

128. What is the formula to find out the synchronous speed of induction motor?

- A) $N_s = (120f/P)$ B) $N_s = (120P/f)$
C) $N_s = (150P/f)$ D) $N_s = (150f/P)$

Answer: A) $N_s = (120f/P)$

129. Which part connects the piston with small end of connecting rod in a reciprocating compressor?

- A) Piston rings B) Piston sleeve
C) Piston bolt D) Piston pin

Answer: D) Piston pin

130. How much is the maximum capacity of refrigerant to be filled in a returnable service cylinder?

- A) Up to 85% B) Up to 90%
C) Up to 80% D) Up to 95%

Answer: C) Up to 80%

131. Which two tubes act as heat exchanger in a refrigerator?

- A) Suction and charging tube B) Capillary and suction tube
C) Discharge and capillary tube D) Discharge and suction tube

Answer: B) Capillary and suction tube

132. Which safety device is used for compressor motor in window air conditioner?

- A) Over load protector B) Running capacitor
C) Relay D) Starting capacitor

Answer: A) Over load protector

133. Where the normally closed contacts are internally connected in voltage relay?

- A) Across 2 and 4 B) Across 2 and 5
C) Across 1 and 5 D) Across 1 and 2

Answer: D) Across 1 and 2

134. What is the method of starting a 3 phase slip ring induction motor?

- A) With starting relay B) Using starting capacitor
C) With running capacitor D) Adding resistance to rotor winding

Answer: D) Adding resistance to rotor winding

135. What is the cause for noisy fan motor in outdoor unit of split AC?

- A) Shaft struck
- B) Motor Burnt
- C) Bearing worn out
- D) Blade bent

Answer: C) Bearing worn out

136. What is the temperature set in thermostat that stops the compressor motor?

- A) Cut in
- B) Differential
- C) Cut out
- D) Range

Answer: C) Cut out

137. What is the reason for filter drier sweating in refrigerator?

- A) Nitrogen in the system
- B) Oxygen in the system
- C) Oil in the system
- D) Moisture in the system

Answer: D) Moisture in the system

138. What is the effect of contamination in refrigeration system?

- A) Low pressure
- B) Poor cooling
- C) Low humidity
- D) High heating

Answer: B) Poor cooling

139. Which sheet is used to check the tightness of door gasket of a refrigerator?

- A) Plastic
- B) Rubber
- C) Zinc
- D) Copper

Answer: A) Plastic

140. Which electronic component is the voltage regulator?

- A) Diac
- B) Transistor
- C) Triac
- D) Zener diode

Answer: D) Zener diode

141. Which process absorbs heat from the cabinet in refrigerator?

- A) Evaporation
- B) Compression
- C) Condensation
- D) Expansion

Answer: A) Evaporation

142. Which extinguishes the fire of flammable liquids?

- A) Oil
- B) Air
- C) Water
- D) CO₂

Answer: D) CO₂

143. Which is the mounting location of evaporator in ductable split unit?

- A) Ceiling mounting
- B) Roof mounting
- C) Wall mounting
- D) Floor mounting

Answer: A) Ceiling mounting

144. How the maximum reverse voltage across the diode is termed in reverse biased condition?

- A) Ripple frequency
- B) Peak inverse voltage
- C) Peak rectification voltage
- D) Diode voltage

Answer: B) Peak inverse voltage

145. Which component rejects the maximum heat to ambient air in refrigerator?

- A) Compressor
- B) Expansion valve
- C) Condenser
- D) Evaporator

Answer: C) Condenser

146. Which movement of plunger energises the start winding in relay operation?

- A) Vertically down
- B) Horizontally left
- C) Bottom side
- D) Vertically up

Answer: D) Vertically up

147. Where the manually defrosted water is stored in refrigerator?

- A) Tray on top of the compressor
- B) Bottom of the condenser
- C) Bottom of the evaporator
- D) Top of the freezer

Answer: A) Tray on top of the compressor

148. Which substance absorbs heat and directly changes its state from solid to vapour?

- A) Primary refrigerants
- B) Dry ice
- C) Secondary refrigerants
- D) Ice

Answer: B) Dry ice

149. What is the supply voltage if a current of 2 ampere flows through 10 Ohm resistor in a circuit?

- A) 45 Volt
- B) 55 Volt
- C) 20 Volt
- D) 65 Volt

Answer: C) 20 Volt

150. Which material is used to make electrode holder for welding?

- A) Steel
- B) Cast iron
- C) Cast iron
- D) Copper alloy

Answer: D) Copper alloy

151. Which is used to clean the condenser fins of a refrigerator?

- A) Soap solution
- B) Diluted acid
- C) Fin comb
- D) Painting brush

Answer: D) Painting brush

152. What is the name of the caliper having one leg with an adjustable divider point and other leg is bent?

- A) Spring joint caliper B) Jenny Caliper
C) Inside Caliper D) Outside caliper

Answer: B) Jenny Caliper

153. Which tool is used for tightening the odd size bolts and nuts?

- A) Adjustable spanner B) Nose pliers
C) Ring spanner D) Socket set

Answer: A) Adjustable spanner

154. Which winding of compressor motor is directly connected across voltage relay coil?

- A) Running winding B) Main winding
C) Auxiliary winding D) Starting winding

Answer: D) Starting winding

155. How many hydrogen atoms are present in R 134a?

- A) Three B) Four
C) Two D) One

Answer: C) Two

156. Which fan is used in condensing unit of ductable split air conditioner?

- A) Centrifugal fan B) Radial fan
C) Forward curved fan D) Propeller fan

Answer: D) Propeller fan

157. What tonnage capacity of split AC unit uses 150/200 MFD starting capacitor?

- A) 1.5 TR B) 2.0 TR
C) 2.5 TR D) 1 TR

Answer: B) 2.0 TR

158. What is the purpose of using goggles during chipping the slag from weld bead?

- A) To protect eyes B) To protect hand
C) To protect leg D) To protect head

Answer: A) To protect eyes

159. What does the number 4 of R 134a indicate?

- A) Number of fluorine atoms B) Number of carbon atoms
C) Number of hydrogen atoms D) Number of chlorine atoms

Answer: A) Number of fluorine atoms

160. What is the safety device used during arc welding?

- A) Electrode holder B) Screw clamp
C) Hand screen D) Lugs for welding

Answer: C) Hand screen

161. What is the fault in compressor motor if there is

electrical continuity between the dome and motor terminal?

- A) Grounded compressor motor B) Shorted run winding
C) Shorted start winding D) Open common terminal

Answer: A) Grounded compressor motor

162. What is the unit of electrical energy?

- A) Watt B) Volt
C) Ampere D) Kilo watt hour

Answer: A) Watt

163. What is the resistance level of start winding in a refrigerator's compressor motor?

- A) High resistance B) Low resistance
C) Medium resistance D) Zero resistance

Answer: A) High resistance

164. How does the evaporator frost affect the sub zero temperature thermally in refrigerator?

- A) As conductor B) As radiator
C) As convactor D) As insulator

Answer: D) As insulator

165. Which refrigerant blend is highly flammable?

- A) CFC B) HCFC
C) HFC D) HC

Answer: D) HC

166. What is the capacity of doing work?

- A) Power B) Work
C) Energy D) Force

Answer: C) Energy

167. Which type of conductor is used for bus bars?

- A) Standard conductor B) Thermal conductor
C) Stranded conductor D) Solid conductor

Answer: C) Stranded conductor

168. Which refrigerant property is desirable for V.C system?

- A) Low latent heat valve B) Low Dielectric strength
C) Low boiling point D) Corrosive to metals

Answer: C) Low boiling point

169. Which valve is closed during compression stroke in reciprocating compressor?

- A) Suction valve B) Liquid line valve
C) Discharge valve D) Service valve

Answer: A) Suction valve

170. What is the absolute zero temperature in degree centigrade?

- A) 212 Degree Centigrade B) -273 Degree Centigrade
C) 0 Degree Centigrade D) 100 Degree Centigrade

Answer: B) -273 Degree Centigrade

- A) Volt B) Coulomb
C) Ampere D) Farad

Answer: D) Farad

171. Which is disconnected by centrifugal switch is RSIR motor?

- A) Starting winding B) Running winding
C) Common winding D) Running capacitor

Answer: A) Starting winding

180. Which valve is closed first while extinguishing flame in gas welding process?

- A) Acetylene B) Oxygen
C) Hydrogen D) Air

Answer: A) Acetylene

172. What is the effect of bimetal thermo sticks in ON position in frost free refrigerator?

- A) Poor cooling B) More cooling
C) No cooling D) Accumulation of frost

Answer: C) No cooling

181. Which is used to connect the rotor bars in 3phase squirrel cage induction motor?

- A) Welded B) Screw
C) Nut and bolt D) End ring

Answer: D) End ring

173. Which tool is used for trimming the edges of a sheet metal cylinder?

- A) Straight snips B) Tube cutter
C) Bent snips D) Scissors

Answer: C) Bent snips

182. Which electrical control cuts off heating element in frost free refrigerator?

- A) Timer B) Bimetal thermo
C) Thermostat D) Relay

Answer: B) Bimetal thermo

174. Why frost free model refrigerator takes less freezing time of products?

- A) Low temperature setting B) High temperature setting
C) Natural air circulation D) Forced air circulation

Answer: D) Forced air circulation

183. Which type fan blade is used with out door unit of split AC?

- A) Guide vane B) Propeller
C) Centrifugal D) Vane

Answer: B) Propeller

175. What is starving in extinguishing the fire?

- A) Clearing the hazards B) Adding fuel
C) Stop the supply of oxygen D) Removal of fuel

Answer: D) Removal of fuel

184. Which factors produce work?

- A) Force and power B) Force and time
C) Time and distance D) Force and distance

Answer: D) Force and distance

176. What is the melting temperature of silver brazing rod?

- A) 1120 Degree F B) 1300 Degree F
C) 1200 Degree F D) 1250 Degree F

Answer: A) 1120 Degree F

185. Which instrument is used for measuring heat?

- A) Thermometer B) Calorimeter
C) Ammeter D) Anemometer

Answer: B) Calorimeter

177. Which international agency standardises the numbering system for identifying refrigerants?

- A) ASHRAE B) DW142
C) ISO D) ISHRAE

Answer: A) ASHRAE

186. Which gas is used for pressure testing the compressor dome?

- A) Refrigerant B) Nitrogen
C) Air D) Oxygen

Answer: B) Nitrogen

178. Which type of rotor is used in 3 Phase induction motor?

- A) Solid rotor B) Shaded pole rotor
C) Laminated rotor D) Squirrel cage rotor

Answer: D) Squirrel cage rotor

187. Which tool is used for bending long sheet metal?

- A) Bench vice B) Folding bar
C) Shear D) Hand vice

Answer: B) Folding bar

179. What is the unit of capacitance?

188. What is the purpose of operating the fan motor first and then the compressor motor in Air conditioners?

- A) Stop the high starting current by both motors
B) Cool the compressor by fan
C) Cool the coils first by fan
D) Minimise the noise of motors

Answer: A) Stop the high starting current by both motors

189. What is the reason for the compressor motor burn out in a window air conditioner?

- A) Defective blower
B) Defective fan motor
C) Defective fan capacitor
D) Defective OLP

Answer: D) Defective OLP

190. What is the effect of pouring water on electrodes resistance in earth pit?

- A) Equalises
B) Remains same
C) Increases
D) Decreases

Answer: D) Decreases

191. Which file is used for filing wood?

- A) Rasp cut file
B) Smooth file
C) Double cut file
D) Single cut file

Answer: A) Rasp cut file

192. Which material is used to avoid oxidation between aluminium conductor and the terminal?

- A) Kerosene
B) Petrol
C) Shellac
D) Grease

Answer: D) Grease

193. Which type of expansion valve is used in window air conditioner?

- A) Automatic expansion valve
B) Capillary tube
C) Thermostatic expansion valve
D) Low side float valve

Answer: B) Capillary tube

194. Which type of 1- ϕ motor has high starting torque?

- A) Capacitor start and capacitor run
B) Resistance start induction run
C) Permanent capacitor
D) Induction start and induction run

Answer: A) Capacitor start and capacitor run

195. Why universal numbering system is adopted for different refrigerants?

- A) Mixing the lubricant combination
B) Identify the systems
C) Identifying the refrigerant's names
D) Fixing the drier combination

Answer: C) Identifying the refrigerant's names

196. Which relay is used in capacitor start, capacitor run

(CSR) compressor motor?

- A) Thermal relay
B) Current relay
C) Voltage relay
D) Amperage relay

Answer: C) Voltage relay

197. Which type of evaporator is used in frost free refrigerator?

- A) Finned tube
B) Shell and tube
C) Plate type
D) Wire mesh

Answer: A) Finned tube

198. Which two terminals read the highest resistance while testing refrigerator compressor motor?

- A) Common and run
B) Start and compressor body
C) Start and run
D) Start and common

Answer: C) Start and run

199. What is the storage capacity of oxygen cylinder?

- A) 5 m³
B) 6 m³
C) 7 m³
D) 3 m³

Answer: C) 7 m³

200. What is the effect of moist air present inside the hermetic system?

- A) Harmful to the compressor and motor
B) Capacity of compressor will increase
C) Increase the life of compressor
D) Less wear and tear in compressor

Answer: A) Harmful to the compressor and motor

201. What is the load resistance in an electrical circuit, if current, I = 2 amp and supply, V = 10 volt?

- A) 2 Ohms
B) 3 Ohms
C) 4 Ohms
D) 5 Ohms

Answer: D) 5 Ohms

202. Which fan motor speed is used with outdoor unit in split AC?

- A) Triple speed
B) Five speed
C) Double speed
D) Single speed

Answer: D) Single speed

203. Which meter indicates the true power directly in an electrical circuit?

- A) Watt meter
B) Volt meter
C) Ammeter
D) Ohm meter

Answer: A) Watt meter

204. Which instrument is used to measure atmospheric pressure?

- A) Hygrometer B) Hydrometer
C) Manometer D) Barometer

Answer: D) Barometer

205. Which valve helps to attend mechanical faults without wasting the gas in split AC?

- A) Gate valve B) Float valve
C) Expansion valve D) Service valve

Answer: D) Service valve

206. Which component belongs to outdoor unit of split AC?

- A) Blower B) Compressor
C) Air filter D) Evaporator coil

Answer: B) Compressor

207. Why the top of dome is hot in a scroll compressor?

- A) Suction super heat is less B) Suction gas not cooled
C) Discharge plenum is at top D) Undercharged system

Answer: C) Discharge plenum is at top

208. Which medium is used to extinguish Class - A fire?

- A) Foam B) Water
C) CO₂ D) Dry powder

Answer: B) Water

209. Which movement of the scroll compresses the low pressure vapour in scroll compressor?

- A) Centrifugal B) Reciprocating
C) Orbital D) Rotating

Answer: C) Orbital

210. What is the effect of releasing HFC refrigerants to the atmosphere?

- A) Improve water pollution B) Increase global warming potential
C) Increase ozone depleting potential D) Decrease green house effect

Answer: B) Increase global warming potential

211. How many diodes are required for making a bridge rectifier circuit?

- A) Three B) Four
C) One D) Two

Answer: B) Four

212. What is the weld test without destroying or breaking the joint?

- A) Radio graphic test B) Magnetic test
C) Destructive test D) Non destructive test

Answer: D) Non destructive test

213. Which refrigerant is highly flammable?

- A) HC - Hydro carbon B) HCFC - Hydro chloro fluoro carbon
C) CFC - Chloro fluoro carbon D) HFC - Hydro fluoro carbon

Answer: A) HC - Hydro carbon

214. What is the process involved for converting AC to DC power supply?

- A) Rectification B) Inversion
C) Convection D) Regulation

Answer: A) Rectification

215. Which method is used to check the leakage of hydro fluoro carbon refrigerants?

- A) Electric torch B) Electronic leak detector
C) Litmus paper D) Sulphur candles

Answer: B) Electronic leak detector

216. What are the passive components used in electronic circuits?

- A) Transformers and semiconductors B) Transistors, diodes and SCRs
C) Semi conductors and transistors D) Resistors, capacitors and inductors

Answer: D) Resistors, capacitors and inductors

217. What is the name of process that changes the used refrigerant to new product?

- A) Reclaim B) Recycle
C) Recover D) Manufacture

Answer: A) Reclaim

218. What is the category of R 290 refrigerant?

- A) Organic compounds B) Hydrocarbons
C) Azeotropes D) Halocarbons

Answer: B) Hydrocarbons

219. Where the refrigerant is stored in split AC during pump down operation?

- A) Accumulator B) Evaporator
C) Compressor D) Condenser

Answer: D) Condenser

220. What is the minimum distance to be maintained between the wall and refrigerator condenser?

- A) 15 cm B) 13 cm
C) 18 cm D) 22 cm

Answer: A) 15 cm

221. Which cooling medium is used to cool the motor of a hermetic reciprocating compressor in AC?

- A) Liquid refrigerant B) Discharge vapour
C) Suction vapour D) Water

Answer: C) Suction vapour

222. Which material is used for making ICs?

- A) Mild steel B) Silicon
C) Carbon D) Platinum

Answer: B) Silicon

223. Which terminals are momentarily shorted to start the compressor motor without relay?

- A) S and compressor body B) S and R terminal
C) C and S terminal D) C and R terminal

Answer: B) S and R terminal

224. Which type of motor drive is used in hermetic compressor in refrigerator?

- A) Gear drive B) Belt drive
C) Direct drive D) Push drive

Answer: C) Direct drive

225. Why HCFC 22 refrigerant is recycled?

- A) Make use of the same lubricant B) Decrease the cost of production
C) Increase the efficiency of RAC systems D) Reduce ODP and GWP of environment

Answer: D) Reduce ODP and GWP of environment

226. Which capacitor is connected in series with starting winding of CSR motor during operation?

- A) Fan capacitor B) Run capacitor
C) No capacitor is connected D) Start capacitor

Answer: B) Run capacitor

227. What is bottom dead centre in reciprocating compressor cylinder?

- A) The piston stops in cylinder at top B) The piston moves down from the point of cylinder
C) The piston moves up from the point of cylinder D) The piston starts in cylinder at top

Answer: C) The piston moves up from the point of cylinder

228. What is the reason for excessive frost on evaporator coil in window AC?

- A) Air filter blocked completely B) Evaporator fins not blocked by dust
C) Blower rotating at higher speed D) More air circulation in evaporator

Answer: A) Air filter blocked completely

229. What is the function of starting capacitor in CSIR motor?

- A) Gives initial torque B) Gives running torque

- C) Improves energy efficiency D) Corrects power factor

Answer: A) Gives initial torque

230. Which law is related to the constant PV at constant T?

- A) Boyles law B) Pascal s law
C) Renaults law D) Charles s law

Answer: A) Boyles law

231. Which components are connected by metering device in vapour compression cycle?

- A) Compressor and evaporator B) Compressor and condenser
C) Condenser and evaporator D) Evaporator and suction line

Answer: C) Condenser and evaporator

232. Which component switches ON/OFF the starting winding in RSIR motor?

- A) Relay B) Capacitor
C) OLP D) Thermostat

Answer: A) Relay

233. Which device equalizes the system pressure in frost free refrigerator?

- A) Condenser B) Evaporator
C) Capillary tube D) Compressor

Answer: C) Capillary tube

234. What is applied to find the leakage on acetylene gas connection?

- A) By smell B) Soap bubbles
C) Halide torch D) LPG torch

Answer: B) Soap bubbles

235. What is the working condition of component during defrost cycle in frost free refrigerator?

- A) Thermostat cuts off B) Evaporator fan motor is running
C) Compressor is not running D) Relay activated

Answer: C) Compressor is not running

236. Which refrigerant is used in vapour compression cycle?

- A) Secondary refrigerant B) Primary refrigerant
C) Water D) Brine solution

Answer: B) Primary refrigerant

237. How to safe guard the hands while handling glass wool?

- A) Wearing gloves B) Wearing goggles
C) Using mask D) Using shoes

Answer: A) Wearing gloves

238. What is effect of compression process on refrigerant vapour?

- A) Cool the vapour above saturation B) Heat the vapour below saturation
C) Increase the pressure and temperature D) Decrease the pressure and temperature

Answer: C) Increase the pressure and temperature

239. What is the effect of sensing higher temperature by thermistor NTC?

- A) Resistance increases B) Resistance decreases
C) Resistance becomes zero D) Resistance becomes infinity

Answer: B) Resistance decreases

240. What is the rotor speed with respect to stator field speed in an induction motor?

- A) More than the stator speed B) More than the fly wheel speed
C) Equal to the stator speed D) Less than the stator speed

Answer: D) Less than the stator speed

241. What is the reason if refrigerator runs normally but no cooling effect?

- A) Filter block B) Leakage of refrigerant
C) Condenser block D) Over charge

Answer: B) Leakage of refrigerant

242. What is the colour of acetylene hose pipe in oxy - acetylene welding set?

- A) Black B) Maroon
C) Green D) Red

Answer: B) Maroon

243. What is the flame temperature range of oxy acetylene gas flame?

- A) 2700Degree Centigrade to 2800Degree Centigrade B) 3100Degree Centigrade to 3300Degree Centigrade
C) 1800Degree Centigrade to 2200Degree Centigrade D) 2400Degree Centigrade to 2700Degree Centigrade

Answer: B) 3100Degree Centigrade to 3300Degree Centigrade

244. What is the effect on defective thermostat sensor in split AC?

- A) AC unit runs continuously B) Increases super heat
C) Unit consumes less power D) Relay malfunctions

Answer: A) AC unit runs continuously

245. Which application uses the digital ICs?

- A) Logic gates B) Tuned circuits
C) Amplifier D) Voltage regulator

Answer: A) Logic gates

246. Which method of refrigeration system is adopted in frost free refrigerator?

- A) Evacuating B) Vapour compression
C) Vapour absorption D) Water vapour

Answer: B) Vapour compression

247. Which type of diode is used for communication circuits?

- A) Zener diode B) Signal diode
C) Rectifier diode D) Switching diode

Answer: B) Signal diode

248. Why the filler metal does not melt and flow into the joint in bronze welding of copper?

- A) Excessive heating of metal surface B) Excess use of flux
C) Due to excess of polished surface D) Surface coated with oxides or oily material

Answer: D) Surface coated with oxides or oily material

249. Which power supply has the fixed polarity?

- A) Direct current B) Signal ripples
C) Signal voltage D) Alternating current

Answer: A) Direct current

250. How to neutralise the concentration of leaked ammonia from air

- A) Spraying a lot of water B) Spray Hydrochloric acid
C) Shut down the plant D) Recover ammonia from air

Answer: A) Spraying a lot of water