

Duration: 60 Mins**Total Marks: 402****Q.ID: ITISKILL1196SN**

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

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

Answer: A) Electronic leak detector

2. Which is sensed by TEV in response to heat load variation?

- A) Super heat in suction line B) Sub cool in liquid line
C) Evaporating temperature D) Discharge temperature

Answer: A) Super heat in suction line

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

- A) Tar felt B) Glass wool
C) Fibre glass D) Thermocole

Answer: D) Thermocole

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

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

Answer: C) Easy to identify

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

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

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

6. Which part of window AC removes dust particles from the room air?

- A) Dehydrator B) Air filter
C) Strainer D) Filter drier

Answer: B) Air filter

7. What is the method of converting AC to DC power supply with two diodes and a step down transformer?

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

Answer: B) Full wave rectifier

8. What is the cause of reduction in fan's air flow?

- A) Supply voltage is normal B) Refrigerant under charge
C) Leak in the system D) Fan capacitor is weak

Answer: D) Fan capacitor is weak

9. What type of material is used to support the tubes on both sides of air cooled condenser?

- A) Galvanised iron sheets B) Copper sheets
C) Mild steel sheet D) Aluminium sheets

Answer: A) Galvanised iron sheets

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

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

Answer: C) 2.0 TR

11. What is the rate of doing work?

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

Answer: C) Power

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

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

Answer: C) Ohm s law

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

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

Answer: D) Ceiling mounting

14. Which part of the compressor converts rotary into reciprocating motion of piston in car AC?

- A) Connecting rod B) Magnetic clutch
C) Swash plate D) Crank shaft

Answer: C) Swash plate

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

- A) Forward curved fan B) Centrifugal fan

- C) Propeller fan D) Radial fan

Answer: C) Propeller fan

16. What is the use of magnetic clutch in Car AC?

- A) Indicate liquid level in the compressor B) Add oil in the system
C) Control ON/OFF for compressor D) Indicate oil level in the compressor

Answer: C) Control ON/OFF for compressor

17. What is the advantage of inverter split AC?

- A) Eliminates compressor B) Current drawn is high
C) High energy efficiency D) Low energy efficiency

Answer: C) High energy efficiency

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

- A) The piston stops in cylinder at bottom 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 bottom

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

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

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

Answer: C) Single speed

20. What is the function of remote control in split AC?

- A) Drain water control B) Transmits signal to operate AC
C) Pressure setting D) Humidity setting

Answer: B) Transmits signal to operate AC

21. Which is the constant reference for the working of AEV?

- A) Suction pressure B) Discharge pressure
C) Oil temperature D) Volume expansion

Answer: A) Suction pressure

22. How pressure drop is achieved in capillary tube of refrigeration cycle?

- A) The friction between piston and cylinder B) The friction between belt and pulley
C) The friction between refrigerant and tube D) The friction between refrigerant and oil

Answer: C) The friction between refrigerant and tube

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

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

Answer: B) Moisture in the system

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

- A) Gives initial torque B) Corrects power factor
C) Gives running torque D) Improves energy efficiency

Answer: A) Gives initial torque

25. What is the effect of longer suction and liquid piping in AC?

- A) Less pressure drop B) No pressure rise
C) Medium pressure rise D) More pressure drop

Answer: D) More pressure drop

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

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

Answer: B) Compressor

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

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

Answer: D) OLP

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

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

Answer: D) Soap bubbles

29. Which speed is recommended for checking optimum performance in car AC?

- A) 3600 rpm B) 4600 rpm
C) 2600 rpm D) 1600 rpm

Answer: C) 2600 rpm

30. Which group the acetylene gas belongs to?

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

Answer: A) HC

31. Which file is used for filing wood?

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

Answer: C) Rasp cut file

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

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

Answer: C) 1120 Degree F

33. What is the effect of releasing HFC refrigerants to the

atmosphere?

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

Answer: D) Increase global warming potential

34. Which component belongs to indoor unit of split AC?

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

Answer: B) Evaporator

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

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

Answer: B) Over load protector

36. What is the reason for no cooling effect in car AC?

- A) Moisture in the system
B) Excess of refrigerant
C) Air in the system
D) Refrigerant leaked

Answer: D) Refrigerant leaked

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

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

Answer: A) Winding short

38. Why the idler pulley is used in belt driven car AC?

- A) Decrease the belt tension
B) Increase the belt tension
C) Increase the feathering
D) Decrease the belt vibration

Answer: D) Decrease the belt vibration

39. What is the remedy for broken bimetal thermo in a frost free refrigerator?

- A) Repair the bimetal thermo
B) Reuse the bimetal thermo
C) Readjust the bimetal thermo
D) Replace the bimetal thermo

Answer: D) Replace the bimetal thermo

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

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

Answer: C) Up to 80%

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

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

Answer: C) Last coil of evaporator

42. How many fan motors are used in split AC?

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

Answer: C) Two

43. How to change the direction of rotation in 3 Phase induction motor?

- A) Change any two phase
B) Change neutral
C) Change the winding only
D) Change all phase

Answer: A) Change any two phase

44. What is the cause for refrigerator door gap at closing position?

- A) Either side gap less
B) Uneven floor level
C) Either side gap more
D) Uneven condenser level

Answer: B) Uneven floor level

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

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

Answer: D) Bimetal strip

46. What is the remedy to remove moisture from the window AC system?

- A) Evacuate the system deeply
B) Over gas charge in the system
C) Clean the condenser fins
D) Clean the evaporator fins

Answer: A) Evacuate the system deeply

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

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

Answer: B) Capillary tube

48. Which is increased by the fins of condenser tubes in window air conditioner?

- A) Power consumption
B) Heat transfer rate
C) Refrigerant flow rate
D) Discharge pressure

Answer: B) Heat transfer rate

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

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

Answer: C) Running

50. Which part connects the piston with small end of

connecting rod in a reciprocating compressor?

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

Answer: D) Piston pin

51. Which instrument is used to measure pressure on both high and low side of the system?

- A) Gauge manifold
- B) Pipe manifold
- C) Pressure manifold
- D) Instrument manifold

Answer: A) Gauge manifold

52. What is the effect of operating the compressor under 5 of Hg vacuum during pump down process?

- A) Pumps oil to condenser
- B) Prevent piston damage
- C) Prevent leakage in service valve
- D) Prevent motor damage in dome

Answer: A) Pumps oil to condenser

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

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

Answer: A) 5 HP

54. What is the unit of electric current?

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

Answer: D) Ampere

55. What is the cooling capacity of 1 TR in K Cal / hr?

- A) 6000
- B) 3000
- C) 4000
- D) 5000

Answer: B) 3000

56. Where the filter drier is installed in window AC refrigerant circuit?

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

Answer: D) Liquid line

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

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

Answer: B) Absorbs heat from inside the cabinet

58. 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

59. Which refrigerant control is used in car AC?

- A) Thermal electric expansion valve
- B) Automatic expansion valve
- C) Thermostatic expansion valve
- D) Hand shut off valve

Answer: C) Thermostatic expansion valve

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

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

Answer: A) Liquid state

61. Which materials are used to make mallets?

- A) Wood, rubber
- B) Rubber, brass
- C) Wood, brass
- D) Wood, cast iron

Answer: A) Wood, rubber

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

- A) Bender
- B) Cutter
- C) Reamer
- D) Roller

Answer: B) Cutter

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

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

Answer: C) Suction vapour

64. 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

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

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

Answer: D) Adding resistance to rotor winding

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

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

Answer: A) Run

67. Which refrigeration system works on directly by the heat

energy?

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

Answer: A) Vapour absorption refrigeration

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

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

Answer: D) Timer

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

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

Answer: A) Vertically up

70. What is the cut out temperature of bimetal thermo in frost free refrigerator?

- A) 5 Degree Centigrade
- B) 20 Degree Centigrade
- C) 25 Degree Centigrade
- D) 10 Degree Centigrade

Answer: D) 10 Degree Centigrade

71. Which type of switch is used to control the room air temperature in split AC?

- A) Over load protector
- B) Thermostat switch
- C) Thermal relay
- D) Manual switch

Answer: B) Thermostat switch

72. Which application uses the digital ICs?

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

Answer: A) Logic gates

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

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

Answer: D) Dry ice

74. What is the cause of water leakage in indoor unit of multi split AC?

- A) Condenser water pump defective
- B) Over flow of water from cooling tower sump
- C) Efficient water pump
- D) Drain line not properly installed

Answer: D) Drain line not properly installed

75. Which winding has high inductance value in CSR compressor motor?

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

Answer: C) Running winding

76. What is the physical condition of refrigerant in hermetic dome of rotary compressor?

- A) HP Vapour
- B) HP Liquid
- C) LP Vapour
- D) LP Liquid

Answer: A) HP Vapour

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

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

Answer: C) Aluminium

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

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

Answer: B) 20 Volt

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

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

Answer: B) Evaporation

80. 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 motor
- C) Defective fan capacitor
- D) Defective blower

Answer: A) Defective compressor motor

81. What is the advantage of using capillary tube as an expansion device?

- A) Volume balancing is easy
- B) Complicate design
- C) Temperature balancing is easy
- D) Pressure balancing is easy

Answer: D) Pressure balancing is easy

82. How much volume of oxygen is needed for complete combustion of one unit volume of acetylene?

- A) 2.5 times
- B) 4.5 times
- C) 3.5 times
- D) 1.5 times

Answer: A) 2.5 times

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

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

Answer: C) Starting winding

84. What is the cause for noise in indoor unit of a multi split air conditioner?

- A) Running current is high B) Blower is loosened
C) Refrigerant leak D) Compressor not working

Answer: B) Blower is loosened

85. What is the type of condenser used in direct cool refrigerator?

- A) Shell and tube B) Wire mesh
C) Fin and tube D) Tube in tube

Answer: B) Wire mesh

86. Which device meters the amount of refrigerant entering the evaporator in window AC?

- A) Finned tube condenser B) Heat exchanger
C) Capillary tube D) Accumulator

Answer: C) Capillary tube

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

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

Answer: C) 1000 sq.ft

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

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

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

89. What is the physical change of refrigerant in evaporator?

- A) Vapour to liquid B) Vapour to solid
C) Liquid to vapour D) Solid to liquid

Answer: C) Liquid to vapour

90. What is the purpose of chemical spraying on finned condenser?

- A) Blow the dust from the fins B) Remove the rust on the fins
C) Correct the bends in fins D) Flush out the condenser tubes

Answer: B) Remove the rust on the fins

91. Where does the ozone layer exist in atmosphere?

- A) Stratosphere B) Exosphere
C) Mesosphere D) Ionosphere

Answer: A) Stratosphere

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

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

Answer: B) Refrigerant leaked

93. What is the ozone depleting potential of R 134a Refrigerant?

- A) 0 B) 2
C) 1 D) 3

Answer: A) 0

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

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

Answer: D) Relay

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

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

Answer: B) 90 Degree

96. What is the equivalent absolute scale for centigrade?

- A) Celsius B) Kelvin
C) Fahrenheit D) Rankine

Answer: B) Kelvin

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

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

Answer: C) Compressor is not running

98. What type of compressor motor is used in inverter split AC?

- A) Open type compressor motor B) Variable speed motor
C) Constant speed compressor motor D) Centrifugal compressor motor

Answer: B) Variable speed motor

99. Which tool is used for bending, seaming and forming of sheet metal?

- A) Stakes B) Hand vice
C) Shear D) Bench vice

Answer: A) Stakes

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

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

Answer: D) 0.001 mm

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

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

Answer: A) POE

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

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

Answer: B) Air filter blocked completely

103. What is the advantage of ductable air conditioner over window air conditioner?

- A) Noisy operation
- B) Higher cost
- C) Needs more space
- D) Silent operation

Answer: D) Silent operation

104. 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

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

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

Answer: C) Identifying the refrigerant's names

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

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

Answer: C) Hand screen

107. Which type of evaporator is used in window air conditioner?

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

Answer: D) Fins and tube

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

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

Answer: A) Defective OLP

109. What is starving in extinguishing the fire?

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

Answer: B) Removal of fuel

110. What is the advantage of using flux in brazing?

- A) Melting tubes
- B) Over heating
- C) Chemical reaction
- D) Prevent Oxidation

Answer: D) Prevent Oxidation

111. How the capacity of refrigerator is expressed?

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

Answer: D) Litres

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

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

Answer: B) Electrician's knife

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

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

Answer: C) Starting winding open

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

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

Answer: B) Black

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

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

Answer: C) Temperature

116. Which is the accurate method of refrigerant charging in car AC?

- A) Sight glass bubbles method
- B) Suction pressure method
- C) Dial a charge method
- D) Weighing method

Answer: D) Weighing method

117. Which component is connected in series with defrost heater in a frost free refrigerator?

- A) Heating element
- B) Cabinet bulb
- C) Bimetal thermo
- D) Door switch

Answer: C) Bimetal thermo

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

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

Answer: B) No shaft seal is required

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

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

Answer: A) Two

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

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

Answer: D) Direct drive

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

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

Answer: A) AC unit runs continuously

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

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

Answer: C) Below its critical temperature

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

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

Answer: C) Maroon

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

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

Answer: B) 100 Degree Centigrade

125. 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

126. What is the cooling capacity for 1.5 Ton of ductable split

air conditioner?

- A) 3500 Kcal/hr
- B) 4500 Kcal/hr
- C) 4000 Kcal/hr
- D) 5000 Kcal/hr

Answer: B) 4500 Kcal/hr

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

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

Answer: B) Single phase double end shaft motor

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

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

Answer: D) Oil level is low

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

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

Answer: C) Bearing worn out

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

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

Answer: B) 36 MFD

131. What is the category of R 290 refrigerant?

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

Answer: C) Hydrocarbons

132. Which component is used in frost free refrigerator?

- A) Timer switch
- B) Plate coil evaporator
- C) Liquid receiver
- D) Oil separator

Answer: A) Timer switch

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

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

Answer: A) Non destructive test

134. Which insulating material is used in duct work?

- A) Rubber
- B) Glass wool
- C) Plastic
- D) Wood

Answer: B) Glass wool

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

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

Answer: D) Compressor and expansion device

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

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

Answer: B) Acetylene

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

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

Answer: D) -273 Degree Centigrade

138. Which type of evaporator is used in house hold refrigerator?

- A) Shell and coil evaporator B) Shell and tube evaporator
C) Plate evaporator D) Tube in tube evaporator

Answer: C) Plate evaporator

139. 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

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

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

Answer: A) Water

141. Which property is desirable for an ideal refrigerant?

- A) High freezing point B) High latent heat value
C) High specific volume D) High boiling point

Answer: B) High latent heat value

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

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

Answer: B) Blower

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

- A) As convector B) As insulator

- C) As radiator D) As conductor

Answer: B) As insulator

144. Where the filter drier is installed in a car AC system?

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

Answer: A) Liquid line

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

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

Answer: B) Compressor

146. What is the maximum TR capacity operated with Single phase AC supply?

- A) 5 TR B) 1.5 TR
C) 2.0 TR D) 1.00 TR

Answer: C) 2.0 TR

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

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

Answer: A) 3100Degree Centigrade to 3300Degree Centigrade

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

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

Answer: C) Hermetic rotary compressor

149. Which component is replaced to prevent air entering the refrigerator cabinet?

- A) Door hinges B) Door gasket
C) Door paint D) Thermostat

Answer: B) Door gasket

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

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

Answer: B) Condenser

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

- A) Pipe lines with more joints B) Install units as far as possible

- C) With more horizontal distance D) System pipes with minimum bends

Answer: D) System pipes with minimum bends

152. Which type of condenser is used in window Air conditioner?

- A) Forced convection B) Evaporative
C) Water cooled D) Natural convection

Answer: A) Forced convection

153. What is the reason for sweating of water on drier filter?

- A) More air flows through the evaporator B) Air filter blocked
C) Partially choked drier filter D) Dust accumulated on condenser

Answer: C) Partially choked drier filter

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

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

Answer: B) K.Cal (Kilo Calorie)

155. Which instrument is used to measure atmospheric pressure?

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

Answer: B) Barometer

156. How many speed selection is used with indoor air blower in ductable multi split AC?

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

Answer: B) Three - speed

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

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

Answer: A) Acetylene

158. Which winding is made of thin wire in single phase motor?

- A) Series B) Main
C) Running D) Starting

Answer: D) Starting

159. Which factor determines the current setting during welding?

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

Answer: C) Diameter of electrode

160. Which flame is used for welding brass?

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

Answer: B) Oxidising flame

161. Which two components do the compressor function in vapour absorption system?

- A) Generator and separator B) Generator and evaporator
C) Generator and absorber D) Generator and condenser

Answer: C) Generator and absorber

162. Which stabilizer capacity is used for 1 Ton window air conditioner?

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

Answer: A) 3 KVA

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

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

Answer: B) Blower

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

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

Answer: A) Potential energy

165. Which refrigerant blend is highly flammable?

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

Answer: C) HC

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

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

Answer: A) AC unit runs continuously

167. Which component belongs to indoor unit of split AC?

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

Answer: D) Evaporator

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

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

Answer: D) Defrost timer

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

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

Answer: D) Copper

170. Which expansion valve is suitable for constant load operation?

- A) King valve
C) Low side float valve
- B) Relief valve
D) Automatic expansion valve

Answer: D) Automatic expansion valve

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

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

Answer: B) Painting brush

172. Which colour is used for painting condenser coil?

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

Answer: B) Black

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

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

Answer: B) Running winding

174. Which bearing is used in blower motor of indoor unit in ductable split air conditioner?

- A) Open ball bearing
C) Sleeve bearing
- B) Ball bearing
D) Thrust bearing

Answer: C) Sleeve bearing

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

- A) Improves energy efficiency
C) Gives running torque
- B) Corrects power factor
D) Gives initial torque

Answer: D) Gives initial torque

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

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

Answer: C) 10^{-9} farad

177. What is smothering in fire extinguishing?

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

Answer: B) Cutting off oxygen supply to fire

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

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

Answer: A) Copper and acetylene form explosive

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

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

Answer: C) Finned tube

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

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

Answer: D) Propeller

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

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

Answer: C) Vapour compression

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

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

Answer: D) GI sheet

183. Which is the numerical designation of ammonia refrigerant?

- A) $700 + (\text{Molecular mass of NH}_3) = 717$
C) $700 + (\text{Molecular mass of NH}_3) = 720$
- B) $700 + (\text{Molecular mass of NH}_3) = 718$
D) $700 + (\text{Molecular mass of NH}_3) = 719$

Answer: A) $700 + (\text{Molecular mass of NH}_3) = 717$

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

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

Answer: C) Service valve

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

- A) Butt joint
C) Grooved joint
- B) Lap joint
D) T - Joint

Answer: D) T - Joint

186. 1 Which control device is used to maintain the room air

temperature?

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

Answer: D) Thermostat

187. Which gas is used to flush out the coils of air cooled condenser?

- A) Dry nitrogen
- B) kaksr
- C) Pure dry air
- D) Oxygen

Answer: A) Dry nitrogen

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

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

Answer: A) Surface coated with oxides or oily material

189. What is the use of capacitor in PSC operated induction motor?

- A) Decrease the starting torque
- B) Decrease the power factor
- C) Cancel the starting torque
- D) Improve the power factor

Answer: D) Improve the power factor

190. Which device engages the compressor shaft in car AC?

- A) Car engine pulley
- B) Thermo switch
- C) Electro magnetic clutch
- D) Over load protector

Answer: C) Electro magnetic clutch

191. Which motor has the least starting torque?

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

Answer: C) RSIR

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

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

Answer: A) Bent snips

193. Which is the welding method if the filler rod only is fused?

- A) Pressure
- B) Forge
- C) Fusion
- D) Non fusion

Answer: D) Non fusion

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

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

Answer: A) GI sheet

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

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

Answer: A) Silent operation

196. What is the use of anemometer?

- A) Produce current
- B) Measure voltage
- C) Check water flow
- D) Measure air flow

Answer: D) Measure air flow

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

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

Answer: C) Peak inverse voltage

198. What is the storage capacity of oxygen cylinder?

- A) 3 m³
- B) 6 m³
- C) 5 m³
- D) 7 m³

Answer: D) 7 m³

199. What is the unit of capacitance used with single phase induction motors in domestic RAC system?

- A) Milli henry
- B) Milli ampere
- C) Kilo ohm
- D) Microfarad

Answer: D) Microfarad

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

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

Answer: D) Decreases

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

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

Answer: C) Ampere

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

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

Answer: C) Refrigerant

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

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

Answer: A) Stranded conductor

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

- A) SO₂
- B) NH₃
- C) AIR
- D) CO₂

Answer: D) CO₂

205. Why CFC 12 system is replaced by HFC 134a system in car AC?

- A) Increase ODP
- B) ODP becomes zero
- C) Increase GWP
- D) GWP becomes zero

Answer: B) ODP becomes zero

206. What is the capacity of doing work?

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

Answer: C) Energy

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

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

Answer: D) Leakage of refrigerant

208. What is the test pressure of condenser coils during manufacture?

- A) 150 psig
- B) 450 psig
- C) 250 psig
- D) 350 psig

Answer: D) 350 psig

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

- A) Increase the speed of fan motor
- B) Decrease the cooling capacity
- C) Decrease the volume of air handling
- D) Increase the cooling capacity

Answer: D) Increase the cooling capacity

210. Which instrument is used to identify the terminals of a compressor motor?

- A) Voltmeter
- B) Ammeter
- C) Anemometer
- D) Ohm meter

Answer: D) Ohm meter

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

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

Answer: C) Run capacitor

212. What is the effect of increased out door temperature in car AC?

- A) Performance remains the same
- B) Compressor runs less time
- C) Compressor runs more time
- D) Performance increases

Answer: C) Compressor runs more time

213. What is the reason for Very high condenser temperature in a window air conditioner?

- A) More air flows into the condenser
- B) Water splashes condenser
- C) Dust accumulated in the condenser fins
- D) Fan motor working in good condition

Answer: C) Dust accumulated in the condenser fins

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

- A) Brass
- B) Copper
- C) Aluminium
- D) Cast iron

Answer: C) Aluminium

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

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

Answer: B) Folding bar

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

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

Answer: D) Refrigerant leaked

217. Which electronic component is the voltage regulator?

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

Answer: D) Zener diode

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

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

Answer: B) Cut out

219. 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

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

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

Answer: B) Rectification

221. Which refrigerant is inactive to ozone layer?

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

Answer: C) R 134a

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

Answer: D) Terminal A

223. Which capacity of fan motor is used in 1Ton window air conditioner?

- A) 1/20 HP
- B) 1/10 HP
- C) 1/5 HP
- D) 1/16 HP

Answer: D) 1/16 HP

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

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

Answer: B) Hose clamp

225. What type of heat is absorbed by primary refrigerant?

- A) Total heat
- B) Specific heat
- C) Sensible heat
- D) Latent heat

Answer: D) Latent heat

226. Which level of vacuum is required before charging HFC 134a in car AC?

- A) 200 micron
- B) 400 micron
- C) 500 micron
- D) 300 micron

Answer: A) 200 micron

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

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

Answer: B) Chipping hammer

228. 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

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

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

Answer: B) Starting winding

230. Which is a positive displacement compressor?

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

Answer: C) Scroll compressor

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

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

Answer: A) Starting capacitor

232. What is the barometer reading at sea level in Hg column?

- A) 750 mm
- B) 740 mm
- C) 760 mm
- D) 730 mm

Answer: C) 760 mm

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

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

Answer: D) 80 to 100 MFD

234. Which factors produce work?

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

Answer: A) Force and distance

235. Which refrigerant is used in domestic refrigerator?

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

Answer: A) R 134 a

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

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

Answer: D) No cooling

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

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

Answer: C) Resistance decreases

238. Which method of welding process is suitable to nonferrous dissimilar metals?

- A) Explosion welding
- B) Ultrasonic method of welding
- C) Brazing and bronze welding
- D) Cold welding

Answer: C) Brazing and bronze welding

239. What is the name of electronic circuit?

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

Answer: A) Bridge rectifier

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

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

Answer: D) Capillary tube

241. What is the fault in compressor motor if there is electrical continuity between the dome and motor terminal?

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

Answer: B) Grounded compressor motor

242. Which material is used for making service valve?

- A) Stainless steel
- B) Aluminium
- C) Cast iron
- D) Brass

Answer: D) Brass

243. Where the refrigerant vapour is compressed in scroll compressor?

- A) Crank and connecting rod
- B) Between fixed and orbiting scrolls
- C) Fixed and reciprocating scroll
- D) Eccentric and cylinder

Answer: B) Between fixed and orbiting scrolls

244. What is the capacity of compressor motor used in 1Ton window air conditioner?

- A) 0.75 HP
- B) 0.50 HP
- C) 0.95 HP
- D) 1.00 HP

Answer: A) 0.75 HP

245. 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

246. What is the value of starting capacitor used for 1TR

window air conditioner?

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

Answer: A) 80 MFD

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

- A) Damper
- B) Air washer
- C) Air filter
- D) Filter drier

Answer: A) Damper

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

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

Answer: D) Capacitor start and capacitor run

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

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

Answer: A) 6000

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

- A) Conductance
- B) Voltage
- C) Resistance
- D) Current

Answer: B) Voltage

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

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

Answer: A) To protect eyes

252. What is indicated by the bubbles in car AC's sight glass?

- A) Shortage of refrigerant
- B) Excess of refrigerant
- C) Pressure of air
- D) Poor compression

Answer: A) Shortage of refrigerant

253. Which is the green house gas?

- A) Oxygen of atmospheric air
- B) Neon of atmospheric air
- C) Chlorofluoro carbon in air
- D) Helium of atmospheric air

Answer: C) Chlorofluoro carbon in air

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

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

Answer: A) Permanent split capacitor motor

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

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

Answer: C) Rat tail joint

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

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

Answer: A) Nitrogen

257. How the cylinders of gas welding set are secured in trolley?

- A) Tied up with belt
- B) Using chain
- C) Tightened with rope
- D) By cable

Answer: B) Using chain

258. What is the cause of reduced supply air throw though air filter is clean in window AC?

- A) Dust accumulated in the condenser
- B) No dust accumulated in the evaporator
- C) Frost accumulated in the evaporator
- D) No frost in the evaporator

Answer: C) Frost accumulated in the evaporator

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

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

Answer: A) Jenny Caliper

260. What is the unit of inductance?

- A) Henry
- B) Ampere
- C) Farad
- D) Ohm

Answer: A) Henry

261. What is the temperature maintained in the refrigerator freezer?

- A) - 65 Degree Centigrade
- B) - 45 Degree Centigrade
- C) 0 Degree Centigrade
- D) - 15 Degree Centigrade

Answer: D) - 15 Degree Centigrade

262. Which part of car AC compressor actuates the piston directly?

- A) Swash plate
- B) Rotor and stator
- C) Blower unit
- D) Crank shaft and connecting rod

Answer: A) Swash plate

263. What is the differential of control switch if it cuts in at 29 kg/cm² and cuts out at 34 kg/cm²?

- A) 10 kg / cm²
- B) 5 kg / cm²
- C) 15 kg / cm²
- D) 20 kg / cm²

Answer: B) 5 kg / cm²

264. Which semiconductor material is used to make diodes?

- A) Aluminium
- B) Silicon
- C) Steel
- D) Copper

Answer: B) Silicon

265. What is the reason for poor cooling effect in multi split air conditioner?

- A) Good insulation
- B) Dirty air filter
- C) Efficient compressor
- D) Proper condensation

Answer: B) Dirty air filter

266. 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

267. How electrons flow in a battery circuit?

- A) Negative polarity to positive polarity
- B) Phase to earth
- C) Positive to negative polarity
- D) Phase to neutral

Answer: A) Negative polarity to positive polarity

268. Which extinguishes the fire on electrical equipment?

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

Answer: B) Halon

269. What is ensured before starting a vacuum pump?

- A) Weight of vacuum pump
- B) Capacity of the pump
- C) Correct oil level
- D) Available ac power supply

Answer: C) Correct oil level

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

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

Answer: C) Discharge plenum is at top

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

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

Answer: D) Condenser

272. Which material is used for making ICs?

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

Answer: D) Silicon

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

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

Answer: A) Silver brazing

274. What is the unit of capacitance?

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

Answer: B) Farad

275. What is the reason for poor condensation in split AC?

- A) High ambient temperature
- B) Blower motor failure
- C) Condenser tube leaky
- D) Low ambient temperature

Answer: A) High ambient temperature

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

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

Answer: D) Fins and tube

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

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

Answer: B) Number of fluorine atoms

278. How much minimum gap is left on either side of the refrigerator from the wall during installation?

- A) 25 cm
- B) 10 cm
- C) 5 cm
- D) 15 cm

Answer: D) 15 cm

279. Which evaporator is known as extended surface evaporator?

- A) Coiled stake evaporator
- B) Finned evaporator
- C) Evaporator tubes
- D) Bare tube evaporator

Answer: B) Finned evaporator

280. What is the reason for poor condensation in split AC?

- A) Blower motor failure
- B) Condenser tube leaky

C) High ambient temperature

D) Low ambient temperature

Answer: C) High ambient temperature

281. What is the name of active component used in electronic circuit?

- A) DIAC
- B) SCR
- C) TRIAC
- D) Transistor

Answer: D) Transistor

282. What is the remedy for defective heating element in a frost free refrigerator?

- A) Reuse the heater and over load protector
- B) Readjust the heater
- C) Repair heater
- D) Replace heater and bimetal thermo

Answer: D) Replace heater and bimetal thermo

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

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

Answer: C) Reclaim

284. Which is the inorganic refrigerant?

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

Answer: C) R 717

285. Which motor is used to drive the condenser fan of outdoor unit in ductable split air conditioner?

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

Answer: D) Permanent split motor (PSC)

286. What are the multi speed of blower motor used in indoor unit of ductable split air conditioner?

- A) Low - 500 rpm, medium - 550rpm, high - 720 rpm
- B) Low - 900 rpm, medium - 950rpm, high - 1100 rpm
- C) Low - 800 rpm, medium - 850rpm, high - 920 rpm
- D) Low -1000 rpm, medium -1200rpm, high -1350 rpm

Answer: C) Low - 800 rpm, medium - 850rpm, high - 920 rpm

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

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

Answer: B) Suction line

288. What are the active components used in electronic circuits?

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

Answer: D) Transistors, diodes and SCRs

289. Which thermodynamic process the temperature is kept constant?

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

Answer: C) Isothermal process

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

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

Answer: D) Flow direction of refrigerant

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

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

Answer: C) 118 Degree

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

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

Answer: A) Resistors, capacitors and inductors

293. Which causes the clogged orifice in TEV of car AC system?

- A) Nitrogen B) Non condensable gases
C) Moisture D) Oxygen

Answer: C) Moisture

294. Where the liquid refrigerant is stored in multi split Air-conditioner during pump down operation?

- A) Accumulator B) Liquid receiver
C) Condenser D) Evaporator

Answer: C) Condenser

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

- A) Defective fan motor B) Defective oscillation motor
C) Defective OLP D) Defective fresh air damper

Answer: C) Defective OLP

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

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

Answer: C) Pump down

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

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

Answer: C) Evaporator fan

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

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

Answer: A) Harmful to the compressor and motor

299. Which type of condenser is directly placed on water spray and air?

- A) Shell and tube condenser B) Air cooled condenser
C) Water cooled condenser D) Evaporative condenser

Answer: D) Evaporative condenser

300. Which power supply has the fixed polarity?

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

Answer: C) Direct current

301. Which is the source of drive for compressor shaft in car AC?

- A) Blower fan B) Magnetic clutch
C) Engine shaft D) Condenser fan

Answer: C) Engine shaft

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

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

Answer: C) Service valve

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

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

304. Which instrument is used for measuring heat?

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

Answer: C) Calorimeter

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

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

Answer: B) Boyles law

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

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

Answer: B) Squirrel cage rotor

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

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

Answer: B) Condenser

308. What is the advantage of multi split air conditioners?

- A) Several outdoor units for one indoor unit
- B) two outdoor units for one indoor unit
- C) One outdoor unit for one indoor unit
- D) One outdoor unit for several indoor units

Answer: D) One outdoor unit for several indoor units

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

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

Answer: B) Brazing

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

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

Answer: C) Condenser and evaporator

311. 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

312. What is the category of R 502 refrigerant?

- A) Azeotropes
- B) Halocarbon
- C) Organic compounds
- D) Hydrocarbon

Answer: A) Azeotropes

313. Which fan motor speed is used with outdoor unit in split

AC?

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

Answer: C) Single speed

314. What is the material composition of a Tin man s solder?

- A) 50% Tin 50% lead
- B) 50% Tin 50% Zinc
- C) 50% Zinc 50% lead
- D) 50% Tin 50% Bronze

Answer: A) 50% Tin 50% lead

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

- A) SO₂
- B) O₂
- C) O₃
- D) N₂

Answer: D) N₂

316. How long the filter drier unit is used in car AC?

- A) 3 years
- B) 4 years
- C) 1 year
- D) 2 years

Answer: A) 3 years

317. What is the effect of pressure drop at the inlet of the evaporator?

- A) Flashing of liquid refrigerant
- B) Freezing of liquid
- C) Boiling of oil
- D) Freezing of liquid refrigerant

Answer: A) Flashing of liquid refrigerant

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

- A) Check the drain tray of evaporator
- B) Pressurize the system with refrigerant
- C) Recharge refrigerant to the system
- D) Removal of the thermostat sensor

Answer: D) Removal of the thermostat sensor

319. Which material is used for making zener diode?

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

Answer: B) Silicon

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

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

Answer: C) Watt meter

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

- A) ISHRAE
- B) ISO

C) ASHRAE D) DW142

Answer: C) ASHRAE

322. What is the unit of electrical energy?

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

Answer: D) Watt

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

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

Answer: D) Less than the stator speed

324. Which cooling medium is used to condense the refrigerant vapour in plate and tube condenser?

- A) Natural Air B) Brine solution
C) Water D) Forced Air

Answer: A) Natural Air

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

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

Answer: D) S and R terminal

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

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

Answer: D) No pumping

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

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

Answer: A) 35 to 45%

328. Which type of expansion device is used in frost free refrigerator?

- A) Automatic expansion valve B) Float valve
C) Capillary tube D) Thermostatic expansion valve

Answer: C) Capillary tube

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

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

Answer: D) Starting winding

330. What is the absolute pressure of gas in a cylinder, if gauge reads 135.3 p.s.i.?

- A) 150 p.s.i.a B) 160 p.s.i.a
C) 130 p.s.i.a D) 140 p.s.i.a

Answer: A) 150 p.s.i.a

331. Which is the hydrocarbon refrigerant?

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

Answer: B) R 600a

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

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

Answer: D) Self inductance

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

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

Answer: C) Prevents liquid flood back to compressor

334. Which component defrosts in frost free refrigerator?

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

Answer: C) Heater

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

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

Answer: B) Bimetal strip

336. What is the physical state of ammonia at condenser inlet in vapour absorption system?

- A) Semi solid B) Vapour
C) Solid D) Liquid

Answer: B) Vapour

337. What is ensured before mounting condenser in car AC?

- A) Condenser top line to TEV inlet B) Accessibility for future service
C) Condenser bottom line to discharge line D) Condenser in line with car radiator

Answer: B) Accessibility for future service

338. What is the revolving part of induction motor?

- A) Stator B) Winding

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

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

356. What is the function of remote control in split AC?

- A) Humidity setting
C) Transmits signal to operate AC
- B) Drain water control
D) Pressure setting

Answer: C) Transmits signal to operate AC

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

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

Answer: B) End ring

358. Which type of compressor is used as a vacuum pump?

- A) Scroll
C) Rotary
- B) Reciprocating
D) Centrifugal

Answer: C) Rotary

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

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

Answer: A) Bearing worn out

360. What is the reverse break down voltage range of zener diode?

- A) 3 to 18 volt
C) 0.1 to 0.5 volt
- B) 0.5 to 1 volt
D) 1 to 3 volt

Answer: A) 3 to 18 volt

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

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

Answer: B) Across 5 and 2

362. What is the purpose of relay used in window air conditioner?

- A) Disconnect the winding
C) Disconnect the starting capacitor
- B) Disconnect the fan capacitor
D) Disconnect the running capacitor

Answer: C) Disconnect the starting capacitor

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

- A) Increase noise of compressor
C) Allow liquid to enter into compressor
- B) Reduce noise of compressor
D) Reduce capacity of compressor

Answer: B) Reduce noise of compressor

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

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

Answer: B) Permanent split capacitor motor

365. What is the atmospheric pressure at sea level?

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

Answer: B) 1.033 kg/cm²

366. What is the least count of a metric micrometer?

- A) 0.01 mm
C) 0.1 mm
- B) 000.1 mm
D) 0.001 mm

Answer: A) 0.01 mm

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

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

Answer: B) Increases ODP and GWP

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

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

Answer: B) Squirrel cage

369. Which material is used to clean oil and grease on the floor?

- A) Cotton waste
C) Water
- B) Saw dust
D) Air

Answer: B) Saw dust

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

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

Answer: B) SCR

371. Which device equalizes the pressure between low and high side of split AC during ?OFF? cycle?

- A) Discharge tube
B) Capillary tube

- C) Suction tube D) Copper tube

Answer: B) Capillary tube

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

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

Answer: C) 15 cm

373. Which device switches ON/OFF the car AC compressor?

- A) Crank shaft B) Rotor winding
C) Magnetic clutch D) Blower unit

Answer: C) Magnetic clutch

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

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

Answer: B) Signal diode

375. Which type of drier filter is suitable for HFC refrigerants?

- A) Activated alumina B) Silica gel
C) Activated carbon D) Molecular sieve type

Answer: D) Molecular sieve type

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

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

Answer: A) Pump down

377. Which bearing is used in condenser motor of outdoor unit in ductable multi split air conditioner?

- A) Ball bearing B) Thrust bearing
C) Open ball bearing D) Sleeve bearing

Answer: D) Sleeve bearing

378. What is the reason for poor compression?

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

Answer: D) Scratches on the piston surface

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

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

Answer: A) Poor cooling

380. Why there is no frosting at the bottom only in plate coil evaporator used with refrigerator?

- A) Excess of refrigerant B) Oil present in the coil
C) Liquid in the coil D) Shortage of refrigerant

Answer: B) Oil present in the coil

381. Which safety control is electrically connected in series with magnetic clutch of compressor in car AC?

- A) AEV B) TEV
C) EEV D) HPC

Answer: D) HPC

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

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

Answer: A) Three

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

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

Answer: A) 5 Ohms

384. What is the full form of the relay - PTC?

- A) Positive terminal circuit B) Polar terminal checking
C) Permanent temperature control D) Positive temperature coefficient

Answer: D) Positive temperature coefficient

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

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

Answer: B) Propeller

386. What is the remedy for the defective OLP in a window air conditioner?

- A) Repair the heater element B) Repair the OLP
C) Replace the OLP D) Remove the parts

Answer: C) Replace the OLP

387. Why frost accumulates in window AC evaporator?

- A) Capillary chocking B) Air filter blocked
C) Less charge of refrigerant D) Over charge of refrigerant

Answer: B) Air filter blocked

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

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

Answer: C) Across 1 and 2

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

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

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

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

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

Answer: D) 12 meters

391. How to prevent the small pieces of glass wool affecting the eyes?

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

Answer: C) Wearing goggles

392. Which type of compressor is used in window air conditioner?

- A) Sealed type
- B) Open type
- C) Belt drive
- D) Swash plate

Answer: A) Sealed type

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

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

Answer: D) Tray on top of the compressor

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

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

Answer: D) 12 meters

395. Which relay is used in capacitor start, capacitor run (CSR) compressor motor?

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

Answer: C) Voltage relay

396. Which device maintains a constant DC output?

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

Answer: A) Voltage regulators

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

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

Answer: D) Suction valve

398. Which domestic system uses automatic defrost?

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

Answer: B) Frost free refrigerator

399. Which type of switch is used to control the room air temperature in split AC?

- A) Manual switch
- B) Thermal relay
- C) Thermostat switch
- D) Over load protector

Answer: C) Thermostat switch

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

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

Answer: D) Hermetic compressor

401. What is the desirable property of POE lubricant?

- A) Toxic gas produced during brazing
- B) Hygroscopic
- C) Miscible with HFCs
- D) Forms acid with moisture

Answer: C) Miscible with HFCs

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

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

Answer: C) High resistance