

Duration: 60 Mins

Total Marks: 100

Q.ID: ITISKILL0408EM

1. What is the effect of improper alignment of machines while installing a central AC plant?

- A) Silent operation B) Excess of wear and tear
C) Less power consumption D) Less noise and vibration

Answer: B) Excess of wear and tear

2. Which is a positive displacement compressor?

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

Answer: D) Scroll compressor

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

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

Answer: B) Forced air circulation

4. 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) 140 p.s.i.a
C) 160 p.s.i.a D) 130 p.s.i.a

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

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

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

Answer: B) Compressor runs more time

6. Which is eliminated from the system in vacuumising process?

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

Answer: C) Moisture

7. Which components are used in AHU of central AC plant?

- A) Evaporator, Compressor, Blower B) Blower, Air filter, Evaporator
C) Air filter, Compressor, Condenser D) Condenser, Fan, Compressor

Answer: B) Blower, Air filter, Evaporator

8. Which process is done first in split AC for shifting from one

place to another?

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

Answer: D) Pump down

9. Which component is connected in series with bimetal thermo in a frost free refrigerator?

- A) Blower B) Door switch
C) Cabinet bulb D) Defrost heater

Answer: D) Defrost heater

10. Which material is used for making service valve?

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

Answer: B) Brass

11. What is the minimum temperature difference in water required between inlet and outlet of water cooled condenser?

- A) 10 Degree Centigrade B) 15 Degree Centigrade
C) 20 Degree Centigrade D) 5 Degree Centigrade

Answer: D) 5 Degree Centigrade

12. What is the effect of sludge in car AC?

- A) Closes the orifice of TEEV B) Chokes the orifice of TEV
C) Closes the orifice of capillary D) Blocks the orifice of AEV

Answer: B) Chokes the orifice of TEV

13. Why the crankcase heater is energised for compressor during the shut down period of AC plant?

- A) Prevent oil foaming on restarting compressor B) Increase miscibility of oil with refrigerant
C) Increase viscosity of crankcase oil D) Decrease viscosity of crankcase oil

Answer: A) Prevent oil foaming on restarting compressor

14. How numerical designations of inorganic refrigerants are assigned?

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

Answer: B) Adding 700 to molecular mass of compound

15. Which gauge is connected to the AC plant system before doing pump down operation?

- A) Oil pressure gauge
- B) Compound gauge
- C) High pressure gauge
- D) Water pressure gauge

Answer: B) Compound gauge

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

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

Answer: A) 10-9 farad

17. What is the advantage of glass fibre ducting?

- A) Economical
- B) High heat transfer
- C) Self insulating
- D) Heavy weight

Answer: C) Self insulating

18. Which instrument is used to measure the total pressure in an air duct?

- A) Velocimeter
- B) Anemometer
- C) Pitot tube manometer
- D) Hygrometer

Answer: C) Pitot tube manometer

19. What is the unit of electric current?

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

Answer: B) Ampere

20. Which refrigerant is used in domestic refrigerator?

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

Answer: B) R 134 a

21. What is the reason for intermittent cooling cycle in car AC?

- A) Fully evacuated system
- B) Moisture in the system
- C) Excess of lubricant in receiver
- D) Non condensables in the system

Answer: B) Moisture in the system

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

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

Answer: D) Transmits signal to operate AC

23. Why the temperatures of inlet and outlet water in shell and tube condenser are recorded in log sheet?

- A) Judge quality of water
- B) Study about the plant
- C) Checking the hardness of water
- D) Fix descaling time for condenser

Answer: D) Fix descaling time for condenser

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

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

Answer: D) Partially choked drier filter

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

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

Answer: D) Prevent Oxidation

26. Which part of the working refrigeration system, the non condensable accumulate?

- A) Evaporator outlet
- B) Top of condenser
- C) Compressor crankcase
- D) Accumulator

Answer: B) Top of condenser

27. Which tool is used to straighten the deformed fins of air cooled condenser?

- A) Wire brush
- B) Blower
- C) Brass brush
- D) Fin comb

Answer: D) Fin comb

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

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

Answer: C) Running winding

29. Which switch is interlocked to become on if the power isolator is off in package AC?

- A) Blower motor
- B) Compressor starting
- C) Crankcase heater
- D) Thermostat

Answer: C) Crankcase heater

30. Which position is safe for storing refrigerant cylinder?

- A) Inclined
- B) Horizontal
- C) Upright
- D) Upside down

Answer: C) Upright

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

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

Answer: A) Vapour absorption refrigeration

32. Which valve is used in capacity control system employing hot gas bypass?

- A) Relief valve
- B) Reversing valve

- C) Solenoid valve D) Safety valve

Answer: C) Solenoid valve

33. How electrons flow in a battery circuit?

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

Answer: C) Negative polarity to positive polarity

34. Which instrument is used to measure the velocity pressure of air in ducting system?

- A) Bourdeon tube B) Nanometer
C) Barometer D) Pitot tube

Answer: D) Pitot tube

35. Which gas is used for flushing blocked capillary tube?

- A) Aqua ammonia B) Moist air
C) Dry nitrogen D) Hydrogen

Answer: C) Dry nitrogen

36. Which AC connects the indoor evaporator unit with outdoor condenser unit through a wall hole of 7cm diameter?

- A) Central air-conditioner B) Split air-conditioner
C) Industrial air-conditioner D) Window air-conditioner

Answer: B) Split air-conditioner

37. What is the use of a starting capacitor in single phase induction motor?

- A) Decrease starting torque B) Dis connect starting winding
C) Increase starting torque D) Improve power factor

Answer: C) Increase starting torque

38. What is meant by total pressure in a duct?

- A) Velocity pressure + suction pressure B) Suction pressure + discharge pressure
C) Static pressure + velocity pressure D) Velocity pressure - static pressure

Answer: C) Static pressure + velocity pressure

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

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

Answer: A) Two

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

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

Answer: D) Squirrel cage rotor

41. How the indoor unit acts during heating cycle of heat

pump?

- A) Evaporator B) Expansion device
C) Condenser D) Electrical heater

Answer: C) Condenser

42. 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) Earth Terminal B) Terminal A
C) Terminal C D) Terminal B

Answer: B) Terminal A

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

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

Answer: C) Sleeve bearing

44. What is the category of R 290 refrigerant?

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

Answer: A) Hydrocarbons

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

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

Answer: B) Bimetal strip

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

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

Answer: A) Reduce noise of compressor

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

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

Answer: C) Evacuate the system deeply

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

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

Answer: B) Fins and tube

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

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

Answer: D) Acetylene

50. Which electronic component senses the temperature in indoor unit of VRV system?

- A) Thyristor
C) Transistor
- B) Resistor
D) Thermistor

Answer: D) Thermistor

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

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

Answer: B) Surface coated with oxides or oily material

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

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

Answer: B) Vapour

53. Which device controls the air flow in ducting system?

- A) Diffuser
C) Register
- B) Damper
D) Grille

Answer: B) Damper

54. Which compressor capacity is suitable for 2 TR air conditioner?

- A) 5000 Kcal/h
C) 3000 Kcal/h
- B) 4000 Kcal/h
D) 6000 Kcal/h

Answer: D) 6000 Kcal/h

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

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

Answer: A) Thermostat switch

56. Which component is used in frost free refrigerator?

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

Answer: B) Timer switch

57. What is the differential of control switch if it cuts in at 29 kg/cm^2 and cuts out at 34 kg/cm^2 ?

- A) 15 kg/cm^2
C) 10 kg/cm^2
- B) 5 kg/cm^2
D) 20 kg/cm^2

Answer: B) 5 kg/cm^2

58. Which type of AC system is operated by VRV system?

- A) Indirect ACs
C) Package AC
- B) Multizone split ACs
D) Central plant AC

Answer: B) Multizone split ACs

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

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

Answer: A) Aluminium

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

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

Answer: A) Condenser

61. What is starving in extinguishing the fire?

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

Answer: B) Removal of fuel

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

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

Answer: B) Single speed

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

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

Answer: C) Rotary

64. Which safety switch deactivates the compressor motor circuit if suction pressure falls below the safe limit in package AC?

- A) Low pressure switch
C) High pressure switch
- B) Dual pressure switch
D) Selector switch

Answer: A) Low pressure switch

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

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

Answer: D) Change any two phase

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

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

Answer: D) Condenser

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

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

Answer: A) Starting winding

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

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

Answer: A) Watt meter

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

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

Answer: A) Condenser and evaporator

70. 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

71. What is the cylinder colour code of R 22 refrigerant?

- A) Green
- B) White
- C) Orchid
- D) Orange

Answer: A) Green

72. What is the purpose of air filter?

- A) Ensure clean air
- B) Circulate air
- C) Improve performance
- D) Cool air

Answer: A) Ensure clean air

73. Which evaporator is known as extended surface evaporator?

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

Answer: B) Finned evaporator

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

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

Answer: D) Run capacitor

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

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

Answer: C) 1000 sq.ft

76. What is the comfortable range of relative humidity (RH) for human beings?

- A) 30 +/- 5%
- B) 50 +/- 5%
- C) 40 +/- 5%
- D) 60 +/- 5%

Answer: B) 50 +/- 5%

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

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

Answer: D) Resistors, capacitors and inductors

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

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

Answer: D) System pipes with minimum bends

79. What is the velocity range of air circulated in car AC?

- A) 2 - 3 m / sec
- B) 5 - 7 m / sec
- C) 9 - 10 m / sec
- D) 7 - 9 m / sec

Answer: A) 2 - 3 m / sec

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

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

Answer: C) Single phase double end shaft motor

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

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

Answer: D) Bent snips

82. What is the wet bulb temperature of air if dry bulb temperature is 35 Degree Centigrade and wet bulb depression is 4 Degree Centigrade?

- A) 30 Degree Centigrade
- B) 33 Degree Centigrade
- C) 32 Degree Centigrade
- D) 31 Degree Centigrade

Answer: D) 31 Degree Centigrade

83. What is the reason for switching contacts get carbonised in package AC electrical wiring?

- A) Quality is bad
- B) Humidity
- C) Loose connections
- D) Too tight connection contacts

Answer: C) Loose connections

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

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

Answer: C) Prevents liquid flood back to compressor

85. What is the reason for no cooling in a frost free refrigerator?

- A) Open door switch
- B) Defective timer
- C) High watt Cabinet bulb
- D) Defective fan motor

Answer: B) Defective timer

86. 1 Which control device is used to maintain the room air temperature?

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

Answer: C) Thermostat

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

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

Answer: C) Ceiling mounting

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

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

Answer: A) Capacitor start and capacitor run

89. Why the miscibility of refrigerant and oil is preferred in car AC?

- A) Circulate oil back to compressor
- B) Lubricate the moving parts of TEV
- C) Lubricate the heat exchangers
- D) Lubricate the clutch assembly

Answer: A) Circulate oil back to compressor

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

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

Answer: C) ASHRAE

91. Why the U trap is provided in water drain line of AHU?

- A) Allows air from outside
- B) Ensure free flow of drain water
- C) Block dust from outside
- D) Prevent entry of foul smell

Answer: D) Prevent entry of foul smell

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

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

Answer: C) Propeller fan

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

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

Answer: B) Wire mesh

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

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

Answer: C) 35 to 45%

95. Which control trips if the expansion valve inlet strainer is blocked in chiller AC plant?

- A) Low pressure cut out
- B) High pressure cut out
- C) Oil pressure cut out
- D) Thermostat control

Answer: A) Low pressure cut out

96. What is the human body temperature in Degree Centigrade?

- A) 27 Degree Centigrade
- B) 17 Degree Centigrade
- C) 47 Degree Centigrade
- D) 37 Degree Centigrade

Answer: D) 37 Degree Centigrade

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

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

Answer: D) Resistance decreases

98. Which tool is used for service valve operations in package AC?

- A) Screw spanner
- B) Double end spanner
- C) Cutting pliers
- D) Ratchet key/wrench

Answer: D) Ratchet key/wrench

99. What is the cause of high condensing pressure in water cooled condenser?

- A) Low load on evaporator B) Damage condenser fan
C) Lack of lubrication D) Defective cooling water pump

Answer: D) Defective cooling water pump

100. What is the reason for frost accumulation in between

fins and tubes of evaporator in frost free refrigerator?

- A) Defective timer B) Under charge of refrigerant
C) Defective fan motor D) Over charge of refrigerant

Answer: C) Defective fan motor
