

**Duration: 60 Mins**

**Total Marks: 90**

**ID: ITISKILL3307YZ**

Student Name: \_\_\_\_\_ Roll No: \_\_\_\_\_

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

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

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

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

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

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

**4.** How to neutralise the concentration of leaked ammonia from air

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

**5.** Which component defrosts in frost free refrigerator?

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

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

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

**7.** 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 |

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**20.** Which refrigerant is highly flammable?

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

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

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

**22.** What is the full form of the relay - PTC?

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

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

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

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

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

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

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

**26.** Which refrigerant blend is highly flammable?

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

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

- A) O<sub>2</sub>                                    B) N<sub>2</sub>  
C) SO<sub>2</sub>                                D) O<sub>3</sub>

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**35.** 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

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

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

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

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

38. 1 Which control device is used to maintain the room air temperature?

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

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

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

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

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

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

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

42. Which material is used to make the evaporator of refrigerator?

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

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

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

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

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

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

- A) Any refrigerant can be used
- B) No shaft seal is required

C) Cylinder lubrication is easier

D) Mechanical efficiency is greater

46. Which is the hydrocarbon refrigerant?

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

47. Which refrigerant is used in domestic refrigerator?

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

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

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

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

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

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

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

51. 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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

63. Which component is used in frost free refrigerator?

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- A) Timer
- C) Relay

- B) Thermostat
- D) Bimetal thermo

- A) Defective fan capacitor
- C) Defective OLP

- B) Defective fan motor
- D) Defective blower

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

- A) Relay
- C) Thermostat

- B) Capacitor
- D) OLP

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

- A) Clean the condenser fins
- C) Clean the evaporator fins

- B) Over gas charge in the system
- D) Evacuate the system deeply

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

- A) Medium resistance
- C) Zero resistance

- B) High resistance
- D) Low resistance

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

- A) Condenser
- C) Compressor

- B) Evaporator
- D) Expansion valve

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

- A) Open type
- C) Swash plate

- B) Belt drive
- D) Sealed type

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

- A) Bimetal thermo
- C) Defrost heater

- B) Timer
- D) Relay

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

- A) Disconnect the starting capacitor
- C) Disconnect the fan capacitor

- B) Disconnect the winding capacitor
- D) Disconnect the running capacitor

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

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

- A) Litmus paper
- C) Sulphur candles

- B) Electric torch
- D) Electronic leak detector

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

- A) Power consumption
- C) Refrigerant flow rate

- B) Discharge pressure
- D) Heat transfer rate

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

- A) Expansion
- C) Condensation

- B) Evaporation
- D) Compression

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

- A) Plate and coil
- C) Bare tube

- B) Plate and tube
- D) Fins and tube

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

- A) Voltage relay
- C) Thermal relay

- B) Amperage relay
- D) Current relay

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

- A) Discharge and capillary tube
- C) Discharge and suction tube

- B) Capillary and suction tube
- D) Suction and charging tube

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

- A) Starting winding
- C) Running Terminal

- B) Common terminal
- D) Running winding

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

- A) 0 Degree Centigrade
- C) - 15 Degree Centigrade

- B) - 65 Degree Centigrade
- D) - 45 Degree Centigrade