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Student: Pavan
Score: 147/250 (58.80%)
Code: 0107

1. What is the atmospheric pressure at sea level?

A) 1.033 kg/cm² (Correct) | B) 1.3 Kg/cm²
C) 1.5 Kg/cm² | D) 1.6 Kg/cm²

2. What is the rate of doing work?

A) Duty | B) Force (Incorrect)
C) Power | D) Velocity

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

A) 1120 Degree F | B) 1200 Degree F
C) 1250 Degree F | D) 1300 Degree F (Incorrect)

4. Which instrument is used to measure atmospheric pressure?

A) Hygrometer | B) Hydrometer
C) Manometer | **D) Barometer (Correct)**

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

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

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

A) 212 Degree Centigrade | **B) 100 Degree Centigrade (Correct)**
C) 32 Degree Centigrade | D) 0 Degree Centigrade

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

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

8. What is the capacity of doing work?

A) Work | B) Power
C) Force | **D) Energy (Correct)**

9. Which instrument is used for measuring heat?

A) Thermometer | B) Anemometer (Incorrect)
C) Calorimeter | D) Ammeter

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

A) Jet refrigeration | B) Mechanical refrigeration
C) Vapour absorption refrigeration (Correct) | D) Vapour compression refrigeration

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

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

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

A) Micron | B) Pressure
C) Humidity | **D) Temperature (Correct)**

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

A) Wind energy | B) Kinetic energy
C) Potential energy (Correct) | D) Electrical energy

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

A) Boyles law (Correct) | B) Charles s law
C) Pascal s law | D) Renaults law

15. Which thermodynamic process the temperature is kept constant?

A) Isobaric process | **B) Isothermal process**
C) Constant volume process | D) Constant pressure process (Incorrect)

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

A) TIG welding (Incorrect) | **B) Silver brazing**
C) Lead soldering | D) Fusion welding

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

A) Condenser and filter | B) Evaporator and motor

C) Receiver and condenser | **D) Compressor and expansion device (Correct)**

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

A) The piston moves down from the point of cylinder | B) The piston moves up from the point of cylinder
C) The piston stops in cylinder at bottom (Incorrect) | D) The piston starts in cylinder at bottom

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

A) Thermoheater | **B) Defrost timer**
C) Relay | D) OLP (Incorrect)

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

A) Semi hermetic reciprocating compressor (Incorrect) | B) Open type reciprocating compressor
C) Hermetic reciprocating compressor | **D) Hermetic rotary compressor**

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

A) Condenser and evaporator | B) Compressor and condenser (Incorrect)
C) Evaporator and suction line | D) Compressor and evaporator

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

A) Above its critical temperature | **B) Below its critical temperature (Correct)**
C) Above its freezing temperature | D) Below its freezing temperature

23. Which factors produce work?

A) Force and distance (Correct) | B) Time and distance
C) Force and power | D) Force and time

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

A) Improves oil circulation | B) Prevents surging of refrigerant
C) Avoids hunting of refrigerant | **D) Prevents liquid flood back to compressor (Correct)**

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

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

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

A) Piston pin | B) Piston bolt
C) Piston rings | D) Piston sleeve (Incorrect)

27. Which is a positive displacement compressor?

A) Centrifugal compressor | **B) Scroll compressor (Correct)**
C) Water pump | D) Oil pump

28. Which motor has the least starting torque?

A) CSIR | B) CSR
C) RSIR | D) PSC (Incorrect)

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

A) Starting | **B) Running (Correct)**
C) Auxiliary | D) Additional

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

A) Semi sealed compressor (Incorrect) | B) Centrifugal compressor
C) Hermetic compressor | D) Open type compressor

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

A) Squirrel cage rotor | B) Shaded pole rotor (Incorrect)
C) Laminated rotor | D) Solid rotor

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

A) Cut in | B) Range
C) Cut out (Correct) | D) Differential

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

A) Servo 20 | **B) POE (Correct)**
C) SAE - 40 | D) Mineral oil

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

A) Service valve | B) Liquid line valve
C) Discharge valve | **D) Suction valve (Correct)**

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

A) Air
B) Oxygen
C) Nitrogen (Correct)
D) Refrigerant

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

A) Discharge vapour
B) Liquid refrigerant
C) Suction vapour (Correct)
D) Water

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

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

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

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

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

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

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

A) Reciprocating
B) Centrifugal (Incorrect)
C) Rotating
D) Orbital

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

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

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

A) Ns=(150P/f)
B) Ns=(120f/P) (Correct)
C) Ns=(150f/P)
D) Ns=(120P/f)

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

A) Lead
B) Lag (Incorrect)
C) Slip
D) Trip

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

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

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

A) Running winding
B) Common winding
C) Starting winding
D) Running capacitor (Incorrect)

46. What is the reason for poor compression?

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

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

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

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

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

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

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

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

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

51. What is the unit of electric current?

A) Ampere (Correct)
B) Farad
C) Ohm
D) Volt

52. What is the unit of capacitance?

A) Volt
B) Ampere
C) Farad
D) Coulomb (Incorrect)

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

A) Hacksaw
B) Firmer chisel

C) Electrician's knife (Correct) D) Combination pliers

54. Which power supply has the fixed polarity?

A) Direct current (Correct) B) Signal voltage
C) Signal ripples D) Alternating current

55. 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 (Incorrect) D) 20 HP

56. What is the unit of electrical energy?

A) Volt (Incorrect) **B) Watt**
C) Ampere D) Kilo watt hour

57. How electrons flow in a battery circuit?

A) Phase to earth B) Phase to neutral
C) Positive to negative polarity **D) Negative polarity to positive polarity (Correct)**

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

A) Aluminium B) Copper
C) Brass D) Zinc (Incorrect)

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

A) Solid conductor B) Thermal conductor (Incorrect)
C) Stranded conductor D) Standard conductor

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

A) Voltage B) Current
C) Resistance (Incorrect) D) Conductance

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

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

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

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

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

A) Run B) Start
C) Common (Incorrect) D) Start and common

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

A) Running winding B) Starting winding (Incorrect)
C) Auxiliary winding D) Common winding

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

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

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

A) Ammeter (Incorrect) B) Ohm meter
C) Watt meter D) Volt meter

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

A) 20 Volt B) 45 Volt
C) 55 Volt D) 65 Volt (Incorrect)

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

A) Ohm s law B) Lenz s law (Incorrect)
C) Newton s law D) Faraday s law

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

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

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

A) 2 Ohms B) 3 Ohms
C) 4 Ohms **D) 5 Ohms (Correct)**

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

A) Petrol **B) Grease**
C) Shellac D) Kerosene (Incorrect)

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

A) Running winding open **B) Starting winding open (Correct)**
C) Starting winding shorted D) Running winding shorted

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

A) Decreases B) Increases
C) Equalises D) Remains same (Incorrect)

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

A) (R1 - R2) Ohms **B) (R1 + R2) Ohms (Correct)**
C) (R1 x R2) Ohms D) (R1 / R2) Ohms

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

A) Terminal A (Correct) B) Terminal B
C) Terminal C D) Earth Terminal

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

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

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

A) One B) Two
C) Four (Correct) D) Three

78. Which material is used for making ICs?

A) Silicon B) Carbon
C) Platinum D) Mild steel (Incorrect)

79. What is the name of electronic circuit?

A) Bridge rectifier B) Half wave rectifier
C) Full wave rectifier (Incorrect) D) Quarter wave rectifier

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

A) Self inductance (Correct) B) Conductance
C) Capacitance D) Resistance

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

A) Signal diode (Correct) B) Zener diode
C) Rectifier diode D) Switching diode

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

A) SCR (Correct) B) Diode
C) Capacitor D) Zener diode

83. Which device maintains a constant DC output?

A) Load regulators B) Rectifier circuits
C) Current limiters **D) Voltage regulators (Correct)**

84. Which electronic component is the voltage regulator?

A) Zener diode (Correct) B) Transistor
C) Triac D) Diac

85. Which material is used for making zener diode?

A) Lead **B) Silicon**
C) Titanium (Incorrect) D) Platinum

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

A) One B) Two
C) Four **D) Three (Correct)**

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

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

88. Which application uses the digital ICs?

A) Amplifier **B) Logic gates (Correct)**
C) Tuned circuits D) Voltage regulator

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

A) Inversion B) Regulation
C) Convection **D) Rectification (Correct)**

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

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

91. Which extinguishes the fire of flammable liquids?

A) Water B) Air
C) CO₂ (Correct) D) Oil

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

A) Iron **B) Copper (Correct)**
C) Bronze D) Aluminium

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

A) 90 Degree | B) 100 Degree
C) 118 Degree | D) 125 Degree (Incorrect)

94. Which extinguishes the fire on electrical equipment?

A) Oil | B) Foam
C) Water | **D) Halon (Correct)**

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

A) 0.0001 mm (Incorrect) | **B) 0.001 mm**
C) 0.01 mm | D) 0.1 mm

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

A) Folding bar | B) Bench vice (Incorrect)
C) Hand vice | D) Shear

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

A) 30 Degree | B) 60 Degree
C) 90 Degree (Correct) | D) 120 Degree

98. Which file is used for filing wood?

A) Double cut file (Incorrect) | B) Single cut file
C) Rasp cut file | D) Smooth file

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

A) Socket set | B) Nose pliers
C) Ring spanner | **D) Adjustable spanner (Correct)**

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

A) CO₂ | B) Foam
C) Water (Correct) | D) Dry powder

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

A) Straight snips | **B) Bent snips (Correct)**
C) Tube cutter | D) Scissors

102. What is smothering in fire extinguishing?

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

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

A) Jenny Caliper (Correct) | B) Inside Caliper
C) Outside caliper | D) Spring joint caliper

104. What is starving in extinguishing the fire?

A) Adding fuel | **B) Removal of fuel (Correct)**
C) Clearing the hazards | D) Stop the supply of oxygen

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

A) Roller | **B) Cutter (Correct)**
C) Reamer | D) Bender

106. Which component defrosts in frost free refrigerator?

A) Bulb | **B) Heater**
C) Thermostat (Incorrect) | D) Capillary tube

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

A) Liquid line | B) Discharge line
C) Last coil of condenser | **D) Last coil of evaporator (Correct)**

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

A) Thermostat | B) Capacitor
C) Relay | D) OLP (Incorrect)

109. Which domestic system uses automatic defrost?

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

110. Which sheet is used to check the tigtness of door gasket of a refrigerator?

A) Rubber | **B) Plastic**
C) Copper (Incorrect) | D) Zinc

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

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

112. How the capacity of refrigerator is expressed?

A) Weightage | B) Tonnage
C) Wattage | **D) Litres (Correct)**

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

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

114. Which component is used in frost free refrigerator?

A) Plate coil evaporator | B) Liquid receiver
C) Oil separator | **D) Timer switch (Correct)**

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

A) Plate type (Incorrect) | B) Wire mesh
C) Finned tube | D) Shell and tube

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

A) OLP | B) Relay (Incorrect)
C) Thermostat | D) Door switch

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

A) Capillary tube (Correct) | B) Compressor
C) Condenser | D) Evaporator

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

A) Vapour compression (Correct) | B) Vapour absorption
C) Water vapour | D) Evacuating

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

A) Bimetal thermo (Correct) | B) Thermostat
C) Relay | D) Timer

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

A) Evaporator fan motor is running | **B) Compressor is not running**
C) Thermostat cuts off (Incorrect) | D) Relay activated

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

A) Bimetal thermo | B) Defrost heater (Incorrect)
C) Timer | D) Relay

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

A) Cabinet bulb | **B) Evaporator fan (Correct)**
C) Thermostat sensor | D) Over load protector

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

A) Vertically up (Correct) | B) Bottom side
C) Vertically down | D) Horizontally left

124. Which is connected in series with start capacior in motor circuit?

A) Starting winding (Correct) | B) Common terminal
C) Running Terminal | D) Running winding

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

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

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

A) Forced air circulation (Correct) | B) Natural air circulation
C) Low temperature setting | D) High temperature setting

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

A) Leakage of refrigerant (Correct) | B) Condenser block
C) Filter block | D) Over charge

128. What is the effect of bimetal thermo stucks in ON position in frost free refrigerator?

A) Accumulation of frost | B) More cooling
C) Poor cooling | **D) No cooling (Correct)**

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

A) High heating | **B) Poor cooling (Correct)**
C) Low pressure | D) Low humidity

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

A) Poor pumping | B) More pumping
C) Oil pumping (Incorrect) | **D) No pumping**

131. What is the category of R 290 refrigerant?

A) Halocarbons | B) Azeotropes (Incorrect)
C) Hydrocarbons | D) Organic compounds

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

A) Up to 95% (Incorrect) | B) Up to 90%
C) Up to 85% | **D) Up to 80%**

133. Which insulating material is poured as liquid?

A) Glass Wool | B) Cork Board

C) Wood Shave | **D) Poly Urethane Foam (PUF) (Correct)**

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

A) ASHRAE | B) ISHRAE
C) DW142 (Incorrect) | D) ISO

135. Which is the green house gas?

A) Oxygen of atmospheric air | **B) Chlorofluoro carbon in air (Correct)**
C) Helium of atmospheric air | D) Neon of atmospheric air

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

A) SO₂ | **B) CO₂**
C) NH₃ (Incorrect) | D) AIR

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

A) Azeotropes | **B) Zeotropes (Correct)**
C) Inorganic | D) Organic

138. Which is the inorganic refrigerant?

A) R 170 | B) R 500
C) R 630 | **D) R 717 (Correct)**

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

A) Primary and secondary | B) Organic and inorganic (Incorrect)
C) Zeotropic and azeotropic | D) Halocarbons and hydrocarbons

140. Which refrigerant is inactive to ozone layer?

A) R 12 | B) R 13
C) R 22 | **D) R 134a (Correct)**

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

A) Number of hydrogen atoms | B) Number of chlorine atoms
C) Number of carbon atoms | **D) Number of fluorine atoms (Correct)**

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

A) Ice | **B) Dry ice**
C) Primary refrigerants (Incorrect) | D) Secondary refrigerants

143. Which is the effective method for refrigerant recovery?

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

144. How numerical designations of inorganic refrigerants are assigned?

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

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

A) One | **B) Two (Correct)**
C) Four | D) Three

146. Which refrigerant is used in vapour compression cycle?

A) Secondary refrigerant | **B) Primary refrigerant (Correct)**
C) Brine solution | D) Water

147. Which position is safe for storing refrigerant cylinder?

A) Upside down (Incorrect) | B) Horizontal
C) Inclined | **D) Upright**

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

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

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

A) Recover | B) Recycle
C) Reclaim (Correct) | D) Manufacture

150. Why HCFC 22 refrigerant is recycled?

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

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

A) Wearing goggles | **B) Wearing gloves**
C) Using mask (Incorrect) | D) Using shoes

152. 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 (Correct)**

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

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

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

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

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

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

156. Which is the hydrocarbon refrigerant?

A) R 12	B) R123
C) R 500	**D) R 600a (Correct)**

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

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

158. Which refrigerant blend is highly flammable?

A) HCFC	B) HFC
C) CFC	**D) HC (Correct)**

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

A) Discharge line	**B) Suction line (Correct)**
C) Condenser	D) Evaporator

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

A) C and S terminal	**B) S and R terminal (Correct)**
C) C and R terminal	D) S and compressor body

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

A) Belt drive	B) Gear drive
C) Direct drive (Correct)	D) Push drive

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

A) 13 cm	**B) 15 cm**
C) 18 cm (Incorrect)	D) 22 cm

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

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

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

A) Air (Incorrect)	B) Water
C) Liquid	**D) Refrigerant**

165. Which refrigerant is highly flammable?

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

166. Which component rejects the maximum heat to ambinet air in refrigerator?

A) Expansion valve	B) Compressor
C) Condenser (Correct)	D) Evaporator

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

A) Condenser	**B) Evaporator**
C) Compressor (Incorrect)	D) Expansion valve

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

A) Releases heat inside the cabinet	**B) Absorbs heat from inside the cabinet (Correct)**
C) Absorbs heat from outside the cabinet	D) Absorbs heat from bottom side cabinet

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

A) Medium resistance	**B) High resistance**
C) Zero resistance	D) Low resistance (Incorrect)

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

A) 5 and 1	B) 5 and 4 (Incorrect)
C) 5 and 2	D) 2 and 4

171. Which refrigerant is used in domestic refrigerator?

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

172. 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 (Incorrect) D) Super heated vapour

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

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

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

A) Electric torch B) Litmus paper
C) Sulphur candles **D) Electronic leak detector (Correct)**

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

A) O₂ **B) N₂ (Correct)**
C) O₃ D) SO₂

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

A) Expansion B) Compression
C) Evaporation (Correct) D) Condensation

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

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

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

A) Shorted run winding (Incorrect) B) Open common terminal
C) Shorted start winding **D) Grounded compressor motor**

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

A) As conductor **B) As insulator (Correct)**
C) As convector D) As radiator

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

A) Nitrogen in the system **B) Moisture in the system (Correct)**
C) Oxygen in the system D) Oil in the system

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

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

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

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

183. 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 (Incorrect)

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

A) Blower B) Air filter
C) Compressor D) Evaporator coil (Incorrect)

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

A) Thermocole **B) GI sheet (Correct)**
C) Wood D) Fibre

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

A) Vane B) Guide vane
C) Propeller (Correct) D) Centrifugal

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

A) Guide vane **B) Blower (Correct)**
C) Axial D) Vane

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

A) Accumulator B) Compressor
C) Evaporator **D) Condenser (Correct)**

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

A) 15 meters **B) 12 meters**
C) 20 meters (Incorrect) D) 25 meters

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

A) Flushing B) Evacuation
C) Pump down (Correct) D) Vacuumisation

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

A) Single speed (Correct) B) Double speed
C) Triple speed D) Five speed

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

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

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

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

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

A) 1 TR B) 1.5 TR (Incorrect)
C) 2.0 TR D) 2.5 TR

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

A) Gate valve B) Float valve
C) Service valve (Correct) D) Expansion valve

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

A) Floor mounting B) Wall mounting
C) Ceiling mounting (Correct) D) Roof mounting

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

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

198. 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) With more horizontal distance
C) System pipes with minimum bends (Correct) D) Install units as far as possible

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

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

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

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

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

A) Tongs (Correct) B) Spanner
C) Pipe vice D) Bench vice

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

A) Screw clamp **B) Hand screen (Correct)**
C) Electrode holder D) Lugs for welding

203. What is the storage capacity of oxygen cylinder?

A) 3 m³ B) 5 m³
C) 6 m³ (Incorrect) **D) 7 m³**

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

A) 1800Degree Centigrade to 2200Degree Centigrade B) 2400Degree Centigrade to 2700Degree Centigrade
C) 2700Degree Centigrade to 2800Degree Centigrade (Incorrect) **D) 3100Degree Centigrade to 3300Degree Centigrade**

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

A) 20 to 35% (Incorrect) **B) 35 to 45%**
C) 45 to 60% D) 60 to 100%

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

A) Maroon B) Green
C) Black D) Red (Incorrect)

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

A) Maroon (Incorrect) B) Green
C) Black D) Red

208. Which group the acetylene gas belongs?

A) HC B) HFC
C) CFC D) HCFC (Incorrect)

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

A) Tongs **B) Chipping hammer**
C) Cross peen hammer D) Ball peen hammer (Incorrect)

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

A) Steel — B) Cast iron (Incorrect)
C) Cast iron — **D) Copper alloy**

211. Which flame is used for welding brass?

A) Wide flame — B) Neutral flame
C) Oxidising flame (Correct) — D) Carburising flame

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

A) Oxygen — B) Nitrogen
C) Acetylene (Correct) — D) Carbon dioxide

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

A) Acetylene — B) Hydrogen
C) Oxygen (Incorrect) — D) Air

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

A) Soap bubbles (Correct) — B) Halide torch
C) LPG torch — D) By smell

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

A) Steel wire — **B) Hose clamp (Correct)**
C) Fibre clip — D) Iron chain

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

A) Conductor — B) Thickness
C) Length — **D) Ampere (Correct)**

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

A) Flaring — B) Charging
C) Swaging — **D) Brazing (Correct)**

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

A) To protect eyes — B) To protect hand
C) To protect leg (Incorrect) — D) To protect head

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

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

220. Which factor determines the current setting during welding?

A) Types of joint — B) Position of weld
C) Length of electrode — **D) Diameter of electrode (Correct)**

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

A) Incomplete penetration — B) Slag inclusion (Incorrect)
C) Blow hole — **D) Spatters**

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

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

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

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

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

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

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

A) Destructive test (Incorrect) — **B) Non destructive test**
C) Radio graphic test — D) Magnetic test

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

A) Fins and tube — B) Plate and tube (Incorrect)
C) Plate and coil — D) Bare tube

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

A) Capillary tube (Correct) — B) Low side float valve
C) Automatic expansion valve — D) Thermostatic expansion valve

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

A) Brass — B) Copper

C) Cast iron **D) Aluminium (Correct)**

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

A) 6000 (Correct) B) 12000
C) 18000 D) 24000

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

A) Voltage relay (Correct) B) Current relay
C) Thermal relay D) Amperage relay

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

A) Relay B) Starting capacitor
C) Running capacitor (Incorrect) **D) Over load protector**

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

A) Fan capacitor| **B) Run capacitor**
C) Start capacitor (Incorrect) D) No capacitor is connected

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

A) 36 MFD (Correct) B) 40 MFD
C) 80 MFD D) 100 MFD

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

A) 40 MFD (Incorrect) B) 60 MFD
C) 80 MFD D) 100 MFD

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

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

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

A) Three phase single shaft motor B) Single phase single shaft motor
C) Three phase double end shaft motor **D) Single phase double end shaft motor (Correct)**

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

A) Main winding **B) Starting winding (Correct)**
C) Running winding D) Auxiliary winding

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

A) Across 1 and 5 (Incorrect) B) Across 2 and 5
C) Across 1 and 2 D) Across 2 and 4

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

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

240. 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 (Incorrect)

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

A) Damper (Correct) B) Air filter
C) Filter drier D) Air washer

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

A) Common winding **B) Running winding (Correct)**
C) Starting winding D) Auxiliary winding

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

A) Across 1 and 2 (Incorrect) B) Across 5 and 1
C) Across 5 and 2 D) Across 2 and 4

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

A) 40 to 60 MFD (Incorrect) **B) 80 to 100 MFD**
C) 130 to 150 MFD D) 150 to 160 MFD

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

A) Defective fresh air damper B) Defective oscillation motor
C) Defective fan motor **D) Defective OLP (Correct)**

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

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

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

A) Evaporator fins not blocked by dust (Incorrect)

B) Blower rotating at higher speed

C) Air filter blocked completely

D) More air circulation in evaporator

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

A) Defective fan capacitor

B) Defective fan motor

C) Defective blower

D) Defective OLP (Correct)

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

A) Defective blower

B) Defective fan motor (Incorrect)

C) Defective fan capacitor

D) Defective compressor motor

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

A) Resistance increases

B) Resistance decreases (Correct)

C) Resistance becomes zero

D) Resistance becomes infinity