

FINAL ANSWER KEY

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Exam:	Refrigeration Mechanic (HER)
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Question1:-What "A" denotes in ABC of first aid ?

A:-Atmosphere

B:-Air way

C:-Attention

D:-Approach

Correct Answer:- Option-B

Question2:-Depending upon the nature of hazard, the PPE (Personal Protective Equipment) is broadly divided into how many categories ?

A:-5

B:-3

C:-2

D:-4

Correct Answer:- Option-C

Question3:-

What operation is carried out in a Gang Drilling Machine ?

A:-Successive operation of drilling

B:-Idle operation

C:-Repeated operation of drilling

D:-Milling operation

Correct Answer:- Option-A

Question4:-

Which chisel is used for cutting oil grooves ?

A:-Web chisel

B:-Flat chisel

C:-Diamond point chisel

D:-Half round nose chisel

Correct Answer:- Option-D

Question5:-

Where will be the weight of the hammer stamped ?

A:-Eye hole

B:-pein

C:-Cheek

D:- Face

Correct Answer:- Option-C

Question6:-

Why burr form on the underside of the sheet metal while shearing ?

A:-Hardened metal

B:-Excessive clearance

C:-No clearance

D:- Increase in force

Correct Answer:- Option-B

Question7:-

Name the tool used to make fluid tight joint in riveting ?

A:- Fullering tool

B:-Rivet snap

C:-Drift

D:-Caulking tool

Correct Answer:- Option-A

Question8:-

What will cause if the nozzle touches the molten pool ?

A:-Smoke

B:-Flash back

C:-Spark

D:-Back fire

Correct Answer:- Option-D

Question9:-

Why the cylinder keys are not removed from the cylinder while welding ?

A:-To close quickly in case of fire

B:- To adjust the gas supply

C:-To prevent gas leak

D:- To open and close frequently

Correct Answer:- Option-A

Question10:-

Low resistance can be measured by using following methods

- i. Voltmeter and Ammeter method
- ii. Wheatstone bridge method
- iii. Kelvin bridge
- iv. Shunt type ohm meter

A:-i and ii only

B:-i, ii and iii only

C:-i, iii and iv only

D:-ii only

Correct Answer:- Option-C

Question11:-

Why permanent magnet moving coil type electrical measuring instruments having uniform scale ?

A:-Deflecting torque is inversely proportional to the current in the coil

B:-Deflecting torque is directly proportional to the current in the coil

C:-Deflecting torque is proportional to the square of current

D:-Deflecting torque is inversely proportional to the square of current

Correct Answer:- Option-B

Question12:-

What is/are the effect of open in series circuit ?

- i. No current flows in the circuit
- ii. No voltage appear across the open
- iii. No device in the circuit will function
- iv. Total supply voltage/source voltage appear across the open

A:-i, ii and iii only

B:-i and iv only

C:-i and ii only

D:-i, iii and iv only

Correct Answer:- Option-D

Question13:-

What will be the effect if the rotor winding of a slip ring induction motor is open circuited at the time of starting ?

A:-Motor run at dangerous speed

B:-Motor run at double the rated speed

C:-Motor will not run

D:-Motor run at half the rated speed

Correct Answer:- Option-C

Question14:-

What is the function of centrifugal switch in capacitor start capacitor run motor ?

A:-Disconnect starting winding

B:-Disconnect starting capacitor

C:-Disconnect starting winding and starting capacitor

D:-Disconnect both capacitors

Correct Answer:- Option-B

Question15:-

How can be change the direction of rotation of a capacitor start induction run motor ?

A:-Inter change the terminals of starting winding only

B:- Interchange the terminals of main winding only

C:-Interchange the terminals of both windings

D:- Interchange the terminals of either starting winding or main winding

Correct Answer:- Option-D

Question16:-

What are the essential components of a fully automatic star delta starter ?

A:-3 contactors, 1 overload relay and 1 timer

B:- 3 contactors and 1 overload relay

C:-3 contactors and 1 timer

D:-3 contactors, 1 overload relay and 2 timer

Correct Answer:- Option-A

Question17:-

Which parts of a DOL starter are connected through control wiring ?

A:-ON and OFF push button, overload relay contacts, main contacts of contactor

B:-ON and OFF push button, overload relay contact, auxiliary contacts of contactor and contactor coil

C:-ON push button, auxiliary contacts of contactor and contactor coil

D:-ON and OFF push button, overload relay contact, main contacts of contactor and contactor coil

Correct Answer:- Option-B

Question18:-

How many electrons are there in the outer most shell of a semiconductor atom ?

A:-3

B:-4

C:- 2

D:-5

Correct Answer:- Option-B

Question19:-

Which are the terminals of UJT ?

A:-MT1, MT2 and Gate

B:- Base1, Base2 and Emitter

C:-Anode, Cathode and Gate

D:-Source, Drain and Gate

Correct Answer:- Option-B

Question20:-

A compressor coupled to a motor externally is called

A:-Sealed compressor

B:-Semi sealed compressor

C:-Open type compressor

D:-None of the above

Correct Answer:- Option-C

Question21:-

Sub-cooling is

A:-cooling liquid below its condensing point

B:- cooling liquid above its condensing point

C:-cooling of vapour below its condensing temperature

D:-heating of liquid above its condensing point

Correct Answer:- Option-A

Question22:-

In vapour compression refrigeration system, at entrance to which component the working fluid is superheated vapour

A:-Evaporator

B:- Condenser

C:-Compressor

D:-Expansion valve

Correct Answer:- Option-B

Question23:-

What is the cause of burn out of hermetically sealed refrigerant compressors ?

A:-Phase to phase short because of worn insulation

B:-By prolonged overload operation

C:-By some mechanical failure

D:-All of the above

Correct Answer:- Option-D

Question24:-

The sensing bulb of the thermostatic expansion valve is located at the

A:-Exit of the evaporator

B:- Inlet of the evaporator

C:-Exit of the condenser

D:-Inlet of the condenser

Correct Answer:- Option-A

Question25:-

Which of the following is not a factor affecting the capacity of evaporator ?

A:-Velocity of refrigerant

B:-Thickness of the evaporator coil wall

C:-Material

D:-Evaporator pressure

Correct Answer:- Option-D

Question26:-

Materials form deposits inside the condenser water tubes is called

A:-Water rusting

B:-Water corrosion

C:-Water fouling

D:-Water failing

Correct Answer:- Option-C

Question27:-

Which Relay is used in capacitor start, capacitor run, (CSR) compressor motor ?

A:-Voltage relay

B:-Current relay

C:- Amperage relay

D:-Thermal relay

Correct Answer:- Option-A

Question28:-

In a refrigeration system, why are expansion devices located closer to the evaporator ?

A:-To avoid the flow of refrigerant

B:- To minimize the heat gain

C:-To ease the flow of refrigerant

D:-To maximise the heat gain

Correct Answer:- Option-B

Question29:-

The required heat for the change in state of any substance is called

A:-Latent heat

B:- Melting heat

C:-Sensible heat

D:-Absolute heat

Correct Answer:- Option-A

Question30:-

Coefficient of Performance (COP) of a refrigerating cycle is an expression of the cycle efficiency, state the unit at Coefficient of Performance (COP)

A:-BTU/hr

B:-Watts

C:-Joules

D:-No unit

Correct Answer:- Option-D

Question31:-

Which of the following indicates the thickness of compressor oil ?

A:-Viscosity

B:-Oiliness

C:- Fire point

D:-Flash point

Correct Answer:- Option-A

Question32:-

The gas strictly obeys all the gas law under all condition of temperature and pressure is called

A:-Perfect vapour

B:-Perfect liquid

C:- Perfect gas/liquid

D:- Perfect gas

Correct Answer:- Option-D

Question33:-

What is the name of instrument used to check high resistance ?

A:-Megger

B:-Ammeter

C:-Voltmeter

D:-Wattmeter

Correct Answer:- Option-A

Question34:-

In a refrigerating machine, heat rejected is _____ heat absorbed.

A:-Equal to

B:-Less than

C:-Greater than

D:-None of these

Correct Answer:- Option-C

Question35:-

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 Answer:- Option-D

Question36:-

Under charging of a refrigeration system

A:-Reduces capacity of the system

B:-Reduces power consumption

C:-Increases capacity of the system

D:-Both (a) and (b)

Correct Answer:- Option-A

Question37:-

In induced draft cooling tower fan used at the

A:-Top

B:- Bottom

C:-Fan not used

D:-Centre

Correct Answer:- Option-A

Question38:-

Which method of refrigeration system is adopted in Frost free refrigerator ?

A:-Vapour compression

B:-Vapour absorption

C:-Water vapour

D:-Evacuating

Correct Answer:- Option-A

Question39:-

If the condenser gets partially choked then

A:-Compressor discharge pressure will drop

B:- Compressor discharge pressure will increase

C:-Evaporator discharge pressure will drop

D:- Expansion device discharge pressure will drop

Correct Answer:- Option-B

Question40:-

The difference in the temperature of the cold water and the wet bulb temperature of surrounding air in the cooling tower is called

A:-Cooling tower range

B:-Cooling tower approach

C:-Cooling tower efficiency

D:-Cooling tower capacity

Correct Answer:- Option-B

Question41:-

Piercing pliers is used for

A:-Bending wires

B:-Pinching off copper pipes

C:- Recovering gas by making holes in tube

D:-Charging oil

Correct Answer:- Option-C

Question42:-

The efficiency of a cooling tower depends upon

A:-Dry bulb temperature

B:-Wet bulb temperature

C:-Medium through which air enters

D:-All of these

Correct Answer:- Option-B

Question43:-

The permanent hardness of water can be removed by

A:-Boiling

B:-Filtering

C:- By chemical treatment

D:-Cooling

Correct Answer:- Option-C

Question44:-

An important characteristic of absorption system of refrigeration is

A:- Noisy operation

B:-Quiet operation

C:-Cooling below 0°C

D:-Very little power consumption

Correct Answer:- Option-B

Question45:-

One Ton of refrigeration is equal to the refrigeration effect corresponding to melting of 1000 Kg of ice

A:-In 1 hour

B:- In 1 minute

C:- In 24 hours

D:- In 12 hours

Correct Answer:- Option-C

Question46:-

Centrifugal compressor working principle is

A:- Conservation of kinetic energy into pressure energy

B:-Conservation of pressure energy into Kinetic energy

C:-Neither conservation of pressure energy nor kinetic energy

D:- Conservation of kinetic energy nor pressure energy

Correct Answer:- Option-A

Question47:-

Oil separator is fitted between

A:-On the suction line

B:-At the receiver outlet

C:- Compressor and condenser

D:- Condenser and evaporator

Correct Answer:- Option-C

Question48:-

What is the chemical name of R-134a refrigerant ?

A:-Tetra fluoro ethane

B:-Penta fluoro methane

C:-Tetra fluoro methane

D:- Penta fluoro ethane

Correct Answer:- Option-A

Question49:-

What is the chemical formula for R-22 refrigerant ?

A:-CH₂Cl₂

B:-CCl₂ F₂

C:-CH₂FCF₃

D:-CHClF₂

Correct Answer:- Option-D

Question50:-

Which one is a HFC refrigerant ?

A:-R-717

B:-R-410A

C:-R-22

D:-R-600a

Correct Answer:- Option-B

Question51:-

What is the boiling point of R-134a refrigerant ?

A:-33.3°C

B:- -29.8°C

C:-26.2°C

D:- -11.7°C

Correct Answer:- Option-C

Question52:-

Which one is an Azeotrope refrigerant ?

A:-R-504

B:-R-729

C:-R-410A

D:-R-600a

Correct Answer:- Option-A

Question53:-

Which tubes are act as heat exchanger in refrigerator ?

A:-Suction and Discharge tube

B:-Capillary and Suction tube

C:-Capillary and Discharge tube

D:- Suction and Charging tube

Correct Answer:- Option-B

Question54:-

Which two terminals reads the high resistance while testing refrigerator compressor ?

A:-Running and Common

B:- Common and Starting

C:-Running and Starting

D:- Running and Compressor body

Correct Answer:- Option-C

Question55:-

What is the reason for "filter drier sweating" in refrigerator ?

A:-Oil in the system

B:- Carbon dioxide in the system

C:-Hydrogen in the system

D:-Moisture in the system

Correct Answer:- Option-D

Question56:-

Which device is used to equalize the system pressure in frost free refrigerator ?

A:-Defrost Timer

B:-Bimetal thermo

C:-Capillary tube

D:- Defrost heater

Correct Answer:- Option-C

Question57:-

Which type of evaporator is used in frost free refrigerator ?

A:-Fins and Tube

B:-Plate and Tube

C:-Wire mesh

D:-Plate and Coil

Correct Answer:- Option-A

Question58:-

What is the advantage of inverter refrigerator ?

A:-High current drawn

B:-High power consumption

C:-High energy efficiency

D:-Low energy efficiency

Correct Answer:- Option-C

Question59:-

What is the reason for poor condensation in water cooler ?

A:-Float valve struck in open

B:-Fan blade bent or Crack

C:-Thermostat does not cut out

D:-Over Load Protector defective

Correct Answer:- Option-B

Question60:-

What is the causes for unit trips high current in water cooler ?

A:-Weak insulator

B:-Leak in the system

C:-System less charge

D:-Compressor winding weak

Correct Answer:- Option-D

Question61:-

What is the function of relay used in visible cooler ?

A:-To disconnect the Running winding

B:-To disconnect the Starting winding

C:-To disconnect the over load protector

D:-To disconnect the thermostat

Correct Answer:- Option-B

Question62:-

What is the reason for "ice build up on the evaporator" in deep freezer ?

A:-Poor brazing

B:-Defective fan capacitor

C:-Leaky door gasket

D:-Drier filter blocked

Correct Answer:- Option-C

Question63:-

What is the reason for "No cooling" in deep freezer ?

A:-Over charged refrigerant

B:-System continuous running

C:-Tight door gasket

D:-Leak in the system

Correct Answer:- Option-D

Question64:-

What is the causes of "No ice production" in ice cube machine ?

A:- No water supplied to unit

B:-Unit not level

C:-Fan blade bent

D:-Unit work properly

Correct Answer:- Option-A

Question65:-

What is the reason for "excessive frost on evaporator coil" in window air-conditioner ?

A:-More air circulation in evaporator

B:- Air filter blocked completely

C:-Blower rotating at high speed

D:- Evaporator fins not blocked by dust

Correct Answer:- Option-B

Question66:-

What is the remedy to remove moisture from the window air-conditioning system ?

A:-Clean the evaporator fins

B:-Clean the air filter

C:-Evacuate the system

D:-Clean the condenser fins

Correct Answer:- Option-C

Question67:-

Which type of relay is used in capacitor start capacitor run (CSR) compressor motor ?

A:-Amperage relay

B:-Thermal relay

C:-Current relay

D:-Voltage relay

Correct Answer:- Option-D

Question68:-

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

A:-Three phase double end shaft motor

B:-Single phase double single shaft motor

C:-Single phase double end shaft motor

D:-Three phase single shaft motor

Correct Answer:- Option-C

Question69:-

What is the reason for "very high condensing temperature" in window air-conditioner ?

- A:-More air flow in to the condenser
- B:-Condenser fan rotating high speed
- C:- Ambient temperature is very low
- D:-Ambient temperature is very high

Correct Answer:- Option-D

Question70:-

Which type of fan is used in condensing unit of ductable split air-conditioner ?

- A:-Propeller fan
- B:-Radial fan
- C:-Centrifugal fan
- D:- Rotary fan

Correct Answer:- Option-A

Question71:-

What is the function of remote control in split air-conditioner ?

- A:-Defrost setting
- B:-Humidity setting
- C:-Transmits signal to operate air-conditioner
- D:-Pressure setting

Correct Answer:- Option-C

Question72:-

What is the causes for "noisy in indoor unit" of multi split air-conditioner ?

- A:-Low ambient temperature
- B:-Tight the base bolt of blower motor
- C:-Tight the base bolt of compressor

D:-Blower is loosed

Correct Answer:- Option-D

Question73:-

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

A:-Evaporator

B:-Condenser

C:-Storage cylinder

D:-Liquid receiver

Correct Answer:- Option-B

Question74:-

Which type of compressor motor used in inverter split air-conditioner ?

A:-Gear speed motor

B:-No speed change motor

C:-Constant speed motor

D:-Variable speed motor

Correct Answer:- Option-D

Question75:-

A duct is said to be a low velocity duct if the velocity of air in the duct is up to

A:-1100 m/min

B:-830 m/min

C:-600 m/min

D:-1300 m/min

Correct Answer:- Option-C

Question76:-

In axial flow fans the air flows

A:-Perpendicular to the axis of

B:-Parallel to the axis of impeller

C:-Either parallel or perpendicular to the axis of impeller

D:- None of the above

Correct Answer:- Option-B

Question77:-

The commonly used refrigerant in ice plant is

A:-R-32

B:-CO₂

C:-NH₃

D:-None of these

Correct Answer:- Option-C

Question78:-

The temperature maintained in the brine tank of ice plant is

A:--22°C

B:--15°C

C:--17°C

D:--10°C

Correct Answer:- Option-D

Question79:-

The difference between dry bulb temperature and wet bulb temperature is called

A:-Dry bulb depression of saturation

B:-Wet bulb depression

C:-Dew point depression

D:-Degree

Correct Answer:- Option-B

Question80:-

Which of the following statements are correct ?

1. At 100% relative humidity, wet bulb temperature, dry bulb temperature, dew

point temperature and saturation temperature are equal

2. For unsaturated air $DPT > DBT > WBT$

3. Saturation pressure corresponding to WBT is P_{vs} .

4. Saturation pressure corresponding to DPT is P_v .

A:-1 and 4

B:-2 and 4

C:- 1 and 3

D:- 2 and 3

Correct Answer:- Option-A

Question81:-

The curved lines on psychrometric chart indicates

A:-Relative Humidity

B:- WBT

C:-DPT

D:-DBT

Correct Answer:- Option-A

Question82:-

When only sensible heat is added to sample of air, the process is represented on psychrometric chart is given by

A:-Vertical line moving towards upward direction

B:-Horizontal line moving towards right direction

C:-Horizontal line moving towards left direction

D:-Vertical line moving towards downward direction

Correct Answer:- Option-B

Question83:-

Which of the following method is not used for determination of duct size

A:-Velocity reduction method

B:-Friction loss method

C:-Static regain method

D:-Static pressure method

Correct Answer:- Option-D

Question84:-A duct is made of

A:-Aluminium

B:-Galvanised iron

C:-Fibre glass

D:-Any one of the above

Correct Answer:- Option-D

Question85:-

Two fans that are different sizes, but have the same basic shape to their performance curves are called

A:-Geometrically similar fans

B:-Tube axial fans

C:-Base fans

D:-Multi-stage fans

Correct Answer:- Option-A

Question86:-

Which of the following type of air conditioning system is adopted when the cooling capacity required is 25 TR or more ?

A:-Winter air conditioning system

B:-Summer air conditioning system

C:-Unitary air conditioning system

D:-Central air conditioning system

Correct Answer:- Option-D

Question87:-The indoor unit of split air conditioning system contains the following unit

A:-Evaporative coil

B:-Compressor

C:-Condenser

D:-Both B & C

Correct Answer:- Option-A

Question88:-

Which of the following statement is/are correct about humidification process

- i. Dry bulb temperature is constant
- ii. Specific humidity is increases
- iii. Relative humidity decreases
- iv. Wet bulb temperature is constant

A:-Only (i & ii)

B:-Only (i & iii)

C:-All of the above (i, ii, iii & iv)

D:-Only (ii & iii)

Correct Answer:- Option-A

Question89:-

Which of the following process is used in winter air conditioning ?

A:-Heating

B:-Dehumidification

C:-Heating and Humidification

D:-Cooling and Dehumidification

Correct Answer:- Option-C

Question90:-

Which of the following statement is/are correct about axial flow fans ?

- i. Never used for duct air conditioning system
- ii. They are incapable of developing high pressure
- iii. Used for duct air conditioning system
- iv. Suitable for handling large volumes of air at low pressures.

A:-Only (i,ii)

B:-Only (i, ii & iv)

C:-Only (iii & iv)

D:-All the above (i, ii, iii & iv)

Correct Answer:- Option-B

Question91:-Which of the following method is not used for leakage detection of CFC refrigerants ?

A:-Soap solution

B:-Halide torch

C:-Burning candle

D:-No chlorine atom

Correct Answer:- Option-C

Question92:-For Large commercial installations, ammonia is used as the refrigerant, because

A:-It has large latent heat

B:-It has moderate working pressure

C:-It is cheap

D:-All of these

Correct Answer:- Option-D

Question93:-

Which of the following refrigerant widely used in larger industrial and commercial reciprocating compression systems ?

A:-Carbon dioxide

B:-Sulphur dioxide

C:-R-12

D:-Ammonia

Correct Answer:- Option-D

Question94:-Human being feels comfortable when the air is at ?

A:-21°C with 56% relative humidity

B:-30°C with 36% relative humidity

C:-37°C with 65% relative humidity

D:-29°C with 70% relative humidity

Correct Answer:- Option-A

Question95:-Viscous Impingement filtration method is capable of

A:-Filtering particles of 1 to 3 microns in size

B:-Filtering particles of 5 to 10 microns in size

C:-Filtering particles of 15 to 20 microns in size

D:-Filtering particles of 35 to 40 microns in size

Correct Answer:- Option-C

Question96:-

Fine Filters are used where the filtering required down to

A:-5-micron size

B:-10-micron size

C:-8-micron size

D:-15-micron size

Correct Answer:- Option-A

Question97:-

Which of following not a nominal capacities of Package Air Conditioner ?

A:-25 tons

B:-15 tons

C:-10 tons

D:-5 tons

Correct Answer:- Option-A

Question98:-

Which of the following not a property of HFC134a ?

A:-It is explosive

B:-It readily absorbs moisture

C:-It is odourless

D:-It is nonexplosive

Correct Answer:- Option-D

Question99:-

During the compression of the refrigerant inside the compressor

A:-the pressure and temperature rapidly increase

B:-the pressure and temperature rapidly decrease

C:-the pressure increase and temperature decrease

D:-the pressure decrease and temperature increase

Correct Answer:- Option-A

Question100:-

In a refrigeration system the expansion device is connected between the

A:-Condenser and Receiver

B:-Receiver and Evaporator

C:-Compressor and Condenser

D:- Evaporator and Compressor

Correct Answer:- Option-B