PROVISIONAL ANSWER KEY

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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 contacter

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:-CH_2Cl_2

B:-$CCl_2\ F_2$

C:-CH_2FCF_3

D:-$CHClF_2$

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:-CO_2

C:-NH_3

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 Pvs.
4. Saturation pressure corresponding to DPT is Pv.

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 basicshape to their performance curves are called

A:-Geometrically similar fans

B:-Tubeaxial fans

C:-Base fans

D:-Multi-sage 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:-Unitory 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