

PROVISIONAL ANSWER KEY

Question 95/2024/OL

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Exam: A C Plant Operator

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Department Kerala State Film Development Corporation Ltd

Question1:-What is the advantage of waste disposal?

- A:-Reduce economic efficiency
- B:-Increase adverse impact on environment
- C:-Increase adverse impact on health
- D:-Ensure workshop neat and tidy

Correct Answer:- Option-D

Question2:-What 'A' denotes in ABC of first-aid?

- A:-Attention
- B:-Atmosphere
- C:-Airway
- D:-Arresting

Correct Answer:- Option-C

Question3:-Which part of Universal Surface Gauge holds the scriber?

- A:-Snug
- B:-Rocker arm
- C:-Base
- D:-Guide pin

Correct Answer:- Option-A

Question4:-Which is an integral part of the stock in Vernier Bevel Protractor?

- A:-Blade
- B:-Dial
- C:-Disc
- D:-Adjustable Blade

Correct Answer:- Option-B

Question5:-Which is used to remove drills, chucks and sockets from the machine spindle?

- A:-Sleeve
- B:-Spanner

C:-Punch

D:-Drift

Correct Answer:- Option-D

Question6:-Name the Hand shear its one of the handle of the shear is bend downwards and the bending portion should be fixed on the iron plate's hole and upper handle will be held by worker?

A:-Aviation shears

B:-Rohdes shears

C:-Block shears

D:-Hawk billed shears

Correct Answer:- Option-C

Question7:-24 SWG is equal to how many millimeters?

A:-1.118 mm

B:-0.629 mm

C:-0.560 mm

D:-0.498 mm

Correct Answer:- Option-B

Question8:-Which defect occurs in lap joint, when the flame is directed on the edge of the top plate?

A:-Edge of plate melted off

B:-Undercut

C:-Excessive convexity

D:-Blow holds

Correct Answer:- Option-A

Question9:-Which type of edge preparation is done for gas welding a 18 mm thick copper butt joint?

A:-Single vee

B:-Double vee

C:-Square

D:-Single bevel

Correct Answer:- Option-B

Question10:-Unit of frequency is

A:-Hertz

B:-Volt

C:-Ampere

D:-Ohm

Correct Answer:- Option-A

Question11:-Name the property of a substance which gives opposition to flow of electron through itself.

A:-voltage

B:-current

C:-resistance

D:-power

Correct Answer:- Option-C

Question12:-Insulation resistance of electrical equipment is measured by

A:-Earth tester

B:-Meggar

C:-Tacho meter

D:-Multimeter

Correct Answer:- Option-B

Question13:-What is the purpose of centrifugal switch in single phase motor?

A:-Disconnect auxiliary winding of motor

B:-Disconnect main winding of motor

C:-Reconnect auxiliary winding of motor

D:-Reconnect main winding of motor

Correct Answer:- Option-A

Question14:-Name the motor used in ceiling fan

A:-capacitor start capacitor run motor

B:-capacitor start induction run motor

C:-shaded pole motor

D:-permanent capacitor motor

Correct Answer:- Option-D

Question15:-The speed of rotating magnetic field in stator of an induction motor is known as

A:-speed

B:-synchronous speed

C:-actual speed

D:-slip speed

Correct Answer:- Option-B

Question16:-Starter used to start slip ring induction motor is

A:-DOL starter

B:-Rotor resistance starter

C:-Star Delta starter

D:-Auto transformer starter

Correct Answer:- Option-B

Question17:-The main function of starter is to

A:-start the motor

B:-limit inrush of current at starting

C:-develop high starting torque

D:-bring motor to full speed

Correct Answer:- Option-B

Question18:-Expansion of FET is

A:-Field Effective Transistor

B:-Field Ejection Transistor

C:-Filled Effect Transistor

D:-Field Effect Triac

Correct Answer:- Option-A

Question19:-Which component in rectifier convert AC to DC

A:-resistor

B:-transformer

C:-diode

D:-battery

Correct Answer:- Option-C

Question20:-In SI system the pressure measuring unit in refrigeration is

A:-Newton

B:-Pascal

C:-Bar

D:-Joule

Correct Answer:- Option-B

Question21:-What is the use of bent snips in refrigeration works?

A:-Bending the sheet

B:-Making holes on the sheet

C:-Cutting the sheet along curved lines

D:-Removing burns from the sheet

Correct Answer:- Option-C

Question22:-The input power requirement for thermo electric refrigeration system is

A:-High voltage AC input

B:-High voltage DC input

C:-Low voltage DC input

D:-Low voltage AC input

Correct Answer:- Option-C

Question23:-Which refrigeration system is driven by low grade energy?

A:-Vortex tube system

B:-Evaporative refrigeration

C:-Gas cycle refrigeration

D:-Steam jet refrigeration

Correct Answer:- Option-D

Question24:-The type of condenser used in traditional domestic refrigerators

A:-Forced convection type

B:-Furnace type

C:-Rotary condensers

D:-Natural convection type

Correct Answer:- Option-D

Question25:-The capacity of shell and coil type condenser is around

A:-15 TR

B:-50 TR

C:-30 TR

D:-40 TR

Correct Answer:- Option-B

Question26:-Main disadvantage in manual defrosting is

A:-Fast defrosting

B:-Taking too much time

C:-Current consumption is more

D:-Less period

Correct Answer:- Option-B

Question27:-Identify the method of defrosting used in frost free refrigerator

A:-Hot gas defrosting

B:-Hot water defrosting

C:-Electric defrosting

D:-Manual defrosting

Correct Answer:- Option-C

Question28:-Recuperators type heat exchangers are not used in

A:-Oil heaters for an aero plane

B:-Automobile radiators

C:-Condensers

D:-Chemical factories

Correct Answer:- Option-D

Question29:-Cooling tower efficiency is the ratio of

A:-Approach to difference of temperature of water entering the cooling tower and temperature of water leaving the cooling tower

B:-Range to difference of temperature of water entering the cooling tower and temperature of water leaving the cooling tower

C:-Range to difference of temperature of water entering the cooling tower and wet bulb temperature of air

D:-None of the above

Correct Answer:- Option-C

Question30:-Refrigerator efficiency is _____ is the C.O.P of the refrigerator.

A:-Directly proportional

B:-Inversely proportional

C:-Equal

D:-Independent

Correct Answer:- Option-D

Question31:-Which one of the following is not a suitable application of evaporators?

A:-Heating

B:-Refrigeration

C:-Cooling

D:-Crystallisation

Correct Answer:- Option-A

Question32:-The expansion device used in domestic refrigeration is

A:-Electronic expansion valve

B:-Automatic expansion valve

C:-Capillary tube

D:-Thermostatic valve

Correct Answer:- Option-C

Question33:-Thermodynamic process where no heat is exchanged with the surroundings is

A:-Adiabatic

B:-Isotropic

C:-Isobaric

D:-Isothermal

Correct Answer:- Option-A

Question34:-The valve used to restrict or throttle the fluid in a particular direction to

influence the volumetric flow of the fluid

A:-Sequence valve

B:-Quick exhaust valve

C:-Flow control valve

D:-Check valve

Correct Answer:- Option-D

Question35:-Operation of thermostatic expansion valve is based on changes in

A:-Temperature of the evaporator

B:-Degree of superheat at exit from the evaporator

C:-Pressure in the evaporator

D:-Pressure in the condenser

Correct Answer:- Option-B

Question36:-The compression process shown in the P-H diagram of a vapour compression refrigeration cycle is

A:-Horizontal line

B:-Straight line with negative slope

C:-Straight line with positive slope

D:-Curved line with possible slope

Correct Answer:- Option-C

Question37:-In the vapor compression refrigeration system sub cooling of the refrigerant in the condenser results in

A:-Increase in size of the evaporator

B:-Increase in COP of the system

C:-Decrease in COP of the system

D:-Increase in the size of the compressor

Correct Answer:- Option-A

Question38:-L/G ratio of a cooling tower is

A:-Water flow rate / Air mass flow

B:-Air mass flow rate / Water flow rate

C:-Length / Girth

D:-Length / Gradient

Correct Answer:- Option-A

Question39:-Reason for reduction in suction pressure of the compressor

A:-Scale formation in condenser water tubes

B:-Overcharge of refrigerant in the system

C:-Clogging of the air-cooled condenser

D:-Fouling of the evaporator surface

Correct Answer:- Option-D

Question40:-Counter flow heat exchanges transfer _____ heat than parallel flow heat exchangers.

A:-One fourth the

B:-More

C:-Less

D:-Half the

Correct Answer:- Option-B

Question41:-Which of the following statements hold true for ice refrigeration?

A:-The rate of refrigeration remains constant with time

B:-The rate of refrigeration increases with time

C:-Chilled liquid water is used as refrigerant

D:-The rate of refrigeration decreases with time

Correct Answer:- Option-D

Question42:-Name the type of compressor used when the rate of flow of the refrigerant is large

A:-Rotary compressor

B:-Centrifugal compressor

C:-Reciprocating compressor

D:-Screw compressor

Correct Answer:- Option-B

Question43:-The reason for using analyzer-rectifier combination in absorption refrigeration cycle

A:-To increase the amount of water vapour in ammonia vapour

B:-To eliminate the water vapour from ammonia vapour

C:-To decrease the amount of water vapour in ammonia vapour

D:-None of these

Correct Answer:- Option-B

Question44:-The shape of P-V curve for an ideal gas is

A:-Parabolic

B:-Ellipse

C:-Hyperbolic

D:-Semi-circle

Correct Answer:- Option-C

Question45:-When water cooled condenser is used in a refrigeration system trapped air will be usually indicated by

A:-Unusually lower than normal discharge pressure when compared to the existing temperature of the liquid refrigerant

B:-Unusually high head pressure when compared to the existing temperature of the liquid refrigerant

C:-Higher than normal liquid refrigerant temperature

D:-Unusually high head pressure when compared to the existing temperature of the liquid refrigerant

Correct Answer:- Option-D

Question46:-In a vapour compression system, the condition of refrigerant before entering the

A:-Wet vapour

B:-Superheated vapour

C:-Dry saturated liquid

D:-Saturated liquid

Correct Answer:- Option-B

Question47:-Dial thermometer is used to measure

A:-Sensible heat

B:-Latent heat of fusion

C:-Vapour pressure

D:-Latent heat of vapourisation

Correct Answer:- Option-C

Question48:-Which of the following property is desirable for an ideal refrigerant?

A:-High freezing point

B:-Low viscosity

C:-Explosive

D:-High boiling point

Correct Answer:- Option-B

Question49:-The detection of leakage in a refrigeration system using Freon as refrigerant is accomplished by

A:-Halide torch

B:-Soap water

C:-Acetylene torch

D:-Sulphur sticks

Correct Answer:- Option-A

Question50:-Freon 12 belongs to the refrigerant category of

A:-Ketone family

B:-Methane family

C:-Alkyne family

D:-Aldehyde family

Correct Answer:- Option-B

Question51:-Which of the following can be used as a secondary refrigerant?

A:-HCl

B:-HFC

C:-HCFC

D:- H_2O

Correct Answer:- Option-D

Question52:-Which one of the following refrigerants is not derived from chlorofluorocarbons?

A:-R 11

B:-R 115

C:-R 12

D:-R 744

Correct Answer:- Option-D

Question53:-COP stands for

A:-Coefficient of performance

B:-Cooling for performance

C:-Coefficient of plant

D:-Capacity of performance

Correct Answer:- Option-A

Question54:-The process which changes the refrigeration system from R12 to R401a is called

A:-Refilling

B:-Retrofitting

C:-Recycling

D:-Reclaiming

Correct Answer:- Option-B

Question55:-What is the typical temperature of a single-door refrigerator freezer?

A:--10°C

B:--18°C

C:--11°C

D:--12°C

Correct Answer:- Option-B

Question56:-The main disadvantage in manual defrosting method is

A:-Fast frosting

B:-Takes too much time

C:-More current consumption

D:-Less temperature stability

Correct Answer:- Option-B

Question57:-The cleaning process of a refrigeration cycle involves cleaning the

A:-Sump oil

B:-Refrigerant

C:-Non condensable gases

D:-Deposited solids and oils

Correct Answer:- Option-D

Question58:-Water cooler tank is made up of

A:-Stainless steel

B:-Copper

C:-Aluminium

D:-Brass

Correct Answer:- Option-A

Question59:-The sensing element in a thermostat of a bottle cooler is

A:-Adjustable screw

B:-Electrical contacts

C:-Bellows

D:-Thermal bulb

Correct Answer:- Option-D

Question60:-What is the most commonly used as insulating material in deep freezers?

A:-Thermocol

B:-PUF

C:-Cork

D:-Glass wool

Correct Answer:- Option-B

Question61:-Which refrigerant is mostly used in ice plants?

A:-Nitrous oxide

B:-Ammonia

C:-Atmospheric Air

D:-None of these

Correct Answer:- Option-B

Question62:-Air conditioning involves

- A:-Control of humidity
- B:-Control of temperature
- C:-Control of air motion and air purity
- D:-All of the above

Correct Answer:- Option-D

Question63:-The thermodynamics law which represents the concept of temperature

- A:-First law
- B:-Second law
- C:-Third law
- D:-Zeroth law

Correct Answer:- Option-D

Question64:-Which component absorbs heat in package AC?

- A:-Blower
- B:-Condenser
- C:-Evaporator
- D:-Expansion valve

Correct Answer:- Option-C

Question65:-Deep freezer is mostly used for

- A:-Cooling bottles
- B:-Storing ice cream
- C:-Storing vegetables
- D:-None of these

Correct Answer:- Option-B

Question66:-The type of refrigeration cycle employed in room AC

- A:-Ice refrigeration
- B:-Vapour absorption refrigeration
- C:-Vapour compression refrigeration
- D:-Steam jet refrigeration

Correct Answer:- Option-C

Question67:-The device that controls the temperature in window AC

- A:-Capillary tube
- B:-Selector switch
- C:-Relay
- D:-Thermostat

Correct Answer:- Option-D

Question68:-In package air conditioner, the preventive measure for scale formation in water cooled condenser

A:-Increase water pressure

B:-Improve water quality

C:-Install flow meter

D:-Minimise water flow

Correct Answer:- Option-B

Question69:-The component that belongs to outdoor unit of split AC

A:-Blower

B:-Air filter

C:-Compressor

D:-Evaporative coil

Correct Answer:- Option-C

Question70:-Which is the first process in shifting the split AC from one place to another?

A:-Flushing

B:-Evacuation

C:-Pump down

D:-Vacuumization

Correct Answer:- Option-C

Question71:-Which material is used to make ducts in split AC?

A:-Wood

B:-GI sheet

C:-Fibre

D:-Thermocol

Correct Answer:- Option-B

Question72:-How is the capacity of refrigerator is expressed

A:-Weightage

B:-Tonnage

C:-Wattage

D:-Litres

Correct Answer:- Option-D

Question73:-The type of split AC in which indoor unit is mounted on the ceiling

A:-Cassette AC

B:-Centralized AC

C:-Window AC

D:-Portable AC

Correct Answer:- Option-A

Question74:-The defrost thermostat measures the temperature of

A:-Defrost heater

B:-Temperature of refrigerant at exit of capillary tube

C:-Evaporator

D:-Temperature of refrigerant at exit of compressor

Correct Answer:- Option-C

Question75:-The pH of brine water used in ice candy plants need to be maintained between

A:-4.2 to 5.0

B:-5.5 to 6.0

C:-6.0 to 7.0

D:-7.0 to 8.0

Correct Answer:- Option-D

Question76:-The refrigerant employed in ice plants working on the principle of vapour compression refrigeration system is/are

A:-R-22

B:-R-717

C:-R-22 and R-717

D:-R-22, R-717 and R-744

Correct Answer:- Option-C

Question77:-Choose the correct option using the following statements based on retrofitting an industrial ice plant from R22 to a more environment friendly refrigerant :

Statement 1 :

The global warming potential of the new refrigerant must be similar to that of R-22

Statement 2 :

The compatibility of the new refrigerant with existing lubricants need not be verified

A:-Only Statement 1 is correct

B:-Only Statement 2 is correct

C:-Both Statement 1 and Statement 2 are correct

D:-Both Statement 1 and Statement 2 are wrong

Correct Answer:- Option-D

Question78:-The usual operating temperature range of low temperature walk in freezer used for holding frozen food is

A:--15°C to -40°C

B:--5°C to -15°C

C:-0°C to -5°C

D:-Ambient temperature to 5°C

Correct Answer:- Option-A

Question79:-The cause of high suction pressure and high discharge pressure noticed in refrigeration system of a cold storage plant can be

A:-Poor condensor efficiency

B:-System overloaded

C:-Short of refrigerant

D:-All of these

Correct Answer:- Option-D

Question80:-Which of the following is TRUE with respect to air -tight insulation applied in cold storage systems?

A:-The joints between the insulation boards should not be filled with vapour-barrier solutions

B:-The insulation material must be fire proof

C:-The insulation material must have high thermal conductivity

D:-The insulation material must allow absorption of water in to it

Correct Answer:- Option-B

Question81:-Which of the following is TRUE for a basic compressor refrigeration system for cold storage application?

A:-King valve is for pumping down the system

B:-Purge valve is for refrigerant charging

C:-Evaporator is for adding heat into the medium to be cooled in the cold storage

D:-None of these

Correct Answer:- Option-A

Question82:-Choose the correct option using the following statements pertaining to the analysis of the psychrometric chart towards the right direction :

Statement 1 :

Constant relative humidity plots are uphill curves

Statement 2 :

Constant wet bulb temperature lines are downhill straight lines

A:-Only Statement 1 is correct

B:-Only Statement 2 is correct

C:-Both Statement 1 and Statement 2 are correct

D:-Both Statement 1 and Statement 2 are wrong

Correct Answer:- Option-C

Question83:-For air with a relative humidity of 80%

A:-Dry bulb temperature is less than Wet bulb temperature

B:-Dew point temperature is less than Wet bulb temperature

C:-Dew point and Dry bulb temperature are equal

D:-Dry bulb and Wet bulb temperature are equal

Correct Answer:- Option-B

Question84:-If a mass of moist air contained in a closed metallic vessel is heated, then its

A:-Relative humidity decreases

B:-Relative humidity increases

C:-Specific humidity increases

D:-Specific humidity decreases

Correct Answer:- Option-A

Question85:-Which of the following is TRUE regarding sensible cooling of air?

A:-Dry bulb temperature increases, wet bulb temperature decreases, dew point temperature decreases

B:-Dry bulb temperature decreases, web bulb temperature increases, dew point temperature remains constant

C:-Dry bulb temperature decreases, wet bulb temperature decreases, dew point temperature remains constant

D:-Dry bulb temperature decreases, wet bulb temperature decreases, dew point temperature decreases

Correct Answer:- Option-C

Question86:-What is the advantages of using fan coil units in a central AC plant?

A:-High initial cost

B:-Always easily integrated with existing ductwork

C:-Ability to provide zoned heating and cooling

D:-Requires frequent maintenance

Correct Answer:- Option-C

Question87:-Which type of fan used in central AC system has the air entering the impeller axially, turn 90 degree and get discharged radially through the casing?

A:-Axial flow fan

B:-Centrifugal fan

C:-Piston fan

D:-Propeller fan

Correct Answer:- Option-B

Question88:-Which of the following statements is NOT TRUE about the operation of components in a central air conditioning system?

A:-The expansion valve reduces the pressure and temperature of the refrigerant, enabling better heat absorption into it in the condenser coil

B:-The condenser coil release absorbed heat to the outdoor air, causing the refrigerant to condense back into a liquid

C:-The compressor increases the pressure and temperature of the refrigerant

D:-The evaporator coil absorbs heat from the indoor air, causing the refrigerant inside to evaporate

Correct Answer:- Option-A

Question89:-Which of the following is/are associated with the performance of an air-cooled condenser in a packaged air conditioning system?

A:-Ambient air temperature around the condenser unit

B:-Cleanliness of the condenser coils

C:-Type of refrigerant used in the system

D:-All of these

Correct Answer:- Option-D

Question90:-What is the full form of VRF with respect to refrigeration and air conditioning field?

A:-Variable Refrigerant Flow

B:-Velocity Radiator Force

C:-Volume Refrigerant Flow

D:-Variant Refrigerant Force

Correct Answer:- Option-A

Question91:-Which type of duct is commonly used in residential AC systems due to its ease of installation and flexibility?

A:-Sheet Metal Duct

B:-Fiberboard Duct

C:-Flexible Duct

D:-Fabric Duct

Correct Answer:- Option-C

Question92:-What is the primary function of ducts in a residential air conditioning system?

A:-To provide structural support for the building

B:-To distribute conditioned air throughout the house

C:-To generate heat for the heating system

D:-To filter out dust and pollutants from the air

Correct Answer:- Option-B

Question93:-Which of the following is/are considered in duct design for a centralized air conditioning system?

A:-Duct size and shape to minimize pressure loss

B:-Thermal insulation to prevent heat gain or loss

C:-Air velocity to ensure proper air distribution and minimize noise

D:-All of these

Correct Answer:- Option-D

Question94:-Choose the correct option using the following statements based on insulation of ducts used in air conditioning systems :

Statement 1 :

Insulation prevents condensation in duct and minimizes noise from air movement.

Statement 2 :

Insulated ducts reduce heat gain or heat loss and there by improve energy efficiency

A:-Only Statement 1 is correct

B:-Only Statement 2 is correct

C:-Both Statement 1 and Statement 2 are correct

D:-Both Statement 1 and Statement 2 are wrong

Correct Answer:- Option-C

Question95:-What is the primary function of air filters in mobile air conditioning systems?

A:-To cool the air

B:-To remove dust and particles from the air

C:-To increase the air pressure

D:-To reduce the humidity

Correct Answer:- Option-B

Question96:-Which type of air filter used in a residential air conditioning system is comparatively having the highest efficiency in capturing fine particles, including bacteria and viruses?

A:-Fiberglass filters

B:-Pleated filters

C:-HEPA filters

D:-Electrostatic filters

Correct Answer:- Option-C

Question97:-Which of the following is/are the typical part of the servicing routine for air filters in commercial air conditioning systems?

A:-Inspecting the filter for physical damage or wear

B:-Replacing or cleaning the filter at recommended intervals

C:-Recording the service date and condition of the filter

D:-All of these

Correct Answer:- Option-D

Question98:-Which is the electric circuitary component used to sense the temperature of air coming off the evaporator coil area in car air conditioning system?

A:-Thermistor

B:-Amplifier

C:-Relay

D:-Clutch Coil

Correct Answer:- Option-A

Question99:-Choose the correct option using the following statements :

Statement 1 :

In automobile air conditioning systems with R 134a, serpentine type evaporator has higher performance than plate and fin type evaporator.

Statement 2 :

A compressor clutch facilitates torque transfer from engine front end accessory drive to compressor rotating assembly of automobile AC

A:-Only Statement 1 is correct

B:-Only Statement 2 is correct

C:-Both Statement 1 and Statement 2 are correct

D:-Both Statement 1 and Statement 2 are wrong

Correct Answer:- Option-B

Question100:-Which of the following is/are applicable to Roof Mounted Package Unit (RMPU) used in AC coaches of Railways?

A:-Light in weight

B:-Hermetically sealed system

C:-No chance of damage due to flash floods

D:-All of these

Correct Answer:- Option-D