

PROVISIONAL ANSWER KEY

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Exam: Refrigeration Mechanic (HER)
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Question1:-Day after tomorrow is Friday, then what is the previous day of today ?

- A:-Friday
- B:-Wednesday
- C:-Tuesday
- D:-Thursday

Correct Answer:- Option-C

Question2:-If TOP is coded as POT, then TABLE is coded as

- A:-Elbat
- B:-Batle
- C:-Telab
- D:-Betla

Correct Answer:- Option-A

Question3:-Find out the missing letter of the following series : B, E, H, _

- A:-L
- B:-J
- C:-K
- D:-O

Correct Answer:- Option-C

Question4:-How much is 40% of 3 hour and 30 minutes ?

- A:-2 Hr. 10 mts.
- B:-1 Hr. 24 mts.
- C:-4 Hr. 30ts.
- D:-2 Hr. 20 mts.

Correct Answer:- Option-B

Question5:-A teacher is to school, like a nurse is to

- A:-Factory
- B:-Laboratory
- C:-Prison
- D:-Hospital

Correct Answer:- Option-D

Question6:-If BAG is coded as 217, decode the number 6554.

- A:-DEF
- B:-FEED
- C:-BEEF
- D:-BED

Correct Answer:- Option-B

Question7:-In a month with 31 days, the first day of the month is Tuesday, then the last day of the month is

- A:-Monday
- B:-Friday
- C:-Wednesday
- D:-Thursday

Correct Answer:- Option-D

Question8:-Insert the missing number :

14 9 5
13 7 6
21 8 —

A:-12

B:-15

C:-13

D:-18

Correct Answer:- Option-C

Question9:-Arun walks 100 metre in 4 minutes. How many minutes will be take to complete 575 metre ?

A:-25 mts.

B:-20 mts.

C:-23 mts.

D:-30 mts.

Correct Answer:- Option-C

Question10:-Find the odd-man out.

A:-36

B:-49

C:-81

D:-70

Correct Answer:- Option-D

Question11:-The ratio of actual mass of water vapour in a given volume of moist air to the mass of water vapour in the same volume of saturated air at the same temperature and pressure is known as

A:-Wet bulb depression

B:-Absolute humidity

C:-Degree of saturation

D:-Relative humidity

Correct Answer:- Option-D

Question12:-A standard ice point temperature corresponds to the temperature of

A:-Water at zero degree Celsius

B:-Solid and dry ice

C:-Ice at -4 degree Celsius

D:-Mixture of ice and water under equilibrium conditions

Correct Answer:- Option-D

Question13:-The suction pipe diameter of refrigerating unit compressor in comparison to delivery side is

A:-Bigger

B:-Smaller

C:-Smaller or bigger

D:-Unpredictable

Correct Answer:- Option-A

Question14:-At 100% relative humidity, the temperatures, dry bulb, wet bulb, dew point and saturation are

A:-Equal

B:-Different

C:-Three equal, one different

D:-None of the above

Correct Answer:- Option-A

Question15:-Humidity ratio is the mass of water vapour present in

A:- $1m^3$ of wet air

B:- $1m^3$ of dry air

C:-1kg of wet air

D:-1 kg of dry air

Correct Answer:- Option-D

Question16:-Critical pressure of a liquid is the pressure

A:-Above which liquid will remain liquid

B:-Above which a liquid becomes gas

C:-Above which a liquid becomes gas

D:-At which all the phases exist together

Correct Answer:- Option-A

Question17:-Ammonia is

A:-Non-toxic

B:-Non-inflammable

C:-Toxic and non-inflammable

D:-Highly toxic and inflammable

Correct Answer:- Option-D

Question18:-For room air distribution, the maximum variation in temperature is

A:-0 degree Celsius

B:-1 degree Celsius

C:-1 degree Celsius

D:-5 degree Celsius

Correct Answer:- Option-B

Question19:-The device used to finish a drilled hole

A:-File

B:-Die

C:-Tap

D:-Reamer

Correct Answer:- Option-D

Question20:-Presence of moisture in a refrigerant affects the working of

A:-Compressor

B:-Condenser

C:-Expansion valve

D:-Evaporator

Correct Answer:- Option-C

Question21:-The boiling point of ammonia is

A:-100 degree Celsius

B:-50 degree Celsius

C:-33.3 degree Celsius

D:-33 degree Celsius

Correct Answer:- Option-C

Question22:-Which of the following refrigerant has the highest critical point temperature ?

A:-Freon-11

B:-Freon-12

C:-Ammonia

D:-Freon-22

Correct Answer:- Option-A

Question23:-One ton of refrigeration is equal to the refrigeration effect corresponding to melting of 1000 kg of ice in

A:-In 1 hour

B:-In 24 hour

C:-In 12 hour

D:-In 6 hour

Correct Answer:- Option-B

Question24:-In Electrolux refrigerator

- A:-Ammonia is absorbed in hydrogen
- B:-Ammonia is absorbed in water
- C:-Ammonia evaporates in hydrogen
- D:-Hydrogen is absorbed in ammonia

Correct Answer:- Option-C

Question25:-One tonne of refrigeration is equal to

- A:-210 KJ/min
- B:-3.5 kW
- C:-3.5 kJ/s
- D:-All the above

Correct Answer:- Option-D

Question26:-On psychrometric chart, dry bulb temperature lines are

- A:-Horizontal
- B:-Vertical
- C:-Curved
- D:-Inclined

Correct Answer:- Option-B

Question27:-The comfort conditions in air conditioning system are defined by

- A:-22°C dry bulb temperature and 60% relative humidity
- B:-25°C dry bulb temperature and 100% relative humidity
- C:-20°C dry bulb temperature and 75% relative humidity
- D:-25°C dry bulb temperature and 40% relative humidity

Correct Answer:- Option-A

Question28:-Condensing temperature in a refrigerator is the temperature

- A:-Of cooling medium
- B:-Of freezing zone
- C:-Of evaporator
- D:-At which a refrigerant becomes liquid

Correct Answer:- Option-D

Question29:-The function of brine agitator in ice plant is to

- A:-Increase refrigeration effect
- B:-Increase COP
- C:-Obtain uniform temperature of brine
- D:-All of the above

Correct Answer:- Option-C

Question30:-A sling psychrometer is used to measure

- A:-Volume
- B:-Humidity
- C:-Pressure
- D:-Velocity

Correct Answer:- Option-B

Question31:-A product of decomposition of oil resulting from impurities or moisture is

- A:-Sludge
- B:-Foam
- C:-Purge
- D:-None of these

Correct Answer:- Option-A

Question32:-Out of the following compressors which one has no moving parts ?

- A:-Reciprocating
- B:-Rotary

C:-Thermo

D:-Centrifugal

Correct Answer:- Option-C

Question33:-The heat rejection factor is given by

A:- $1 + \text{COP}$

B:- $1 - \text{COP}$

C:- $1 + 1/\text{COP}$

D:- $1 - 1/\text{COP}$

Correct Answer:- Option-C

Question34:-The refrigerant for a refrigerator should have

A:-High sensible heat

B:-High total heat

C:-High latent heat

D:-Low sensible heat

Correct Answer:- Option-C

Question35:-Freon group refrigerants are

A:-Inflammable

B:-Toxic

C:-Nontoxic and non-inflammable

D:-Toxic and non-inflammable

Correct Answer:- Option-C

Question36:-In a Carnot cycle, heat is transferred at

A:-Constant pressure

B:-Constant volume

C:-Constant temperature

D:-Constant enthalpy

Correct Answer:- Option-C

Question37:-A process in which substance is exposed to mechanical or chemical action of air is called

A:-Agitation

B:-Aeration

C:-Aspiration

D:-Atomization

Correct Answer:- Option-B

Question38:-The capacity of domestic refrigerator is of the range of

A:-0.1 to 0.3 TR

B:-1 to 3 TR

C:-3 to 5 TR

D:-5 to 7 TR

Correct Answer:- Option-A

Question39:-The tubes of shell and tube condenser in ammonia refrigerant is made up of

A:-Steel

B:-Copper

C:-Brass

D:-Glass

Correct Answer:- Option-A

Question40:-A bootstrap air cooling system has

A:-One heat exchanger

B:-Two heat exchanger

C:-Three heat exchanger

D:-No heat exchanger

Correct Answer:- Option-B

Question41:-A system of fixed mass and identity whose boundaries are determined by the space of matter occupied in it is called

- A:-Closed system
- B:-Open system
- C:-Isolated system
- D:-Control volume

Correct Answer:- Option-A

Question42:-Formation of frost on evaporator in refrigerator

- A:-Results in loss of heat due to poor heat transfer
- B:-Increases heat transfer rate
- C:-Has no effect
- D:-Decreases compressor power

Correct Answer:- Option-A

Question43:-Chemical formula of Freon-12

- A:- CCl_2F_2
- B:- CCl_3F_2
- C:- CCl_3F
- D:- $CClF_2$

Correct Answer:- Option-A

Question44:-Heating of air without changing its moisture content takes place on psychrometric chart along

- A:-A vertical line upward
- B:-A vertical line downward
- C:-A horizontal line of the constant dew point
- D:-Curved line

Correct Answer:- Option-C

Question45:-Drift loss in cooling tower is of the order of

- A:-1 to 5%
- B:-5 to 10%
- C:-10 to 20%
- D:-25 to 50%

Correct Answer:- Option-C

Question46:-Out of the following which one is an example for intensive property ?

- A:-Temperature
- B:-Pressure
- C:-Density
- D:-All the above

Correct Answer:- Option-D

Question47:-Which of the following property remains constant during throttling process ?

- A:-Internal energy
- B:-Pressure
- C:-Entropy
- D:-Enthalpy

Correct Answer:- Option-D

Question48:-According to Charles law for a perfect gas

- A:- $T_2/T_1 = P_2/P_1$, if V is kept constant
- B:- $T_2/T_1 = V_2/V_1$, if P is kept constant
- C:- $P_2/P_1 = V_1/V_2$, if T is kept constant
- D:- $PV/T = \text{constant}$

Correct Answer:- Option-B

Question49:-The bank of tubes at the back of domestic refrigerator is

- A:-Condenser tubes
- B:-Evaporator tubes
- C:-Throttling tubes
- D:-Capillary tubes

Correct Answer:- Option-A

Question50:-In cooling tower water is cooled by the process of

- A:-Condensation
- B:-Fusion
- C:-Evaporation
- D:-All of the above

Correct Answer:- Option-C

Question51:-The latent heat of water is

- A:-540 K.Cal/Kg
- B:-240 K.Cal/Kg
- C:-120 K.Cal/kg
- D:-60 K.Cal/kg

Correct Answer:- Option-A

Question52:-Thermal conductivity of air with rise in temperature

- A:-Increases
- B:-Decreases
- C:-Remains constant
- D:-May increase or decrease

Correct Answer:- Option-A

Question53:-The thermostatic expansion valve is also called

- A:-Constant superheat valve
- B:-Constant pressure valve
- C:-Constant temperature valve
- D:-Constant volume valve

Correct Answer:- Option-A

Question54:-A grill along with a damper is called

- A:-Register
- B:-Duct
- C:-Diffuser
- D:-Attenuator

Correct Answer:- Option-A

Question55:-The refrigeration plants are charged by introducing refrigerants from the cylinder at the

- A:-Suction of compressor
- B:-Receiver
- C:-Evaporator
- D:-Expansion valve

Correct Answer:- Option-B

Question56:-Domestic refrigerator working on a vapor compression cycle uses the following type of expansion device.

- A:-Electrically operating throttling valve
- B:-Manually operated valve
- C:-Thermostatic valve
- D:-Capillary tube

Correct Answer:- Option-D

Question57:-The measurement of temperature is given by which thermodynamic law ?

- A:-Zeroth law

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

Correct Answer:- Option-A

Question58:-A drier is located in the

- A:-Liquid line
- B:-Vapour line
- C:-Compressor
- D:-Evaporator

Correct Answer:- Option-A

Question59:-Out of the following refrigerants, which one has lowest freezing point ?

- A:-Freon-22
- B:-Freon-12
- C:-Ammonia
- D:-Sulphur di oxide

Correct Answer:- Option-B

Question60:-The power per tone in KW of refrigeration is given by

- A:-3.5/COP
- B:-3.5 ×COP
- C:-350/COP
- D:-35/COP

Correct Answer:- Option-A

Question61:-The index which correlates the combined effects of air temperature, relative humidity and air velocity on the human body, is known as

- A:-Mean radiant temperature
- B:-Dew point temperature
- C:-Effective temperature
- D:-None of these

Correct Answer:- Option-C

Question62:-The process of adding of moisture to air at constant dry bulb temperature is known as

- A:-Humidification
- B:-Dehumidification
- C:-Heating
- D:-Cooling

Correct Answer:- Option-A

Question63:-Undercooling in a refrigeration cycle

- A:-Increases COP
- B:-Decreases COP
- C:-Don't change COP
- D:-Unpredictable

Correct Answer:- Option-A

Question64:-Superheated vapor behaves

- A:-Exactly as gas
- B:-As steam
- C:-As ordinary vapor
- D:-Approximately as gas

Correct Answer:- Option-D

Question65:-The most widely used superconductor is

- A:-Nichrome
- B:-Tungsten
- C:-Niobium

D:-Lead

Correct Answer:- Option-C

Question66:-The unit of thermal diffusivity is

A:-m/hK

B:-m/h

C:- m^2/h

D:- m^2/hk

Correct Answer:- Option-C

Question67:-Dust and other impurities in air are removed by

A:-Air washer

B:-Centrifugal device

C:-Adhesive impregnated filter

D:-Any of the above

Correct Answer:- Option-D

Question68:-The refrigeration effect in a dry evaporator compared to flooded evaporator in a similar plant

A:-Is same

B:-Is more

C:-Is less

D:-Is Unpredictable

Correct Answer:- Option-C

Question69:-An air washer is used in a refrigeration system for

A:-Cleaning

B:-Cooling

C:-Humidification

D:-All of the above

Correct Answer:- Option-D

Question70:-If suction pressure decrease, then COP

A:-Decreases

B:-Increases

C:-Has no change

D:-First increases and then decreases

Correct Answer:- Option-A

Question71:-Cooling towers are installed in places where

A:-Water is available in plenty

B:-Water is scarce

C:-For big plants

D:-For small plants

Correct Answer:- Option-B

Question72:-When two refrigerants are mixed in the proper proportions, the mixture forms a third refrigerant called

A:-Synthetic refrigerant

B:-Low pressure refrigerant

C:-Azeotropic refrigerant

D:-Auxiliary refrigerant

Correct Answer:- Option-C

Question73:-Air refrigerators works on

A:-Carnot cycle

B:-Strling cycle

C:-Reversed Joule cycle

D:-Atkinson cycle

Correct Answer:- Option-C

Question74:-Psychrometry is the science of measuring of _____ in air.

- A:-Temperature
- B:-Pressure
- C:-Moisture
- D:-Heat

Correct Answer:- Option-C

Question75:-Lithium bromide in vapor absorption refrigeration system is used as

- A:-Refrigerant
- B:-Cooling substance
- C:-Lubricant
- D:-Absorbent

Correct Answer:- Option-D

Question76:-The vertical distance, the air moves after it leaves the outlet and reaches at the end of blow is called

- A:-Damper size
- B:-Draft
- C:-Drift
- D:-Charge

Correct Answer:- Option-C

Question77:-A DC shunt motor has

- A:-Constant speed
- B:-Variable speed
- C:-Variable velocity
- D:-Pulsating speed

Correct Answer:- Option-A

Question78:-The ratio of supplied air to the air leaving the room is known as

- A:-Entrainment ratio
- B:-Discharge ratio
- C:-Supply ratio
- D:-Velocity ratio

Correct Answer:- Option-A

Question79:-Reciprocating refrigeration compressor uses following type of valve

- A:-Rotary valve
- B:-Ring plate valve
- C:-Poppet valve
- D:-Gate valve

Correct Answer:- Option-B

Question80:-Thermal insulator provide _____ path to heat.

- A:-Smaller
- B:-Longer
- C:-Zero
- D:-None of the above

Correct Answer:- Option-B

Question81:-A Baudelot evaporator is used to

- A:-Chill ice
- B:-Produce icecream
- C:-Separate cream from milk
- D:-Produce ice cube

Correct Answer:- Option-C

Question82:-The most suitable refrigerant for commercial ice plant is

A:-Brine

B:-Ammonia

C:-Freon

D:-Air

Correct Answer:- Option-B

Question83:-Moisture in refrigeration system is removed by

A:-Drier

B:-Dessicant

C:-Filter drier

D:-Any of the above

Correct Answer:- Option-D

Question84:-Air cooler reduces temperature and

A:-Reduces humidity

B:-Increases humidity

C:-Compress air

D:-Compress refrigerant

Correct Answer:- Option-B

Question85:-Which of the following is not desirable property of good insulating material ?

A:-Light weight

B:-High heat conductivity

C:-Odorless

D:-Conformability

Correct Answer:- Option-B

Question86:-The following type of expansion device is utilized in flooded evaporator

A:-Motor operated valve

B:-Self-actuated expansion valve

C:-Capillary tube

D:-Float valve

Correct Answer:- Option-D

Question87:-The solar radiation reaches earth by beam radiation and

A:-Diffused conduction

B:-Diffused radiation

C:-Diffused convection

D:-Beam convection

Correct Answer:- Option-B

Question88:-As relative humidity decreases, the dew point will be

A:-Lower than wet bulb temperature

B:-Higher than wet bulb temperature

C:-Equal to wet bulb temperature

D:-Having no relation

Correct Answer:- Option-A

Question89:-The unit of capacitance is expressed by

A:-Farad

B:-Watt

C:-Ampere

D:-Volts

Correct Answer:- Option-A

Question90:-An electrically operated switch used to disconnect the starting winding from the circuit, when the motor reaches 75% of its rated speed

A:-OLP

B:-Starting capacitor

C:-Relay

D:-Running capacitor

Correct Answer:- Option-C

Question91:-Which part of Indian Constitution deals with Fundamental Rights ?

A:-Part 12

B:-Part 5

C:-Part 4

D:-Part 3

Correct Answer:- Option-D

Question92:-Which article of Indian Constitution deals with Amendment of Constitution ?

A:-Article 356

B:-Article 36

C:-Article 368

D:-Article 370

Correct Answer:- Option-C

Question93:-How many schedules are there in Indian Constitution ?

A:-8 Schedules

B:-10 Schedules

C:-12 Schedules

D:-5 Schedules

Correct Answer:- Option-C

Question94:-Which Amendment added Right to Education to Indian Constitution ?

A:-86th Amendment

B:-84th Amendment

C:-73rd Amendment

D:-68th Amendment

Correct Answer:- Option-A

Question95:-Who was the Chairman of Drafting Committee of Indian Constitution ?

A:-Dr. Rajendra Prasad

B:-Jawahar Lal Nehru

C:-Dr. B. R. Ambedkar

D:-K. M. Munshi

Correct Answer:- Option-C

Question96:-Who is the Ex-Officio Chairman of Rajya Sabha ?

A:-Prime Minister

B:-Vice President

C:-President

D:-Governor

Correct Answer:- Option-B

Question97:-Name the body which framed Indian Constitution.

A:-Parliament

B:-Constituent Assembly

C:-Rajya Sabha

D:-Lok Sabha

Correct Answer:- Option-B

Question98:-Which Article of Indian Constitution abolishes untouchability ?

A:-Article 17

B:-Article 18

C:-Article 32

D:-Article 15

Correct Answer:- Option-A

Question99:-What is the minimum age required to contest in Lok Sabha Election ?

A:-35 years

B:-30 years

C:-40 years

D:-25 years

Correct Answer:- Option-D

Question100:-How many members are elected to Kerala Legislative Assembly ?

A:-140

B:-141

C:-142

D:-9

Correct Answer:- Option-A