

## PROVISIONAL ANSWER KEY

Question 169/2023/OL

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Code:

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Department Agriculture Development and Farmers Welfare

Question1:-The name of attachment to the MB plough bottom used to cut trash, avoid clogging and to obtain a neat furrow wall is

A:-Jointer

B:-Coulter

C:-Trash shield

D:-Gauge wheel

Correct Answer:- Option-B

Question2:-Which of the following statements are correct with respect to the draft requirement of disc ploughs?

i. Draft is influenced by the speed of operation.

ii. Cross sectional area of the furrow does not influence the draft requirement

iii. Diameter of the disc and concavity have considerable effect on draft.

iv. Increasing the tilt angle decreases the draft.

A:-i, ii and iii are correct

B:-ii and iv are correct

C:-i and iii are correct

D:-all are correct

Correct Answer:- Option-C

Question3:-Which of the following methods are used to change the seed rate in a fluted roller type metering mechanism?

i. Shifting the rollers sideways to change the length of grooves exposed to the seed

ii. Change the adjustable gate opening at the discharge side

iii. Changing the speed of driving square shaft of the fluted roller

A:-i, ii and iii

B:-only i

C:-ii and iii

D:-i and iii

Correct Answer:- Option-D

Question4:-\_\_\_\_\_ type plough bottoms are favoured in dry areas where the soil is rough and stony.

A:-Rolling bottom

B:-Sliding bottom

C:-Chisel type bottom

D:-Lister bottoms

Correct Answer:- Option-A

Question5:-A virtual point on tractor, midway between the rear wheels and in line with axle is named as

A:-Center of pull

B:-Center of load

C:-Drawbar point

D:-Hinge point

Correct Answer:- Option-A

Question6:-A 2-bottom tractor mounted MB plough of 30 cm width is ploughing at a depth of 10 cm. If the tractor speed is 5 kmph and field efficiency is 70%, what is the effective field capacity of ploughing operation.

A:-3.0  $ha/hr^{-1}$

B:-2.1  $ha/hr^{-1}$

C:-0.3  $ha/hr^{-1}$

D:-0.21  $ha/hr^{-1}$

Correct Answer:- Option-D

Question7:-In MB ploughs, the angle normally provided at the cutting edge of share to the direction of travel in order to obtain turning and immediate inversion is

A:-20° to 25°

B:-30° to 35°

C:-35° to 40°

D:-40° to 45°

Correct Answer:- Option-D

Question8:-Ratio of the net pull produced to the dynamic normal load of the traction device is

A:-Tractive efficiency

B:-Net Traction coefficient

C:-Motion resistance ratio

D:-None of these

Correct Answer:- Option-B

Question9:-Ratio of seat vibration intensity to chassis vibration intensity in a tractor is known as

A:-Transfer function

B:-Transmissibility

C:-Frequency response

D:-Vibration coefficient

Correct Answer:- Option-B

Question10:-The appropriate approach for calculating depreciation when a tractor is purchased for its entire operational lifespan and not intended for resale is the

A:-Straight line method

B:-Compound interest method

C:-Constant percentage method

D:-Estimated method

Correct Answer:- Option-A

Question11:-In the equation ( $S = C + N \tan \phi$ ) to determine the shear stress at the soil failure surface when a tillage tool moves in soil, which factor is represented by the letter  $\phi$

A:-Angle of soil cohesion

B:-Angle of cutting edge

C:-Angle of internal friction

D:-Angle of attack

Correct Answer:- Option-C

Question12:-Which of the following statements are true regarding the fluid properties affecting droplet size in agricultural spraying?

- i. increased surface tension decreases the size of droplets
- ii. increased surface tension increases the size of droplets
- iii. increased viscosity increases droplet sizes
- iv. increased viscosity decreases droplet sizes

A:-i and iii are correct

B:-ii and iv are correct

C:-ii and iii are correct

D:-only ii is correct

Correct Answer:- Option-C

Question13:-The rate at which energy is received from the sun on a unit area perpendicular to the rays of the sun, at mean distance of the earth from the sun will be

A:-1.353 kilowatts per square meter

B:-1353 W/ $m^2$

C:-11.65 Langley's

D:-42.92 Btu per sq.ft

Correct Answer:- Option-B

Question14:-The instrument employed for measurement of the total hemispherical solar radiation is

A:-pyrheliometer

B:-sunshine recorder

C:-eppley pyr heliometer

D:-pyranometer

Correct Answer:- Option-D

Question15:-The area of the wind streams swept by the wind turbine is maximum, when blades face into the wind. This is achieved by

A:-Yaw control

B:-Pitch control

C:-Turbine tower system

D:-Wind stream variation

Correct Answer:- Option-A

Question16:-The C:N ratio for best biogas production is 25 to 30 because

A:-Thermophilic bacteria are active only at C:N ratio of 25 to 30

B:-C:N ratio of 25 to 30 will avoid scum formation

C:-The fermentative bacteria use carbon 25 to 30 times as fast as nitrogen

D:-C:N ratio of 25 to 30 will maintain pH

Correct Answer:- Option-C

Question17:-The intensity, duration and frequency of rainfall are interrelated as

A:-  $i = (K + T^a) / (t + b)^d$

B:-  $i = (K + T^d) / (t - b)^a$

C:-  $i = (K^a + T) / (t + b)^d$

D:-  $i = (KT^d) / (t \times b)^a$

Correct Answer:- Option-A

Question18:-The contour bunds in heavy and medium rainfall areas, the grades of the bunds may be \_\_\_\_\_ towards the outlet.

A:-0.02 to 0.08%

B:-0.2 to 0.3%

C:-2 to 3%

D:-0.6 to 0.8%

Correct Answer:- Option-B

Question19:-Which of the following is NOT the characteristics of the land capability of different land areas for sustainable crops

A:-The Slope

B:-Erosion condition

C:-The soil depth and soil type

D:-Rainfall

Correct Answer:- Option-D

Question20:-Which of the following software will not be used for GIS application software?

A:-GRASS

B:-IDRISI

C:-ILWIS

D:-BETILGI

Correct Answer:- Option-D

Question21:-In a Geographical data models, forest, desert, floodplain can be represented by

A:-Points

B:-Polygons

C:-Lines

D:-All the above

Correct Answer:- Option-B

Question22:-The Gunter's chain is \_\_\_\_\_ long and divided into \_\_\_\_\_ links.

A:-33 ft, 100

B:-33 ft, 16

C:-66 ft, 100

D:-30 ft, 25

Correct Answer:- Option-C

Question23:-Which of the following is / are bench marks

i. GTS bench marks

ii. Permanent and temporary bench mark

iii. Arbitrary bench mark

iv. Point benchmark

A:-i and ii only

B:-i, ii and iii

C:-iii and iv only

D:-all the above

Correct Answer:- Option-B

Question24:-The velocity of flow at the toe in Chute Spilway design is given by

A:- $V_1 = 2g(H-h_f)$

B:- $V_1 = \text{Sq.root of } (2g(H+h_f))$

C:- $V_1 = 2g(H+h_f)$

D:- $V_1 = \text{Sq.root of } (2g(H-h_f))$

Correct Answer:- Option-D

Question25:-If the gully depth is between 1m to 5m, then Gullies are classified as

A:-Small gullies

B:-Large gullies

C:-Medium gullies

D:-Gullies depth are more than 5 m

Correct Answer:- Option-C

Question26:-Recommended maximum velocities in low pressure underground pipelines are in the range of \_\_\_\_\_

A:-2.5 to 3.5 m/s

B:-2.3 to 2.5 m/s

C:-1.3 to 1.5 m/s

D:-0.1 to 0.4 m/s

Correct Answer:- Option-C

Question27:-The actual velocity at which water is moving through an aquifer is related to the Apparent / Seepage velocity given by Darcys law, by the expression

A:- $v_a = v/n$

B:- $v_a = v \times n$

C:- $v_a = n/V$

D:- $v_a = v/e$

Correct Answer:- Option-A

Question28:-The Delta for a crop when its duty is 864 hectares/cumec and base period is 120 days is

A:-864 cm

B:-120 cm

C:-100 cm

D:-86.4 cm

Correct Answer:- Option-B

Question29:-In the silt theories for design of Alluvial channels by Kennedy which of the following statements are true :

- i. Silt is kept in suspension by the vertical component of eddies
- ii. Eddies generated from the sides of Trapezoidal channel was neglected
- iii. Critical velocity formula depends only on the depth of flow
- iv. Two regime conditions exist : initial and final regime

A:-i, ii and iii

B:-all the above

C:-ii, iii and iv

D:-iii and iv

Correct Answer:- Option-A

Question30:-The drilling method best adapted for drilling deep holes in unconsolidated Alluvial formations is

A:-cable tool percussion drilling

B:-Rotary drilling

C:-Air rotary drilling

D:-Down the hole drilling

Correct Answer:- Option-B

Question31:-Which of the following statements are true regarding performance of centrifugal pumps

- i. The capacity of the pump varies directly as the speed
  - ii. The capacity of pump varies directly as the diameter
  - iii. The head varies directly as the square of the speed
  - iv. The head varies directly as the cube of the diameter
- ii, iii and iv

A:-ii, iii and iv

B:-All of the above

C:-i, ii and iii

D:-none of the above

Correct Answer:- Option-C

Question32:-The filter used in Drip irrigation systems to remove suspended substances with specific gravity greater than 1.2 is

A:-Media filter

B:-Screen filter

C:-Disc filter

D:-Hydro cyclone filter

Correct Answer:- Option-D

Question33:-In a centrifugal pump, the volute casing helps to convert

A:-Pressure head to velocity head

B:-Gravity head to velocity head

C:-Gravity head to pressure head

D:-Velocity head to pressure head

Correct Answer:- Option-D

Question34:-The accessory used to relieve pressure in the tile drain line is

A:-Junction box

B:-French drains

C:-Relief wells and Breathers

D:-Blind inlets

Correct Answer:- Option-C

Question35:-In case of grain, the ratio of the diameter of the largest inscribing circle to the diameter of the smallest circumscribing circle is known as

A:-Shape factor

B:-Roundness

C:-Sphericity

D:-None of the above

Correct Answer:- Option-C

Question36:-The drag and lift properties of food material are important in designing

A:-Screw conveyors

B:-Belt conveyors

C:-Bucket elevator

D:-Pneumatic conveyors

Correct Answer:- Option-D

Question37:-In \_\_\_\_\_ separator, the grain shape and the frictional difference between the grains and belt material are used for separation

A:-Specific gravity

B:-Cyclone

C:-Centrifugal

D:-Inclined belt

Correct Answer:- Option-D

Question38:-The transport property of material that affects heat conduction is

A:-Thermal conductivity

B:-Velocity

C:-Viscosity

D:-Porosity

Correct Answer:- Option-A

Question39:-The overall heat transfer coefficient in a heat exchanger takes into effect

A:-Conduction between solid and liquids involved

B:-Thermal radiation from the liquid and solid surfaces

C:-Convection in each fluid involved and conduction through the walls separating the fluids

D:-Steady state conduction heat transfer and radiation effects only

Correct Answer:- Option-C

Question40:-During drying process, the air moving through the grain for removing moisture is subjected to this thermodynamic process

A:-Heating and humidifying

B:-Cooling and humidifying

C:-Heating and dehumidifying

D:-Cooling and dehumidifying



Correct Answer:- Option-B

Question41:-In multiple effect evaporators, the pressure in the 2nd stage will be \_\_\_\_\_ that of the first stage

- A:-Greater than
- B:-Less than
- C:-Same as
- D:-Slightly greater

Correct Answer:- Option-B

Question42:-In falling film evaporators, the milk is introduced at the \_\_\_\_\_ of the heating unit

- A:-Side
- B:-Bottom
- C:-Top
- D:-Front

Correct Answer:- Option-C

Question43:-In a filtration equipment, resistance to filtration arises from two sources namely the filtering screen and

- A:-liquid
- B:-frame
- C:-air
- D:-filter cake

Correct Answer:- Option-D

Question44:-Suitable moisture content for the safe storage of paddy is in the range of

- A:-10-12%
- B:-16-22%
- C:-22-28%
- D:-4-6%

Correct Answer:- Option-A

Question45:- $F_0$  value in thermal processing indicates the sum of lethality rate to ensure

- A:-Complete sterilization
- B:-Sterilization
- C:-Commercial sterilization
- D:-Pasteurization

Correct Answer:- Option-C

Question46:-The free moisture available in the grain will be removed first in this phase of drying

- A:-falling rate drying
  - B:-constant rate drying
  - C:-rising rate drying
  - D:-exponential rate drying
- Correct Answer:- Option-B

Question47:-One of the effects of the deposition of fouling matter in heat exchanger tubes in milk processing is that the

- A:-heat transfer rate will be increased
  - B:-taste and smell of the milk will become more desirable
  - C:-overall heat transfer coefficient will be reduced
  - D:-convective heat transfer coefficient will be increased
- Correct Answer:- Option-C

Question48:-Kick has assumed that the energy required for size reduction is proportional to the

- A:-size reduction ratio (dL/L)
  - B:-rate of area reduction
  - C:-rate of volume reduction
  - D:-shape
- Correct Answer:- Option-A

Question49:-A quotient indicating how much more rapidly the reaction proceeds at a temperature  $T_2$  than at a lower temperature  $T_1$  is called as

- A:-D value
  - B:-TDT value
  - C:-Z value
  - D:-Q value
- Correct Answer:- Option-D

Question50:-If bulk density of a material is given as  $700 \text{ kg/m}^3$  and true density as  $1000 \text{ kg/m}^3$ , its porosity will be

- A:-30%
  - B:-70%
  - C:-40%
  - D:-20%
- Correct Answer:- Option-A

Question51:-When the annual demand of a product is 24,000 units the economic order quantity (EOQ) is 2000 units. If the annual demand is 48,000 units the most appropriate EOQ will be

- A:-1400 units
- B:-2000 units

C:-2800 units

D:-4000 units

Correct Answer:- Option-C

Question52:-In simple exponential smoothing forecasting to give higher weightage to recent demand information, the smoothing constant must be equal to

A:-1

B:-zero

C:-0.5

D:-1.0

Correct Answer:- Option-D

Question53:-Six jobs arrived in a sequence as given below :

Job	I	II	III	IV	V	VI
Completion time	4	9	5	10	6	8

Average flow time (in days) for the above jobs using shortest processing time rule is

A:-20.83

B:-20.03

C:-125

D:-126.5

Correct Answer:- Option-A

Question54:-In PERT analysis, a critical activity has

A:-Maximum float

B:-Zero float

C:-Maximum cost

D:-Minimum cost

Correct Answer:- Option-B

Question55:-The word Kanban is most appropriate associated with

A:-Economic order quantity

B:-Just-in-time production

C:-Capacity planning

D:-product design

Correct Answer:- Option-B

Question56:-If there are 'm' sources and 'n' destinations in a transportation matrix, the total number of basic variables in the basic feasible solution is

A:-m + n

B:-m - n - 1

C:-m + n - 1

D:-m

Correct Answer:- Option-C

Question57:-Which one of the following is not a decision taken during the aggregate production planning stage?

A:-Scheduling of machines

B:-Amount of labor to be committed

C:-Rate at which production should happen

D:-Inventory to be carried forward

Correct Answer:- Option-A

Question58:-Determination of standard time in complex job system is best done through

A:-Stop watch time study

B:-Analysis of micro motions

C:-Group timing techniques

D:-Analysis of standard data systems

Correct Answer:- Option-D

Question59:-Which of the following are the principles of material handling?

A:-keep all handling to the minimum

B:-move as few pieces as possible in one unit

C:-move the heaviest weight to the least distance

D:-select only efficient handling equipment

Correct Answer:- Option-B

Question60:-The routing function in a production system design is concerned with

A:-man power utilization

B:-machine utilization

C:-quality assurance of a product

D:-optimizing material flow through the plant

Correct Answer:- Option-D

Question61:-Number of nearest neighboring atoms on FCC crystal is

A:-6

B:-8

C:-12

D:-None of the above

Correct Answer:- Option-C

Question62:-Choose the correct statements for normalizing

i. Normalizing improves strength

ii. Normalizing increase hardness

- iii. Normalizing removes internal stresses
- iv. Normalizing improve toughness.

A:-i and ii are correct

B:-iii and iv are correct

C:-i and iv are correct

D:-all statements are correct

Correct Answer:- Option-B

Question63:-Which of the following defect is not detected by Dye penetrant test

A:-Nonmetallic inclusions

B:-Leaks

C:-Cracks

D:-Forging defects

Correct Answer:- Option-A

Question64:-Which of the following instrument is appropriate for inspection during mass production of identical cylindrical specimens with  $\pm 0.5\text{mm}$

A:-Vernier calipers

B:-Micrometers

C:-GO and NO-GO gauges

D:-None of these

Correct Answer:- Option-C

Question65:-Which is preferred for welding Aluminium sheets?

A:-Carbon Arc Welding

B:-Oxy-Acetylene Gas welding

C:-TIG welding

D:-None of these

Correct Answer:- Option-C

Question66:-What happens to the permeability of moulding sand as the asnd grain size increases?

A:-Decreases

B:-Increases

C:-Remains same

D:-Depends on type of sand

Correct Answer:- Option-B

Question67:-In case of simple turning operation in a Lathe, for the same spindle speed, if the diameter of workpiece is increased, how will the cutting speed vary?

A:-Increase

B:-Decrease

C:-Will not change

D:-Varies depending on tool material

Correct Answer:- Option-A

Question68:-Continuous chips with BUE are formed during the machining of

A:-Brittle material at low cutting speed

B:-Ductile material at low cutting speed

C:-Brittle material at high cutting speed

D:-Ductile material at high cutting speed

Correct Answer:- Option-B

Question69:-Process of changing the shape of grinding wheels when it becomes worn from original shape due to breaking away of abrasive is called

A:-Dressing

B:-Truing

C:-Glazing

D:-Buffing

Correct Answer:- Option-B

Question70:-In which of the following milling method, the cutter rotates in the direction opposite to the direction in which work is fed

A:-Up Milling

B:-Climb Milling

C:-Down milling

D:-None of these

Correct Answer:- Option-A

Question71:-A pitot-static tube, with a coefficient of 0.98 is used to measure the velocity of water in a pipe. The stagnation pressure head is 6 m and static pressure head is 5 m. What is the velocity of flow?

A:-5.32 m/s

B:-3.14 m/s

C:-2.14 m/s

D:-4.34 m/s

Correct Answer:- Option-D

Question72:-Euler equation for water turbine is derived on the basis of

A:-Rate of change of angular momentum

B:-Rate of change of linear momentum

C:-Conservation of mass

D:-Rate of change of velocity

Correct Answer:- Option-A

Question73:-Stream lines, streak lines and path lines are identical for a

A:-Steady flow

B:-Unsteady flow

C:-Incompressible flow

D:-Never identical

Correct Answer:- Option-A

Question74:-The material acceleration is always zero for a/an

A:-Steady and uniform flow

B:-Steady and non-uniform flow

C:-Unsteady and uniform flow

D:-Unsteady and non-uniform flow

Correct Answer:- Option-A

Question75:-The separation of the boundary layer takes place when the pressure gradient is

A:-Negative

B:-Constant

C:-Positive

D:-Zero

Correct Answer:- Option-C

Question76:-When an air vessel is fitted to a single acting reciprocating pump the % of saving in work done against friction is

A:-84.8%

B:-39.2%

C:-50%

D:-100%

Correct Answer:- Option-A

Question77:-Two pumps can operate independently at heads  $H_1, H_2$  and discharges  $Q_1, Q_2$  respectively. If the pumps are connected in parallel, then what are the resulting discharge (Q) and head (H)

A:- $H = H_1 = H_2; Q = Q_1 + Q_2$

B:- $H = H_1 + H_2; Q = Q_1 + Q_2$

C:- $H = H_1 + H_2; Q = Q_1 - Q_2$

D:- $H = H_1 = H_2; Q = Q_1 = Q_2$

Correct Answer:- Option-A

Question78:-The overall efficiency of a centrifugal pump when head is 25 m, discharge is  $0.004 \text{ m}^3/\text{s}$  and output power P is 16 kW ( $g = 10 \text{ m/s}^2, \rho = 1000 \text{ kg/m}^3$ )

A:-65%

B:-55%

C:-52.5%

D:-62.5%

Correct Answer:- Option-D

Question79:-Match List-I (Turbine) with List-II (Specific speeds) and select the correct answer using the codes given below the lists

List-I

- A. Francis
- B. Kaplan
- C. Pelton (one jet)
- D. Pelton (two jets)

List-II

- 1. 10-35
- 2. 35-60
- 3. 60-300
- 4. 300-1000

A:-A-3, B-4, C-1, D-2

B:-A-2, B-3, C-4, D-1

C:-A-1, B-2, C-3, D-4

D:-A-4, B-1, C-3, D-2

Correct Answer:- Option-A

Question80:-For maximum efficiency of a series of curved vanes, the vane speed is

A:-Quarter of the jet speed

B:-One third of the jet speed

C:-Equal to jet speed

D:-Half of the jet speed

Correct Answer:- Option-D

Question81:-The centroid of an equilateral triangle is located at

A:-One-third the distance from each vertex along each median

B:-Two-third the distance from each vertex along each median

C:-Half the distance from each vertex along each median

D:-Various distance from each vertex along the median

Correct Answer:- Option-B

Question82:-A steel cylindrical closed container having inner diameter **D** and wall thickness **t**, where **D > 20t**, is holding gas at pressure **P**. If the container is positioned horizontally, the hoop stress experienced by the cylinder could be

A:-2 P/t

B:-4 P/t

C:-PD/2t

D:-PD/4t

Correct Answer:- Option-C

Question83:-Which among the following screw thread profile is suggested in higher axial load applications



- A:-Acme thread
- B:-Buttress thread
- C:-Square thread
- D:-V-thread

Correct Answer:- Option-B

Question84:-A design engineer designated a fit as **25H6k7**, to mount a gear on a shaft. What kind of fit is it?

- A:-Clearance fit
- B:-Interference fit
- C:-Transition fit
- D:-Data insufficient

Correct Answer:- Option-C

Question85:-An orthopedic implant pin of titanium alloy having length **50 mm** and diameter  **$20 \pm 0.02$  mm** is to be plated with nickel with coating thickness  **$50 \pm 5 \mu\text{m}$** . What would be the dimension of the GO ring gauge to check the diameter of the plated pin, if gauge tolerance is neglected?

- A:-20.075 mm
- B:-20.130 mm
- C:-20.020 mm
- D:-20.070 mm

Correct Answer:- Option-B

Question86:-'A screw advances linearly when the screw is rotated inside a stationary nut'. How many degrees of freedom for such a screw joint?

- A:-1
- B:-2
- C:-zero
- D:-cannot be defined

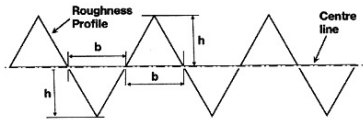
Correct Answer:- Option-A

Question87:-Stress-strain curve of a material is observed to be linear throughout the strain limit. The material could be

- A:-Titanium
- B:-Mild steel
- C:-Glass
- D:-Any of the above

Correct Answer:- Option-C

Question88:-A surface roughness profile of a turned surface is appeared to be a triangular profile having base **b** and height **h**, as shown below. The **CLA** roughness value for the given profile would be



A:  $-h/2$

B:  $-h$

C:  $-2h$

D:  $-bh$

Correct Answer:- Option-A

Question89:-Pick the odd-one-out from the given power transmission drives:

A:-Gear drive

B:-Belt drive

C:-Chain drive

D:-Clutch drive

Correct Answer:- Option-D

Question90:-Which among the given metal joining terminology is commonly used, when two pieces of metal are joined by melting its edges and adding a filler material, if necessary?

A:-Ultrasonic welding

B:-Friction welding

C:-Resistance welding

D:-Fusion welding

Correct Answer:- Option-D

Question91:-For a heat exchanger,  $-\Delta T_{\max}$  is the maximum temperature difference and  $\Delta T_{\min}$  is the minimum temperature difference between the two fluids. LMTD is the log mean temperature difference.  $C_{\min}$  and  $C_{\max}$  are the minimum and the maximum heat capacity rates. The maximum possible heat transfer between the two fluids is

A:  $-C_{\max} \text{ LMTD}$

B:  $-C_{\min} \text{ LMTD}$

C:  $-C_{\max} \Delta T_{\max}$

D:  $-C_{\min} \Delta T_{\max}$

Correct Answer:- Option-D

Question92:-A hollow cylinder has length  $L$ , inner radius  $r_1$ , outer radius  $r_2$ , and thermal conductivity  $k$ . The thermal resistance of the cylinder for radial conduction is

A:  $-\frac{\ln\left(\frac{r_1}{r_2}\right)}{2\pi kL}$

B:  $-\frac{\ln\left(\frac{r_2}{r_1}\right)}{2\pi kL}$

C:  $-\frac{2\pi kL}{\left(\frac{r_1}{r_2}\right)}$

D:-None of the above

Correct Answer:- Option-B

Question93:-The ratio of momentum diffusivity ( $\nu$ ) to thermal diffusivity ( $\alpha$ ) is called

A:-Prandtl number

B:-Reynolds number

C:-Grashoff number

D:-Nusselt number

Correct Answer:- Option-A

Question94:-For a glass plate transitivity and reflectivity are specified as 0.85 and 0.09 respectively, the absorptivity of the glass plate is

A:-0.05

B:-0.005

C:-0.06

D:-0.94

Correct Answer:- Option-C

Question95:-Before entering the expansion or the throttle valve, a refrigerant's condition in any vapor compression system is

A:-Dry vapor

B:-High pressure saturated liquid

C:-Low pressure saturated liquid

D:-High pressure vapor

Correct Answer:- Option-B

Question96:-Which of the following process is used in winter air conditioning?

A:-Heating and Humidification

B:-Cooling and Dehumidification

C:-Dehumidification

D:-All of the above

Correct Answer:- Option-A

Question97:-The highest temperature of a refrigerant in a refrigeration system operating on a reversed

Carnot cycle is  $27^{\circ}\text{C}$  and the lower temperature is  $-23^{\circ}\text{C}$ . The coefficient of performance?

A:-5.5

B:-0.2

C:-1.5

D:-5.0

Correct Answer:- Option-D

Question98:-The theoretically correct air-fuel ratio for petrol engine is approximately

A:-7:1

B:-4:1

C:-25:1

D:-15:1

Correct Answer:- Option-D

Question99:-The thermal efficiency of a diesel engine is of the order of

A:-90%

B:-15%

C:-35%

D:-70%

Correct Answer:- Option-C

Question100:-Diesel Engine fuels are rated by

A:-Cetane number

B:-Octane number

C:-HUCR

D:-CFR number

Correct Answer:- Option-A