FINAL ANSWER KEY

Question1:-The first law minister of Kerala is _____

    A:-V.R. Krishna Iyer

    B:-C. Achutha Menon

    C:-E. Chandrasekaran Nair

    D:-K.R. Gouri

    Correct Answer:- Option-A

Question2:-The first session of constituent assembly convened in _____

    A:-1950 January 26

    B:-1950 January 24

    C:-1950 January 30

    D:-1950 February 28

    Correct Answer:-Question Cancelled

Question3:-Who started Pandhibojanam (Mixed dining) firstly is India ?

    A:-Thycad Ayyaguru

    B:-Dr. Palpu

    C:-Sahodaran Ayyappan

    D:-Sri Narayana Guru

    Correct Answer:- Option-A

Question4:-The famous 'Kadampuzha' temple situates in which district ?

    A:-Thrissur

    B:-Palakkad

    C:-Kozhikode

    D:-Malappuram

    Correct Answer:- Option-D

Question5:-Ezhava Memorial submitted to _____

    A:-Sri Chithira Thirunal

    B:-Swathi Thirunal

    C:-Sri Moolam Thirunal

    D:-Rani Laxmi Bai Thampuvatti

    Correct Answer:- Option-C

Question6:-Who translated ' Qu-ran' firstly into Malayalam ?

    A:-K.M. Moulavi

    B:-E.K. Moulavi

    C:-Mohamed Amani Moulavi

    D:-Vakkom Abdur Kader Moulavi

    Correct Answer:- Option-D

Question7:-Who is the author of the book, 'Thee Kadal Kadanj Thirumathuram' ?

    A:-C. Radhakrishnan

    B:-Sethu

    C:-Vaishakan

    D:-V.R. Sudheesh

    Correct Answer:- Option-A

Question8:-'Arangu Kanatha Nadan' is the autobiography of _____

    A:-N.N. Pillai

    B:-P.J. Antony

    C:-Thikkodiyan

    D:-Ibrahim Vengara

    Correct Answer:- Option-C

Question9:-Who is the Kerala Minister for Hajj Affairs ?

A:-Dr. K.T. Jaleel

B:-A.C. Moideen

C:-G. Sudakaran

D:-V.S. Sunilkumar

Correct Answer:- Option-A

Question10:-Who among the following is not the leader of 1921 Malabar Revolt ?

A:-Seethi Koya Thangal

B:-Variyan Kunnath Kunhamed Haji

C:-Ali Musliyar

D:-Mamburam Syed Alavi Thangal

Correct Answer:- Option-D

Question11:-In the 'PERT' network, the project completion time is considered to follow

A:-Normal Distribution

B:-Beta Distribution

C:-Linear Distribution

D:-None of the above

Correct Answer:- Option-A

Question12:-What are the constituent of phosphor bronze ?

A:-Nickel, Copper and Cobalt

B:-Copper, Zinc and Manganese

C:-Copper, Tin and Phosphorous

D:-Aluminium, Copper and Nickel

Correct Answer:- Option-C

Question13:-Movement of block of atoms along certain crystallographic phases and directions termed as

A:-Glide

B:-Twinning

C:-Slip

D:-Jog

Correct Answer:- Option-C

Question14:-The correct order of co-ordination number in SC, BCC, FCC and HCP unit cells is

A:-12, 12, 8, 6

B:-6, 8, 12, 12

C:-6, 6, 8, 12

D:-12, 8, 6, 12

Correct Answer:- Option-B

Question15:-Addition of magnesium to cast Iron increases it's

A:-Hardness

B:-Creep strength

C:-Corrosion resistance

D:-Ductility and strength in tension

Correct Answer:- Option-D

Question16:-During a tensile testing of a specimen using 'UTM', the parameters actually measured include

A:-True stress and true strain

B:-Poisson's ratio and Young's modulus

C:-Engineering stress and engineering strain

D:-Load and elongation

Correct Answer:- Option-D

Question17:-A gauge block is checked for it's taperness using interferometer and the wavelength of the light is 0.4 μ m. The number of fringes obtain are ten and five when the job is filted by 180°. The taperness is

A:-0.4μ m ` `

B:-0.5μ m

C:-0.8μ m

D:-0.6μ m

Correct Answer:- Option-B

Question18:-The most accurate surface roughness measuring instrument is

A:-Perthometer

B:-Light Section Microscope

C:-Tomlinson Surface Tester

D:-Profile projector

Correct Answer:- Option-A

Question19:-Draft on pattern means

A:-Locating aid

B:-Allowance for machining

C:-Facility for stripping

D:-Compensation for shrinkage

Correct Answer:- Option-C

Question20:-Match plate pattern is used in

A:-green sand molding

B:-bench molding

C:-pit moulding

D:-machine moulding

Correct Answer:- Option-D

Question21:-Angle on which strength of the tool depends is

A:-lip angle

B:-rake angle

C:-cutting angle

D:-clearance angle

Correct Answer:- Option-B

Question22:-Drilling can be termed as

A:-Oblique cutting

B:-Simple cutting

C:-Orthogonal cutting

D:-Uniform cutting

Correct Answer:- Option-A

Question23:-In APT language, the cutter motion in incremental cordinate mode is addressed as

A:-GO TO/...

B:-GO/TO...

C:-GO DL TA/...

D:-GO FWD/...

Correct Answer:- Option-B

Question24:-The critical depth of a rectangular channel of width 4 m and discharge of $12m^{3}$/sec is equal to

A:-0.972 mm

B:-300 mm

C:-30 mm

D:-674 mm

Correct Answer:- Option-A

Question25:-Flow can be considered as incompressible flow

A:-When mach number less than 0.3

B:-When mach number in between 0.3 and 1

C:-When mach number greater than 1

D:-When mach number equal to 1

Correct Answer:- Option-A

Question26:-In a doublet equipotential lines are

A:-Circles tangent to y-axis

B:-Circles tangent to x-axis

C:-Concentric circles with centre on y-axis

D:-Concentric circle with centre on x-axis

Correct Answer:- Option-A

Question27:-What is the value of momentum correction factor for a turbulant flow in a pipe ?

A:-greater than 1

B:-1.02-1.05

C:-1.33

D:-2.00

Correct Answer:- Option-B

Question28:-When maximum power is transmitted through the pipe, the relation between Total Head Supplied (H) and Head loss due to friction $(H_{(L)})$ is

A:-$H_{(L)}$ = $H//2$

B:-$H_{(L)}$ = $H//4$

C:-`H_(L)` = `H//3`

D:-`H_(L)`= H

Correct Answer:- Option-C

Question29:-What will be the number of buckets on the periphery of Pelton Wheel Runner, If 'D' is the diameter of wheel and 'd' is the diameter of the jet ?

A:-`D//2d` + 10

B:-`(D)/(2d)` +12

C:-`(D)/(2d)`+14

D:-`(D)/(2d)`+15

Correct Answer:- Option-D

Question30:-What is the maximum efficiency of a jet striking a single plate moving in the direction of jet is

A:-`(4)/(27)`

B:-`(6)/(27)`

C:-`(1)/(2)`

D:-`8//27`

Correct Answer:- Option-D

Question31:-For Francis Turbine Thoma's critical cavitation factor `sigma_(C)` can be related to specific speed as

A:-0.30 + 0.0036 `((N_S)/(100))^(2.73)`

B:-0.30 + 0.0036 `((N_S)/(100))`

C:-0.0431 `((N_S)/(100))^(2)`

D:-0.0431`(N_S//100)`

Correct Answer:- Option-C

Question32:-What is the least diameter of impeller in a centrifugal pump to commense the flow, where Hm is the manometric head N is the speed of impeller ?

A:-`(97.7Hm)/(N)`

B:-`(97.7Hm)/(sqrt(N))`

C:-`(97.7sqrt(Hm))/(N)`

D:-`(97.7sqrt(N))/(Hm)`

Correct Answer:- Option-C

Question33:-When an air vessel is fitted in a double acting Reciprocating pump, percentage workdoneper stroke saved against friction is

A:-84.8%

B:-39.2%

C:-46.4%

D:-76.4%

Correct Answer:- Option-B

Question34:-Q `->` Discharge from supply tank to valve box

q `->` Discharge from valve box to delivery tank

H `->` Height of water in discharge tank above valve box

h `->` Height of water in supply tank above valve box

Then D' Aubuisson's efficiency of a hydraulic Ram is

A:-`(Qh)/(qH)`

B:-`(Qq)/(Hh)`

C:-`(qH)/((Q-q)h)`

D:-`(qH)/(Qh)`

Correct Answer:- Option-D

Question35:-A hemispherical shape of diameter 1.5 m is provided in the bottom of a tank. If the depth of water above the horizontal floor of tank is 5 m. What is the magnitude of resultant force on hemisphere ?

A:-78 KN

B:-74 KN

C:-76 KN

D:-75 KN

Correct Answer:- Option-A

Question36:-If `mu` is the actual coeficient of friction in a belt moving in a grooved pulley, the groove angle being '2`alpha`', the virtual coefficient of friction will be

A:-`mu//cosalpha`

B:-`mu//sinalpha`

C:-`mu` sin`alpha` ` `

D:-`mu` cos`alpha`

Correct Answer:- Option-B

Question37:-Design of shafts made of brittle material is based on

    A:-Guest's theory

    B:-St. Venant's theory

    C:-Von-mises theory

    D:-Rankine's theory

    Correct Answer:- Option-D

Question38:-The highest stress that a material can with stand for a specified length of time with out excessive deformation is called

    A:-fatique strength

    B:-endurance strength

    C:-creep strength

    D:-creep rupture strength

    Correct Answer:- Option-C

Question39:-When the addenda of pinion and wheel is such that the path of approach and path of recess are half of their maximum possible values then the length of path of contact is given by,

r pitch circle radius of pinion

R pitch circle radius of wheel

Phi pressure angle

    A:-$((R+r) sinPhi)/(2)$

    B:-$((R+r) cosPhi)/(2)$

    C:-$((R+r) tanPhi)/(2)$

    D:-$((R+r))/(2sinPhi$```` ```

    Correct Answer:- Option-A

Question40:-In a clock mechanism, the gear train used to connect minute hand to hour hand is

    A:-Epicyclic gear train

    B:-Reverted gear train

    C:-Compound gear train

    D:-Simple gear train

    Correct Answer:- Option-B

Question41:-The angle between the direction of follower motion and a normal to pitch curve is called

    A:-Pitch angle

    B:-Prime angle

    C:-Base angle

    D:-Pressure angle

    Correct Answer:- Option-D

Question42:-The ratio of height of Porter Governor (When length of arms and links are equal) to the height of Watt's Governor is

m-mass of ball and M-mass of the load on sleeve.

    A:-$(m)/(m+M)$

    B:-$(M)/(m+M)$

    C:-$(m+M)/(m)$

    D:-$(m+M)/(M)$

    Correct Answer:- Option-C

Question43:-To restore stable operating condition in a hydrodynamic journal bearing, when it encounters higher magnitude loads

    A:-Oil viscosity is to be decreased

    B:-Oil viscosity is to be increased

    C:-Oil viscosity index is to be increased

    D:-Oil viscosity index is to be decreased

    Correct Answer:- Option-B

Question44:-A flywheel of moment of inertia 9-8 Kgm^{2} fluctuates by 30 rpm for a fluctuation of energy of 19360 J. The mean speed of the flywheel is in rpm

    A:-600

    B:-900

    C:-968

    D:-2940

    Correct Answer:- Option-A

Question45:-The number of elastic constants for a completely anisotropic elastic material are

    A:-3

    B:-4

C:-21
D:-25
Correct Answer:- Option-C
Question46:-If 'P' is the Ratio of inside to outside diameter of a shaft, the ratio of torque carrying capacity of solid shaft to that of hollow shaft is given by
A:-$(1-P^4)^{(-1)}$
B:-$1-P^4$
C:-P^4
D:-$(1)/(P^4)$
Correct Answer:- Option-A
Question47:-Angle of helix in a closed coiled spring is
A:-<100
B:->100
C:-=100
D:-None
Correct Answer:- Option-A
Question48:-For the same maximum pressure and temperature of Otto, Diesel and dual combustion air standard cycles
A:-The compression ratio will be same
B:-Heat supplied to the cycles will be same
C:-Air standard efficiency will have same value
D:-Heat rejected by the engine will be same
Correct Answer:- Option-D
Question49:-The mass of carbon per kg of flue gas is given by
A:-$3//7CO_2 +(11)/(3)$ CO
B:-$(7)/(3)CO_2 +3//11$ CO
C:-$3//11CO_2 + 7//3$ CO
D:-$(11)/(3)CO_2 + 3//7$ CO
Correct Answer:- Option-D
Question50:-Critical thickness of insulation for sphere is given by
[k $->$ thermal conductivity, h $->$ heat transfer coefficient]
A:-$k//h$
B:-$(k)/(4Pih)$
C:-$(h)/(2k)$
D:-$(2k)/(h)$
Correct Answer:- Option-D
Question51:-In a certain Heat exchanger, both fluids have identical mass flow rate -sp. heat product. The hotfluid enters at 76°C and leaves at 47°C and cold fluid enters at 26°C and leaves at 55°C. The effectiveness of heat exchanger is
A:-0.16
B:-0.58
C:-0.72
D:-1.0
Correct Answer:- Option-B
Question52:-When ammonia is used as Refrigerant, the recommended material used for Refrigerant lines are
A:-Copper
B:-Aluminium
C:-Steel
D:-Brass
Correct Answer:- Option-C
Question53:-A Spark plug gap should be
A:-0.2 to 0.8 mm
B:-0.3 to 0.7 mm
C:-0.4 to 0.9 mm
D:-0.6 to 1.0 mm
Correct Answer:-Question Cancelled
Question54:-Which type of compressor mostly used in supercharger of internal combustion engines ?
A:-Roots blower
B:-Axial flow compressor
C:-Redial flow compressor
D:-Reciprocating compressor
Correct Answer:- Option-C

Question55:-Thermostatic expansion valves are set mostly for a super heat of
    A:-5°C
    B:-10°C
    C:-15°C
    D:-20°C
    Correct Answer:- Option-A
Question56:-In a Refrigeration system with multiple evaporators at different temperature with compound compression and flash intercooler, the suction vapour to the high pressure stage is
    A:-Wet state
    B:-Dry saturated
    C:-Super heated
    D:-Saturated liquid
    Correct Answer:- Option-B
Question57:-The supply air state of cooling coil with a bypass factor (BPF) lies at
    A:-Intersection of RSHF line with saturation curve
    B:-Intersection of GSHF line with saturation curve
    C:-Point dividing RSHF line in proportion of BPF and (1-BPF)
    D:-Intersection of RSHF line and GSHF line
    Correct Answer:- Option-D
Question58:-The degree of warmth or cold felt by a human body depends mainly on
    A:-DBT
    B:-Relative humidity
    C:-Air velocity
    D:-All of the above
    Correct Answer:- Option-D
Question59:-Petrol Enginer has compression ratio from
    A:-6 to 10
    B:-10 to 15
    C:-15 to 25
    D:-25 to 40
    Correct Answer:- Option-A
Question60:-Which of the following is not included under the definition of wages given under the payment of wages Act, 1936 ?
    A:-Basic wage
    B:-Dearness Allowance
    C:-Gratuity
    D:-Incentive
    Correct Answer:- Option-C
Question61:-Shadow price in linear programming refers to the
    A:-lowest sales price
    B:-maximum cost per item
    C:-value assigned to one unit
    D:-cost of bought out items
    Correct Answer:- Option-C
Question62:-Which of the following stock valuation methods is based on a cost estimate made before the part is purchased
?   A:-FIFO
    B:-WFO
    C:-Standard costing
    D:-Average costing
    Correct Answer:- Option-C
Question63:-Vehicle manufacturing assembly line is an example of
    A:-Product layout
    B:-Process layout
    C:-Group layout
    D:-Fixed position layout
    Correct Answer:- Option-A
Question64:-For forecasting the potential of a new product which one of the following method is used ?
    A:-Time series analysis
    B:-Direct survey method

C:-Sales force composite method

D:-Jury of executive opinion method

Correct Answer:- Option-B

Question65:-SIMO charts are used in

A:-method study

B:-micro motion study

C:-process analysis

D:-layout analysis

Correct Answer:- Option-B

Question66:-The control chart used for the fraction of defective items in a sample is

A:-Range chart

B:-Mean chart

C:-P-chart

D:-C-chart

Correct Answer:- Option-C

Question67:-Low cost, higher volume items requires

A:-no inspection

B:-little inspection

C:-intensive inspection

D:-100% inspection

Correct Answer:- Option-B

Question68:-Which of the following is not a method of depreciation ?

A:-Replacement method

B:-Revaluation

C:-Reducing balance

D:-Straight line

Correct Answer:- Option-A

Question69:-The department which take care of both production as well as control is

A:-Routing

B:-Dispatching

C:-Expediting

D:-Scheduling

Correct Answer:- Option-D

Question70:-Queing theory is associated with

A:-Sales

B:-Inspection time

C:-Production time

D:-Waiting time

Correct Answer:- Option-D

Question71:-If y = $\log_{(e)}x$ + $\log_{(x)}e$ + $\log_{(x)}x$, then the value of the derivative of y with respect to x at x = e is :

A:-0

B:-1

C:-e

D:-None of the above

Correct Answer:- Option-A

Question72:-Equation of the line with mid-point (3, 2) on then portion between the x and y axis is :

A:-2x-3y = 0

B:-3x+2y = 13

C:-2x+3y = 12

D:-None of the above

Correct Answer:- Option-C

Question73:-The area of the parallelogram with one at the origin, having sides as lines with slopes 3 and 4 and making unit intercept on the y-axis is :

A:-1

B:-2

C:-3

D:-4

Correct Answer:- Option-A

Question74:-The minimum value of $\log_{(a)}x$ + $\log_{(x)}a$ at x = $\frac{a}{2}$ where 0 < $\frac{a}{2}$ < a is :

A:-0

B:-1

C:-2

D:-3

Correct Answer:- Option-C

Question75:-If f(x) = min {|x - 1|, |x|, |x+1|} then the indefinite integral of f(x) between -1 and 1 is :

A:-0

B:-1

C:-z

D:-None of these

Correct Answer:- Option-D

Question76:-The area of the graph of the function y = |x-5| and the y axis between the limits 0 and 8 is :

A:-17

B:-9

C:-12

D:-18

Correct Answer:- Option-A

Question77:-The larger of $99^{(99)}$ + $100^{(99)}$ and $101^{(99)}$ is :

A:-$101^{(99)}$

B:-$99^{(99)}$ + $100^{(99)}$

C:-Both are equal

D:-None of these

Correct Answer:- Option-A

Question78:-The value of a for which the system of equations 2x + y - 5 = 0, x - 2y + 1 = 0 and 2x - 14y - a = 0 is consistent is :

A:-1

B:-2

C:--16

D:--12

Correct Answer:- Option-C

Question79:-If cosα + cosβ = 0 = sinα + sinβ then cos 2α + cos 2β =

A:--2 sin (α + β)

B:--2 cos (α + β)

C:-2 sin (α + β)

D:-2 cos (α + β)

Correct Answer:- Option-B

Question80:-The value of 4 cos A cos (60-A) cos (60 + A) is

A:-8 cos 3A

B:-4 cos 3A

C:-2 cos 3A

D:-cos 3A

Correct Answer:- Option-D

Question81:-Frequency of AC power distribution in India is

A:-230 Hz

B:-60 Hz

C:-50 Hz

D:-11 Hz

Correct Answer:- Option-C

Question82:-If 'n' number of resistors with 'R' Ohm each are connected in series and parallel separately, the equivalent resistance will be

A:-nR and R/n

B:-(n+R) and (n-R)

C:-nR and n/R

D:-nR and (R-n)

Correct Answer:- Option-A

Question83:-The impedance in an R-L-C series circuit at Resonance condition will be

A:-X/R

B:-R

C:-L/R

D:-LC

Correct Answer:- Option-B

Question84:-In AC circuits the power delivered to load at Unity Power Factor (UPF) condition will be

A:-Negative

B:-Minimum

C:-Zero

D:-Maximum

Correct Answer:- Option-D

Question85:-The device which is connected in electrical wiring for earth leakage protection is

A:-ELCB

B:-MCB

C:-Fuse

D:-Isolator

Correct Answer:- Option-A

Question86:-In a brick masonry what is called a lap ?

A:-distance between successive vertical joints

B:-distance between successive courses

C:-distance between adjacent bats

D:-distance between adjacent queen closers

Correct Answer:- Option-A

Question87:-What is meant by reduced level ?

A:-height of line of collimation above bench mark

B:-height of a point above bench mark

C:-depth of a point below datum

D:-depth of a point below bench mark

Correct Answer:- Option-C

Question88:-For preparation of concrete which type of aggregate should be preferred for economy ?

A:-angular aggregate

B:-rounded aggregate

C:-flaky aggregate

D:-elongated aggregate

Correct Answer:- Option-B

Question89:-Which among the following is Fe 250 grade steel ?

A:-Plain bars

B:-HYSD bars

C:-TOR steel

D:-TMT steel

Correct Answer:- Option-A

Question90:-In which case direct ranging is used ?

A:-If two stations are not intervisible

B:-If the interveining ground between two stations is a hill

C:-If the distance between two stations is less than the length of measuring chain

D:-If the distance between two stations is more than the length of measuring chain

Correct Answer:- Option-D

Question91:-The function of a flywheel is

A:-To convert reciprocating motion of the piston into rotary motion

B:-To convert rotary motion of the crankshaft into to and fro motion of the valve rod

C:-To prevent fluctuation of speed

D:-To keep engine speed uniform at all load conditions

Correct Answer:- Option-C

Question92:-The thermodynamic cycle on which petrol engine works is

A:-Otto

B:-Joule

C:-Rankine

D:-Stirling

Correct Answer:- Option-A

Question93:-A moderator in a nuclear power plant is a medium used to

A:-Slow down the speed of fast moving electrons

B:-Control the reaction

C:-Reduce the temperature

D:-Extract heat from nuclear reaction

Correct Answer:- Option-B

Question94:-A Pelton turbine requires

A:-High head and high discharge

B:-High head and low discharge

C:-Low head and low discharge

D:-low head and high discharge

Correct Answer:- Option-B

Question95:-In an automotive differential, the drive pinion is assembled into the

A:-Drive shaft

B:-Axle case

C:-Differential case

D:-Differential housing

Correct Answer:- Option-D

Question96:-In an unregulated power supply, if input ac voltage increases output voltage _____

A:-Increases

B:-Decreases

C:-Remains the same

D:-None of the above

Correct Answer:- Option-A

Question97:-If energy is taken from the ac side of the inverter and sends it back in to the dc side then it is known as _____

A:-Motoring mode operation

B:-Braking mode operation

C:-Regenerative mode operation

D:-None of the above

Correct Answer:- Option-C

Question98:-The type of access used in GSM technology is _____

A:-FDMA/TDMA

B:-CDMA

C:-OFDMA

D:-None of the above

Correct Answer:- Option-A

Question99:-The coverage and capacity of CDMA system is more than that of GSM system.

A:-True

B:-False

C:-Equal

D:-None of the above

Correct Answer:- Option-A

Question100:-Which toxic compound is not found in e-waste ?

A:-Mercury

B:-Cadmium

C:-Neon

D:-Lead

Correct Answer:- Option-C