

PROVISIONAL ANSWER KEY

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| Alphacode | A |

Question1:-Amongst the following for whose removal Parliament's resolution is not needed ?

- A:-Chief Election Commissioner
- B:-Governor of a State
- C:-Judge of Supreme Court
- D:-Comptroller and Auditor General

Correct Answer:- Option-B

Question2:-The Right to Information Act was passed by Parliament on

- A:-`15^(th)` June, 2005
- B:-`12^(th)` October, 2005
- C:-`22^(nd)` June, 2005
- D:-`22^(nd)` November, 2005

Correct Answer:- Option-A

Question3:-Who prepared the first Malayalam Dictionary ?

- A:-Dr. Angelos Francis
- B:-Benjamin Beyli
- C:-Arnos Pathiri
- D:-Dr. Herman Gundert

Correct Answer:- Option-C

Question4:-In which year Kuriakose Elias Chavara was declared as blessed one by pope of Rome ?

- A:-1996
- B:-1987
- C:-1985
- D:-1986

Correct Answer:- Option-D

Question5:-As a result of Channar Revolt, which Travancore ruler was forced to permit the Channar women to wear jacket in 1859.

- A:-Uthram Thirunal Maharaja
- B:-Gauri Parvathy Bhai
- C:-Sri Chithira Thirunal Balarama Varma
- D:-Swathi Thirunal

Correct Answer:- Option-A

Question6:-'Prabhatham' a newspaper started at Shornar in 1934 under the guidelines.

- A:-K. G. Sankar
- B:-E. M. S. Namboodiri Pad
- C:-Kunhunni Achan
- D:-A. K. Pillai

Correct Answer:- Option-B

Question7:-Who is known as the Jhansi Rani of Travancore ?

- A:-A. V. Kuttimalu Amma
- B:-Annie Mascrene
- C:-Akkamma Cherian
- D:-Annachandi

Correct Answer:- Option-C

Question8:-Who made the Kozhencherry speech in relation with the Nivarthana Agitation ?

- A:-C. V. Kunchiraman
- B:-P. Krishna Pillai
- C:-Barrister G. P. Pillai
- D:-C. Kesavan

Correct Answer:- Option-D

Question9:-Who was the great poet, translated whole of Mahabharata into Malayalam ?

- A:-Azhakath Padmanabha Kurup
 - B:-Kodungallur Kunhikuttan Thampuran
 - C:-Kerala Varma Valia Koil Thampuran
 - D:-Vallathole Narayana Menon
- Correct Answer:- Option-B

Question10:-Which launching vehicle recently carried 104 satellite to orbit ?

- A:-PSLV-C 28
- B:-PSLV-C 31
- C:-PSLV-C 37
- D:-PSLV-C 20

Correct Answer:- Option-C

Question11:-If $A = \begin{bmatrix} i & 0 \\ 0 & i \end{bmatrix}$, then A^4 is equal to

- A:- $\begin{bmatrix} i & 0 \\ 0 & i \end{bmatrix}$
- B:- $\begin{bmatrix} -i & 0 \\ 0 & -i \end{bmatrix}$
- C:- $\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$
- D:- $\begin{bmatrix} -1 & 0 \\ 0 & -1 \end{bmatrix}$

Correct Answer:- Option-C

Question12:-If every element of a third order determinant of value Δ is multiplied by 5, then the value of the new determinant is

- A:- Δ
- B:- Δ^3
- C:- 5Δ
- D:- 125Δ

Correct Answer:- Option-D

Question13:-Which of the following function is differentiable at $x = 0$?

- A:- $f(x) = \begin{cases} \sin(1/x), & x \neq 0 \\ 0, & x = 0 \end{cases}$
- B:- $f(x) = \begin{cases} x \sin(1/x), & x \neq 0 \\ 0, & x = 0 \end{cases}$
- C:- $f(x) = \begin{cases} x^2 \sin(1/x), & x \neq 0 \\ 0, & x = 0 \end{cases}$
- D:- $f(x) = \begin{cases} \cos(1/x), & x \neq 0 \\ 0, & x = 0 \end{cases}$

Correct Answer:- Option-C

Question14:-The maximum value of the function $f(x) = 5x + 3$ in the interval $[-5, 5]$ is

- A:-28
- B:-22
- C:-3
- D:-Maximum value of $f(x)$ does not exist in $[-5, 5]$

Correct Answer:- Option-A

Question15:-The area of the region bounded by the curve $y = \sqrt{x}$, the lines $x = 1$ and $y = 0$ is given by

- A:- $\frac{4}{3}$
- B:- $\frac{2}{3}$
- C:- $\frac{1}{3}$
- D:- $\frac{3}{2}$

Correct Answer:- Option-B

Question16:-An integrating factor for the first order linear differential equation $\frac{dy}{dx} - \frac{y}{x} = x^3$ is

- A:- x
- B:- $-x$
- C:- $\frac{1}{x}$
- D:- $\frac{1}{x^2}$

Correct Answer:- Option-D

Question17:- $\int \frac{dx}{1 + \sqrt{x}}$ is equal to

- A:- $2\sqrt{x} - 2\log|1 + \sqrt{x}| + c$
- B:- $2\sqrt{x} + 2\log|1 + \sqrt{x}| + c$
- C:- $\sqrt{x} - \log|1 + \sqrt{x}| + c$
- D:- $2(1 + \sqrt{x}) + c$

Correct Answer:- Option-A

Question18:-The equation of the straight line that has x-intercept -3 and is perpendicular to the line $3x + 5y = 4$

- A:- $5x - 3y - 15 = 0$
- B:- $5x - 3y + 15 = 0$
- C:- $3x + 5y - 4 = 0$

D: $-5x + 3y - 15 = 0$

Correct Answer:- Option-B

Question19:-If $\sin\theta + \operatorname{cosec}\theta = 2$, then $\sin^2\theta + \operatorname{cosec}^2\theta$ is equal to

A:-0

B:-3

C:-2

D:-1

Correct Answer:- Option-C

Question20:-The term independent of x in $(2x - 1/x)^{10}$ is

A:- 6^{th}

B:- 5^{th}

C:- 11^{th}

D:- 2^{nd}

Correct Answer:- Option-A

Question21:-The PIV rating of each diode in a bridge rectifier is _____ that of the equivalent centre tap rectifier.

A:-One-half

B:-The same as

C:-Twice

D:-Four times

Correct Answer:- Option-A

Question22:-In an unregulated power supply, if load current increases, the output voltage

A:-Remains the same

B:-Decreases

C:-Increases

D:-None of the above

Correct Answer:- Option-B

Question23:-In a _____ hand off, a mobile station can communicate with two base stations at the same time.

A:-Hard

B:-Soft

C:-Medium

D:-None of the above

Correct Answer:- Option-B

Question24:-The 8051 microcontroller is of _____ pin package and has a _____ processor.

A:-30, 1 byte

B:-20, 1 byte

C:-40, 8 bits

D:-40, 8 bytes

Correct Answer:- Option-C

Question25:-Which of the following statements about a single pole double throw relay is not true ?

A:-It is called an SPDT type of relay

B:-It has one common contact

C:-It has two positions (NC and NO)

D:-It has centre off position

Correct Answer:- Option-D

Question26:-A first class brick should have a minimum crushing strength of _____

A:- 7.0 N/mm^2

B:- 10.5 N/mm^2

C:- 12.5 N/mm^2

D:- 14.0 N/mm^2

Correct Answer:- Option-B

Question27:-Durability of concrete is proportional to

A:-Water-cement ratio

B:-Sand content

C:-Cement-aggregate ratio

D:-Aggregate-water ratio

Correct Answer:- Option-C

Question28:-If 'D' is the diameter of the well of a well foundation, then the thickness of its staining is generally about

A:- $D/2$

B:- $D/3$

C:- $\frac{3}{4}$ D

D:-D/4

Correct Answer:- Option-D

Question29:-Reciprocal ranging is adopted when the following is encountered

A:-A hillock

B:-A dense forest

C:-A river

D:-A tall building

Correct Answer:- Option-A

Question30:-In profile leveling on a road, if the staff readings on two neighbouring pegs 20 m apart are 1.200 and 1.000 respectively, then the road has a

A:-Rising gradient of 1 in 100

B:-Falling gradient of 1 in 100

C:-Rising gradient of 1 in 20

D:-Falling gradient of 1 in 20

Correct Answer:- Option-A

Question31:-For completing one cycle of operation in a four stroke engine, the number of revolutions of crank shaft equal to

A:-One

B:-Two

C:-Three

D:-Four

Correct Answer:- Option-B

Question32:-To start the petrol engine, fuel-air mixture required is

A:-Lean

B:-Rich

C:-Chemically correct

D:-None of these

Correct Answer:- Option-B

Question33:-The device which is used for smoothing out the power impulses in an engine is

A:-Clutch

B:-Differential

C:-Torque converter

D:-Fly wheel

Correct Answer:- Option-D

Question34:-Which can be set up economically for large power production ?

A:-Hydro-electric power plants

B:-Diesel power plants

C:-Steam power plants

D:-Gas turbines

Correct Answer:- Option-A

Question35:-The degree of reaction of a turbine is defined as the ratio of enthalpy drop in

A:-Moving blades to enthalpy drop in fixed blades

B:-Fixed blades to enthalpy drop in moving blades

C:-Moving blades to enthalpy drop in stage

D:-Fixed blades to enthalpy drop in stage

Correct Answer:- Option-C

Question36:-Obtain the average power in a pure resistive circuit of 10Ω when the current flowing through it is $i = 10 \cos \omega t$ A.

A:-600 W

B:-750 W

C:-500 W

D:-400 W

Correct Answer:- Option-C

Question37:-When a dielectric is placed in an electrical field the field strength

A:-Decreases

B:-Increases

C:-Reduce to zero

D:-Remain unchanged

Correct Answer:- Option-A

Question38:-An emf of 16 volts is induced in a coil of inductance 4 H. What must be the rate of change of current ?

- A:-6.5 A/sec
- B:-4 A/sec
- C:-5 A/sec
- D:-7 A/sec

Correct Answer:- Option-B

Question39:-An air-cored toroidal coil has 450 turns and a mean diameter of 30 cm and cross sectional area of 3 cm^2 . Calculate the inductance of the coil.

- A:-0.65 μH
- B:-.9 μH
- C:-0.7 μH
- D:-0.81 μH

Correct Answer:- Option-D

Question40:-When earth fault occurs

- A:-Voltage potential at the earth mat increases due to grounding
- B:-Voltage potential at the earth mat decreases due to grounding
- C:-Voltage potential at the earth mat remains zero irrespective of fault
- D:-None of the above

Correct Answer:- Option-A

Question41:-Rotational inertia is called

- A:-Bending moment
- B:-The moment of inertia
- C:-Radius of gyration
- D:-Inertia tensor

Correct Answer:- Option-B

Question42:-The steepest angle of repose is called

- A:-Talus
- B:-Shear angle
- C:-Septilus
- D:-Momentum

Correct Answer:- Option-A

Question43:-Young's modulus measures the property of _____ of a solid material.

- A:-Hardness
- B:-Toughness
- C:-Stiffness
- D:-Softness

Correct Answer:- Option-C

Question44:-A material with Poisson's ratio of 0 is

- A:-Cork
- B:-Steel
- C:-Copper
- D:-Rubber

Correct Answer:- Option-A

Question45:-Neutral axis of a beam is a line through the centre of area of cross section at _____ angle to the applied load.

- A:-Declined angle
- B:-Inclined angle
- C:-Right angle
- D:-Zero angle

Correct Answer:- Option-C

Question46:-Euler's formula establishes the fundamental relationship between complex exponential function and _____

- A:-Imaginary numbers
- B:-Trigonometric function
- C:-Lateral function
- D:-Divise function

Correct Answer:- Option-B

Question47:-The unit of slenderness ratio is

- A:-Lambda
- B:-Kappa

C:-Theta

D:-Phi

Correct Answer:- Option-A

Question48:-M 25 grade of concrete would have a mix proportion of

A:-1 : 2 : 4

B:-1 : 3 : 6

C:-1: 1.5 : 3

D:-1 : 1 : 2

Correct Answer:- Option-D

Question49:-Lateral torsional buckling occurs in

A:-T-beam

B:-I-beam

C:-H-beam

D:-C-beam

Correct Answer:- Option-B

Question50:-A material which is not suitable for rivet work

A:-Aluminium

B:-Copper

C:-Brass

D:-Low carbon steel

Correct Answer:- Option-A

Question51:-The IS codes specified tensile strength of the material used for riveting is

A:-20 MPa

B:-30 MPa

C:-40 MPa

D:-50 MPa

Correct Answer:- Option-C

Question52:-In a T-beam, the web resist

A:-Compression

B:-Shear stress

C:-Tension

D:-Torsion

Correct Answer:- Option-B

Question53:-Granite is a polymineralic rock composed of

A:-Augite and chlorite

B:-Hornblende, Mica and Olivine

C:-Quartz, Feldspar and Mica

D:-Serpentine and Calcite

Correct Answer:- Option-C

Question54:-The stone that is also called "Blue metal"

A:-Shale

B:-Basalt

C:-Nite

D:-Slate

Correct Answer:- Option-B

Question55:-Chips of stone used for filling the interstices in stone masonry.

A:-Spalls

B:-Bats

C:-Quoins

D:-Closer

Correct Answer:- Option-A

Question56:-In brick masonry, the vertical joints are broken by using

A:-Quoin

B:-Stretcher

C:-Header

D:-Closer

Correct Answer:- Option-D

Question57:-The sloped upward edged mortar joint in brick masonry.

A:-Raked Joint

- B:-Flush Joint
- C:-Struck Joint
- D:-Weathered Joint

Correct Answer:- Option-C

Question58:-The recess made inside the door frame to receive the door shutter.

- A:-Horn
- B:-Rebate
- C:-Jamb
- D:-Sill

Correct Answer:- Option-B

Question59:-The wedge shaped stone used in constructing an arch.

- A:-Voussoir
- B:-Extrados
- C:-Abutment
- D:-Impost

Correct Answer:- Option-A

Question60:-The space between the roof trusses.

- A:-Purlin
- B:-Board
- C:-Bay
- D:-Ridge

Correct Answer:- Option-C

Question61:-Loudness of sound is measured in

- A:-Watt
- B:-Joules
- C:-Pascal
- D:-Decibels

Correct Answer:- Option-D

Question62:-The gradient of the ramp for wheelchair usage

- A:-1 : 10
- B:-1 : 12
- C:-1 : 15
- D:-1 : 20

Correct Answer:- Option-B

Question63:-The minimum height of handrail of a fire escape staircase is

- A:-80 cm
- B:-90 cm
- C:-100 cm
- D:-120 cm

Correct Answer:- Option-C

Question64:-The water distribution system which is suitable for traditional towns and cities of India.

- A:-Tree System
- B:-Radial System
- C:-Grid Iron System
- D:-Ring System

Correct Answer:- Option-A

Question65:-A graphical method of survey in which the field observations and plotting are done simultaneously.

- A:-Compass Survey
- B:-Chain Survey
- C:-Theodolite Survey
- D:-Plane Table Survey

Correct Answer:- Option-D

Question66:-When the reading of Globe thermometer is higher than the dry bulb temperature it is called

- A:-Effective Temperature
- B:-Corrected Effective Temperature
- C:-Radiant Temperature
- D:-Heat gain

Correct Answer:- Option-B

Question67:-The area on earth where the northerly and southerly winds meet is called

- A:-Intra Tropical Convergence Zone
 - B:-Coriolis Force
 - C:-Slippage
 - D:-Inter Tropical Convergence Zone
- Correct Answer:- Option-D

Question68:-The relationship between DBT, WBT, Absolute Humidity and Relative Humidity and of vapour pressure is shown by

- A:-Anemograph
 - B:-Psychometric Chart
 - C:-Climate Graph
 - D:-Bio-climatic Chart
- Correct Answer:- Option-B

Question69:-Which of these city is located not in the warm-humid climate zone ?

- A:-Jakarta
 - B:-Singapore
 - C:-Phoenix
 - D:-Lagos
- Correct Answer:- Option-C

Question70:-The phenomenon of decrease of temperature with the increase of height is referred to as

- A:-Temperature Diversion
 - B:-Temperature Inversion
 - C:-Temperature Correction
 - D:-Temperature Convergence
- Correct Answer:- Option-B

Question71:-Concentrated and accelerating flow of a cold mass of air is called

- A:-Katabatic Wind
 - B:-Easterlies
 - C:-Westerlies
 - D:-Doldrums
- Correct Answer:- Option-A

Question72:-Open space in Greek cities that were used as market places.

- A:-Forum
 - B:-Square
 - C:-Plaza
 - D:-Agora
- Correct Answer:- Option-D

Question73:-The religious precinct of Mesopotamian cities.

- A:-Ziggurat
 - B:-Temenos
 - C:-Tells
 - D:-Babylon
- Correct Answer:- Option-B

Question74:-The Roman streets that allowed the passage of only pedestrians.

- A:-Itinera
 - B:-Viae
 - C:-Actus
 - D:-Domus
- Correct Answer:- Option-A

Question75:-The neighbourhood unit envisaged by Clarence Stein locates the primary school within the walking radius of

- A:-0.5 km
 - B:-0.6 km
 - C:-0.8 km
 - D:-0.9 km
- Correct Answer:- Option-C

Question76:-In KMBR, the mercantile/Commercial buildings are classified in

- A:-Group C
- B:-Group D
- C:-Group E
- D:-Group F

Correct Answer:- Option-D

Question77:-The great bath is located in ancient cities of

- A:-Egypt
- B:-Mesopotamia
- C:-Greece
- D:-Indus Valley

Correct Answer:- Option-D

Question78:-The apsidal ended Buddhist prayer hall.

- A:-Chaithya
- B:-Vihara
- C:-Stupa
- D:-Pagoda

Correct Answer:- Option-A

Question79:-The entry gateways to Dravidian temples are called

- A:-Vimana
- B:-Prakaram
- C:-Gopuram
- D:-Sopanam

Correct Answer:- Option-C

Question80:-The entry gateway of Egyptian Temples

- A:-Horus
- B:-Pylon
- C:-Min
- D:-Opet

Correct Answer:- Option-B

Question81:-The Greek order with volute shaped capital

- A:-Doric
- B:-Ionic
- C:-Corinthian
- D:-Composite

Correct Answer:- Option-B

Question82:-What is the characteristic feature of Gothic Architecture ?

- A:-Flying Buttress
- B:-Ribbed Vault
- C:-Pointed Arch
- D:-All of the above

Correct Answer:- Option-D

Question83:-This building in Fatehpur Sikri is built entirely of marble

- A:-Buland Darwaza
- B:-Diwan-i-khas
- C:-Tomb of Salim Chisti
- D:-Diwan-i-am

Correct Answer:- Option-C

Question84:-The architect who propagated the idea form follows function

- A:-Le Corbusier
- B:-Louis Kahn
- C:-Alvar Alto
- D:-Marcel Bruer

Correct Answer:- Option-B

Question85:-The extra time that activities get in network analysis is called

- A:-Dummy
- B:-Forward
- C:-Crash
- D:-Float

Correct Answer:- Option-D

Question86:-The Sydney Opera House in Australia was designed by the architect

- A:-Norman Foster
- B:-Jon Utzon
- C:-Richard Rogers

D:-Peter Eisenman

Correct Answer:- Option-B

Question87:-The rat trap bond in brickwork was popularised by the architect

A:-Laurie Baker

B:-Achyut Kanvinde

C:-Charles Correa

D:-B. V. Doshi

Correct Answer:- Option-A

Question88:-The outlet of the water drain from the sanctum of Kerala temple is called

A:-Adisthanam

B:-Sopanam

C:-Pranala

D:-Stambham

Correct Answer:- Option-C

Question89:-The common name of the shrub Codiaem Variegatum

A:-Croton

B:-Copper Pod

C:-Shoe Flower

D:-Rush Foil

Correct Answer:- Option-A

Question90:-A landscaping method developed especially for arid and semi arid climate that utilizes water conserving techniques.

A:-Zooscape

B:-Heterotrophic

C:-Xeriscape

D:-Aeration

Correct Answer:- Option-C

Question91:-The national tree of India

A:-Banyan

B:-Neem

C:-Mango

D:-Tamarind

Correct Answer:- Option-A

Question92:-A technique of horticulture where by tissues of plants are joined so as to continue their growth together

A:-Budding

B:-Grafting

C:-Layering

D:-Separation

Correct Answer:- Option-B

Question93:-A layer of material applied to the surface of soil to conserve soil moisture

A:-Pulp

B:-Sap

C:-Graft

D:-Mulch

Correct Answer:- Option-D

Question94:-In ergonomics, the zone in which the employees have fewer injuries while doing work

A:-Neutral Zone

B:-Reach Zone

C:-Enhanced Zone

D:-Power Zone

Correct Answer:- Option-D

Question95:-Which among these is not a warm colour ?

A:-Purple

B:-Red

C:-Yellow

D:-Orange

Correct Answer:- Option-A

Question96:-The lighting provided for overall illumination of an area

A:-Accent Lighting

B:-Ambient Lighting

C:-Task Lighting

D:-Spot Lighting

Correct Answer:- Option-B

Question97:-In the application for building permit, the site plan should be drawn to a scale of

A:-1 : 200

B:-1 : 400

C:-1 : 500

D:-1 : 600

Correct Answer:- Option-B

Question98:-In perspective view, the point at which receding parallel lines appear to converge is called

A:-Horizon Point

B:-Vanishing Point

C:-Base Point

D:-Converge Point

Correct Answer:- Option-C

Question99:-The area at any floor covered by roof other than cornice or weather shade

A:-Built up area

B:-Plinth area

C:-Carpet area

D:-Coverage

Correct Answer:- Option-A

Question100:-The clear vertical distance measured from the finished floor surface to the finished ceiling surface

A:-Effective Length

B:-Clear span

C:-Head Room

D:-Open space

Correct Answer:- Option-C