FINAL ANSWER KEY

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Question1:-Choose from the following options, the Lagranges equation for an electrical circuit consisting of an inductance L and capacitance C, which is charged to q Coulombs and i be the current flowing through the circuit ?

A:-$\frac{1}{2}L\dot{q}^2+\frac{1}{2}\frac{q^2}{C}$

B:-$\frac{1}{2}C\dot{q}^2+\frac{1}{2}\frac{q^2}{L}$

C:-$\frac{1}{2}L\dot{q}^2-\frac{q^2}{C}$

D:-$\frac{1}{2}L\dot{q}^2-\frac{1}{2}\frac{q^2}{C}$

Correct Answer:- Option-D

Question2:-The equation of motion for a bead sliding on a uniformly rotating wire in a force free motion is

A:-$m\dot{r}^2+mr\dot{\theta}^2=0$

B:-$m\ddot{r}-mr\dot{\theta}^2=0$

C:-$m\dot{r}-mr\ddot{\theta}=0$

D:-$m\ddot{r}^2-mr^2\dot{\theta}^2=0$

Correct Answer:- Option-B

Question3:-What is the degree of freedom for three particles moving freely in a plane ?

A:-3

B:-1

C:-9

D:-6

Correct Answer:- Option-D

Question4:-Which of the following equation represent Jacobi's for of the least action principle ?

A:-$\Delta\int\sqrt{2\left[H+V(q)\right]}d\rho=0$

B:-$\Delta\int\sqrt{2\left[H+V(q)\right]}d\rho=constant$

C:-$\Delta\int\sqrt{2\left[H-V(q)\right]}d\rho$ =0

D:-$\Delta\int\sqrt{2\left[L-V(q)\right]}d\rho$ =0

Correct Answer:- Option-C

Question5:-The product of generalised coordinate and its conjugate momentum has the dimension of

A:-Angular momentum

B:-Force

C:-Torque

D:-Energy

Correct Answer:- Option-A

Question6:-Which of the following represents the effective potential energy for orbits under inverse square law of force

A:-$-\frac{k}{r^2}+\frac{l^2}{2mr^2}$

B:-$\frac{k}{r}+\frac{l^2}{2mr^2\theta}$

C:-$-\frac{k}{r}+\frac{l^2}{2mr^2}$

D:-$\frac{k}{r^2}+\frac{l^2}{2mr^2\theta}$

Correct Answer:- Option-C

Question7:-Due to Cariolis force a moving particle in the northern hemisphere is deflected towards

A:-Left

B:-Right

C:-Upward

D:-Downward

Correct Answer:- Option-B

Question8:-What condition a function f(x) should fulfill to be expanded in Fourier series ?

A:-Parseval's theorem

B:-Gibbs phenomena

C:-Reiman-Lebesgue lemma

D:-Dirichlet's Condition

Correct Answer:- Option-D

Question9:-Compute the value of the integral using Gamma function $\int_0^\infty e^{-x^2}dx$

A:-π

B:-$\sqrt{\pi}$

C:-$\sqrt{\pi}$ / 2

D:-π / 2

Correct Answer:- Option-C

Question10:-Choose the correct answer from the following Γ(–1/2) = _____ ?

A:-$-2\sqrt{\pi}$

B:-$\sqrt{\pi}$

C:-$\sqrt{\pi}$ /2

D:-2π

Correct Answer:- Option-A

Question11:-Residue of f(z) at a simple pole z=p is

A:-$\lim_{z \to p} \frac{f(z)}{(z-p)}$

B:-$\lim_{z \to p} (z-p) f(z)$

C:-$\lim_{z \to p} z f(z)$

D:-$\lim_{z \to p} (z-p) f(z-p)$

Correct Answer:- Option-B

Question12:-Calculate the value of the integral $\int_C \frac{(2z+3)}{z(2z+1)} dz$ where c is a circle with |z|≤ 1

A:-πi

B:-$2\pi i$

C:-$-\pi i$

D:-$-2\pi i$

Correct Answer:- Option-B

Question13:-Find the value of $\int_{-1}^{1} P_0(x) dx$ using Rodrigues formula for Legendre Polynomial

A:-2

B:-0

C:-1

D:--1

Correct Answer:- Option-A

Question14:-Which of the following is true about the Bessel functions of the second kind, denoted by $Y_n(x)$?

A:-They are bounded at x=0 for all integer n

B:-They are bounded at x=0 only for odd integer n

C:-They are bounded at x=0 only for even integer n

D:-They diverge at x=0 for all integer n

Correct Answer:- Option-D

Question15:-Satellites that orbit earth at a greater distance will be affected by which force ?

A:-Gravitational fields of the sun and the moon

B:-Gravitational fields of sun and other nearby planets

C:-By the atmospheric drag

D:-By gravitational fields of the sun and the earth's magnetic fields

Correct Answer:- Option-D

Question16:-There are five repeaters in 100Km for a silica fiber of 1 micro meter and it has measured losses of 3dB/Km. Calculate the total fiber loss that can be tolerated in a single link.

A:-80 dB

B:-70 dB

C:-60 dB

D:-50 dB

Correct Answer:- Option-C

Question17:-The Pinch-off voltage of a JFET depends on

A:-The doping density of negative ions alone

B:-The doping density of positive ions alone

C:-The doping density of both positive and negative ions

D:-The doping density and the geometry of the device

Correct Answer:- Option-D

Question18:-In a pulse code modulation the quantization error is a functions of

A:-The input frequency and current

B:-The input voltage

C:-The input signals power

D:-The input signals phase angle

Correct Answer:- Option-B

Question19:-The value of the input voltage at which the switch will occur in a Schmidt Trigger is determined by which element of the circuit

A:-The value of the ground resister and input resister

B:-The value of the input resister

C:-The value of the input and feedback resisters

D:-The value of the feedback resister

Correct Answer:- Option-C

Question20:-For an Op-Amp the differential gain is 100 and the common-mode voltage gain is -1, what is the value of Common mode rejection ratio (CMRR) in decibels ?

A:-20 dB

B:-30 dB

C:-40 dB

D:-50 dB

Correct Answer:- Option-C

Question21:-The internal quantum efficiency analysis of a solar cell can be used to find out

A:-The diffusion length, minority carrier life time and surface recombination rate

B:-The surface recombination velocity

C:-The majority and minority carrier life time

D:-The surface recombination rate and majority carrier life time

Correct Answer:- Option-A

Question22:-The microprocessor instructions CALL and INTERRUPT both cause execution of a subroutine but differ in that

A:-CALL and INTERRUPT are both hardware and software cause instruction

B:-CALL is a software cause instruction and INTERRUPT is either software or a hardware cause instruction

C:-CALL and INTERRUPT are both hardware cause instruction

D:-CALL and INTERRUPT are manually cause instruction

Correct Answer:- Option-B

Question23:-While a microprocessor executing a program top priority will be given to

A:-The CALL instruction

B:-The INTERRUPT instruction

C:-The PUSH and POP instruction

D:-The JUMP instruction

Correct Answer:- Option-B

Question24:-Which instruction in the 8085 Microprocessor instruction set control the AC (Auxiliary Carry) flag in the Flag Register

A:-JUMP

B:-CALL

C:-PUSH

D:-None of the above

Correct Answer:- Option-D

Question25:-From the pin configuration of 8085 which pin is specifically used for DMA data transfer

A:-RESET

B:-INTERRUPT

C:-HOLD

D:-READY

Correct Answer:- Option-C

Question26:-Why the ALE pin in a Microprocessor is connected to a ADC (Analog to Digital Convertor)Circuit which is controlled by that Microprocessor

A:-To control the transfer of data and Address

B:-To identify the Microprocessor

C:-To identify the ADC circuit

D:-To control the programmable Peripheral interface

Correct Answer:- Option-A

Question27:-The microcontroller 8051 is incorporated with

A:-Two 8 bit counters

B:-Two 16 bit registers

C:-Two 16 bit counters and timers

D:-Two 8 bit registers and timer

Correct Answer:- Option-C

Question28:-One of the most important main component of a Sample and Hold circuit is

A:-High frequency oscillator

B:-N-Channel E-MOSFET

C:-N-Channel FET

D:-P-Channel FET

Correct Answer:- Option-B

Question29:-If L_x and L_y are the angular momentum commutator components in position space, evaluate $[L_x, L_y]x$.

A:-0

B:-$-\hbar^2 z$

C:-$-i\hbar L_z$

D:-$(-\hbar^2 y)$

Correct Answer:- Option-D

Question30:-Optical theorem in quantum mechanics encapsulates which conservation law ?

A:-Conservation of energy

B:-Conservation of spin

C:-Conservation of charge

D:-None of the above

Correct Answer:- Option-A

Question31:-Which of the following statement is/are correct about Pauli's spin matrices ?
i) The measurement of spin angular momentum component along any coordinate axis for an electron gives $\pm \hbar$
ii) The operators for spin components along three mutually orthogonal axes obey commutation relation
iii) Pauli's spin matrices are Hermitian

A:-Only (i and ii)

B:-Only (i and iii)

C:-Only (ii and iii)

D:-All of the above (i, ii and iii)

Correct Answer:- Option-D

Question32:-For hard sphere of radius R, total cross-sectional area is

A:-0

B:-πR^2

C:-$2\pi R$

D:-$4\pi R^2$

Correct Answer:- Option-B

Question33:-Which of the following statement is/are correct according to Klein-Gordon equation ?
i Equation fulfills the special theory of relativity
ii Equation allows indefinite probability density
iii Equation allows negative energies as solution

A:-Only (i and ii)

B:-Only (i and iii)

C:-Only (ii and iii)

D:-All of the above (i, ii and iii)

Correct Answer:- Option-D

Question34:-If the atom is placed in an external magnetic field, no. of splitting states of 3d orbital would be

A:-4

B:-5

C:-6

D:-7

Correct Answer:- Option-D

Question35:-Which one of the following theories clearly explain the fine structure of Hydrogen ?

A:-Bohr Model theory

B:-Time independent perturbation theory

C:-Time dependent perturbation theory

D:-None of the above

Correct Answer:- Option-B

Question36:-According to Gibbs paradox in statistical mechanics
i Identical particles are distinguishable either by their quantum states or by their positions
ii When gases are mixed, there is an increase in entropy due to the increased

number of microstates available to the system
iii Gibbs paradox provides deeper insights into the nature of particles and their behaviour in statistical systems

A:-Only (i and ii)

B:-Only (i and iii)

C:-Only (ii and iii)

D:-All of the above (i, ii and iii)

Correct Answer:- Option-D

Question37:-Quantum effects is important in thermodynamics if :
(L the average interparticle spacing of a gas, $\lambda-$ thermal deBroglie wavelength)

A:-λ< L

B:-λ> L

C:-λ= L

D:-λ << L

Correct Answer:- Option-B

Question38:-Let f=u(z) + iv(z) be an entire function in complex plane C. If |u(z)| < M for every z in C, where M is a positive constant, then

A:-f is a constant function

B:-f is a variable function

C:-f is a polynomial function

D:-f is an identity function

Correct Answer:- Option-A

Question39:-The density matrix for an ensemble of spin $\frac{1}{2}$ particles in the S_z basis is $\rho = \begin{bmatrix} \frac{1}{4} & n \\ n^* & x \end{bmatrix}$
The aterisk represents complex conjugation. What values must n have for the density matrix to represnt a pure state ?

A:-$\frac{1}{2},\frac{3}{4}$

B:-+$\frac{3}{4},-\frac{3}{4}$

C:-+$\frac{\sqrt{3}}{4},-\frac{\sqrt{3}}{4}$

D:-+$\frac{1}{2},-\frac{1}{2}$

Correct Answer:- Option-C

Question40:-If $\hbar = 10^{-34}$
Js number density of copper $=10^{27}$
electrons/m^3 , rest mass of electron = $9\times10^{-31}Kg$, calculate the fermi energy of copper :

A:-$\approx 0.5\times10^{-29}J$

B:-$\approx 0.5\times10^{-19}J$

C:-$\approx 0.5\times10^{-8}J$

D:-$\approx 0.5\times10^{-10}J$

Correct Answer:- Option-B

Question41:-Gibb's free energy of an ideal Bose gas $T<T_c$ is

A:-0

B:-1

C:-Infinity

D:-None of the above

Correct Answer:- Option-A

Question42:-Which of the following statement describe Pauli para magnetism ?

A:-The magnetization of a degenerate ideal Fermi gas of electrons with an external magnetic field

B:-The magnetization of a degenerate ideal Bose gas of electrons with an external magnetic field

C:-The magnetization of an atom in an external magnetic field

D:-The magnetization of an ideal gas of electrons with an internal magnetic field

Correct Answer:- Option-A

Question43:-Density of the atomic nucleus is of the order of

A:-$10^{-27}kg/m^3$

B:-$10^{27}kg/m^3$

C:-$10^{-17}kg/m^3$

D:-$10^{17}kg/m^3$

Correct Answer:- Option-D

Question44:-In semi-empirical mass formula the surface energy term varies with mass number A as

A:-$_{A^{\frac{3}{4}}}$

B:-$_{-A^{\frac{2}{3}}}$

C:-$_{-A^{-\frac{1}{3}}}$

D:-A

Correct Answer:- Option-B

Question45:-Internal conversion in atomic nucleus occurs when

A:-Nucleus is in an excited energy state

B:-Number of protons is greater than 92

C:-Neutron number to proton number ratio is larger than stable value

D:-Neutron number to proton number ratio is smaller than stable value

Correct Answer:- Option-A

Question46:-If Σ^- baryon has strangeness number S=-1, what is its quark composition ?

A:-uds

B:-uus

C:-dss

D:-dds

Correct Answer:- Option-D

Question47:-Which of the following atomic nuclei has magic number of protons as well as neutrons ?

A:-$_{28}Ni^{62}$

B:-$_{10}Ne^{20}$

C:-$_{82}Pb^{208}$

D:-$_{92}U^{238}$

Correct Answer:- Option-C

Question48:-The XRD peak of a sample has FWHM of 0.9° corresponding to Bragg angle of 30°. What is the approximate crystallite size, if the wavelength of X-rays used is 0.154nm ?

A:-30nm

B:-10nm

C:-5nm

D:-20nm

Correct Answer:- Option-B

Question49:-Which of the following Physicists won the Nobel Prize for discovering the eight fold symmetry and quark structure ?

A:-Yuval Neeman

B:-Abdus Salam

C:-Richard Feynman

D:-Murray Gell-Mann

Correct Answer:- Option-D

Question50:-A unit cell has the following lattice parameters : a=11.20A°, b=8.63A°, c=6.19A°, α=47°, β=81°, γ=95°. Which crystal system does this belong to ?

A:-Monoclinic

B:-Triclinic

C:-Hexagonal

D:-Tetragonal

Correct Answer:- Option-B

Question51:-Determine the Miller indices of an atomic plane in a crystal that intercepts a, b and c axes in the ratio 1 : ∞ : 2

A:-(0 2 0)

B:-(0 1 0)

C:-(2 0 1)

D:-(1 0 2)

Correct Answer:- Option-C

Question52:-The specific heat capacity at constant volume for solids at extremely low temperatures varies as

A:-T^3

B:-T^2

C:-T^{-3}

D:-$T^{-\frac{3}{2}}$

Correct Answer:- Option-A

Question53:-To which of the following categories does Copper belong to ?

A:-Paramagnetic

B:-Diamagnetic

C:-Ferromagnetic

D:-Antiferromagnetic

Correct Answer:- Option-B

Question54:-Which of the following statements is false regarding piezoelectric crystals ?

A:-They are anisotropic

B:-They are electrically polarisable by mechanical stress

C:-Their molecules have centre of symmetry

D:-All of the above

Correct Answer:- Option-C

Question55:-The relation between critical magnetic field (H_c) and temperature T for a superconducting material is

A:-$H_C = H_0\left[1-\left(T/T_C\right)^2\right]$

B:-$H_C = H_0\left[1-\left(T/T_C\right)\right]^2$

C:-$H_C = H_0\left[1-\left(T/T_C\right)^{1/2}\right]$

D:-$H_C = H_0\left[1-\left(T/T_C\right)\right]^{1/2}$

Correct Answer:- Option-A

Question56:-The magnetic field H in a superconductor

A:-decays with the penetration depth

B:-decays exponentially with the penetration depth

C:-decays with the square of the penetration depth

D:-decays with the square root of the penetration depth

Correct Answer:- Option-B

Question57:-Choose the correct option

A:-Both CO_2 and H_2O have three modes of vibration

B:-CO_2 has three normal modes of vibration where as H_2O has four normal modes of vibration

C:-H_2O has three normal modes of vibration where as CO_2 has four normal modes of vibration

D:-Both CO_2 and H_2O have four modes of vibration

Correct Answer:- Option-C

Question58:-The energy level corresponding to non-rigid rotator is $E_j = BJ(J+1) - DJ^2(J+1)^2$ where B is the rotational constant and D is the centrifugal distortion constant. The frequency of transition from the level J to level J+1 is given by

A:-$2B(J+1) - 4D(J+1)^2 cm^{-1}$

B:-$2B(J+1) - 4D(J+1)^3 cm^{-1}$

C:-$2B(J+1) - 2D(J+1)^3 cm^{-1}$

D:-$2B(J+1) - 2D(J+1)^2 cm^{-1}$

Correct Answer:- Option-B

Question59:-How does the Born-Oppenheimer approximation facilitate the calculation of molecular vibrational spectra ?

A:-It simplifies calculations by assuming that vibrational energy levels are much larger than electronic energy levels

B:-It treats the electronic and nuclear motions as completely coupled, simplifying computational models

C:-It predicts that the electronic transitions occur at the same energy levels as vibrational transitions

D:-It assumes that the electronic states are stationary relative to the nuclear motion, allowing their separation when calculating vibrational spectra

Correct Answer:- Option-D

Question60:-What does Larmor precession describe in the context of magnetic resonance ?

A:-The precession of the magnetic moment of nuclei in a constant magnetic field

B:-The rotation of a charged particle in a magnetic field due to the Lorentz force

C:-The oscillation of magnetic field vectors in an alternating current

D:-The alignment of spin magnetic moments along the direction of an applied electric field

Correct Answer:- Option-A

Question61:-Which of the following statements are true in the process of Stimulated Raman effect ?
i) It is a non linear process
ii) It needs population inversion of the states
iii) It is a type of parametric amplification

A:-Both (i) and (ii)

B:-Both (ii) and (iii)

C:-Both (i) and (iii)

D:-All the three (i), (ii) and (iii)

Correct Answer:- Option-C

Question62:-In the assignment of (v', v") values for a band in the vibrational analysis of a spectrum using Deslander's table, the bands (0,0), (1,1), (2,2) etc are called _____

A:-v' Progressions

B:-v" Progressions

C:-Sequences

D:-First energy difference

Correct Answer:- Option-C

Question63:-Which among the following is a key feature of Mossbauer spectroscopy that enables the precise measurement of nuclear transitions ?

A:-High-energy electron beam irradiation

B:-Resonant absorption and re-emission of gamma rays without recoil

C:-Application of a strong external electric field

D:-Detection of beta radiation from radioactive decay processes

Correct Answer:- Option-B

Question64:-Which of the following contributes to the broadening of spectral lines in a laser ?
i) Collision broadening
ii) Doppler broadening
iii) Natural broadening

A:-Only (i) and (ii)

B:-Only (ii) and (iii)

C:-Only (i) and (iii)

D:-All of the above (i), (ii) and (iii)

Correct Answer:- Option-D

Question65:-Which statement best describes the difference between Q-switching and mode-locking techniques used in laser operation ?

A:-Q-switching is a technique used to produce a continuous wave output, while mode-locking is used to generate short pulses

B:-Q-switching generates high-power, short-duration laser pulses by modulating the quality factor of the optical cavity, whereas mode-locking synchronizes the phases of different modes to produce ultra-short pulses

C:-Mode-locking involves increasing the laser cavity's quality factor for steady output, while Q-switching aligns the phases of different modes within the laser

D:-Both Q-switching and mode-locking are techniques to produce continuous

wave laser operations but differ in the types of optical materials used

Correct Answer:- Option-B

Question66:-What is the primary mechanism for the generation of laser light in a co_2 laser ?

A:-The excitation of electrons in a semiconductor material to produce photons

B:-The direct electrical excitation of co_2 molecules leading to the emission of infrared light

C:-The vibrational transitions of co_2 molecules in the gas phase, which emit photons at specific infrared wavelengths

D:-The amplification of light through a pumped dye solution containing co_2 molecules

Correct Answer:- Option-C

Question67:-The process of second-harmonic generation (SHG), when a high-power laser beam is passed through a crystal, what is a key requirement for effectively generating light at twice the frequency of the original beam

A:-The laser beam must be of sufficiently low power to avoid damaging the crystal

B:-The crystal must inherently emit light at the frequency which is twice that of the laser beam

C:-The refractive indices at the fundamental and second-harmonic frequencies must be matched to satisfy the phase matching condition

D:-The crystal must absorb light at the fundamental frequency to later re-emit it at the second-harmonic frequency

Correct Answer:- Option-C

Question68:-In an optical fiber with n1 as the refractive index of core and n2 as that of cladding, the critical angle is given by _____

A:-$\sin^{-1}\left(\frac{n_2}{n_1}\right)$

B:-$\sin\left(\frac{n_2}{n_1}\right)$

C:-$\sin^{-1}\left(\frac{n_1}{n_2}\right)$

D:-$\sin\left(\frac{n_1}{n_2}\right)$

Correct Answer:- Option-A

Question69:-Which of the following statements accurately distinguishes holography from traditional photography ?
i) Holography captures both the intensity and phase of light waves, whereas traditional photography only captures light intensity
ii) Holography can be performed using both digital sensors and traditional film, just as traditional photography can use both mediums.
iii) Traditional photography uses a reference beam to enhance image quality, while holography does not require any reference beam

A:-Both (i) and (ii)

B:-Both (ii) and (iii)

C:-Both (i) and (iii)

D:-Only (i)

Correct Answer:- Option-A

Question70:-What are the primary causes of attenuation in optical fibers ?

A:-Reflection of light at the core-cladding interface and absorption by the fiber material

B:-Electrical interference from external sources

C:-Scattering of light due to material inhomogeneities and absorption by impurities

D:-Increased use of high-power laser sources and fluctuations in external temperature

Correct Answer:- Option-C

Question71:-The process of quantifying a learner's knowledge skills or attitude is called

A:-Learning

B:-Measurement

C:-Assessment

D:-Evaluation

Correct Answer:- Option-B

Question72:-Which among the following methods of teaching will enhance indirect learning ?

A:-Demonstration method

B:-Assignment method

C:-Problem based learning method

D:-Lecture method

Correct Answer:- Option-C

Question73:-Most appropriate method of avoiding plagearism in research is

A:-Paraphrasing text without giving credit

B:-Appropriately citing the source of all data taken from others

C:-Direct copying and pasting text from articles without giving citations

D:-Citing only direct quotations not paraphrased text

Correct Answer:- Option-B

Question74:-Choose from the given below options, the one which doesn't belong to graphi aid

A:-Flannel Board

B:-Flash Card

C:-Maps

D:-Poster

Correct Answer:- Option-A

Question75:-Solving a problem by generating knowledge and taking action within the social system in which the problem is located is

A:-Basic Research

B:-Applied Research

C:-Historical Research

D:-Action Research

Correct Answer:- Option-D

Question76:-From among the following options, choose the most relevant ethical considerations in research
a) Confidentiality
b) Voluntary participation
c) Free copying from books and journals
d) Informed consent
e) use of unacceptable research practices

A:-a, b and e

B:-a, b and d

C:-b, c and d

D:-c, d and e

Correct Answer:- Option-B

Question77:-Major aim of UGC CARE is

A:-International collaboration

B:-Enhancing the number of publications

C:-Promotion of high quality research

D:-Elimination of publication ethics

Correct Answer:- Option-C

Question78:-Student centered classroom doesn't mean

A:-learner autonomy

B:-teacher autonomy

C:-learner as the focus of educational programme

D:-Addressing individual differences

Correct Answer:- Option-B

Question79:-Manipulation and control of variables and randomisation of sample are associated with

A:-Naturalistic Inquiry Research

B:-Ethnographic research

C:-Ex post facto research

D:-Experimental research

Correct Answer:- Option-D

Question80:-Out of the given below options, find out the one that is associated with cognitive domain

A:-Imitating

B:-Valueing

C:-Organising

D:-Creating

Correct Answer:- Option-D

Question81:-Given below are two statements
Statement 1 : Right to Information Act was passed by the Indian Parliament on 10 May 2005 in order to promote transparency and accountability in the working of every public authority
Statement 2 : National Food Security Act, 2013 provides for coverage of up to 75% of the rural population and up to 50% of the urban population for receiving subsidized food grains under Targeted Public Distribution System (TPDS)
In the above given statements which of the following is correct

A:-Both statement 1 and 2 are true

B:-Both statement 1 and 2 are false

C:-Statement 1 is true and statement 2 is false

D:-Statement 1 is false and statement 2 is true

Correct Answer:- Option-D

Question82:-Which of the following statement about the election commission of India is NOT true ?

A:-The Election Commission of India is constitutionally empowered to conduct elections of President and Vice President

B:-Since its inception in 1950 and till 15 October 1989, the election commission was a one member body with only the Chief Election Commissioner (CEC) as its sole member

C:-The chief election commissioner is appointed for a tenure of 6 years or until the age of 60, whichever is earlier

D:-Sukumar Sen was the first chief election commissioner of India

Correct Answer:- Option-C

Question83:-Which of the following is NOT a word added to the Preamble of Indian Constitution by the 42nd Amendment in 1976 ?

A:-Unity

B:-Socialist

C:-Secular

D:-Integrity

Correct Answer:- Option-A

Question84:-Which power allows the President to return a bill for reconsideration ?

A:-Veto power

B:-Suspensive veto

C:-Pocket veto

D:-Absolute veto

Correct Answer:- Option-B

Question85:-Consider the following statements about national emergency :
1. According to Article 358, when a proclamation of National Emergency is made, the six fundamental rights under article 19 are automatically suspended
2. The proclamation of emergency must be approved by both the houses of Parliament within one month from the date of its issue
Which of the above statements is/are true ?

A:-Both statement 1 and 2 are true

B:-Both statement 1 and 2 are false

C:-Statement 1 is true and statement 2 is false

D:-Statement 1 is false and statement 2 is true

Correct Answer:- Option-A

Question86:-Under which Article of the Indian Constitution is the provision for a joint sitting of both Houses of Parliament mentioned ?

A:-Article 114

B:-Article 108

C:-Article 122

D:-Article 132

Correct Answer:- Option-B

Question87:-Which of the following is true about the Prime Minister of India ?
i. The Prime Minister is directly elected by the people in a general election.
ii. He should have completed his 30 years if he is a member of the Rajya Sabha.
iii. The council of ministers are appointed by the President on the advice of Prime Minister.
iv. The joint sitting of the Parliament is called by the President and is presided over by the Prime Minister
v. The Prime Minister serves a fixed term of 5 years without the possibility of re-election.
Select the correct option.

A:-i and iv

B:-ii and iii

C:-iii and iv

D:-i and v

Correct Answer:- Option-B

Question88:-Match List I with List II.

List I	**List II**
Constitutional Provisions	**Source**
1. Concurrent List	i. British Constitution

2. The idea of single citizenship ii. Ireland
3. Directive Principles of State Policy iii. South Africa
4. Provision for Constitutional Amendment iv. Australia

A:-1-ii, 2-i, 3-iv, 4-iii

B:-1-iii, 2-i, 3-ii, 4-iv

C:-1-iv, 2-iii, 3-ii, 4-i

D:-1-iv, 2-i, 3-ii, 4-iii

Correct Answer:- Option-D

Question89:-Consider the following statements about Center-State relationship
1. The Government of India had set up the Sarkaria Commission in June 1973 on Center-State relations.
2. The 7th schedule of Indian Constitution deals with the division of powers between the Union and State Governments.
Which of the above statements is/are true ?

A:-Both statement 1 and 2 are true

B:-Both statement 1 and 2 are false

C:-Statement 1 is true and statement 2 is false

D:-Statement 1 is false and statement 2 is true

Correct Answer:- Option-D

Question90:-Which of the following is incorrectly matched ?

A:-61st Amendment Act, 1989 : Voting age was decreased from 21 to 18

B:-73rd Amendment Act, 1992 : Panchayati Raj institutions were given Constitutional status

C:-101th Amendment Act, 2016 : Reservations for Economic Weaker Section

D:-106th Amendment Act, 2023 : Reservation for women in Lok Sabha and State Legislative Assemblies

Correct Answer:- Option-C

Question91:-Among the following statements which is correct about Basel Mission ?

A:-It is a European missionary organisation founded in 1785 at London

B:-German missionary organisation founded in 1858 at Stockholm

C:-It is a Christian missionary society, originally known as German Missionary society, founded in 1815 and it is based in Basel, Switzerland

D:-German Missionary organisation formed during second world war and stood for world peace and co-operation among countries. It's headquarters at Basel

Correct Answer:- Option-C

Question92:-Among the following statements which one is correct about 'Saraswatheevijayam' ?

A:-V.T. Bhattathiripad wrote 'Saraswatheevijayam', which portrays the pathetic life of Namboothiri women

B:-It is a Novel written in 1892 by Potheri Kunhambu, which depicts the

importance of English Education and how it helps an oppressed individual to succeed in life.

C:-It is a novel written in 1889 by R.Easwara Pillai which portrays the struggles of an oppressed man and his fight against colonialism to achieve the right to get English Education

D:-It is a work of Appu Nedugandi and it advocates the need to get western education along with starting native industries

Correct Answer:- Option-B

Question93:-Among the following statements which is correct about 'Smarthavicharam'
i. This was a ritualistic social trial practiced among Namboodiris for adultery and after the trial the accused women along with the men found involved were excommunicated and expelled from caste.
ii. It was a social practice prevalent in Kerala in which Nair widows, who were not following societal rituals expelled from caste and had to appear for a social trial.
iii. Kuriyedathu thatri went through this trial and ostracised in 1905.
iv. Parvathy Varasyar was the victim of this social custom and later she became a social activist whose struggles led to the abolition of this practice.

A:-Only i and iv

B:-Only ii and iii

C:-Only i and iii

D:-Only ii and iv

Correct Answer:- Option-C

Question94:-Prabhatham is a _____

A:-Malayalam weekly newspaper founded in 1935 and edited by EMS

B:-Malayalam weekly newspaper started in 1935 and edited by Murkot Kumaran

C:-It is a daily started under P. Krishnapillai and it was published from Calicut

D:-It is a magazine started by AK Gopalan to promote revolutionary ideas among peasants

Correct Answer:- Option-A

Question95:-The social reformer Kumaraguru also known as

A:-Poikayil Abraham

B:-Chattambhi Swamikal

C:-Poikayil Yohannan

D:-Pambadi John Joseph

Correct Answer:- Option-C

Question96:-Who stopped Suchindram Kaimukku or ordeal of boiling ghee

A:-Samoothiri

B:-Swathi Thirunal

C:-Marthandavarma

D:-Sri Chithira Thirunnal Balaramavarma

Correct Answer:- Option-B

Question97:-Among the following choose the correct answer about 'Pattabakki'.

A:-It is drama written by Sahodaran Ayyappan

B:-S.K. Pottekkadu wrote this novel in 1975 which discusses the political condition during emergency

C:-It was the first political drama to be staged in Kerala and it was written by K. Damodaran

D:-It was a socio-political drama written by V.T. Bhattathirippad in 1955

Correct Answer:- Option-C

Question98:-Kerala Land Reforms Act was introduced in

A:-1956

B:-1963

C:-1951

D:-1975

Correct Answer:- Option-B

Question99:-'Badhiravilapam' is the work of _____

A:-Vallathol

B:-Kumaranasan

C:-Ullur

D:-Ezhuthachan

Correct Answer:- Option-A

Question100:-Who is the first opposition leader in the Loksabha ?

A:-C. Kesavan

B:-T.K. Madhavan

C:-A.K. Gopalan

D:-Neelam Sanjeeva Reddy

Correct Answer:- Option-C