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BITSAT TEST

DATE: 20.05.2023

Subject: Physics

Single Correct Type

Q1: Electric potential at any point is g E ; 1 9 1 7; then the magnitude of the electric field is j V Z ZMb 8668l

1) 9 8
2) : 8
3) ; 8
4) 7

Q2: The third line of Balmer series of an ion equivalent to hydrogen atom has wavelength of 76>4; ˆ × . The ground state energy of an electron of this ion will be j] ZMb 7AA=l

1) 94 td
2) 794<vg
3) ;: 4 td
4) 7884 vg

Q3: What is the voltage gain in a common emitter amplifier, where input resistance is 9 and load resistance 8: 2 E 64<?

1) >4
2) : 4>
3) 84
4) 480

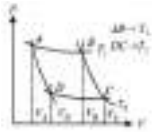
Q4: Infinite number of masses, each 7| ware placed along the √-axis at E 7π 2 8π 2 : π 2 >π , 7<× 44the magnitude of the resultant gravitational potential in terms of gravitational constant O at the orgin . E 6/ is ____ ?

1) G/Z
2) O
3) 8O
4) : O

Q5: Water of volume 2 litre in a container is heated with a coil of 7| e at 8= K . The lid of the container is open and energy dissipates at rate of 7<6R5→ In how much time temperature will rise from 8= K to == K ? [Given specific heat of water is : 48| R5| w]

1) >×ŷ 86→
2) <×ŷ 8→
3) =×ŷ
4) 7: ×ŷ

Q6: In the following a g diagram of an ideal gas, two adiabates cut two isotherms at e_7 E 966S and e_8 E 866S . The value of g_C E 8 unit, g_D E 8 unit, g_E E 7<unit. Find the value of g_G .



1) 4 unit
2) D : unit
3) F ; unit
4) 5 unit

Q7: The mass of P$_8$ molecule is 9498 76 $^{8:}$ w. If 76^{89} hydrogen molecules per second strike 8r×^{8} of wall at an angle of : ; with the normal, while moving with a speed of 76; r×5→ the pressure exterted on the wall is nearly.

1) 79; 6W5×^{8}
2) 89; 6W5×^{8}
3) 9986W5×^{8}
4) 7<<6W5×^{8}

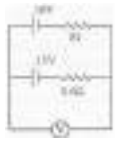
Q8: Seven resistances, each of value 86 , are connected to a 8d battery as shown in the figure. The ammeter reading will be

1) 7576I
2) 9576I
3) : 576I
4) =576I .

Q9: A copper rod of length ±rotates about its end with angular velocity in uniform magnetic field D. The emf developed between the ends of the rod if the field is normal to the plane of rotation is ____ ?

1) D ±^{8}
2) $\frac{7}{8}D$ ±^{8}
3) 8D ±^{8}
4) $\frac{7}{:}D$ ±^{8}

Q10: A 76d battery with internal resistance 7 and a 7; d battery with internal resistance 64< are connected in parallel to a voltmeter (see figure). The reading in the voltmeter will be close to :



1) 784; d
2) 8: 4; d
3) 7947d
4) 774Ad

Q11: A resistor and an inductor are connected to an ac supply of 786d and ; 6P∞ The current in the circuit is 9I . If the power consumed in the circuit is 76>e , then the resistance in the circuit is ____ ?

1) 78 2) : 6
3) .; 8 8; / 4) 9<6

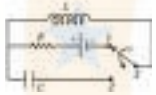
Q12: Four point charges b 2 28 and 8b are placed, one at each corner of the square. The relation between b and for which the potential at the centre of the square is zero is ____ ?

1) b E 2) b E 7
3) b E 4) b E 7

Q13: Two long parallel wires carry equal current αflowing in the same direction are at a distance 8s apart. The magnetic field D at a point lying on the perpendicular line joining the wires and at a distance from the midpoint is ____ ?

1) 6αt /)t 8 1 8[2) 6α /)t 8 8[
3) 6α /)t 8 1 8[4) 6αt /)t 8 1 8[

Q14: In the circuit shown, the symbols have their usual meanings. The cell has emf K4j is initially joined to k for a long time. Then, j is joined to m. The maximum charge on E at any later time will be



1) K / c VE 2) Kc / 8 VE
3) K VE / 8c 4) K VE / c

Q15: The acceleration due to gravity on the surface of the moon is 75<that on the surface of earth and the diameter of the moon is one-fourth that of earth. The ratio of escape velocities on earth and moon will be ____ ?

1) < / 8 2) 8:
3) 3 4) 9 / 8

Q16: Given a E 8α 9β1 :θ and b E β 8θ. The magnitude of their resultant is ____ ?

1) 9 2) 8 9
3) 9 9 4) : 9

Q17: At a place, if the earth's horizontal and vertical components of magnetic fields are equal, then the angle of dip will be ____ ?

1) 96 2) A6
3) :; 4) 6

Q18: Figure shows a capillary rise P. If the air is blown through the horizontal tube in the direction as shown then rise in capillary tube will be

1) E P 2) F P
3) D P 4) zero

Q19: A boy running on a horizontal road at ⫤ ×5x finds the rain falling vertically. He increases his speed to 78| ×5x and finds that the drops makes 96 with the vertical. The speed of rain with respect to the road is ____ ?

1) : ⫤ ×5x 2) A ⫤ ×5x
3) 78 ⫤ ×5x 4) 7; ⫤ ×5x

Q20: A particle of mass π 7 moving with velocity collides with a mass ×8 at rest, then they get embedded. Just after collision, velocity of the system

1) increases 2) decreases
3) remains constant 4) becomes zero

Q21: The ratio of the specific heats of a gas is E / E E

74<<, then the gas may be .... ?

1) KX8 2) Pt
3) P8 4) WX8

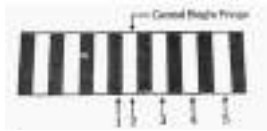
Q22: A juggler keeps on moving four balls in the air throwing the balls after intervals. When one ball leaves his hand (speed E 86×→7) the position of other balls (height in ×) will be (Take wE 76×→8)

1) 762862 76 2) 7; 28627;
3) ; 27; 286 4) ; 27628 6

Q23: A hoop rolls down an inclined plane. The fraction of its total kinetic energy that is associated with rotational motion is ____ ?

1) 7 B8 2) 7 B9
3) 7 B: 4) 8 B9

Q24: The figure shows the interference pattern obtained in a double-slit experiment using light of wavelength <66^×4728292 and 5 are marked on five fringes.
The third order bright fringe is



1) 2 2) 3 3) 4 4) 5

Q25: A point object Z is placed in front of a glass rod having spherical end of radius of curvature 30 r×. The image would be formed at

1) 96r× left 2) infinity
3) 7r× to the right 4) 7>r× to the left

Q26: In Young's double slit experiment, E ;66ˆ× , s E 7××2L E 7×. Minimum distance from the central maximum for which intensity is half of the maximum intensity is ____ ?

1) 84; 76 :× 2) 748; 76 :×
3) 64<8; 76 :× 4) 64978; 76 :×

Q27: A particle of mass × executes simple harmonic motion with amplitude n and frequency . The average kinetic energy during its motion from the position of equilibrium to the end is ____ ?

1) 8 $^{8}\pi\, n^{8}$ ^{8} 2) $^{8}\pi\, n^{8}$ ^{8}
3) $\frac{7}{:}\pi\, n^{8}$ ^{8} 4) : $^{8}\pi\, n^{8}$ ^{8}

Q28: The binding energy per nucleon of ^{76}g is AVtd and that of ^{77}g is =4;Vtd where g represents an element. The minimum energy required to remove a neutron from ^{77}g is ____ ?

1) =4;Vtd 2) 84;Vtd
3) >Vtd 4) 64;Vtd

Q29: If K, the velocity of light, wthe acceleration due to gravity and Z the atmospheric pressure be the fundamental quantities in MKS system, then the dimensions of length will be same as that of .... ?

1) $\frac{E}{y}$ 2) $\frac{E}{a}$
3) ZKw 4) $\frac{E^{8}}{y}$

Q30: In an electron gun, the potential difference between the filament and plate is 9666d. What will be the velocity of electron emitting from the gun?

1) 9 76>×5→ 2) 947> 76=×5→
3) 94;8 76=×5→ 4) 948< 76=×5→

Subject: Chemistry

Single Correct Type

Q31. Which of the following is strongest nucleophile

1) J... 2) BXP
3) BKW 4) $K_{8}P_{;}X$:

Q32. Identify the incorrect statement from the following ____ ?

1) Ozone absorbs the intense ultraviolet radiation of the sun.
2) Depletion of ozone layer is because of its chemical reactions with chlorofluoro alkanes.
3) Ozone absorbs infrared radiation.
4) Oxides of nitrogen in the atmosphere can cause the depletion of ozone layer.

Q33. Which of the following is not a member of chalcogens?

1) X 2) a
3) at 4) Po

Q34. The blue colour of snail is due to presence of .... ?

1) Albumin 2) Haemocyanin
3) Globulins 4) Fibrinogen

Q35. Which of the following is a diamine?

1) Dopamine 2) Histamine
3) Meprobamate 4) Chlorphenamine

Q36. Which of the following will have a meso-isomer also?

1) 2, 3-Dichloropentane 2) 2,3-Dichlorobutane
3) 2-Chlorobutane 4) 2-Hydroxypropanoic acid

Q37. Pick out the wrong statement.

1) Nitrogen has the ability to form bonds with itself.
2) Bismuth forms metallic bonds in elemental state.
3) Catenation tendency is higher in nitrogen when compared with other elements of the same group.
4) Nitrogen has higher first ionisation enthalpy when compared with other elements of the same group.

Q38. Which of the following element do not form complex with EDTA?

1) Kp 2) Vw
3) Jt 4) a...

Q39. 766×TX$_8$ and P$_8$ kept at same temperature and pressure. What is true about their number of molecules

1) WX$_8$ F WP$_8$
2) WX$_8$ D WP$_8$
3) WX$_8$ E WP$_8$
4) WX$_8$ 1 WP$_8$ E 7 mole

Q40. According to molecular orbital theory which of the following statement about the magnetic character around order is correct regarding X_8^1

1) Paramagnetic and Bond Δst..D X$_8$
2) Paranidg tic and Bond order F X$_8$
3) Diamagnetic and Bond order D X$_8$
4) Diamagnetic and Bond order F X$_8$

Q41. If g is the volume of one molecule of gas under given conditions, the van der Waal's constant p is ____ ?

1) :d
2) $\frac{:d}{W_6}$
3) $\frac{W_6}{:d}$
4) :d W$_6$

Q42. For vaporization of water at 1 atmospheric pressure, the values of P and a are :64<9|R×Δ±^{7} and 76>4>RS ^{7}×Δ±^{7}, respectively. The temperature when Gibbs energy change . O/for this transformation will be zero, is: ____ ?

1) 8A94 S
2) 8=94 S
3) 9A94 S
4) 9=94 S

Q43. The ΩP of 647V solution of the following salts increases in the order ____ ?

1) WpK±D WP: K±D WpKWD PK±
2) PK±D WP: K±D WpK±D WpKW
3) WpKWD WP: K±D WpK±D PK±
4) PK±D WpK±D WpKWD WP: K±

Q44. When W$_8$X$_;$ is heated at certain temperature, it dissociates as W$_8$X$_;$.w/ W$_8$X$_9$.w/1 X$_8$.w/GSr E 84;4I ⇌
the same time W$_8$X$_9$ also decomposes as :
W$_8$X$_9$.w/ W$_8$X.w/1 X$_8$.w/. If initially
:46 moles of W$_8$X$_;$ are taken in 746 litre flask and allowed to dissociate. Concentration of X$_8$ at equilibrium is 84;V . Equilibrium concentration of W$_8$X$_;$ is: ____ ?

1) 746V
2) 74;V
3) 847<<V
4) 74>:<V

Q45. The IUPAC name of the compound is

1) 3,3 -dimethyl-1-cyclohexanol
2) 1,1 -dimethyl-3-hydroxy cyclohexane
3) 3,3 -dimethyl-1-hydroxy cyclohexane
4) 1,1 -dimethyl-3-cyclohexanol

Q46. The accompanying figure depicts a change in concentration of species C and D for the reaction I J , as a function of time. The point of inter section of the two curves represents

1) 758
2) 95:
3) 859
4) Data insufficient to predict

Q47. Freundlich equation for adsorption of gases (in amount of w) on a solid (in amount of π w) at constant temperature can be expressed as .... ?

1) ±Δw$_π$ E ±Δw 1 $\frac{7}{ω}$±ΔwT
2) ±Δw$_{\overline{π}}$ E ±ΔwT 1 $\frac{7}{ω}$±Δw
3) $_π$
4) $_π$ E ±Δw 1 $\frac{7}{ω}$±ΔwT

Q48. Which of the following feature of catalysts is described in reactions given below?

(i) KX)w} 1 8P$_8$)w} $^{K∈5i\ \hat{}\ X\ \ K.{}_8X_9}$ KP$_9$XP)w}

(ii) KX)w} 1 P$_8$)w} $^{K∈}$ PKPX)w}

(iii) KX)w} 1 9P$_8$)w} ^{Wy} KP:)w} 1 P$_8$X)w}

1) Activity
2) Selectivity
3) Catalytic promoter
4) Catalytic poison

Q49. Which one of the following cyano complexes would exhibit the lowest value of paramagnetic behaviour?

1) jKΔKW/<l^9
2) jNt.KW/<l^9
3) jV^.KW/<l^9
4) jK..KW/<l^9

(At. Nos: K..E 8:2V^ E 8;2Nt E 8<2KΔ) E 8=

Q50. Consider the reactions

A. P$_8$X$_8$ 1 8PQ Q$_8$ 1 8P$_8$X

B. PXK±1 P$_8$X$_8$ P$_9$X^1 1 K± 1 X$_8$

Which of the following statements is correct about P$_8$X$_8$ with reference to these reactions? Hydrogen peroxide is_____.

1) an oxidising agent in both A and B
2) an oxidising agent in A and reducing agent in B
3) a reducing agent in A and oxidising agent in B
4) a reducing agent in both A and B

Q51. Which of the following is the correct and increasing order of lone pair of electrons on the central atom?

1) QN= D QN; D K+N9 D g tN8
2) QN= D g tN8 D K+N8 D QN;
3) QN= D K+N9 D g tN8 D QN;
4) QN= D g tN8 D QN; D K+N9

Q52. Each edge of a cubic unit cell is : 66Ω× long. If atomic mass of the element is 120 and its density is <48; w5r×9 , the crystal lattice is : (use W1 E < 7689 [

1) primitive
2) body centered
3) face centered
4) end centered

Q53. ΩP of a 647V monobasic acid is found to be 84Hence, its osmotic pressure at a given temperature TK is ____ ?

1) 647] b
2) 6477] b
3) 747] b
4) 6467] b

Q54. When an aqueous solution of copper (II) sulphate is saturated with ammonia, the blue compound crystallises on evaporation. The formula of this blue compound is: ____ ?

1) jK∈.WP9/: laX: P8X (square planar)
2) jK∈.WP9/: laX: (Tetrahedral)
3) jK∈.WP9/< laX: (Octahedral)
4) jK∈.aX: /.WP9/; l. Octahedral /

Q55. The 8; ×T of a 647; V solution of lead nitrate, Zq.WX9/8 reacts with all of the aluminium sulphate, I ±.aX: /9 , present in 86×T of a solution. What is the molar concentration of the I ±.aX: /9 ?

9Zq.WX9/8.p–/1 I ±.aX: /9.p–/ 9ZqaX:.–/1 8I ±WX9/9.p–/

1) <48; 768 V
2) 84 87 768 V
3) 647>=; V
4) None of these

Q56. If the Planck's constant x E <4< 769: R→; the de Broglie wavelength of a particle having momentum of 949 768: | w×→7 will be ____ ?

1) 6668Å
2) 64;Å
3) 8Å
4) ;66Å

Q57. Following are colours shown by some alkaline earth metals in flame test. Which of the following are not correctly matched?

Metal	Colour
(i) Calcium	Apple green
(ii) Strontium	Crimson
(iii) Barium	Brick red

1) (i) and (iii)
2) (i) only
3) (ii) only
4) (ii) and (iii)

Q58. In a set of reactions, ethylbenzene yielded a product D.

1) 
2) 
3) 
4) 

Q59. A 7664×T dillute solution of I w1 is electrolysed for 7; 46 minutes with a current of 748; ×I and the silver is removed completely. What was the initial √/w1 ?

1) 8498 767
2) 8498 76:
3) 8498 769
4) 747< 76;

Q60. The rate constant of a reaction is 74; 769 at 8; K and 847 768 at <6 K . The activation energy is ____ ?

1) 9;/999] ±Δwt 847 768 / 74; 768
2) 8A> 999/9;] ±Δwt 87/74;
3) 8A> 999/9; c ±Δwv 847
4) 8A> 999/9;] ±Δwt 847/74;

Subject: Maths

Single Correct Type

Q61. The num The number of ways in which first, second and third prizes can be given to 5 competitors is ____ ?

1) 10
2) 60
3) 15
4) 125

Q62. The probability of getting 10 in a single throw of three fair dice is: ____ ?

1) 7/<
2) 7/>
3) 7/A
4) 7/;

Q63. If the constraints in a linear programming problem are changed then ____ ?

1) The problem is to be re-evaluated.
2) Solution is not defined.
3) The objective function has to be modified.
4) The change in constraints is ignored.

Q64. In a binomial distribution, the mean is 4 and variance is 3. Then its mode is ____ ?

1) 5
2) 6
3) 4
4) None of these

Q65. Which of the following statements is correct?

1) Every L.P.P. admits an optimal solution.
2) AL.P.P. admits a unique optimal solution.
3) If a L.P.P. admits two optimal solutions, it has an infinite number of optimal solutions.
4) The set of all feasible solutions of a L.P.P. is not a convex set.

Q66. In how many ways can 12 gentlemen sit around a round table so that three specified gentlemen are always together?

1) A!
2) 76!
3) 9!76!
4) 9!A!

Q67. The coefficient of ^{9} in the expansion of) ^{7} [$^=$ is: ____ ?

1) 14 2) 21 3) 28 4) 35

Q68. If F 6 , the 7 1 $\frac{\pm w_8}{7!}$ 1 $\frac{\pm w_8 \sqrt{}^8}{8!}$ 1 4E

1)
2) $\sqrt{}^8$
3) 8$\sqrt{}$
4) $\sqrt{}$

Q69. Consider the equation of a parabola ^{8} 1 : n E 6 , where a F 6 which of the following is/are correct?

1) Tangent at the vertex is $\sqrt{}$E 6
2) Directrix of the parabola is $\sqrt{}$E 6
3) Vertex of the parabola is not at the origin
4) Focus of the parabola is at .n26/

Q70. he value of ±y× $_\omega$ $\frac{71\ 81\ 91}{\omega^8 1\ 766}$ $^\omega$ is equal to: ____ ?

1)
2) $\frac{7}{8}$
3) 2
4) 0

Q71. ±y× 6 $\frac{y^ˆ}{1\ y^8}$ is equal to ____ ?

1) 1
2) 0
3)
4) None of these

Q72. The points represented by the complex numbers 7 1 c2 8 1 9c2$\frac{:}{9}c$ on the argand diagram are .... ?

1) Vertices of an equilateral triangle
2) Vertices of an isosceles triangle
3) Collinear
4) None of the above

Q73. If matrix I E $\begin{matrix} 9 & 8 & : \\ 7 & 8 & 7 \\ 6 & 7 & 7 \end{matrix}$ and I ^{7} E ^{7} ps z)I [, then θ is ____ ?

1) 7
2) =
3) 15
4) 77

Q74. If f)$\sqrt{}$ { E | 72○ xt ˆ6 D $^9_:$; 8 y ˆ $\frac{8}{A}$ 2○ xt ˆ $^9_:$ D D

1) x.$\sqrt{}$/ is continuous at $\sqrt{}$E 6
2) x.$\sqrt{}$/ is continuous at $\sqrt{}$E
3) x.$\sqrt{}$/ is continuous at E $^9_:$
4) x.$\sqrt{}$/ is discontinuous at E $^9_:$

Q75. Let E v^8 . Then)$\frac{t^8}{t^8}$ $\sqrt{}$)$\frac{t^8}{t^8}$ $\sqrt{}$is ____ ?

1) 1
2) v^8
3) 8v^8
4) 8v^8

Q76. A ball is dropped from a platform 7A4× high. Its position function is ____ ?

1) E :4A ^{8} 1 7A4)6 7[
2) E :4A ^{8} 1 7A4)6 8[
3) E A4> ^{8} 1 7A4)6 8[
4) E :4A ^{8} 7A4)6 8[

Q77. $\frac{v^8)8\ 1\ ^9[}{.91\ ^8/^8}t$ is equal to: ____ ?

1) $\frac{t\,v^8}{.91\ \sqrt{}^8/}$ 1 |
2) $\frac{7}{8}\frac{v^8}{.91\ ^8/^8}$ 1 θ
3) $\frac{7}{:}\frac{v^8}{.91\ ^8/^8}$ 1 θ
4) $\frac{7}{8}\frac{v^8}{.91\ ^8/}$ 1 θ

Q78. f $^n_6$ x)8n [t E π and $^n_6$ x) [t E ω , then $^{8n}_6$ x) $\sqrt{t}$ is equal to ____ ?

1) 8π 1 ω
2) π 1 8ω
3) π ω
4) π 1 ω

Q79. An integrating factor of the differential equation y ˆ $\sqrt{\frac{t}{t}}$ 1 8○r∆ $\sqrt{}$E 7 is ____ ?

1) y ˆ ^{8}
2) $\frac{8}{y^ˆ}$
3) ±∆w∧y ˆ ∧
4) $\frac{7}{y^8}$

Q80. The projection of line joining .92 2; / and .: 2<29/ on the line joining . 7282: / and .7262; / is ____ ?

1) $\frac{:}{9}$
2) $\frac{8}{9}$
3) $\frac{>}{9}$
4) $\frac{7}{9}$

Q81. The Boolean expression . / . /is equivalent to : ____ ?

1) Ω 2) –
3) – 4) p

Q82. The domain of the function x) } E 8 j l^8 , where j l denotes the greatest integer less than or equal to , is ____ ?

1) .62 / 2) . 26/
3) . 2 / 4) None of these

Q83. Let $C2D$, and E are the angles of a plain triangle and ¬þ^ I/8 E 7/92¬þ^ J/8 E 8/9 . Then ¬þ^ K/8 is equal to ____ ?

1) =5A 2) 85A
3) 759 4) 859

Q84. If the amplitude of 8 9$\alpha$is 5: , then the locus of E 1 α is ____ ?

1) 1 7E6 2) 7E6
3) 1 1 7E6 4) 1 7E6

Q85. The roots of the equation : 8 ^{9}1 E 9>6 are ____ ?

1) ;2 :2^7 ; $^{\overline{9}}_8$ 2) ;22 ^{7} ; $^{\overline{9}}_8$
3) ;22$^{\frac{7}{8}}$; $^{\overline{9}}$ 4) ;2 :2^7 ; $^{\overline{9}}_8$

Q86. Roots of the equation ^{8}1 p qE6)p2qF6[are .... ?

1) Both positive 2) Both negative
3) Of opposite sign 4) None of these

Q87. Eccentricity of ellipse $^8_{n^8}$ 1 $^8_{p^8}$ E 7 if it passes through point .A2, / and .782 / is ____ ?

1) 95: 2) :5;
3) ;5< 4) <5=

Q88. If C E $\begin{matrix} 7 & 8 & 8 \\ 7/9 & 8 & 7 \\ n & 8 & p \end{matrix}$ is an orthogonal matrix, then ____ ?

1) pE 82qE 7 2) nE 82pE 7
3) nE 82pE 7 4) nE 82pE 7

Q89. The value of ry^.62 8/ satisfying the mean value theorem for the function x. /E . 7/^{8}2 j628l is equal to ____ ?

1) 9/: 2) :/9
3) 7/9 4) 8/9

Q90. f E $\frac{}{17}$1 ^{17} , then $\frac{t^8}{t^8}$ at E 7 is equal to ____ ?

1) =/: 2) =/>
3) 7/: 4) =/>

Q91. If in a frequency distribution, the mean and median are 21 and 22 respectively, then its mode is approximately ---- ?

1) 8; 4 2) 8: 46
3) 8846 4) 864;

Q92. Number of solutions of ¬ý^ A E ¬ý^ in the interval j628 l is ____ ?

1) 16 2) 17 3) 18 4) 15

Q93. A pole stands vertically inside a triangular park I J K . If the angle of elevation of the top of the pole from each corner of the park is same, then the foot of the pole is at the ---- ?

1) centroid 2) circumcentre
3) incentre 4) orthocentre

Q94. If n2p2q are in G.P., then ____ ?

1) p^{8}2q^{8}2r^8 are in OZ . 2) n^8)p1 q[2q^8)n1 p[2p^8)n1 q[are in G.P.
3) $\frac{n}{p1\,q}$2$\frac{p}{q1\,n}$2$\frac{q}{n1\,p}$ are in G.P. 4) None of these

Q95. The locus of the point of intersection of the lines E n) $^{7}_{71}$ $^{8}_{8}$√and E $^{8n}_{71\ 8}$ represent . being a parameter)

1) circle 2) parabola 3) ellipse 4) hyperbola

Q96. Number of solutions of the equation ¬þ^ ^{7})71 [1 ¬þ^ ^{7})7 [E $\frac{}{8}$ are .... ?

1) 3 2) 2 3) 1 4) 0

Q97. If x. / E ¬ý^ 2○ xt^ y→p÷ý^ p±
E r∆→2○ xt^ y→y . p÷ý^ p±
Then the function is ____ ?

1) discontinuous at √E ^ 1 5: 2) continuous at √E ^ 1 5:
3) discontinuous at all √ 4) none of these

Q98. The value of the integral $\int_{n}^{p} \frac{\bar{t}}{\bar{1}\ \overline{n1\ p}}$ is: ____ ?

1)
2) $\frac{7}{8})p \quad n[$
3) 58
4) q p

Q99. If $\alpha 1 \quad \beta 2\beta 1\ \theta 2\alpha 1\ \theta$ are the position vectors of the vertices of a triangle CDE taken in order, then I is equal to ____ ?

1) $\overline{8}$
2) $\overline{;}$
3) $\overline{<}$
4) $\overline{9}$

Q100: f π ŷ E ω ŷ . 1 8 /then ₹p̂ . 1 /is ____ ?

1) $\times 1\ \hat{}\ \text{₹}\hat{p}$
2) $\times 1\ \hat{}\ \text{₹}\hat{p}$
3) $\pi\ 1\ \omega$ r Δ⇌
4) $\pi\ 1\ \omega$ r Δ⇌

Subject: EP & LR

Single Correct Type

Q101: Choose the word which is most similar in meaning to the word 'Optimistic'.

1) Favourable 2) Gloomy 3) Hopeful 4) Rude

Q102: The likelihood of at least 600,000 deaths being caused annually in India by fine particulate matter pollution in the air is cause for worry, even if the data released by the World Health Organisation are only a modelled estimate. The conclusion that so many deaths could be attributed to particulate matter 84; micrometres or less in size is, of course, caveated, since comprehensive measurement of PM 84; is not yet being done and the linkages between pollution, disease and deaths need further study. What is not in doubt is that residents in many urban areas are forced to breathe unhealthy levels of particulates, and the smallest of these - PM10 and less - can penetrate and get lodged deep in the lungs. The WHO Global Burden of Disease study has been working to estimate pollution-linked health impacts, such as stroke and ischaemic heart disease, acute lower respiratory infection and chronic obstructive respiratory infection and chronic obstructive pulmonary disease. Data on fine particulates in India show that in several locations the pollutants come from burning of biomass, such as coal, fuel wood, farm litter construction debris, road dust and vehicular exhaust construction debris, road dust and vehicular exhaust Air Quality Index last year aimed at improving pollution Air Quality Index last year aimed at improving pollution the best evidence available on the terrible toll taken by the best evidence available on the terrible toll taken by neglected aspect of urban air pollution control is the virtual discarding of the Construction and Demolition Waste Management Rules, notified to sustainably manage debris that is dumped in the cities, creating severe particulate pollution.

The Environment Ministry has highlighted the role that debris can play as a resource. Municipal and government contracts are, under the rules, required to utilise up to 20 per cent materials made from construction and demolition waste, and local authorities must place containers to hold debris. This must be implemented without delay. Providing cleaner fuels and scientifically designed cookstoves to those who have no option but to burn biomass, would have a big impact on reducing particulate matter in the northern and eastern States, which are the worst-hit during winter, when biomass is also used for heating. Greening the cities could be made a mission, involving civil society, with a focus on landscaping open spaces and paving all public areas to reduce dust. These measures can result in lower PM 10 and PM 2.5 levels. Comprehensive measurement of these particulates is currently absent in many cities, a lacuna that needs to be addressed.

According to the WHO Global Burden of Disease study which of the following is/are pollution linked health impacts?

(I) Infection of the lower respiratory system

(II) Chronic obstructive pulmonary disease

(III) Stroke and ischaemic heart disease

1) Only (I) 2) Only (III)
3) Both (I) and (II) 4) All of the above

Q103: The likelihood of at least 600,000 deaths being caused annually in India by fine particulate matter pollution in the air is cause for worry, even if the data released by the World Health Organisation are only a modelled estimate. The conclusion that so many deaths could be attributed to particulate matter 84; micrometres or less in size is, of course, caveated, since comprehensive measurement of PM 84; is not yet being done and the linkages between pollution, disease and deaths need further study. What is not in doubt is that residents in many urban areas are forced to breathe unhealthy levels of particulates, and the smallest of these - PM10 and less - can penetrate and get lodged deep in the lungs. The WHO Global Burden of Disease study has been working to estimate pollution-linked health impacts, such as stroke and ischaemic heart disease, acute lower respiratory infection and chronic obstructive respiratory infection and chronic obstructive pulmonary disease. Data on fine particulates in India show that in several locations the pollutants come from burning of biomass, such as coal, fuel wood, farm litter construction debris, road dust and vehicular exhaust construction debris, road dust and vehicular exhaust Air Quality Index last year aimed at improving pollution Air Quality Index last year aimed at improving pollution the best evidence available on the terrible toll taken by the best evidence available on the terrible toll taken by neglected aspect of urban air pollution control is the virtual discarding of the Construction and Demolition Waste Management Rules, notified to sustainably manage debris that is dumped in the cities, creating severe particulate pollution.

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Which of the following is/are not true in the context of the passage?

1) Eastern and Southern states are worst hit in winter by burning of biomass.
2) The smallest particulate matter PM2.5 penetrates and gets lodged in lungs.
3) Data on fine particulates in India show that in several locations the pollutants come from the smoke emitted by vehicles.
4) None is true

Q104: The likelihood of at least 600,000 deaths being caused annually in India by fine particulate matter pollution in the air is cause for worry, even if the data released by the World Health Organisation are only a modelled estimate. The conclusion that so many deaths could be attributed to particulate matter 84; micrometres or less in size is, of course, caveated, since comprehensive measurement of PM 84; is not yet being done and the linkages between pollution, disease and deaths need further study. What is not in doubt is that residents in many urban areas are forced to breathe unhealthy levels of particulates, and the smallest of these - PM10 and less - can penetrate and get lodged deep in the lungs. The WHO Global Burden of Disease study has been working to estimate pollution-linked health impacts, such as stroke and ischaemic heart disease, acute lower respiratory infection and chronic obstructive respiratory infection and chronic obstructive pulmonary disease. Data on fine particulates in India show that in several locations the pollutants come from burning of biomass, such as coal, fuel wood, farm litter construction debris, road dust and vehicular exhaust construction debris, road dust and vehicular exhaust Air Quality Index last year aimed at improving pollution Air Quality Index last year aimed at improving pollution the best evidence available on the terrible toll taken by the best evidence available on the terrible toll taken by neglected aspect of urban air pollution control is the virtual discarding of the Construction and Demolition Waste Management Rules, notified to sustainably manage debris that is dumped in the cities, creating severe particulate pollution.

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As per the given passage, which of the following is/are the measures for lowering particulate matter in the atmosphere?

(I) Making cleaner fuels available
(II) Landscaping open areas
(III) Providing cooking stoves designed scientifically

1) Only(I)
2) Both (I) and (II)
3) All of the above
4) None of these

Q105: Read the sentence to find out whether there is any grammatical error or idiomatic error in it. The error, if any, will be in one part of the sentence. The letter of that part is the answer. If there is no error, the answer is (D). (Ignore errors of punctuation, if any.)
Despite being (A)/ a good teacher, (B)/ he has no influence on his pupil. (C)/ No error (D)

1) A 2) B 3) C 4) D

Q106: Read the sentence to find out whether there is any grammatical error or idiomatic error in it. The error, if any, will be in one part of the sentence. The letter of that part is the answer. If there is no error, the answer is (D). (Ignore errors of punctuation, if any.)
A group of trees is known as .... ?

1) grove 2) parliament 3) heap 4) hedge

Q107: Choose the word which is most opposite in meaning to the word 'Drowsy'.

1) Sleepy 2) Nodding 3) Yawning 4) Wakeful

Q108: Hey, Nanny, speak about the devil and you are here.
(I) speak at the devil
(II) speak on the devil
(III) speak of the devil

1) Only (I) is correct
2) Only (II) is correct
3) Only (III) is correct
4) No correction required

Q109: If sentence (Q) "The Finance Ministry's warning to potential investors in bitcoin and other cryptocurrencies has come at a time when a new, seemingly attractive investment area has opened up that few have enough information about." is the first sentence, what is the order of other sentences after rearrangement?
(P) One of the main reasons for this volatility is speculation and the entry into the market of a large number of people lured by the prospect of quick and easy profits.
(Q) The Finance Ministry's warning to potential investors in bitcoin and other cryptocurrencies has come at a time when a new, seemingly attractive investment area has opened up that few have enough information about.
(R) A number of investors, daunted by the high price of bitcoin, have put their money into less well-established and often spurious cryptocurrencies, only to lose it all.
(S) Investment in bitcoin and other cryptocurrencies increased tremendously in India over the past year, but most new users know close to nothing of the technology, or how to verify the genuineness of a particular cryptocurrency.
(T) The price of bitcoin, the most popular of all cryptocurrencies, not only shot up by well over 7666) over the course of the last year but also fluctuated wildly.
(U) The government's caution comes on top of three warnings issued by the Reserve Bank of India since 86794

1) RSTUP 2) TPUSR 3) SRPTU 4) TRSPU

Q110: If sentence (R) "Clinical trials involving human subjects have long been a flashpoint between bioethicists and clinical research organisations (CROs) in India." is the first sentence, what is the order of other sentences after rearrangement?
(P) Such over-volunteering occurs more frequently in bioequivalence studies, which test the metabolism of generics in healthy subjects.
(Q) Landmark amendments to the Drugs and Cosmetics Act in 2013 led to better protection of vulnerable groups such as illiterate people, but more regulation is needed to ensure truly ethical research.
(R) Clinical trials involving human subjects have long been a flashpoint between bioethicists and clinical research organisations (CROs) in India.
(S) The big problem plaguing clinical research is an over-representation of low-income groups among trial subjects.
(T) While CROs have argued that more rules will stifle the industry, the truth is that ethical science is often better science.
(U) Sometimes CROs recruit them selectively, exploiting financial need and medical ignorance; at other times people over volunteer for the money.

1) PQSUT 2) QSTPU 3) SUPTQ 4) QTSUP

Q111: Read the sentence to find out whether there is any grammatical error or idiomatic error in it. The error, if any, will be in one part of the sentence. The letter of that part is the answer. If there is no error, the answer is (D). (Ignore errors of punctuation, if any.)
A group of sheep is known as .... ?

1) bunch 2) herd 3) band 4) fleet

Q112: He is really feeling under the weather today; he has a terrible cold.
(I) feeling like the weather
(II) feeling over the weather
(III) feeling in the weather

1) Only (I) is correct
2) Only (III) is correct
3) Only (II) is correct
4) No correction required

Q113: By working part-time and looking after his old mother, he managed to get the best for both worlds.
(I) the best at both worlds
(II) the best of both worlds
(III) the best on both worlds

1) Only (I) is correct
2) Only (II) is correct
3) Only (III) is correct
4) No correction required

Q114: The likelihood of at least 600,000 deaths being caused annually in India by fine particulate matter pollution in the air is cause for worry, even if the data released by the World Health Organisation are only a modelled estimate. The conclusion that so many deaths could be attributed to particulate matter 84; micrometres or less in size is, of course, caveated, since comprehensive measurement of PM 84; is not yet being done and the linkages between pollution, disease and deaths need further study. What is not in doubt is that residents in many urban areas are forced to breathe unhealthy levels of particulates, and the smallest of these - PM10 and less - can penetrate and get lodged deep in the lungs. The WHO Global Burden of Disease study has been working to estimate pollution-linked health impacts, such as stroke and ischaemic heart disease, acute lower respiratory infection and chronic obstructive respiratory infection and chronic obstructive pulmonary disease. Data on fine particulates in India show that in several locations the pollutants come from burning of biomass, such as coal, fuel wood, farm litter construction debris, road dust and vehicular exhaust construction debris, road dust and vehicular exhaust Air Quality Index last year aimed at improving pollution Air Quality Index last year aimed at improving pollution the best evidence available on the terrible toll taken by the best evidence available on the terrible toll taken by neglected aspect of urban air pollution control is the virtual discarding of the Construction and Demolition Waste Management Rules, notified to sustainably manage debris that is dumped in the cities, creating severe particulate pollution.

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The conclusion regarding the deaths attributed to particulate matter 84; micrometers is considered to be caveated because

1) Measurement of all aspects of PM2.5 has been done comprehensively
2) Measurement of all aspects of PM2.5 is not radical
3) Relation between pollution, disease and death is complete
4) None of these

Q115: Read the sentence to find out whether there is any grammatical error or idiomatic error in it. The error, if any, will be in one part of the sentence. The letter of that part is the answer. If there is no error, the answer is (D). (Ignore errors of punctuation, if any.)
Yesterday, when we were returning from the party, (A)/ our car met with an accident, (B)/ but we were fortunate to reach our home safely. (C)/No error (D)

1) A 2) B 3) C 4) D

Q116: If ; %<E 787 and 76%>E 98: , then find the value of 89%7: E ?

1) 1369 2) 1349 3) 1331 4) 725

Q117: Choose the correct alternatives from the given ones that will complete the series.
L_NO_ _MLLM_OO_ML

1) MNNNO 2) MONNO 3) MONON 4) MONNN

Q118: Choose the correct alternatives from the given ones that will complete the series.
8828<2; 92<A27A: , ?

1) 230 2) 260 3) 250 4) 245

Q119: Select the missing number from the given responses.

1) 888 2) 788 3) 848 4) 842

Q120: In a code language, if REGAINS is coded as QDFZHMR, then the word PERIODS will be coded as -

1) XL[WPK] 2) XLL[PK]
3) ODQHNCR 4) ODQHNRC

Q121: Which of the following cube in the answer figure cannot be made based on the unfolded cube in the question figure?

1) 
2) 
3) 
4) 

Q122: Select the related letter/word/ number from the given alternatives.
Distance : Odometer H5? : Barometer

1) Humidity 2) Pressure 3) Thickness 4) Wind

Q123: Identify the figure that will complete the pattern.

1) 

2) 

3) 

4) 

Q124: Which one of the following diagram represents the correct relationship among Professor, Male and Female.

1) 

2) 

3) 

4) 

Q125 Find the odd word/letters/ number pair/number from the given alternatives.

1) 24-1614
2) 270-569
3) 786 : 98;
4) 7<8 <A96
