Kendriya Vidyalaya N.A.D. Karanja

Summer Vacation Holiday Homework 2023 – 2024

Class :- XII (All Section)

Note :- Students go for according to your Subjects.

(Write it in English subject note-book)

Q. 1 Choose any **2 (factual/descriptive/literary) comprehension passages**, from practice book/e- material, paste print-outs and attempt.

Q.2 Choose any **2 CASE BASED FACTUAL PASSAGES**, from practice book/e-material, paste print-outs and attempt.

Q. 3 Write any **2 letters to the editor** of a national daily giving suggestions or opinion on issues of public interest, in 150 words each.

Q. 4 Write any **2 articles** descriptive or analytical in nature, in 150 words each.

Q. 5 Read all lessons and poems from Flamingo intensively.

Subject :- Hindi (हिंदी)

1) (रंगीन पन्नों पर *किन्हीं 2 विषयों पर* मौलिक/मन से कहानी लिखिए)

*मेरी यादों में बसा वह पेड़

*मुस्कुराती यादें

*रेगिस्तान की बेटी

*छोटी बहन

*हाथों की सुन्दरता

* जन्मदिन का अद्भुत तोहफा

2) कवि *हरिवंशराय बच्चन तथा महादेवी वर्मा* के जीवन के विषय में जानकारी एकत्र करके सचित्र जानकारी लिखिए। (प्रत्येक के विषय में चार-से पाँच पन्ने)

3) जनसंचार के अभ्यास पत्रकों को पुस्तिका में लिखें तथा प्रश्नोत्तरों का अभ्यास करें ।

https://docs.google.com/document/d/1ccC1P-T31nVnY3TLTI_wULc3pmgigJ5i/edit?usp=share_link&ouid=114824625591984062331&rtpof=true&sd=true

WORKSHEET -1 MATRICES

Q1 The number of all possible matrices of order 3x3 with each entry 0 or 1 is:

(a) 27   (b) 18   (c) 81   (d) 512

Q2. Matrix A and B will be inverse of each other only if

(a) AB=BA   (b) AB=BA=0   (c) AB=0, BA=I   (d) AB=BA=I

Q3. If A and B are symmetric matrices of same order, then AB-BA is a

(a) Skew-symmetric matrix   (b) Symmetric matrix   (c) Zero matrix   (d) Identity

Q4. If a matrix has 6 elements, then number of possible orders of the matrix can be

(a) 2   (b) 4   (c) 3   (d) 6

Q5. If A is a square matrix such that $A^2 = A$, then $(I + A)^2 - 3A$ is

(a) I   (b) 2A   (c) 3I   (d) A

Q6. The diagonal elements of a skew symmetric matrix are

(a) all zeroes   (b) are all equal to some scalar k($\neq$ 0)   (c) can be any number   (d) none of these

Q7. If a matrix A is both symmetric and skew symmetric then matrix A is

(a) a scalar matrix   (b) a diagonal matrix   (c) a zero matrix of order n × n   (d) a rectangular matrix.

Q8. If matrix A is of order m × n, and for matrix B, AB and BA both are defined, then order of matrix B is   (a) m × n   (b) n × n   (c) m × m   (d) n × m

Q9. A manufacture produces three stationery products Pencil, Eraser and Sharpener which he sells in two markets.

Annual sales are indicated below	Products (in numbers)		
Market	Pencil	Eraser	Sharpener
A	10,000	2000	18,000
B	6000	20,000	8,000

If the unit Sale price of Pencil, Eraser and Sharpener are ₹ 2.50, ₹ 1.50 and ₹ 1.00 respectively, and unit cost of the above three commodities are ₹ 2.00, ₹ 1.00 and ₹ 0.50 respectively, then, based on the above information answer the following:

(a) Total revenue of market A

(i) ₹ 64,000   (ii) ₹ 60,400   (iii) ₹ 46,000   (iv) ₹ 40,600

(b) Total revenue of market B

(i) ₹ 35,000   (ii) ₹ 53,000   (iii) ₹ 50,300   (iv) ₹ 30,500

(c) Cost incurred in market A

(i) ₹ 13,000   (ii) ₹ 30,100   (iii) ₹ 10,300   (iv) ₹ 31,000

(d) Profit in market A and B respectively are

(i) (₹ 15,000, ₹ 17,000) (ii) (₹ 17,000, ₹ 15,000) (iii) (₹ 51,000, ₹ 71,000) (iv) (₹ 10,000, ₹ 20,000)

(e) Gross profit in both market
(i) ₹ 23,000   (ii) ₹ 20,300   (iii) ₹ 32,000   (iv) ₹ 30,200
Q10. Show that the matrix B^TAB is symmetric or skew symmetric according as A is symmetric or skew symmetric.

WORKSHEET – 1 DETERMINANTS

Q1. If A is a square matrix of order 3, such that A(adjA) = 10I, then |adj A| is equal to
(a) 1   (b) 10   (c) 100   (d) 1000

Q2. Let A be a square matrix of order 2 × 2, then |KA| is equal to
(a) K|A| (b) K^2|A| (c) K^3|A| (d) 2K|A|

Q3. If A and B are invertible matrices then which of the following is not correct
(a) AdjA = $|A|.A^{-1}$ (b) det(A^{-1}) = (det A)$^{-1}$ (c) $(AB)^{-1} = B^{-1}A^{-1}$ (d) $(A + B)^{-1} = A^{-1} + B^{-1}$

Q4. Let A be a non-angular square matrix of order 3 × 3, then |A . adj A| is equal to
(a) $|A|^3$ (b) $|A|^2$ (c) |A| (d) 3|A|

Q5. If A is a skew-symmetric matrix of order 3, then the value of |A| is
(a) 3   (b) 0   (c) 9   (d) 27

Q6. If A is any square matrix of order 3x3 such that |A| = 3, then the value of |adj A| is
(a) 3   (b) 1/3   (c) 9   (d) 27

Q7. The area of a triangle with vertices (−3,0), (3,0)and (0, k) is 9 sq. units. Then, the value of k will be
(a) 9   (b) 3   (c) -9   (d) 6

Q8. For any square matrix A, AA_T is a
(a) Unit matrix   (b) Symmetric matrix   (c) Skew symmetric matrix   (d) Diagonal matrix

Q9. If a matrix A is such that $3A^3 + 2A^2 + 5A + I = 0$ then its inverse is
(a) $-(3A^2 + 2A + 5I)$ (b) $(3A^2 + 2A + 5I)$ (c) $(3A^2 – 2A + 5I)$ (d) None of these

Q10. If the order of matrix A is m x p and the order of B is p x n. Then the order of matrix AB is?
(a) m × n   (b) n × m   (c) n × p   (d) m × p

Q11. Raja purchases 3 pens, 2 pencils and 1 mathematics instrument box and pays ₹ 41 to the shopkeeper. His friends, Daya and Anil purchases 2 pens, 1 pencil, 2 instrument boxes and 2 pens, 2 pencils and 2 mathematical instrument boxes respectively. Daya and Anil pays ₹ 29 and ₹ 44 respectively. Based on the above information answer the following:
(a) The cost of one pen is

(i) ₹ 2   (ii) ₹ 5   (iii) ₹ 10   (iv) ₹ 15

(b) The cost of one pen and one pencil is

(i) ₹ 5   (ii) ₹ 10   (iii) ₹ 15   (iv) ₹ 17

(c) The cost of one pen and one mathematical instrument box is

(i) ₹ 7   (ii) ₹ 10   (iii) ₹ 15   (iv) ₹ 18

(d) The cost of one pencil and one mathematical instrumental box is

(i) ₹ 5   (ii) ₹ 10   (iii) ₹ 15   (iv) ₹ 20

(e) The cost of one pen, one pencil and one mathematical instrumental box is

(i) ₹ 10   (ii) ₹ 15   (iii) ₹ 22   (iv) ₹ 25

WORKSHEET -2 MATRICES

Find X and Y, if $X + Y = \begin{bmatrix} 5 & 2 \\ 0 & 9 \end{bmatrix}$ and $X - Y = \begin{bmatrix} 3 & 6 \\ 0 & -1 \end{bmatrix}$.

Find AB, if $A = \begin{bmatrix} 6 & 9 \\ 2 & 3 \end{bmatrix}$ and $B = \begin{bmatrix} 2 & 6 & 0 \\ 7 & 9 & 8 \end{bmatrix}$.

Solve the equation for x, y, z and t, if $2\begin{bmatrix} x & z \\ y & t \end{bmatrix} + 3\begin{bmatrix} 1 & -1 \\ 0 & 2 \end{bmatrix} = 3\begin{bmatrix} 3 & 5 \\ 4 & 6 \end{bmatrix}$

Find $A^2 - 5A + 6I$, if $A = \begin{bmatrix} 2 & 0 & 1 \\ 2 & 1 & 3 \\ 1 & -1 & 0 \end{bmatrix}$

If $A = \begin{bmatrix} 1 & 0 & 2 \\ 0 & 2 & 1 \\ 2 & 0 & 3 \end{bmatrix}$, prove that $A^3 - 6A^2 + 7A + 2I = 0$

If $A = \begin{bmatrix} -2 \\ 4 \\ 5 \end{bmatrix}$, $B = \begin{bmatrix} 1 & 3 & -6 \end{bmatrix}$, verify that $(AB)' = B'A'$.

For what values of x : $\begin{bmatrix} 1 & 2 & 1 \end{bmatrix} \begin{bmatrix} 1 & 2 & 0 \\ 2 & 0 & 1 \\ 1 & 0 & 2 \end{bmatrix} \begin{bmatrix} 0 \\ 2 \\ x \end{bmatrix} = O$?

Find x, if $\begin{bmatrix} x & -5 & -1 \end{bmatrix} \begin{bmatrix} 1 & 0 & 2 \\ 0 & 2 & 1 \\ 2 & 0 & 3 \end{bmatrix} \begin{bmatrix} x \\ 4 \\ 1 \end{bmatrix} = O$

Find the matrix X so that $X \begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \end{bmatrix} = \begin{bmatrix} -7 & -8 & -9 \\ 2 & 4 & 6 \end{bmatrix}$

Find non-zero values of x satisfying the matrix equation:

$$x \begin{bmatrix} 2x & 2 \\ 3 & x \end{bmatrix} + 2 \begin{bmatrix} 8 & 5x \\ 4 & 4x \end{bmatrix} = 2 \begin{bmatrix} (x^2 + 8) & 24 \\ (10) & 6x \end{bmatrix}.$$

If $A = \begin{matrix} 1 & 5 \\ 7 & 12 \end{matrix}$ and $B = \begin{matrix} 9 & 1 \\ 7 & 8 \end{matrix}$, find a matrix C such that $3A + 5B + 2C$ is a null matrix.

Find x, y, z if $A = \begin{bmatrix} 0 & 2y & z \\ x & y & -z \\ x & -y & z \end{bmatrix}$ satisfies $A' = A^{-1}$.

If $A = \begin{bmatrix} 1 & 2 & 0 \\ -2 & -1 & -2 \\ 0 & -1 & 1 \end{bmatrix}$, find A^{-1}.

Using A^{-1}, solve the system of linear equations $x - 2y = 10$, $2x - y - z = 8$, $-2y + z = 7$.

Using matrix method, solve the system of equations $3x + 2y - 2z = 3$, $x + 2y + 3z = 6$, $2x - y + z = 2$.

Given A $\begin{array}{ccc} 2 & 2 & 4 \\ 4 & 2 & 4 \\ 2 & 1 & 5 \end{array}$, B $\begin{array}{ccc} 1 & 1 & 0 \\ 2 & 3 & 4 \\ 0 & 1 & 2 \end{array}$, find BA and use this to solve the system of equations $y + 2z = 7$, $x - y = 3$, $2x + 3y + 4z = 17$.

Solve the system of equations
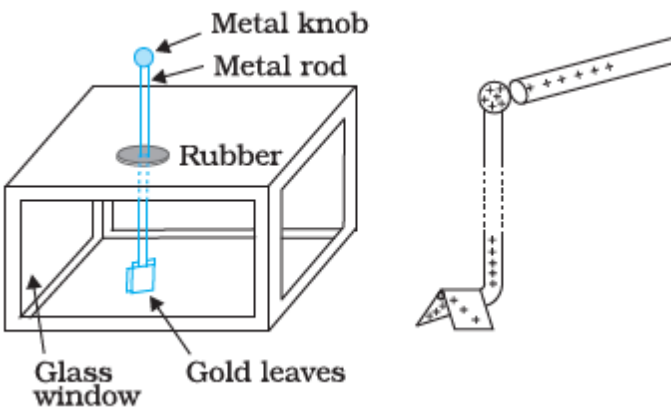
$$\frac{2}{x} + \frac{3}{y} + \frac{10}{z} = 4$$

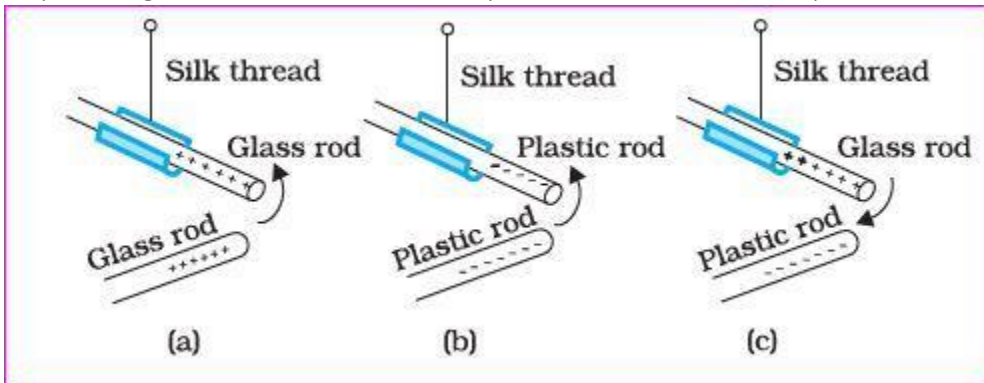$$\frac{4}{x} - \frac{6}{y} + \frac{5}{z} = 1$$

$$\frac{6}{x} + \frac{9}{y} - \frac{20}{z} = 2$$

For the matrix $A = \begin{bmatrix} 1 & 1 & 1 \\ 1 & 2 & -3 \\ 2 & -1 & 3 \end{bmatrix}$
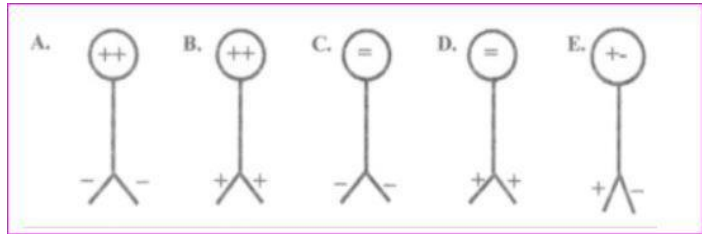
Show that $A^3 - 6A^2 + 5A + 11\,I = O$. Hence, find A^{-1}.

Subject :- Physics

1	A body can be negatively charged by (a) Giving excess of electrons to it (b) Removing some electrons from it (c) Giving some protons to it (d) Removing some neutrons from it
2	Two charged spheres separated at a distance d exert a force F on each other. If they are immersed in a liquid of dielectric constant 7, then what is the force (if all conditions are same) (a) $\dfrac{F}{7}$ (b) F (c) 7F (d) $4F$
3	A charge q is placed at the centre of the line joining two equal charges Q. The system of the three charges will be in equilibrium, if q is equal to (a) $-\dfrac{Q}{2}$ (b) $-\dfrac{Q}{4}$ (c) $+\dfrac{Q}{4}$ (d) $+\dfrac{Q}{2}$
4	The dimensional formula of electric flux is (a) $[M^1 L^2 T^{-2} A^{-1}]$ (b)$[M^{-1} L^3 T^{-3} A^1]$ (c) $[M^1 L^3 T^{-3} A^{-1}]$ (d)$[M^1 L^{-3} T^{-3} A^{-1}]$
5	What is the minimum force acting between two charges placed at 1m apart from each other (a)Ke^2 (b) Ke (c) $\dfrac{Ke}{4}$ (d) $\dfrac{Ke^2}{2}$
6	Three charges $2q, -q, -q$ are located at the vertices of an equilateral triangle. At the centre of the triangle (a) The field is zero but potential is non-zero (b)The field is non-zero but potential is zero (c) Both field and potential are zero (d)Both field and potential are non-zero
7	A Spherical gaussian surface enclose a charge of 8.85* 10^{-8}C (i) Calculate the electric flux passing through the surface .(ii) if the radius of gaussian surface is doubled , how would the flux change ?
8	A point charge $+q$ is placed at the centre of a cube of side L. The electric flux emerging from the cube is (a) $\dfrac{q}{\varepsilon_0}$ (b) Zero (c) $\dfrac{6qL^2}{\varepsilon_0}$ (d) $\dfrac{q}{6L^2 \varepsilon_0}$
9	A cube of side l is placed in a uniform field E, where $E = E\hat{i}$. The net electric flux through the cube is (a) Zero (b) $l^2 E$ (c) $4l^2 E$ (d)
10	Two free point charges +4e and +e are placed a distance 'a' apart. Where should a third point charge q be placed between them such that the entire system may be in equilibrium? What should be the magnitude and sign of q ? what type of equilibrium will it be ?

	For question numbers 11 to 20, two statements are given-one labelled Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions from the codes (a), (b), (c) and (d) as given below. a) Both A and R are true and R is the correct explanation of A b) Both A and R are true but R is NOT the correct explanation of A c) A is true but R is false d) A is false and R is also false
11	Assertion(A): Electric filed lines not form closed loops. Reason(R): Electric filed lines are always normal to the surface of a conductor.
12	Assertion(A): The Coulomb force between two points charges depend upon the dielectric constant of the intervening medium. Reason(R): Coulomb's force varies inversely with the dielectric constant of medium.
13	Assertion(A): The charge given to a metallic sphere does not depend on whether it is hollow or solid Reason(R): The charge resides only at the surface of conductor.
14	Assertion(A): A proton is placed in a uniform electric field it experiences a force. Reason(R): A proton is placed in a uniform electric field, it tend to move along the direction of electric field.
15	Assertion(A): The net force on a dipole in a uniform electric dipole is zero. Reason(R): Electric dipole moment is a vector directed from –q to +q.
16	Assertion(A) : If a proton and an electron are placed in the same uniform electric field. They experience different acceleration. Reason(R) : Electric force on a test charge is independent of its mass.
17	Assertion(A): The resultant electric field at a point is the superimposition of the electric fields at that point Reason(R) : Electric lines of force cross each other
18	Assertion(A): Charge is invariant. Reason(R) : Charge does not depends on speed of frame of reference
19	Assertion: Three equal charges are situated on a circle of radius *r* such that they form on equilateral triangle, then the electric field intensity at the centre is zero. Reason: the force on unit positive charge at the centre, due to the three equal charges are represented by the three sides of a triangle taken in the same order. Therefore , electric field intensity at centre is zero.
20	Assertion: The coulomb force is the dominating force in the universe. Reason : The coulomb force is weaker than the gravitational force
	Case Study Based Questions Attempt any 4 sub part out of 5.

21	Gold leaf electroscope has two gold leaf suspended from a metal (usually brass) stem in a vacuumed glass jar and connected to a metal cap. The glass is grounded with the help of a metal foil to make it uncharged. It can be used to: Detect charge: Body under test is touched with the metal cap.
21.1	Neutral atoms contain equal numbers of positive and negative. (a) Electrons and Protons (b) Protons and Electrons (c) Neutrons and Electrons (d) Protons and Neutrons
21.2	Greater the charge on a given body, the divergence in the leaves will be (a) smaller (b) greater (c) same (d) first smaller then greater
21.3	Magnitude of force between a pair of proton and proton is F and between a proton d electron is F' then (a) F = F' (b) F > F' (c) F < F' (d) F >> F'
21.4	Earthing means (a) to perform an experiment on Earth (b) to burry the device in the Earth (c) To put the device on Earth (d) Process of sharing charges with Earth
21.5	If a negatively charged rod touches a conductor, the conductor will be charged by what method? (a) Friction (b) Conduction (c) Convection (d) Induction
	21.1(b). 21.2 (b). 21.3(a). 24.4(d). 25.5(b)
22	When a glass rod is rubbed with silk, the rod acquires one kind of charge and the silk acquires the second kind of charge. This is true for any pair of objects that are rubbed to be electrified. Now if the electrified glass rod is brought in contact with silk, with which it was rubbed, they no longer attract each other. They also do not attract or repel other light objects as they did on being electrified. Thus, the charges acquired after rubbing are lost when the charged bodies are brought in contact. What can you conclude from these observations? It just tells us that unlike charges acquired by the objects neutralise or nullify each other's effect. Therefore, the charges were named as positive and negative by the American scientist Benjamin Franklin. We know that when we add a positive number to a negative number of the same magnitude, the sum is zero. This might have

	been the philosophy in naming the charges as positive and negative. By convention, the charge on glass rod or cat's fur is called positive and that on plastic rod or silk is termed negative. If an object possesses an electric charge, it is said to be electrified or charged. When it has no charge it is said to be electrically neutral.
22.1	When you charge a balloon by rubbing it on your hair this is an example of what method of charging? (a)Friction (b)Conduction (c)Grounding (d)Induction
22.2	The cause of charging (a) Actual transfer of proton (b) Actual transfer of electrons (c) Actual transfer of neutron (d) None of the above
22.3	Which particle in an atom can you physically manipulate? (a)protons (b)electrons (c)neutrons (d)you can't manipulate any particle in an atom
22.4	If a negatively charged rod touches a conductor, the conductor will be charged by what method? (a) Friction (b)Conduction (c)Induction (d)Convection
22.5	A negatively charged rod is touched to the top of an electroscope, which on is correct in the given figure (a)A (b) B (c) C (d) D
	Creative and critical Thinking Based Questions
23	A positively charged metal ring of radius R is fixed in the xy-plane with its centre at origin O. A negatively charged particle P Is related from rest at the point $(0,0,Z_0)$ where $Z_0 > 0$. Then, the motion of P is (a) Periodic for all the values of Z_0, Satisfying $0 < Z_0 < \infty$ (b) Simple harmonic for all the values of Z_0 satisfying $0 < Z_0 \leq R$ (c) Approximately simple harmonic provided $Z_0 \ll R$ (d) Such that P crosses O and Continues to move along the negative Z-axis towards $Z = -\infty$
24	A hollow metal sphere of radius R is uniformly charged. The electric field due to the sphere at a distance r from the centre (a) Increases as r increases for r < R and for r > R (b) Zero as r increases for r < R ; decreases as r increases for r > R. (c) Zero as r increases for r < R; increases for r > R (d) decreases as r increases for r < R and for r < R
	23 (b) 24. (a and c)

Subject :- Chemistry

I. Multiple Choice Questions (Type-I)

1. Which of the following units is useful in relating concentration of solutionwith its vapour pressure?
   (i)   mole fraction
   (ii) parts per million
   (iii) mass percentage
   (iv) molality

2. On dissolving sugar in water at room temperature solution feels cool to touch.Under which of the following cases dissolution of sugar will be most rapid?
   (i)   Sugar crystals in cold water.
   (ii) Sugar crystals in hot water.
   (iii) Powdered sugar in cold water.
   (iv) Powdered sugar in hot water.

3. At equilibrium the rate of dissolution of a solid solute in a volatile liquid solventis____.
   (i)   less than the rate of crystallisation
   (ii) greater than the rate of crystallisation
   (iii) equal to the rate of crystallisation
   (iv) zero

4. A beaker contains a solution of substance 'A'. Precipitation of substance 'A'takes place when small amount of 'A' is added to the solution. The solution is

   ____.
   (i)   saturated

   (ii) supersaturated
   (iii) unsaturated
   (iv) concentrated

5. Maximum amount of a solid solute that can be dissolved in a specified amountof a given liquid solvent does **not** depend upon_____.
   (i)   Temperature
   (ii) Nature of solute
   (iii) Pressure
   (iv) Nature of solvent

6. Low concentration of oxygen in the blood and tissues of people living at high altitude is due to_____.
   (i)   low temperature
   (ii) low atmospheric pressure
   (iii) high atmospheric pressure

(iv)   both low temperature and high atmospheric pressure

7. Considering the formation, breaking and strength of hydrogen bond, predict which of the following mixtures will show a positive deviation from Raoult's law?

(i)   Methanol and acetone.

(ii)   Chloroform and acetone.

(iii)   Nitric acid and water.

(iv)   Phenol and aniline.

8. Colligative properties depend on_____.

(i)   the nature of the solute particles dissolved in solution.

(ii)   the number of solute particles in solution.

(iii)   the physical properties of the solute particles dissolved in solution.

(iv)   the nature of solvent particles.

9. Which of the following aqueous solutions should have the highest boiling point?

(i)   1.0 M NaOH

(ii)   1.0 M Na_2SO_4

(iii)   1.0 M NH_4NO_3

(iv)   1.0 M KNO_3

10. The unit of ebulioscopic constant is_____.

(i) $K\ kg\ mol^{-1}$ or $K\ (molality)^{-1}$

(ii) $mol\ kg\ K^{-1}$ or $K^{-1}(molality)$

(iii) $kg\ mol^{-1}\ K^{-1}$ or $K^{-1}(molality)^{-1}$

(iv) $K\ mol\ kg^{-1}$ or $K\ (molality)$

11. In comparison to a 0.01 M solution of glucose, the depression in freezing point of a 0.01 M $MgCl_2$ solution is_____.

(i)   the same

(ii)   about twice

(iii)   about three times

(iv)   about six times

12. An unripe mango placed in a concentrated salt solution to prepare pickle,shrivels because_____.

(i)   it gains water due to osmosis.

(ii)   it loses water due to reverse osmosis.

(iii)   it gains water due to reverse osmosis.

(iv)   it loses water due to osmosis.

13. At a given temperature, osmotic pressure of a concentrated solution of a substance_____.

(i)   is higher than that at a dilute solution.

(ii)   is lower than that of a dilute solution.

(iii)   is same as that of a dilute solution.

(iv)   cannot be compared with osmotic pressure of dilute solution.

14. Which of the following statements is false?

    (i) Two different solutions of sucrose of same molality prepared in differentsolvents will have the same depression in freezing point.

  (ii) The osmotic pressure of a solution is given by the equation $\Pi = CRT$

(where C is the molarity of the solution).

    (iii) Decreasing order of osmotic pressure for 0.01 M aqueous solutions of barium chloride, potassium chloride, acetic acid and sucrose is

$BaCl_2 > KCl > CH_3COOH > \text{sucrose}.$

    (iv) According to Raoult's law, the vapour pressure exerted by a volatile component of a solution is directly proportional to its mole fraction in the solution.

15. The values of Van't Hoff factors for KCl, NaCl and K_2SO_4, respectively, are ___.

    (i) 2, 2 and 2

    (ii) 2, 2 and 3

    (iii) 1, 1 and 2

    (iv) 1, 1 and 1

16. Which of the following statements is **false**?

    (i) Units of atmospheric pressure and osmotic pressure are the same.

    (ii) In reverse osmosis, solvent molecules move through a semipermeable membrane from a region of lower concentration of solute to a region ofhigher concentration.

    (iii) The value of molal depression constant depends on nature of solvent.

    (iv) Relative lowering of vapour pressure, is a dimensionless quantity.

17. Value of Henry's constant K_H _____.

    (i) increases with increase in temperature.

    (ii) decreases with increase in temperature.

    (iii) remains constant.

    (iv) first increases then decreases.

18. The value of Henry's constant K_H is_____.

    (i) greater for gases with higher solubility.

    (ii) greater for gases with lower solubility.

    (iii) constant for all gases.

    (iv) not related to the solubility of gases.

19. Consider the Fig. 2.1 and mark the correct option.

(i) water will move from side (A) to side

(B) if a pressure lower than osmotic pressure is applied on piston (B).

(ii) water will move from side (B) to side (A) if a pressure greater than osmotic pressure is applied on piston (B).

(iii) water will move from side (B) to side (A) if a pressure equal to osmotic pressure is applied on piston (B).
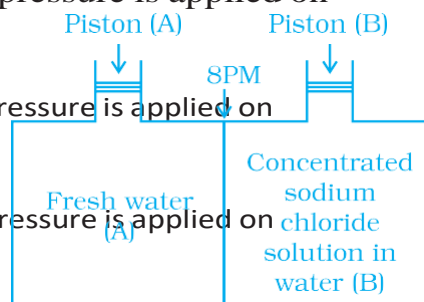
(iv) water will move from side (A) to side (B) if pressure equal to osmotic pressure is applied on piston (A).

Fig. 2.1

20. We have three aqueous solutions of NaCl labelled as 'A', 'B' and 'C' with concentrations 0.1M, 0.01M and 0.001M, respectively. The value of van't Hofffactor for these solutions will be in the order_.

(i) $i_A < i_B < i_C$

(ii) $i_A > i_B > i_C$

(iii) $i_A = i_B = i_C$

(iv) $i_A < i_B > i_C$

21. On the basis of information given below mark the correct option.

Information:

(A) In bromoethane and chloroethane mixture intermolecular interactions of A–A and B–B type are nearly same as A–B type interactions.

(B) In ethanol and acetone mixture A–A or B–B type intermolecular interactions are stronger than A–B type interactions.

(C) In chloroform and acetone mixture A–A or B–B type intermolecular interactions are weaker than A–B type interactions.

(i) Solution (B) and (C) will follow Raoult's law.

(ii) Solution (A) will follow Raoult's law.

(iii) Solution (B) will show negative deviation from Raoult's law.

(iv) Solution (C) will show positive deviation from Raoult's law.

22. Two beakers of capacity 500 mL were taken. One of these beakers, labelled as "A", was filled with 400 mL water whereas the beaker labelled "B" was filled with 400 mL of 2 M solution of NaCl. At the same temperature both the beakers were placed in closed containers of same material and same capacity as shown in Fig. 2.2.

Fig. 2.2

At a given temperature, which of the following statement is correct about the vapour pressure of pure water and that of NaCl solution.

(i) vapour pressure in container (A) is more than that in container (B).

(ii) vapour pressure in container (A) is less than that in container (B).

(iii) vapour pressure is equal in both the containers.

(iv) vapour pressure in container (B) is twice the vapour pressure in container (A).

23. If two liquids A and B form minimum boiling azeotrope at some specific composition then_____.

(i) A–B interactions are stronger than those between A–A or B–B.

(ii) vapour pressure of solution increases because more number of molecules of liquids A and B can escape from the solution.

(iii) vapour pressure of solution decreases because less number of molecules of only one of the liquids escape from the solution.

(iv) A–B interactions are weaker than those between A–A or B–B.

24. 4L of 0.02 M aqueous solution of NaCl was diluted by adding one litre of water. The molality of the resultant solution is_____.

(i) 0.004

(ii) 0.008

(iii)   0.012

(iv)   0.016

25. On the basis of information given below mark the correct option.

Information : On adding acetone to methanol some of the hydrogen bonds between methanol molecules break.

(i) At specific composition methanol-acetone mixture will form minimum boiling azeotrope and will show positive deviation from Raoult's law.

(ii) At specific composition methanol-acetone mixture forms maximum boiling azeotrope and will show positive deviation from Raoult's law.

(iii) At specific composition methanol-acetone mixture will form minimum boiling azeotrope and will show negative deviation from Raoult's law.

(iv) At specific composition methanol-acetone mixture will form maximum boiling azeotrope and will show negative deviation from Raoult's law.

26. K_H value for $Ar(g)$, $CO_2 (g)$, $HCHO (g)$ and $CH_4 (g)$ are 40.39, 1.67, 1.83×10^{-5}

and 0.413 respectively.

Arrange these gases in the order of their increasing solubility.

(i) $HCHO < CH_4 < CO_2 < Ar$

(ii) $HCHO < CO_2 < CH_4 < Ar$

(iii) $Ar < CO_2 < CH_4 < HCHO$

(iv) $Ar < CH_4 < CO_2 < HCHO$

II. Multiple Choice Questions (Type-II)

Note : In the following questions two or more options may be correct.

27. Which of the following factor (s) affect the solubility of a gaseous solute in the fixed volume of liquid solvent?

(a) nature of solute   (b) temperature   (c) pressure

(i) (a) and (c) at constant T

(ii) (a) and (b) at constant P

(iii) (b) and (c) only

(iv) (c) only

28. Intermolecular forces between two benzene molecules are nearly of same strength as those between two toluene molecules. For a mixture of benzene and toluene, which of the following are **not** true?

(i) $\Delta_{mix} H$ = zero

(ii) $\Delta_{mix} V$ = zero

(iii) These will form minimum boiling azeotrope.

(iv) These will not form ideal solution.

29. Relative lowering of vapour pressure is a colligative property because
_____.

(i) It depends on the concentration of a non electrolyte solute in solution and does not depend on the nature of the solute molecules.

(ii) It depends on number of particles of electrolyte solute in solution and does not depend on the nature of the solute particles.

(iii) It depends on the concentration of a non electrolyte solute in solution as well as on the nature of the solute molecules.

(iv) It depends on the concentration of an electrolyte or nonelectrolyte solute

in solution as well as on the nature of solute molecules.

30. Van't Hoff factor i is given by the expression_____.

(i) $i = \dfrac{\text{Normal molar mass}}{\text{Abnormal molar mass}}$

(ii) $i = \dfrac{\text{Abnormal molar mass}}{\text{Normal molar mass}}$

(iii) $i = \dfrac{\text{Observed colligative property}}{\text{Calculated colligative property}}$

(iv) $i = \dfrac{\text{Calculated colligative property}}{\text{Observed colligative property}}$

31. Isotonic solutions must have the same_____.

    (i)   solute

    (ii)   density

   (iii) elevation in boiling point

    (iv) depression in freezing point

**32.** Which of the following binary mixtures will have same composition in liquid and vapour phase?

    (i)   Benzene - Toluene

    (ii)   Water-Nitric acid

    (iii) Water-Ethanol

    (iv) *n*-Hexane - *n*-Heptane

33. In isotonic solutions_____.

    (i)   solute and solvent both are same.

    (ii)   osmotic pressure is same.

    (iii) solute and solvent may or may not be same.

    (iv) solute is always same solvent may be different.

34. For a binary ideal liquid solution, the variation in total vapour pressure versus composition of solution is given by which of the curves?

(i) (ii)

(iii)

(iv)
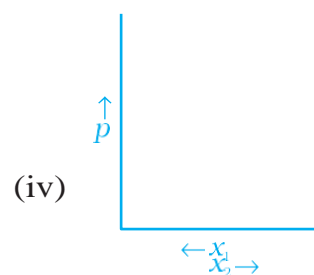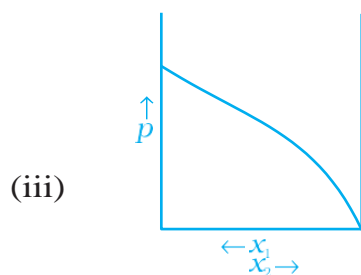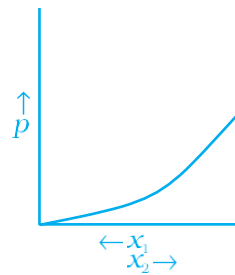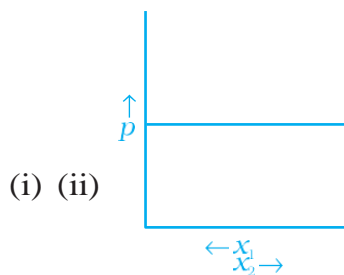
35.   Colligative properties are observed when___.

   (i)   a non volatile solid is dissolved in a volatile liquid.

   (ii) a non volatile liquid is dissolved in another volatile liquid.

   (iii) a gas is dissolved in non volatile liquid.

   (iv) a volatile liquid is dissolved in another volatile liquid.

III. Short Answer Type

36. Components of a binary mixture of two liquids A and B were being separated by distillation. After some time separation of components stopped and composition of vapour phase became same as that of liquid phase. Both the components started coming in the distillate. Explain why this happened.

37. Explain why on addition of 1 mol of NaCl to 1 litre of water, the boiling point of water increases, while addition of 1 mol of methyl alcohol to one litre of water decreases its boiling point.

38. Explain the solubility rule "like dissolves like" in terms of intermolecular forces that exist in solutions.

39. Concentration terms such as mass percentage, ppm, mole fraction and molality are independent of temperature, however molarity is a function of temperature. Explain.

40. What is the significance of Henry's Law constant K_H?

41. Why are aquatic species more comfortable in cold water in comparison to warm water?

42. (a) Explain the following phenomena with the help of Henry's law.

   (i) Painful condition known as bends.

   (ii) Feeling of weakness and discomfort in breathing at high altitude.

   (b) Why soda water bottle kept at room temperature fizzes on opening?

43. Why is the vapour pressure of an aqueous solution of glucose lower than that of water?

44. How does sprinkling of salt help in clearing the snow covered roads in hilly areas? Explain the phenomenon involved in the process.

45. What is "semi permeable membrane"?

46. Give an example of a material used for making semipermeable membrane for carrying out reverse osmosis.

IV. Matching Type

Note : In the following questions match the items given in Column I and Column II.

47. Match the items given in Column I and Column II.

Column I	Column II

(i)	Saturated solution	(a)	Solution having same osmotic pressure at a given temperature as that of given solution.
(ii)	Binary solution	(b)	A solution whose osmotic pressure is less than that of another.
(iii)	Isotonic solution	(c)	Solution with two components.
(iv)	Hypotonic solution	(d)	A solution which contains maximum amount of solute that can be dissolved in a given amount of solvent at a given temperature.
(v)	Solid solution	(e)	A solution whose osmotic pressure is more than that of another.
(vi)	Hypertonic solution	(f)	A solution in solid phase.

48. Match the items given in Column I with the type of solutions given in Column II.

	Column I		**Column II**
(i)	Soda water	(a)	A solution of gas in solid
(ii)	Sugar solution	(b)	A solution of gas in gas
(iii)	German silver	(c)	A solution of solid in liquid
(iv)	Air	(d)	A solution of solid in solid
(v)	Hydrogen gas in palladium	(e)	A solution of gas in liquid
		(f)	A solution of liquid in solid

49. Match the laws given in Column I with expresions given in Column II.

	Column I		**Column II**
(i)	Raoult's law	(a)	$\Delta T_f = K_f \, m_f$
(ii)	Henry's law	(b)	$\Pi = CRT$
(iii)	Elevation of boiling point	(c)	$p = x_1 \, p_1^o + x_2 \, p_2^o$
(iv)	Depression in freezing point	(d)	$\Delta T_b = K_b \, m_b$
(v)	Osmotic pressure	(e)	$p = K_H \cdot x$

50. Match the terms given in Column I with expressions given in Column II.

	Column I		**Column II**
(i)	Mass percentage	(a)	$\dfrac{\text{Number of moles of the solute component}}{\text{Volume of solution in litres}}$

(ii)	Volume percentage	(b)	$\dfrac{\text{Number of moles of a component}}{\text{Total number of moles of all the components}}$
(iii)	Mole fraction	(c)	$\dfrac{\text{Volume of the solute component in solution}}{\text{Total volume of solution}} \times 100$
(iv)	Molality	(d)	$\dfrac{\text{Mass of the solute component in solution}}{\text{Total mass of the solution}} \times 100$
(v)	Molarity	(e)	$\dfrac{\text{Number of moles of the solute components}}{\text{Mass of solvent in kilograms}}$

V. Assertion and Reason Type

Note : In the following questions a statement of assertion followed by a statement of reason is given. Choose the correct answer out of the following choices.

   (i) Assertion and reason both are correct statements and reason is correct explanation for assertion.

  (ii) Assertion and reason both are correct statements but reason is not correct explanation for assertion.

 (iii) Assertion is correct statement but reason is wrong statement.

 (iv) Assertion and reason both are incorrect statements.

  (v) Assertion is wrong statement but reason is correct statement.

51. Assertion : Molarity of a solution in liquid state changes with temperature.

Reason : The volume of a solution changes with change in temperature.

52. Assertion : When methyl alcohol is added to water, boiling point of water increases.

Reason : When a volatile solute is added to a volatile solvent elevation in boiling point is observed.

53. Assertion : When NaCl is added to water a depression in freezing point is observed.

Reason : The lowering of vapour pressure of a solution causes depression in the freezing point.

54. Assertion : When a solution is separated from the pure solvent by a semi-permeable membrane, the solvent molecules pass through it from pure solvent side to the solution side.

Reason : Diffusion of solvent occurs from a region of high concentration solution to a region of low concentration solution.

VI. Long Answer Type

55. Define the following modes of expressing the concentration of a solution. Which of these modes are independent of temperature and why?

   (i) w/w (mass percentage)   (v) x (mole fraction)

  (ii) V/V (volume percentage)   (vi) M (Molarity)

 (iii) w/V (mass by volume percentage) (vii) m (Molality)

 (iv) ppm. (parts per million)

56. Using Raoult's law explain how the total vapour pressure over the solution is related to mole fraction of components in the following solutions.

  (i) $CHCl_3$ (l) and $CH_2Cl_2(l)$ (ii) $NaCl(s)$ and H_2O (l)

57. Explain the terms ideal and non-ideal solutions in the light of forces of interactions operating between molecules in liquid solutions.

58. Why is it not possible to obtain pure ethanol by fractional distillation? What general name is given to binary mixtures which show deviation from Raoult's law and whose components cannot be separated by fractional distillation. How many types of such mixtures are there?

59. When kept in water, raisin swells in size. Name and explain the phenomenon involved with the help of a diagram. Give three applications of the phenomenon.

60. Discuss biological and industrial importance of osmosis.

61. How can you remove the hard calcium carbonate layer of the egg without damaging its semiprermiable membrane? Can this egg be inserted into a bottle with a narrow neck without distorting its shape? Explain the process involved.

62. Why is the mass determined by measuring a colligative property in case of some solutes abnormal ? Discuss it with the help of Van't Hoff factor.

ANSWERS

I. Multiple Choice Questions (Type-I)

1. (i) 2. (iv) 3. (iii)

4. (ii), [**Hint :** If added substance dissolves, the solution is unsaturated. If it does not dissolve solution is saturated. If precipitation occurs solution is supersaturated.]

5. (iii)

6. (ii), [**Hint :** Body temperature of human beings remains constant.]

7. (i)	8. (ii)	9. (ii)	10. (i)	11. (iii)	12. (iv)
13. (i)	14. (i)	15. (ii)	16. (ii)	17. (i)	18. (ii)
19. (ii)	20. (iii)	21. (ii)	22. (i)	23. (i)	24. (iv)
25. (ii)	26. (iii)				

II. Multiple Choice Questions (Type-II)

27. (i), (ii)	28. (iii), (iv)	29. (i), (ii)	30. (i), (iii)	31. (ii), (iii)
32. (ii), (iii)	33. (ii), (iii)	34. (i), (iv)	35. (i), (ii)	

III. Short Answer Type

36. Since both the components are appearing in the distillate and composition of liquid and vapour is same, this shows that liquids have formed azeotropic mixture and hence cannot be separated at this stage by distillation.

37. NaCl is a non volatile solute, therefore, addition of NaCl to water lowers the vapour pressure of water. As a result boiling point of water increases. Methyl alcohol on the other hand is more volatile than water, therefore its addition increases, the total vapour pressure over the solution and a decrease in boiling point of water results.

38. A substance (solute) dissolves in a solvent if intermolecular interactions are similar in both the components; for example, polar solutes dissolve in polar solvents and non polar solutes in non polar solvents thus we can say "like dissolves like".

39. Molarity of a solution is defined as the number of moles of solute dissolved in one litre of solution. Since volume depends on temperature and undergoes a change with change in temperature, the molarity will also change with change in temperature. On the other hand, mass does not change with change in temperature, as a result other concentration terms given in the question remain unchanged by changing temperature. According to the definition of all these terms, mass of the solvent used for making the solution is related to the mass of solute.

40. Higher the value of Henry's law constant K_H, the lower is the solubility of the gas in the liquid.

41. At a given pressure the solubility of oxygen in water increases with decrease in temperature. Presence of more oxygen at lower temperature makes the aquatic species more comfortable in cold water.

42. Refer to the NCERT textbook for Class XII.

43. In pure liquid water the entire surface of liquid is occupied by the molecules of water. When a non volatile solute, for example glucose is dissolved in water, the fraction of surface covered by the solvent molecules gets reduced because some positions are occupied by glucose molecules. As a result number of solvent molecules escaping from the surface also gets reduced, consequently the vapour pressure of aqueous solution of glucose is reduced.

44. When salt is spread over snow covered roads, snow starts melting from the surface because of the depression in freezing point of water and it helps in clearing the roads.

45. Continuous sheets or films (natural or synthetic) which contain a network of submicroscopic holes or pores through which small solvent molecules like water can pass; but the passage of bigger molecules of solute is hindered, are known as semi permeable membrane.

46. Cellulose acetate.

IV. Matching Type

47. (i) → (d)   (ii) → (c)   (iii) → (a)   (iv) → (b)   (v) → (f)   (vi) → (e)

48. (i) → (e)   (ii) → (c)   (iii) → (d)   (iv) → (b)   (v) → (a)

49. (i) → (c)   (ii) → (e)   (iii) → (d)   (iv) → (a)   (v) → (b)

50. (i) → (d)   (ii) → (c)   (iii) → (b)   (iv) → (e)   (v) → (a)

V. Assertion and Reason Type

51. (i)   52. (iv)   53. (i)   54. (ii)

VI. Long Answer Type

55. Refer to NCERT textbook for Class XII.

56. **Hint :** Discuss the following formulas

   (i) for a binary solution having both components as volatile liquids, the total pressure will be
   $$p = p = x\ p^0 + x\ p^0$$

$$= x_1 p_1^0 + (1-x_1)p_2^0$$

$$= (p_1^0 - p_2^0) x_1 + p_2^0$$

p = total vapour pressure

p_1 = partial vapour pressure of component 1

p_2 = partial vapour pressure of component 2.

(ii) For a solution containing non-volatile solute, the Raoult's law is applicable only to vaporisable component (1) and total vapour pressure is written as

$$p = p$$

$$= x_1 p_1^0$$

57. Refer to page 45 of NCERT textbook for Class XII.

58. See page 46 of NCERT textbook for Class XII.

59. [**Hint :** Explain it with the help of a diagram (Fig. 2.3) illustrating the osmosis of water into raisin.]

60. **Hint :** The process of osmosis is of immense biological and industrial importance as is evident from the following examples :

(i) Movement of water from soil into plant roots and subsequently into upper portion of the plant is partly due to osmosis.
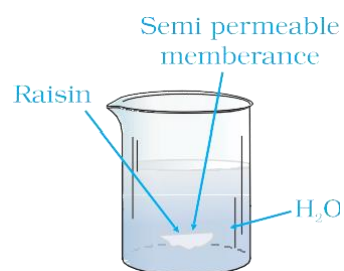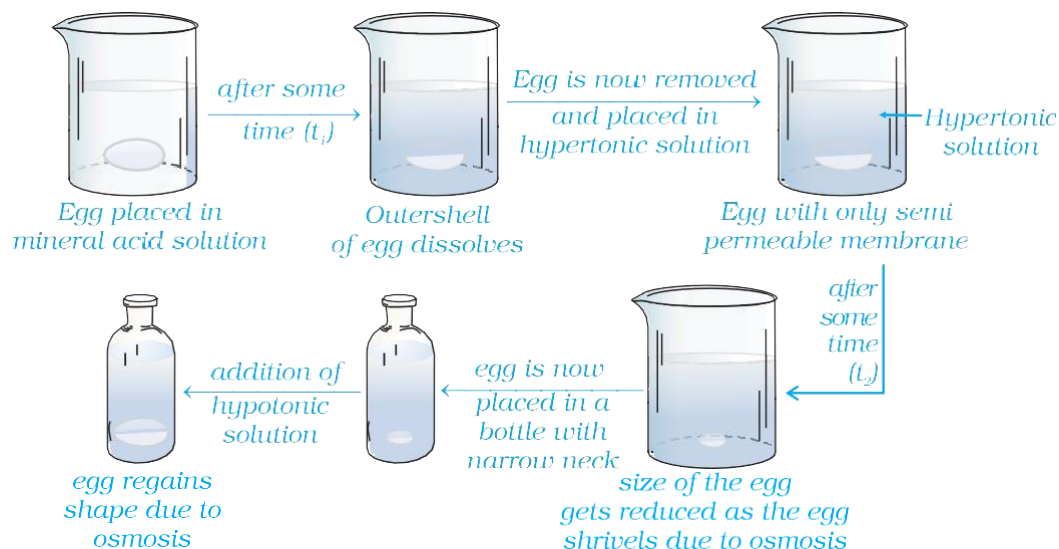
Fig. 2.3

(ii)   Preservation of meat against bacterial action by adding salt.

(iii) Preservation of fruits against bacterial action by adding sugar. Bacterium in canned fruit loses water through the process of osmosis, shrivels and dies.

(iv) Reverse osmosis is used for desalination of water.

61. Hint :

Egg placed in mineral acid solution → *after some time (t₁)* → Outershell of egg dissolves → *Egg is now removed and placed in hypertonic solution* → Egg with only semi permeable membrane (Hypertonic solution) → *after some time (t₂)* → size of the egg gets reduced as the egg shrivels due to osmosis → *egg is now placed in a bottle with narrow neck* → *addition of hypotonic solution* → egg regains shape due to osmosis

62.   Certain compounds when dissolved in suitable solvents either dissociate or associate.

For example ethanoic acid dimerises in benzene due to hydrogen bonding, while in water, it dissociates and forms ions. As a result the number of chemical species in solution increases or decreases as compared to the number of chemical species of solute added to form the solution. Since the magnitude of colligative property depends on the number of solute particles, it is expected that the molar mass determined on the basis of

colligative properties will be either higher or lower than the expected value or the normal value and is called abnormal molar mass.

In order to account for the extent of dissociation or association of molecules in solution, Van't Hoff introduced a factor, *i,* known as the Van't Hoff factor. It can be defined as follows.

$$i = \frac{\text{Expected molar mass}}{\text{Abnormal molar mass}}$$

$$= \frac{\text{Observed colligative property}}{\text{Calculated colligative property}}$$

$$= \frac{\text{Total number of moles of particles after association/dissociation}}{\text{Number of moles of particles before association/dissociation}}$$

Subject :- Biology

Please complete 1 investigatory project of topic of your choice for practical final examination as discussed in class.

Subject :- Accountancy

Do the following questions in your ACCOUNTANCY HOMEWORK NOTEBOOK.

1. Name the user of accounting information ?

2. How to calculate the income, find out the income if sale is 12,70000 and expenses are 10,95000 ?

3. Classify the following into assets liabilities, capital, revenue and expenses?

Plant and machinery, bank loan, sale, rent, purchaser, good will, furniture, capital, discount received, wage, advance income, bills payable, outstanding expenses.

4. Pass the Journal entries for the following transactions :-

2021

01 April – A Started business with cash   - 1,00,000

02 April – Purchase goods in cash   - 20,000

03 April – Paid electricity Bills   - 2,000

04 April – Paid salary to staff   - 15,000

5. Write the rules of debit and credit for personal real and nominal account?

6. A form bought a machinery for rupees 7,40000 on 01 Apr 2021 and rupees 60,000 is spent on its installation, its useful life is estimated to be of five years its estimated reliable or scrap value at the end of the period was estimated as rupees 40,000. Determine the amt of annual depreciation and rate of depreciation?

7. How will be following errors rectified ?

(i) Purchase book is over casted by rupees 20,000

(ii) Purchase return book is over casted by rupees 5,000

(iii) Purchase book balance is carried forward excess by rupees 1000

(iv) Purchase return book is carried forward in excess by rupees 500.

8. What is operating profit how is it calculated ?

9. Calculate cost of good sold and gross profit ?   **4M**

Opening stock   – Rupees 30,000

Purchase- Rupees 54,600

Sale   - Rupees 90,000

Expenses on Purchase – Rupees 6,000

Expenses on Sale   - Rupees 3,000

Closing Stock– Rupees 36,600

10. Pass the Journal Entries for the following transactions:

2019

Jan 01   Purchased goods from Rohan&Co. for Cash

       List price Rs. 15000 Trade Discount @ 10% , Cash Discount @5%.

Jan 03   Deposited into Bank Rs. 20,000.

Jan 06   Machinery purchased from Raj&Sons for Rs. 35,000

Jan 12   Depreciation on Machinery Rs. 500.

Jan 16   Paid to Raj& Sons Rs. 32500 in settlement of the account

Jan 20   Sold Goods to Mahesh & Sons

       List Price Rs. 25000 Trade Discount @ 10%

Jan 23   Returned Goods by Mahesh & Sons

       List Price Rs. 5000

11. If rate of Gross profit is 25% on sales and cost of goods sold is 2,40,000, then Gross Profit will be _____.

12. E, F and G are partners sharing profits in the ratio of 3:3:2. As per the partnership agreement, G is to get a minimum amount of ₹80,000 as his share of profits every year and any deficiency on this account is to be personally borne by E. The net profit for the year ended 31st March, 2020 amounted to ₹3,12 ,000. Calculate the amount of deficiency to be borne by E?

a. ₹1,000   **b. ₹4,000**   **c. ₹8,000**   **d. ₹2,000**

13. One of the partners in a partnership firm has withdrawn ₹ 9,000 at the end of each quarter, throughout the year. Calculate interest on drawings at the rate of 6% per annum.

a. ₹1,350   **b. ₹800.**   **c. ₹1,080**   **d. ₹810**

14. Ram, Mohan and Sohan were partners sharing profits in the ratio of 2 : 1 : 1. Ram withdrew ₹ 3,000 every month and Mohan withdrew ₹ 4,000 every month. Interest on drawings @ 6% p.a. was charged, whereas the partnership deed was silent about interest on drawings. Showing your working clearly, pass the necessary adjustment entry to rectify the error.

15. Vidit and Seema were partners in a firm sharing profits and losses in the ratio of 3:2. Their capitals were ₹1,20,000 and ₹2,40,000, respectively. They were entitled to interest on capitals @ 10% p.a. The firm earned a profit of ₹18,000 during the year. The interest on Vidit's capital will be:

a. ₹12,000   **b. ₹10,800**   **c. ₹7,200**   **d. ₹6,000**

16. Mohit, Shobhit and Rohit are partners sharing profits and losses in the ratio 2 : 1 : 1. Rohit is guaranteed a profit of ₹14,000. The firm incurred a profit of ₹20,000 during the year. Calculate the amount of deficiency borne by Mohit and Shobhit.

17. Mohit and Rohit were partners in a firm with capitals of ₹ 80,000 and ₹ 40,000 respectively. The firm earned a profit of ₹ 30,000 during the year. Mohit's share in the profit will be:

a. ₹ 20,000   **b. ₹ 10,000**   **c. ₹ 15,000**   **d. ₹ 18,000**

18. Do all firms need a Deed and registration?

a. Yes   **b. No**   **c. Can't say**

d. Its optional but its better to have a registered firm to avoid any kind of conflicts

19. Where would you record the interest on Drawings when capitals are fixed?

20. P, Q and R are equal partners with fixed capitals of ₹5,00,000, ₹4,00,000 and ₹3,00,000 respectively. After closing the accounts for the year ending 31st March 2019 it was discovered that interest on capitals was provided @ 7% instead of 9% p.a. In the adjusting entry :

a. P will be credited by ₹2,000 and Q will be debited by ₹2,000.

b. P will be debited by ₹2,000 and Q will be credited by ₹2,000.

c. P will be debited by ₹2,000 and R will be credited by ₹2,000.

d. P will be credited by ₹2,000 and R will be debited by ₹2,000.

21. The partnership deed is silent on payment of salary to partners. Amita a partner claim that she manages the business, she should get monthly salary of rupees 10,000. Is she entitled for the salary? give reason.

22. A group of 40 people wants to form a partnership firm. They want your advice regarding the the maximum number of persons that can be there in the partnership firm and the name of the act under whose provision it is given.

23. P, Q and R are partners in a firm. Their capital accounts stood at Rs.30,000, Rs.15,000 and Rs.15,000 respectively on 1stApril,2015.As per the provision of the deed:

(1) R was to be allowed a remuneration of Rs.3,000 per annum,

 (2) Interest @5% p.a. was to be provided on capital and Profits were to be divided in the ratio of 2:2:1.

Ignoring the above terms, net profit of Rs.18,000 for the year ended 31stMarch,2016 was divided among the three partners equally.

Pass an adjustment entry to rectify the error. Show the working clearly.

24. Mona, Nisha and Priyanka were partners sharing profits and losses equally. Their respective capitals wereRs.30,000, Rs.20,000 andRs.10,000. After closing the accounts for the year 2019 it was discovered that the interest on capital at the rate 6% p.a. was omitted before distributing the profits. Instead of changing the audited balance sheet it was decided to pass a single adjusting entry in the beginning of the year, so that the accounts of the previous years can be rectified. Pass the journal entry and show the working notes.

25. Sharma and Gupta decided to start a partnership firm to manufacture low cost jute bags as plastic bags were creating many environmental problems. They contributed capitals of 1,00,000 and 50,000 on 1st April, 2015 for this. Sharma expressed his willingness to admit Shakti as a partner without capital, who is specially abled but a very creative and intelligent friend of his. Gupta agreed to this. The terms of partnership were as follows :

i. Sharma, Gupta and Shakti will share profits in the ratio of 2 : 2 : 1.

ii. Interest on capital will be provided @ 6% p.a.

 Due to shortage of capital, Sharma contributed Rs. 25,000 on 30th September, 2015 and Gupta contributed 10,000 on 1st January, 2016 as additional capital. The profit of the firm for the year ended 31st March, 2016 was Rs. 1,68,900.

Prepare Profit and Loss Appropriation Account for the year ending 31st March, 2016.

26. A , and B are partners sharing profit in the ratio 3:2 with capitals of Rs. 5,00,000 and Rs. 3,00,000 respectively. Interest on capital is agreed @ 6% p.a. B is to be allowed an annual salary of Rs.25,000. During 2015 the profits of the year prior to calculation of interest on capital but after charging B's salary amounted to Rs.1,25,000. A provision of 5% of the profits is to be made in respect of managers commission.

 Prepare Profit and loss Appropriation account.

27. ANIL, SANDHYA and NEETU are partners in a firm on 1stapril 2015 the balance in their capital accounts stood at Rs.14,00,000, Rs.6,00,000 and Rs.4,00,000 respectively. They shared profits in the proportion of 7:3:2 respectively. Partners are entitled to interest on capital @ 6% p.a. and salary to Sandhya @ Rs.50,000 p.a. and a commission of Rs.3,000 per month to Neetu as per the provision of the partnership deed. Sandhya share of profit (excluding int. on capital) is guaranteed at not less than Rs.1,70,000 p.a. Neetu's shares of profit (including int. on capital but excluding salary) is guaranteed at not less than Rs.1,50,000 p.a. any deficiency arising on that account shall be net by ANIL. The profit of firm for the year ended 31st march 2013 amounted to Rs.9,50,000. Prepare profit and loss appropriation account and necessary journal entries for the year ended 31st march 2016.

28. A,B and c were partners in a firm having capitals of 60,000, Rs 60,000 and Rs.80,000 respectively. Their current account balance were A: Rs 10,000, B: Rs 5,000 and C: Rs 2,000(Dr). According to the partnership deed the partners were entitled to interest on capital @5% p.a. C being the working partner was also entitled to a salary of Rs 6,000 p.a. The profits were to be divided as follows:

(a) The first Rs 20,000 in proportion to their capital.

(b) Next Rs 30,000 in the ratio of 5:3:2.

(c) Remaining profits to be shared equally.

The firm made a profit of Rs 1,56,000 before charging any of the above items.

Prepare the profit and loss appropriation account and pass necessary journal entry.

29. Anand and Sonu were childhood friends and colleagues in a company who were thinking of starting something of their own someday. On 1st Jan, 2015 they thought of starting a stationery depot for the financially backward children of their area. They also admitted Manoj a differently abled educated youth who was unemployed as a partner of their firm without any capital contribution. Sonu also approached RohitKaul from Jammu, who was also eager to start something of this sort having lot of funds at his disposal, and persuaded him to join them.

The following terms where agreed upon:

i) Anand, Sonu and Rohit will contribute 30,000; 50,000 and 400,000 respectively as capital.

ii) Profit will be shared equally.

iii) Interest on capital will be allowed @ 5% p.a.

The Profits of the firm for the year ended 31st Dec 2015 were 50,000.

Prepare Profit & Loss Appropriation Account and capital account of the firm for the year.

30. Anwar, Bisvas and Divya are partners in a firm. Their capital accounts stood at Rs.8,00,000,Rs.6,00,000 andRs.4,00,000 respectively on 1st april,2015. They shared profits and losses in the ratio of 3:2:1 respectively. Partners are entitled to interest on Capital @ 6% per annum and salary to Bisvas and Divya @Rs.4,000 per month and Rs.6,000 per quarter respectively as per the provisions of

partnership deed. Biswas's share of profit including interest on capital but excluding salary is guaranteed at a minimum of Rs.82,000 p.a. Any deficiency arising on that account shall be met by Divya.

The profits for the year ended 31st march,2016 amounted toRs.3,12,000. Prepare profit and loss appropriation account and journal entries for the year ended 31st march,2016.

Subject :- Business Studees

Do the following questions in the Business Studies Homework Notebook.

1. What is Partnership? Explain the contents of partnership deed?

2. Differentiate between Sole proprietorship and partnership firms.

3. What is a Company? What are the different types of company?

4. What is equity shares? What are the different types of shares?

5. Explain meaning and benefits of E banking

6. State any three differences between E-business and traditional business.

7. Social responsibility towards different group like owners, investors, consumers, employees, government and community.

8. Differentiate between equity shares and preference share.

9. What is shares? Explain the different type's shares with suitable examples.

10. "McDonalds, the fast food giant made major changes in its menu to be able to survive in the Indian market." State the characteristic of management highlighted in theabove statement.

11. Which function of management is concerned with finding the right people for the right job?

12. 'In order to be successful an organisation must changeits goals according to the needs of the environment.' Which characteristic of management is highlighted in the statement?

13. "Successful organizations do not achieve their goals by chance but by following a deliberate process". Identify the process highlighted here.

14. A production manager was able to produce the desired output with minimum cost but not within the required time. In this case the manager was_____.

(a) Effective only.   (b) Efficient only.

  (c) Both effective and efficient.   (d) Neither effective nor efficient

15. Vrinda Ltd. is able to achieve the target production of 5,000 units within the prescribed period. However, to achieve the target on time, additional Rs.40,000 were paid as overtime wages to employees. Do you think Vrinda Ltd. is effective and efficient in its working?

16. Directors of Aman Ltd. assigned the task of implementing the plans and policies framed by the board to all the departmental heads. Departmental heads appointedbsupervisors, superintendent, executives, etc. so that work can be assigned to workers as per the plan. Supervisors kept a check on workers as per the plan. Identify then feature of management highlighted in above para.

17. Radhika Ltd. uses environment-friendly methods of production. Identify the objective it is trying to achieve.

18. Raheja Ltd. is diversifying its product lines. What organisational objective it is trying to achieve?

19. The authority-responsibility relationship binds individuals as superiors and subordinates and gives rise to different _____ in an organisation.

20. Ritu is the manager of the northern division of a large corporate house. At what level of management does she work in the organisation? What is her main task?

21. At which level of management are the managers responsible for maintaining the quality of output and the safety standards?

22. At which level of management the managers are responsible for the welfare and survival of the organisation?

23. XYZ Power Ltd. set up a factory for manufacturing solar lanterns in a remote village as there was no reliable supply of electricity in rural areas. The revenue earned by the company was sufficient to cover the costs and the risks. The demand of lanterns was increasing day by day, so the company decided to increase production to generate higher sales. For this they decided to employ people from the nearby villages as very few job opportunities were available in that area. The company also decided to open schools and crèches for the children of its employees

Identify and explain the objectives of management discussed above. Also, quote the lines.

24. Sanjana is the branch manager of ABC Handicrafts Pvt.Ltd. The company's objective is to promote the sales of Indian handloom and handicraft products. Its sells fabrics, furnishings, readymades and household items are made out of traditional Indian fabrics. Sanjana decides quantities, variety, colour and texture of all the above items and then allocates resources for their purchase from different suppliers. She appoints a team of designers and crafts people in the company, who developed some prints for bed covers in bright colours on silk. Although they looked very impressive, they were more expensive than they had planned to sell. Average customer could not afford to buy it. Praising their effort, Sanjana suggested that they should keep the silk bed covers for special occasions like Diwali and Christmas and offer the cotton bed covers on a regular basis to keep costs under control.

Identify and state the functions of management which Sanjana performs by quoting the lines from the above para.

25. Fashion India Limited is a chain of ladies garments boutiques where most of the work is done manually. Due to coming of international brands in India, the company is finding it difficult to compete on two fronts—finishing and embroidery work. The production manager realised that without modern machines it would not be possible for them to survive for long. The company purchased new hi-tech modern machines from Germany. During the production process, the manager observed that the quality of production is not as per standard and very often production is disrupted due to break-down of machinery. The workers get frustrated by continuous rejection of output and started showing resistance towards new technology. To increase the efficiency of the workers, the company decided to train their workers on-the-job under the able guidance of specialists. The workers who are able to pick the skills are promoted and made incharge of the not so trained groups. This created positive impact and everybody became keen to learn. Suggestions from the workers are valued and workers are encouraged to communicate freely.

Identify any three points of importance of management highlighted in the above case by quoting the lines.

26. Hema is one of the most successful managers of her company, 'Kobe Ltd.' She uses her creativity and initiative in handling challenging situations at work. The knowledge gained by her during her student days at a renowned management institute as well as through her observation and experience over the years is applied by Hema in a skillful manner in the context of the realities of a given situation. She often reads books and other literature in various fields of management to keep her knowledge updated.

(i) An aspect of the nature of management is being highlighted in the above description. Identify the aspect.

(ii) Explain any three features of the aspect identified in part–(i).

27. Aman, Ahmad and Ally are partners in a firm engaged in the distribution of dairy products in Maharashtra state. Aman is a holder of Senior Secondary School Certificate from Central Board of Secondary Education with Business Studies as one of his elective subjects. Ahmad had done his post graduation in History and Ally in dairy farming. One day there was a serious discussion between Ahmad and Ally regarding the nature of management. Ahmad argued that management was a profession whereas Ally argued against it saying that the legal and medical professions are the only professions because they fulfill all the conditions of profession. Aman on the basis of his knowledge of business studies explained the nature of management as profession to Ahmad and Ally.

Explain, how Aman would have satisfied both Ahmad and Ally.

28. _____ involves synchronisation of the different actions or efforts of the various units of an organisation.

29. In X Ltd., the purchase department purchased 10 tonnes of raw material for the production department. However, the production department needed just 7 tonnes. Due to this reason, goods were over produced and were not accepted by Sales department. As a result, some goods remained unsold. Which aspect of management is lacking?

30. Company X is facing a lot of problems these days. It manufactures white goods like washing machines, microwave ovens, refrigerators and air conditioners. The company's margins are under pressure and the profits and market share are declining. The production department blames marketing for not meeting sales targets and marketing blames production department for producing goods, which are not of good quality meeting customers expectations. The finance department blames both production and marketing for declining return on investment and bad marketing.

(a) What quality of management do you think the company is lacking?

(b) Explain any five features of the concept of the management identified in part (a).

31. Fayol stressed on scientific selection of employees and once they are selected they should be given a sense of assurance of safety of their jobs. It will make them more effective as they are not having a fear of losing their jobs. They can better concentrate on their works. Which principle of management is concerned with the above statement?

(a). Order.   (b). Initiative.   (c). Stability of tenure of personnel   (d). Espirit De corps

32. A sales person Mr Ram of Gupta & Gupta Sales Ltd. is asked to clinch a deal with a buyer and he is allowed to give 8% discount by the marketing manager. But finance department tells him not to offer more than 5% discount.Which principle of management is violated here?

(a) Unity of direction.   (b) Centralisation and decentralisation

(c) Division of work.   (d) Unity of command

33. Pioneer Ltd. is dealing in fruit juices and hair oils. To ensure unity of action and coordination, it has made two separate divisions for each product. Each division has its own in charge, plans and execution resources. Thus, both the divisions are moving towards the same objectives through focused efforts. Identify the Principle of management followed by Pioneer Ltd. in the above case.

(a) Esprit de corps.   (b) Equity.   (c) Unity of Direction.   (d) Authority and Responsibility.

34. Explain the following principles of general management:

(a) Division of Work:

(b) Authority and Responsibility; and

(c) Discipline.

35. Subramanium & Co., an Aggarbatti manufacturing company in Bengaluru, have two offices in the city within 10 km area. It manufactures Aggarbatties under the brand name 'Aeroplane'. It is famous for its sandal and rose flavoured Aggarbatties.Mahesh and Rahul are accountants in each of the office having same qualification and work on the same post and perform same nature of work. In spite of that, Mahesh is getting salary of ₹ 20,000 and Rahul is getting ₹16,000 per month. There is no logic behind this difference in salary. Management is also frustrated when they see that staff relating to production department is wasting its time in gossiping with sales department and members of sales team sitting in finance department. People and materials are not in suitable places.

(a) Mention the Fayol's principles of management violated in the given company. Also give one advantage of principles identified in above (a)

(b) Explain the principle of Espirit De Corps.

35. Enigma Coolers are the leading manufacturers in their area. They have decided to increase the productivity of their workers. For this they have chalked out a plan. They will be hiring operational managers who to work at the lower level of management. They have decided to keep eight managers over a single worker. Thus every worker will have to report to all these eight managers. Which technique of scientific management is followed here? What will be the benefit? Also tell which principle of Fayol will be violated here?

36. Bhatkaav Enterprises is facing huge losses. The owner of the company is an MBA pass out. Even then many things in the organization are happening which are indicative of lack of proper management in the company. First of all there is no specific sharing of work and any time any employee is asked to do anything. This has led to wastage of efforts. Further due to negligence in proper work sharing there has been no specialization development in the nature of the jobs done by the employees. There are no clear and fair agreements between the workers and the management. This has led to a lot of frustration in the workers. Management has quite often been found to be ignorant of not fulfilling promises done by it. There are also no strict rules and regulations binding on the conduct of the workers. The departmental heads who are the middle level managers in the company and hold key positions always favor their relatives. They quite often don't turn up for job on time. They are always looking for special relaxations from the top management. This has led to feeling of resentment among the employees who are also demanding special favors and threatening strike in the coming days. Identify the three principles of Fayol violated in the above case.

37. Distinguish between Unity of command and Unity of direction.

Subject :- Economics

Indian economy on the eve of independence

Read the following statements: Assertion (A) and Reason (R). Choose one of the correct alternatives given below:

a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).

b) Both Assertion (A) and Reason (R) are true and Reason (R) is not the correct explanation of Assertion (A).

c) Assertion (A) is true, but Reason (R) is false.

d) Assertion (A) is false, but Reason (R) is true.

1. Assertion (A): India became an exporter of primary products and an importer of finished consumer and capital goods produced in Britain.
   Reason (R): Restrictive policies of commodity production, trade, and tariff pursued by the colonial government adversely affected the structure, composition, and volume of India's foreign trade.

2. Assertion (A): During the British rule, the production of cash crops improved the economic condition of farmers.
   Reason (R): Farmers were given higher prices to produce cash crops.

3. Assertion (A): Decline of Handicraft Industry led to increase in import of manufactured goods from given below:
   Reason (R): The Indian made goods could not withstand the foreign competition of machine-made cheap goods.

4. Assertion (A): The agricultural sector accounted for the largest share of workforce with approximately 75%.
   Reason (R): All the states witnessed an increase in dependence of workforce on the agricultural sector.

5. Assertion (A): The opening of Suez Canal in 1869 reduced the cost of transportation.
   Reason (R): Suez Canal provided a direct trade route for ships operating between Britain and India.
   Reason (R): The main aim motive behind infrastructural development was to serve various colonial interests.

6. Assertion (A): Under British rule, there was a huge export surplus due to excess exports.
   Reason (R): India became an exporter of primary products and an importer of finished goods.

7. Assertion (A): Farmers were forced to produce cash crops like cotton or jute instead of conventional crops like rice and wheat during the British Rule.

8. Reason (R): Agriculture was exploited through Zamindari System under the Colonial Rule.

9. Assertion (A): During the Colonial Rule, India's exports exceeded imports, which resulted in a surplus of the balance of trade.
   Reason (R): Trade Surplus was used for the development of the Indian Economy.

10. Assertion (A): India's renowned handicraft industry was systematically destroyed due to discriminatory tariff policies of the British Government.
    Reason (R): Colonial Government imposed a heavy duty on import of finished goods from Britain.

11. Assertion (A): 1921 is regarded as the Year of the Great Divide'.
    Reason (R): After 1921, the total population in India never declined.

12. Assertion (A): India could not develop a sound industrial base under British Rule.

13. Reason (R): The colonial government reduced India to the status of a mere exporter of raw materials to be used by upcoming industries in Britain.

14. What was the aim of the policies pursued by the British during colonial rule?
15. Why is 1921 called as the 'Year of Great divide'?
16. Write a short note on the volume and composition of Indian trade during British rule.
17. Explain the factors responsible for the downfall of indigenous handicraft industries during British rule.
18. Describe the positive impact of the British rule on Indian economy.
19. Explain the role of the Suez Canal in intensifying British control over India's foreign trade.
20. Where was the zamindari system implemented by British in India? Discuss its features.
21. **What do you understand by the drain of Indian wealth during the colonial period?**

Indian Economy (1950-1990)

Read the following statements: Assertion (A) and Reason (R). Choose one of the correct alternatives given below:

a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).

b) Both Assertion (A) and Reason (R) are true and Reason (R) is not the correct explanation of Assertion (A).

c) Assertion (A) is true, but Reason (R) is false.

d) Assertion (A) is false, but Reason (R) is true.

1. Assertion (A): Government made use of 'Tariffs' and 'Quotas' to protect goods produced in India from imports.
   Reason (R): Restriction on imports of general goods was necessary as the planners wanted to encourage import of luxury goods.

2. Assertion (A): The major policy initiatives i.e., land reforms and green revolution helped India to become self-sufficient in food grains production.
   Reason (R): The proportion of people depending on agriculture did not decline as expected.

3. Assertion (A): Land reforms were needed in India as the majority of its population depended on agriculture.
   Reason (R): Ownership of land would give incentives to the actual tillers to make improvements.

4. Assertion (A): Industries were reclassified into three categories, viz., Schedule A, Shedule B and Schedule C in Industrial Policy Resolution (IPR) 1956.
   Reason (R): The system of Industrial Licensing was used for all types of industries after the IPR 1956.

5. Assertion (A): In the first phase of Green Revolution, all the states received the HYV seeds.
   Reason (R): The use of HYV seeds primarily benefited the wheat growing regions only.

6. Assertion (A): HYV seeds were the main reason for the agricultural revolution in India.
   Reason (R): The major benefit HYV seeds was that they needed less irrigation facilities.

7. Assertion (A): During Industrial Development (1950-1990), many public sector firms incurred huge losses and were, therefore, shut down.
   Reason (R): Public sector firms continued to function even though they were putting a drain on the nation's limited resources because of difficulty in closing a government undertaking.

8. Assertion (A): Land reforms were successful in Uttar Pradesh and Haryana
   Reason (R): Governments of these states were committed to the policy of land reforms.

9. Assertion (A): The concept of Socialist Economy for the country's growth and development was adopted by Soviet Union.

Reason (R): There was no difference in the nature of planning model adopted by India compared with Soviet Union.

10. Why are subsidies necessary?
11. Define capitalistic economy. Why was Pt. Jawaharlal Nehru not in the favour of capitalism?
12. Explain the policies which were adopted to promote equity in the agricultural sector,
13. Discuss the impact of Green Revolution.
14. Briefly explain the industrial policy resolution 1956?
15. Why is it important to promote small scale industries? Explain.
16. Discuss the significance of foreign trade.
17. Discuss the changes in India's value and volume of trade over the period.
18. What the main features of foreign trade in India? Explain
19. Discuss briefly the rational behind "equity with growth" as planning objectives for Indian economy.
20. Discuss briefly the rational choosing 'Modernisation' as planning objectives for Indian economy.

Questions Related to Indian Economy on Current Affairs

1. India's exports have declined even when rupee has depreciated in the recent past. How do you explain this fact?
2. How do you evaluate 'Start-ups' in India as a solution to the problem of unemployment? Write two observations.
3. 'India's GDP contracted 23.9% in the April-June quarter of 2020-21 as compared to same period of 2019-20, suggesting that the lockdown has hit the economy hard.' The Hindustan Times, 1st September 2020 State and discuss any two fiscal measures that may be taken by the Government of India to correct the situation indicated in the above news report.
4. How Pandemic Corona Virus may Impact the Agriculture Sector and Farmers Income?
5. Is current slowdown in Indian economy is because of global issues including U.S-China trade war? What could be quick revival action points?
6. As RBI decided to transfer 1.76 trillion rupees to Indian government. How will it affect the Indian economy?
7. What is the impact of GST (Good and Service Tax) on Indian Economy?
8. What will be the impact of banning Rs.500 and Rs.1000 notes on Indian Economy?
9. The sectoral imbalances in India especially in reform periods may have inflationary pressure on the economy. What do you think?
10. 'Atamnirbhar Bharat' had been at the roots of the Indian planning process in the form of self-reliance' as an objective of planning process. Do agree with the given statement? Justify the rationale of the given statement.

XII – ECONOMICS

Holidays Homework

Revision Worksheet of Numerical

(CBSE Numerical Questions of 2013 – 2017.)

1. Calculate sales from the following data: (Ans.5000)

Subsidies	200
Opening stock	100
Closing stock	600
Intermediate consumption	3000
Consumption of fixed capital	700
Profit	750
Net value added at factor cost	2000

2. Calculate GNP at MP: (Ans.5700)

Compensation of employees	2000
Interest	500
Rent	700
Profit	800
Employer's contribution to SSS	200
Dividend	300
Consumption of fixed capital	100
NIT	250
Net exports	70
Net factor income to abroad	150
Mixed income of self employed	1500

3. Calculate Gross value added at FC: (Ans.2800)

Sales	8000
Change in stock	100
Subsidies	200
Consumption of fixed capital	300
Intermediate consumption	5500
Rent	500

4. Calculate national income: (Ans. 7780)

Net exports	-300
Compensation of employees	6000
Rent	400
Dividend	200
Consumption of fixed capital	300
Change in stock	50
Profits	800
Net factor income to abroad	-80
NIT	600
Interest	500

5. Calculate i) Domestic income, ii) Compensation of employees:

NFYA	-20
Net exports	10
NIT	50
Rent and royalty	20
Consumption of fixed capital	10
Private final consumption expenditure	400
Corporate tax	10
Interest	30
Net domestic capital formation	50
Dividends	22
Govt. final consumption expenditure	100
Undistributed profit	5
Mixed income	23

6. Calculate gross fixed capital formation from the following data when :

Private final consumption expenditure	1000
Govt. final consumption expenditure	500
Net exports	-50
NFYA	20
Opening stock	300
Closing stock	200
GDP at MP	2500

7. Calculate NDP at FC from the following data: (Ans. 360)

Net current transfers to abroad	5
Govt. final consumption expenditure	100
NIT	80
Private final consumption expenditure	300
Consumption of fixed capital	20
Gross domestic fixed capital formation	50
Net imports	-10
Closing stock	25
Opening stock	25
Net factor income from abroad	10

8. Calculate NNP at FC: (Ans. 2050)

Social security contribution by employees	90
Wages and salaries	800
Net current transfers to abroad	-30
Rent and royalty	300
Net factor income to abroad	50
Social security contribution by employers	100
Profit	500
Interest	400
Consumption of fixed capital	200
NIT	250

9. Calculate national income from the following: (Ans. 630)

Change in stock	50
Govt. final consumption expenditure	100
Net current transfers to abroad	30
Gross domestic fixed capital formation	200
Private final consumption expenditure	500
Net imports	40
Depreciation	70
NFYA	-10
NIT	120
Net capital transfers to abroad	25

10. Calculate NNP at MP: (Ans. 730)

Closing stock	10
Consumption of fixed capital	40
Private final consumption expenditure	600
Exports	50
Opening stock	20
Govt. final consumption expenditure	100
Imports	60
Net domestic fixed capital formation	80
Net current transfers to abroad	-10
Net factor income to abroad	30

11. If the Real GDP is 400 and Nominal GDP is 450, calculate the Price Index.   (Ans. 112.5)

12. If the3 Real GDP is 600 and Nominal GDP is 125, calculate the Nominal GDP.   (Ans. 625)

13. If the Nominal GDP is 600 and Price index is 120, Calculate the Real GDP.   (Ans. 500)

14. Calculate national income: (Ans. 1240)

Rent	200
NFY to Abroad	10
National debt interest	15
Wages and salaries	700
Current transfers from govt.	10
Undistributed profit	20
Corporate taxes	30
Interest	150
Social security contribution by employers	100
NDP accruing to govt.	250
Net current transfers to ROW	5
Dividend	50

15. Calculate NNP at MP: (Ans. 1070)

NFY to Abroad	-10
Net current transfers to abroad	5
Consumption of fixed capital	40
COE	700
Corporate tax	30
Undistributed profits	10
Interest	90
Rent	100
Dividends	20
NIT	110
Social security contribution by employees	11

16. Find Net Value Added at MP: (Ans. 14)

Fixed capital with a life span of 15 yrs.	15
Raw material	6
Sales	25
Net change in stock	-2
Taxes on production	1

17. Find GNP at MP: (Ans. 1380)

Private final consumption expenditure	800
Net current transfers to abroad	20
Net factor income to abroad	-10
Govt. final consumption expenditure	300
NIT	150
Net domestic capital formation	200
Current transfers to govt.	40
Depreciation	100
Net imports	30
Income accruing to govt.	90
National debt interest	50

18. Calculate national income: (Ans. 1030)

Corporate tax	100
Private final consumption expenditure	900
Personal income tax	120
Govt. final consumption expenditure	200
Undistributed profits	50
Change in stock	-20
Net domestic fixed capital formation	120
Net imports	10
NIT	150
NFYA	-10
Private income	1000

19.

20. Calculate GNP at MP :   (Ans. 1690)

Rent	100
Net current transfers to ROW	30
Social Security Contribution by Employers	47
Mixed Income	600
Gross Domestic Capital Formation	140
Royalty	20
Interest	110
COE	500
Net domestic capital formation	120
Net factor income from abroad	-10
NIT	150
Profit	200

21. Calculate NDP at FC: (Ans. 1000)

Net current transfers to abroad	15
Private final consumption expenditure	800
Net imports	-20
Net domestic capital formation	100
Net factor income to abroad	10
Depreciation	50
Change in stock	17
NIT	120
Government final consumption expenditure	200
Exports	30

22. Calculate NNP at MP: (Ans. 425)

Transfer payments by Govt.	7
Govt. final cons. expenditure	50
Net imports	-10
Net domestic capital formation	60
Private final cons. Exp.	300
Private income	280
Net factor income to abroad	-5
Closing stock	8
Opening stock	8
Depreciation	12
Corporate tax	60
Retained earnings of corporations	20

23. Calculate GNP at MP: (Ans. 1720)

Wages and salaries	800
Personal tax	150
Operating Surplus	200
Undistributed taxes	10
Social security contr. By employers	100
Corporate tax	50
Net factor income to abroad	-20
Personal disposable income	1200
NIT	70
Consumption of fixed capital	30
Mixed income of self employed	500
Royalty	9

24. Find Gross Value Added at Market Price: (Ans. 80)

Depreciation	20
Domestic sales	200
Net change in stock	-10
Exports	10
Single use producer goods	120

25. Find National Income: (Ans. 2040)

Wages and salaries	1000
Net current transfers to abroad	20
Net factor paid to abroad	10
Profit	400
National debt interest	120
Social security contributions by employers	100
Current transfers from govt.	60
National income accruing to govt.	150
Rent	200
Interest	300
Royalty	50

26. Calculate Value added by Firm X and Firm Y: (Ans. X= 250, Y= 60)

Sales by firm X to households	100
Sales by firm Y	500
Purchases by households from firm Y	300
Exports by firm Y	50
Change in stock of firm X	20
Change in stock of firm Y	10
Imports by firm X	70
Sales by firm Z to firm Y	250
Purchases by firm Y from firm X	200

27. Find out Value added by firm B from the following data: (Ans. 40)

Purchases by Firm B from Firm A	30
Sales by Firm B to Firm C	25
Sales by Firm B to households	35
Opening stock of Firm B	5
Opening stock of Firm C	10
Closing stock of Firm B	10
Purchases by Firm B from Firm D	15
Export by Firm B	20

26. Find Net value added at Market Price: (Ans. 19500)

Output sold (in units)	1000
Price per unit of output	30
Excise	1600
Import duty	400
Net change in stock	-500
Depreciation	2000
Intermediate cost	8000

27. Calculate National Income: (Ans. 550)

Current transfers by Govt.	15
Private final cons. Exp.	400
Net current transfers fro ROW	20
Govt. final cons. Exp.	100
Net factor income from abroad	-10
Net domestic capital formation	80
Consumption of fixed capital	50
Net exports	40
NIT	60

28. Calculate GDP at MP by a) Production method, b) Income method: (Ans. 1440)

Intermediate Consumption of:	
a) Primary sector	500
b) Secondary sector	400
c) Tertiary sector	300
Value of output of:	
a) Primary sector	1000
b) Secondary sector	900
c) Tertiary sector	700
Rent	10
Emoluments of employees	400
Mixed income	650
Operating surplus	300
Net factor income from abroad	-20
Interest	5
Consumption of fixed capital	40
NIT	10

29. Calculate NNP at MP by a) Expenditure method, b) Income method (Ans. 1090)

Personal consumption exp.	700
Wages and salaries	700
Employer's contr. To SSS	100
Gross business fixed investment	60
Gross residential construction	60
Gross public investment	40
Inventory investment	20
Profits	100
Govt. purchase of goods and services	200
Rent	50
Exports	40
Imports	20
Interest	40
Mixed income of self employed	100
Net factor income from abroad	-10
Depreciation	0
Indirect taxes	20
Subsidies	10

30. Calculate a) GDP at FC, b) Factor income to abroad.   (Ans. 1700, 100)

COE	1000
Profits	200
Dividends	80
GNP at MP	1800
Rent	250
Interest	200
Gross domestic capital formation	300
Net fixed capital formation	200
Change in stock	50
Factor income from abroad	80
NIT	120

31. Calculate a) GDP at MP, b) Factor income from abroad. (Ans. 3250, 3300)

Profits	550
Exports	40
COE	1600
Gross national product at factor cost	3000
Net current transfers from ROW	90
Rent	300
Interest	400
Factor income to abroad	120
NIT	300
Net domestic capital formation	650
Change in stock	50
Gross fixed capital formation	700

32. GNP at MP of an imaginary economy is 120000 crore as its capital stock is worth 300000 crore. If capital stock depreciates @ 20% per annum, indirect taxes amount to 30000 crore and subsidies are put at 15000 crore. What isnational income?   (Ans. 45000)

33. From the following data, calculate Domestic factor income :   (Ans. 24480)

GDP at MP	24600
Consumption of fixed capital	2800
NIT	120
Net factor income to abroad	-200

34. Calculate GDP at MP by Income method and Closing stock: (Ans. 820cr , 40cr.)

Particulars	In crores	Particulars	In crores
Pvt. Final cons. Exp.	450	Opening stock	10
Rent	120	Gross fixed capital formation	300
Govt. final cons. Exp	50	COE	200
Indirect taxes	60	Net exports	-10
Interest	150	Net factor income from abroad	-10
Mixed income of self employed	20	Subsidies	10
Consumption of fixed capital	30	Profit	250

35. Calculate GDP at MP and Subsidies: (Ans. 70000, 5000)

Particulars	In crores	particulars	In crores
Govt. final cons. Expenditure	7000	COE	24000
Indirect taxes	9000	Depreciation	4000
NNP at FC	61700	Pvt. Final cons. Exp.	44000
Mixed income of self employed	28000	Export of goods and services	4800
Gross fixed capital form.	13000	Import of goods and services	5600
Net addition to stock	10000	NFIA	-300

36. Calculate domestic income and compensation of employees: (Ans. 510, 400)

Particulars	In crores	Corporate taxes	10
Net factor income to abroad	20	Interest	30
Net exports	10	Net domestic capital formation	50
NIT	50	Dividends	22
Rent and royalty	20	Govt. final cons. Exp.	100
Consumption of fixed capital	10	Undistributed profits	5
Prvt. final cons. Exp.	400	Mixed income	23

37. Calculate national income and depreciation from the following data: (Ans. 930, 25)

Particulars	In crores	Particulars	In crores
NIT	5	Prvt. Final cons. Exp.	600
Net domestic fixed capital formation	100	Change in stock	10
Govt. final cons. Exp.	200	Net factor income from abroad	5
Gross domestic fixed cap. Form.	125	Net imports	-20

Subject :- History

1 Mark and Locate the places – given list of maps by cbse

2. Prepared a question paper with answer as per given blue print .

3 Prepared a question paper with answer as per given blue print from chapter 1 and 2.

4.list the items of food available to people in Harappan cities. Identify the groups who would have provided these.

5. Write notes of chapter 1 abd 2.

6. Find out if there are any museums in your town. Visit one of them during summer vacation and write a report on any ten items, describing how old they are, where they were found,and why you think they are on display.

LIST OF MAPS

S. No	Page No.	Part – I Maps
1	2	**Mature Harappan sites:** Harappa, Banawali, Kalibangan, Balakot, Rakhigarhi, Dholavira, Nageshwar, Lothal, Mohenjodaro, Chanhudaro, KotDiji.
2	3	**Mahajanapada and cities:** Vajji, Magadha, Kosala, Kuru, Panchala, Gandhara, Avanti, Rajgir, Ujjain, Taxila, Varanasi.
3	33	**Distribution of Ashokan inscriptions:** • Pillar inscriptions – Sanchi, Topra, Meerut Pillar and Kaushambi. • Kingdom of Cholas, Cheras and Pandyas.
4	43	**Important kingdoms and towns:** • Kushanas, Shakas, Satavahanas, Vakatakas,Guptas • Cities/towns: Mathura, Kanauj, Puhar, Braghukachchha, Shravasti, Rajgir, Vaishali, Varanasi,Vidisha
5	95	**Major Buddhist Sites:** Nagarjunakonda, Sanchi, Amaravati, Lumbini, Bharhut, Bodh Gaya, Ajanta

S. No	Page No.	Part II - Maps
6	174	Bidar, Golconda, Bijapur, Vijayanagar, Chandragiri, Kanchipuram, Mysore, Thanjavur, Kolar, Tirunelveli

7	214	**Territories under Babur, Akbar and Aurangzeb:** • Delhi, Agra, Panipat, Amber, Ajmer, Lahore, Goa.

S. No	Page No.	Part III - Maps
8	287	**Territories/cities under British Control in1857:** Punjab, Sindh, Bombay, Madras Berar, Bengal, Bihar, Orissa, Surat, Calcutta, Patna, Allahabad
9	260	**Main centres of the Revolt of 1857:** Delhi, Meerut, Jhansi, Lucknow, Kanpur, Azamgarh, Calcutta, Benaras, Gwalior, Jabalpur, Agra, Awadh
10		**Important centres of the National Movement:** Champaran, Kheda, Ahmedabad, Benaras, Amritsar, Chauri Chaura, Lahore, Bardoli, Dandi, Bombay (Quit India Resolution), Karachi

QUESTION PAPER DESIGN - CLASS XII

Book	MCQ		SA		LA		Source Based		Map	Total	
	No of questions	MM	No of questions	MM	No of questions	MM	No of questions	MM		Theory	Internal
Part I	7	1	2	3	1	8	1	4		25	
Part II	7	1	2	3	1	8	1	4		25	
Part III	7	1	2	3	1	8	1	4		25	
Map									05	05	
Project											20
Total	7 x 3 =21		6 x 3 =18		3 x 8 = 24		3 x 4 =12		1 x 5 =5	100 marks	

5.

Subject :- Computer Science

Programming based:

1. Write a program to display whether entered number is Even or Odd.

2. Write a program to accept values from a user in a list. Add a list to it and display its elements one by one. Also display its maximum and minimum value.

3. Write a Python program to input 'n' classes and names of their class teachers to store them in a dictionary and display the same. Also accept a particular class from the user and display the name of the class teacher of that class.

4. Write a program to store student names and their percentage in a dictionary and delete a particular student name from the dictionary. Also display the dictionary after deletion.

5. Write a Python program to get the smallest number from a list.

6. Write a function name CUBE to display Cube of entered number.

7. Write a program to display sum & factorial of entered number using for & while loop.

8. Write program to calculate area of circle,rectangle & triangle using function-area_circle,area_triang,area_rect.

Notes based :

1. Differentiate between : A. while Vs for loop
   B. User defined Vs Built in Function

2. Define & explain Function with suitable example.

Project based:

Choose a topic for investigatory project.

Do its survey.

Write its synopsis in brief.

Subject :- Informatics Practices

Programming based:

1. Create a Series to add all day of week with its number as index.

2. Write a program to accept values from a user in a list. Add a list to it and display its elements one by one. Also display its maximum and minimum value.

3. Write a Python program to input 'n' classes and names of their class teachers to store them in a dictionary and display the same. Also accept a particular class from the user and display the name of the class teacher of that class.

4. Write a program to store student names and their percentage in a dictionary and delete a particular student name from the dictionary. Also display the dictionary after deletion.

5. Write a Python program to get the smallest number from a list.

6. Write a Series to store marks obtained to 10 students. Add 2 bonus marks. Display original & updated marks.

7. Write a Python program to combine marks obtained to 10 students in IP & CS.Use Series.

8. Write a python program to ask name of states & its capital and display in series country.

9. Create a series to display table of 5 to 50 using numpy library.

10. Create a DataFrame from series Day_in_Month. Display number of days in each month.

Notes based :

1. Differentiate between :

    A. while Vs for loop
    B. List Vs Series
    C. Pandas Vs NumPy

2. What do you means by Array? Explain

3. Explain importance of Series with suitable example.

Project based:

Choose a topic for investigatory project.

Do its survey.

Write its synopsis in brief.

Subject :- Geography

1. Make one question paper as per new pattern of CBSE.
2. Complete following map skills-
   a. Areas of subsistence gathering (Fig 4.2)
   b. Major areas of nomadic herding of the world (4.4)
   c. Major areas of commercial livestock rearing (4.6)
   d. Major areas of extensive commercial grain faming (4.12)
   e. Major areas of mixed farming of the World (4.14)
   f. Terminal Stations of Transcontinental Railways– Trans-Siberian, Trans Canadian, Trans-Australian Railways
   g. **Major Sea Ports**
      Europe: North Cape, London, Hamburg
      North America: Vancouver, San Francisco, New Orleans
      South America: Rio De Janeiro, Colon, Valparaiso
      Africa: Suez and Cape Town
      Asia: Yokohama, Shanghai, Hong Kong, Aden, Karachi, Kolkata
      Australia: Perth, Sydney, Melbourne
   h. **Major Airports:**
      Asia: Tokyo, Beijing, Mumbai, Jeddah, Aden
      Africa: Johannesburg & Nairobi
      Europe: Moscow, London, Paris, Berlin and Rome
      North America: Chicago, New Orleans, Mexico City
      South America: Buenos Aires, Santiago
      Australia: Darwin and Wellington
   i. **Inland Waterways-** Suez Canal, Panama Canal, Rhine waterways and St. Lawrence Seaways
   j. State with highest population density & state with lowest population density (2011)
   k. Leading producing states of the following crops: (a) Rice (b) Wheat (c) Cotton (d) Jute (e) Sugarcane (f) Tea and (g) Coffee
   l. **Mines:**
      Iron-ore mines: Mayurbhanj, Bailadila, Ratnagiri, Bellary
      Manganese mines: Balaghat, Shimoga
      Copper mines: Hazaribagh, Singhbhum, Khetari
      Bauxite mines: Katni, Bilaspur and Koraput
      Coal mines: Jharia, Bokaro, Raniganj, Neyveli
      Oil Refineries: Mathura, Jamnager, Barauni
   m. Mark and label the major sea ports and airports on an outline map of India.
      Major Sea Ports: Kandla, Mumbai, Marmagao, Kochi, Mangalore, Tuticorin, Chennai, Vishakhapatnam, Paradwip, Haldia
      International Air ports: Ahmedabad, Mumbai, Bengaluru, Chennai, Kolkata, Guwahati, Delhi, Amritsar, Thiruvananthapuram & Hyderabad.

Subject ;- Political Science

Political Science Project-

    A.   Prepare a project according to CBSE guidelines.

Topics :- 1) Cold War

        2) Impact of Cold War on Indian Politics

    B.   Read the newspaper daily especially the editorial Make Report on Political Homework Notebook.

Subject ;- Political Science

Subject :- WE (Work Experience)

1. Decorate a paper file with decorating materials, craft and drawings.

2. Best out of waste. Prepare any useful item from waste materials like paper, plastic etc.

Subject :- Physical and Health Education (Games and Sports)

- 30-40 minutes daily work out and play one brain game daily i.e., chess, sudoku, crosswords and Rubik's cube etc.

Art Integrated Project

- Draw on a chart paper exercise effect on cardiorespiratory system, nervous system and respiratory system and their benefits.

Computer Based Project

- Make PPT on Macro and Micro nutrients and sources of nutrients. Briefly discuss their benefit to human body.
- Read one biography or see biopic of one sports personality and make a video of yours describing about him/her in your own word. Video duration should not exceed more than 5 minutes.

Subject :- Yoga

Name_____
Class _____
Worksheet for Class 12
Which asana you liked the most _____
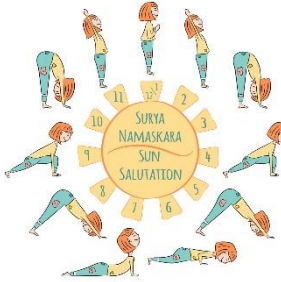
...t with Suryanamaskar.
...w many times you did on day one
_____ and
...w many times you did on last day _____
.
...ress your
feeling_____
_____
_____
_____
_____

Pose Picture	Pose Name	How many seconds can you hold the pose?	
		On Day 1 of your Vacations	On last day after regular practice
1.	Padmasana (Lotus)		
2.	BaddhaKonasana (Butterfly)		
3.	Vajrasana (Thunderbolt)		
4.	Sirsasana (Headstand) Do take wall support or elders help		
5.	Balasana (Child pose)		

6.		Tadasana (Mountain)	
7.		Vrikshasana (Tree) Do for both legs	
8.		Ardh Chakrasana (Half Wheel)	
9.		Chakrasana (Full Wheel)	
10.		Adho mukha asana (Downward Dog)	
11.		Bhujangasana (Cobra)	
12.		Dhanurasana (Bow)	
13.		Padhastasana (Standing Forward Bend)	
14.		Trikonasana (Triangle) Do on both side	
15.		Savasana (Corpse)	

Note: All the asanas to be done in normal conditions. No need to push yourself for more. Suggested to follow sequence and write your feelings for Yoga.

Enjoy Your Vacations. Stay Safe.

WISH YOU ALL THE BEST

STAY SAFE,
BE HAPPY AND HEALTHY

Submit holiday homework on first day of reopening of the Vidyalaya