## CLASS - XII - PHYSICS ~ HOME - ASSIGNMENT: -N

## Electrostatics - I

1. Two charges each of $+Q$ units are placed along a line. A third charge $-q$ is placed between them. At what position and for what value of q , will the system be in equilibrium?
2. What kind of charges are produced on each, when (i) a glass rod is rubbed with silk and (ii) an ebonite rod is rubbed with wool?
3. Can a body have charge of $0.8 \times 10^{19} \mathrm{C}$ ? Comment to justify your answer?
4. Name the experiment, which established quantum nature of electric charge.
5. How the mass of a body is affected on charging?
6. Force between two-point electric charges kept at a distance $d$ apart in air is $F$. If these charges are kept at the same distance in water, how does the force between them change?
7. If the distance between two equal point charges is doubled and their individual charges are also doubled, what would happen to the force between them?
8. Ordinary rubber is an insulator. But the special rubber tires of aircrafts are made slightly conducting. Why is this necessary?
9. Vehicles carrying inflammable materials usually have metallic ropes touching the ground during motion. Why?
10. Can a charged body attract another uncharged body? Explain.

## Or

Why does a charged glass rod attract a piece of paper?
11. A charge q is placed at the center of line joining two equal charges $Q$. Show that the system of three charges will be in equilibrium, if $q=-Q / 4$.
12. Two point charges of charge values Q and q are placed at a distance of $x$ and $x / 2$ respectively from a third charge of charge value 4 q , all charges being in the same straight line. Calculate the magnitude and nature of charge $Q$, such that the net force experienced by the charge q is zero.

## Electrostatics - II

1. The force acting between two-point charges $\mathrm{q}_{1}$ and $\mathrm{q}_{2}$ kept at some distance apart in air attractive or repulsive when (i) $q_{1} q_{2}>0$ (ii) $q_{1} q_{2}<0$.
2. Sketch the electric lines of force for two- point charges $q_{1}$ and $q_{2}\left(q_{1}>q_{2}\right)$ separated by a distance d.
3. Express dielectric constant in terms of capacitance.
4. What is the effect of introducing a dielectric slab between the plates of a parallel plate capacitor?
5. An electric dipole of dipole moment $20 \times 10^{-6} \mathrm{C}$ is enclosed by closed surface. What is the net electric flux coming out of this surface?
6. Sketch graph to show how charge Q given to a capacitor of capacitance C varies with the potential difference.
7. A charged air capacitor has stored energy $U_{0}$. What will be the energy stored when air is replaced by a dielectric of dielectric constant $K$, charge $Q$ remaining the same.
8. In a parallel plate capacitor, the capacitance increases from $4 \mu \mathrm{~F}$ to $80 \mu \mathrm{~F}$ on introducing the dielectric medium between the plates. What is the dielectric constant of the medium?
9. In an electric field an electron is kept freely. If a proton replaces this electron, what will be the relationship between the forces experienced by them?
10. What orientation of an electric dipole in a uniform electric field corresponds to its stable equilibrium?
11. The force between two point charges kept at a distance $r$ apart in air is $F$. If the same charges are kept in water at same distance, how does the force between them change?
12. Two point electric charges of unknown magnitude and sign are placed at a distance ' $d$ ' apart. The electric intensity is zero at a point, not between the charges but on the line joining them. Write two essential conditions for this to happen.
13. What should be the work done if a point charge $+q$ is taken from a point $A$ to the point $B$ on the circumference drawn with another point +q at the center?
14. A and B are two conducting spheres of the same radius, A being solid and B hollow. Both are charged to the same potential. What will be the relation between the charges on the two spheres?
15. How much work is done in moving a $500 \mu \mathrm{C}$ charge between two points on an equi-potential surface.
16. Name the dielectric whose molecules have (i) non-zero (ii) zero dipole moment.
17. A positively charged particle is free to move in an electric field. Will it always move along the line of force?
18. A proton and an electron are placed freely in an electric field. Which of the particles will have greater acceleration and why?

## Electrostatics and Capacitance

$r$

1. Electric charges $\mathrm{q}, \mathrm{q}$ and -2 q are placed at the corners of an equilateral triangle of side L . what is the magnitude of dipole moment of the system?
2. State Gauss's law in electrostatics. Show, with the help of a suitable example along with the figure, that the outward flux due to a point charge ' $q$ ', in vacuum within a closed surface, is independent of its size or shape and is given by $q / \varepsilon_{0}$.
3. Two parallel uniformly charged infinite plane sheets, ' 1 ' and ' 2 ', have charge densities $+\sigma$ and $-2 \sigma$ respectively. Give the magnitude and direction of the net
4. $\quad$ Three point charges $q_{1}, q_{2}$ and $q_{3}$ are kept respectively at points $A, B$ and $C$ as shown in the figure.


Derive the expression for the electrostatic potential energy of the system.
5. Depict the equipotential surfaces due to (i) an electric dipole, (ii) two identical positive charges separated by a distance.
6. Find the ratio of the potential differences that must be applied across the parallel and the series combination of two identical capacitors so that the energy stored, in the two cases, becomes the same.
7. Find the electric field intensity due to a uniformly charged spherical shell at a point (i) outside the shell (ii) inside the shell. Plot the graph of electric field with distance from the center of the shell.
8. A right circular cylinder of length ' $a$ ' and radius ' $r$ ' has its centre at the origin and its axis along the $x$-axis so that one face is at $x=+a / 2$ and $x=-a / 2$, as shown in the figure. A uniform electric field is acting parallel to the x-axis such that $\vec{E}=\overrightarrow{E_{o}} \hat{\imath}$ for $x>0$ and $\vec{E}=-\overrightarrow{E_{o} \hat{\imath}}$ for $x<0$.


Find (i) flux through each flat faces (ii) through the curved surface (iii) the net outward flux through the cylinder and the net charge inside the cylinder.

Kendriya Vidyalaya No-2 AFS Hindan GZB.
HOLIDAY HOME WORK CLASS: XII A+B

SUB: CHEMISTRY
Solutions

## Section-A

1. Calculate the mole fraction of water in a mixture consisting of 9.0 water, 120 g acetic acid, and 115 g ethyl alcohol.
2. The density of a 2.0 M solution of acetic acid in water is $1.02 \mathrm{~g} / \mathrm{mL}$. Calculate the mole fraction of acetic acid.
3. The density of a 2.03 M solution of acetic acid in water is $1.017 \mathrm{~g} / \mathrm{mL}$. Calculate the molality of solution.
4. The molality of a solution of ethyl alcohol in water is $1.54 \mathrm{~mol} / \mathrm{kg}$. How many grams of alcohol is dissolved in 2.50 kg water?
5. What is the mole fraction of the solute in a 1.00 m aqueous solution?

## Section-B

6. The given sample of sulphuric acid was found to have mole fraction of $\mathrm{H}_{2} \mathrm{SO}_{4}$ as 0.15 . Calculate the molality of solution.
7. If 29 mg of nitrogen dissolves in water at $0^{\circ} \mathrm{C}$ and 760 Torr nitrogen pressure, how much $\mathrm{N}_{2}$ will dissolve in 1 L of water at $\mathrm{O}^{\circ} \mathrm{C}$ and 5 atm $\mathrm{N}_{2}$ pressure?
8. Benzene with boiling point 353.1 K and toluene with boiling point 383.6 K are the two hydrocarbons which form nearly ideal solution. At 313 K , the vapour pressures of pure benzene and pure toluene are 21.1 kPa and 8.0 kPa respectively. Calculate the partial vapour pressures of benzene and toluene, and the total vapour pressure in bar under the following conditions: (a) A solution made by mixing equal number of moles of benzene and toluene. (b) A solution made by mixing 4 moles of toluene and 1 mole of benzene. (c) A solution made by mixing equal masses of toluene and benzene.
9. Concentrated nitric acid used in laboratory work is $68 \%$ nitric acid by mass in aqueous solution. What should be the molarity of such a sample of the acid if the density of the solution is $1.504 \mathrm{~g} \mathrm{~mL}^{-1}$ ?
10. A solution of glucose in water is labelled as $10 \% w / w$, what would be the molality and mole fraction of each component in the solution? If the density of solution is $1.2 \mathrm{~g} \mathrm{~mL}^{-1}$, then what shall be the molarity of the solution?

## Section-C

11. The partial pressure of ethane over a solution containing $6.56 \times 10^{-3} \mathrm{~g}$ of ethane is 1 bar. If the solution contains $5.00 \times 10^{-2} \mathrm{~g}$ of ethane, then what shall be the partial pressure of the gas?
12. If the density of some lake water is $1.25 \mathrm{~g} \mathrm{~mL}^{-1}$ and contains 92 g of $\mathrm{Na}^{+}$ ions per kg of water, calculate the molality of $\mathrm{Na}^{+}$ions in the lake.
13. If the solubility product of CuS is $6 \times 10^{-16}$, calculate the maximum molarity of CuS in aqueous solution.
14. Calculate the mass percentage of aspirin $\left(\mathrm{C}_{9} \mathrm{H}_{8} \mathrm{O}_{4}\right)$ in acetonitrile $\left(\mathrm{CH}_{3} \mathrm{CN}\right)$ when 6.5 g of $\mathrm{C}_{9} \mathrm{H}_{8} \mathrm{O}_{4}$ is dissolved in 450 g of $\mathrm{CH}_{3} \mathrm{CN}$.
15. Nalorphene $\left(\mathrm{C}_{19} \mathrm{H}_{21} \mathrm{NO}_{3}\right)$, similar to morphine, is used to combat withdrawal symptoms in narcotic users. Dose of nalorphene generally given is 1.5 mg . Calculate the mass of $1.5 \times 10^{-3} \mathrm{~m}$ aqueous solution required for the above dose.

## Electrochemistry

## Section-A

16-If a current of 0.5 ampere flows through a metallic wire for 2 hrs , then how many electron would flow through the wire?
17-Write the chemistry of recharging the lead storage battery, highlighting all the material that are involved during recharging.

## Section-B

18. Unlike the dry cell, mercury cell has a constant cell potential throughout its life.why?
19-Why alternating current is used for measuring resistance of an electrolyte solution.

## Section-C

20.A steady current of 2 amp was passed through two electrolyte cells $X$ and Y connected in series containinf FeSO 4 and ZnSO 4 untill 2.8 g of Fe is deposited at the cathode of the cell.How long did the current flow? 21.Molar conductivity of an electrolyte increase with decrease in concentration.Why?

HINDI
CLASS-12 वर्ग-B एवं C
विषय: हिन्दी
ग्रीष्मकालीन प्रदत्त गृहकार्य विषय अध्यापक:ओमवीर सिंह

1. संचार किसे कहा जाता है? संचार के साधनों के नाम लिखिए।
2. प्रिंट मीडिया से आप क्या समझते हैं? उदाहरण देकर स्पस्ट कीजिए।
3. निम्नलिखित में से किसी एक विषय पर लेख लिखिए- (क) कोविड का फिर से बढ़ता प्रकोप
(ख) आम आदमी और दिनों दिन बढ़ती मंहगाई
4. निम्नलिखित में से किसी एक विषय पर फीचर लिखिए
(क) बढ़ती गर्मी का प्रकोप
(ख) घटती हरियाली और बढ़ता प्रदूषण
5. समाचार से आप क्या समझते है? समाचार लेखन की उल्टा पिरामिड शैली को समझाइए।
6. किसी लोकप्रिय समाचार के संपादक के नाम पत्र लिखिए जिसमें आपके क्षेत्र में बिजली की समस्या पर अधिकारियों का ध्यान आकृष्ट करने की प्रार्थना की गई हो ।
7. परियोजना कार्य:- (क) कला समेकित कार्य-युग्मित राज्य अरुणाचल प्रदेश की भौगोलिक स्थिति, इतिहास, खानपान, नृत्य, वेशभूषा, भ्रमण स्थल, ऐतिहासिक स्थान, कवि, लोक संगीत आदि में से किसी एक का वर्णन करें।
(ख) किसी कवि / लेखक का जीवन परिचय व साहित्य में उसका योगदान, जल का महत्व और संरक्षण के उपाय, नारी शक्ति का समाज में योगदान, भारतीय सिनेमा का इतिहास, स्वतंत्रता संग्राम का इतिहास, जनसंचार संचार के साधन, किसी स्वतंत्रता सेनानी का जीवन/इतिहास, भारतीय सिनेमा का इतिहास, आधुनिक जीवन शैली, विज्ञापन और हमारा जीवन ( इनमें से कोई एक)
8. पढ़ाए गए पाठ्यक्रम का अध्ययन करना व याद करना।

## CLASS $12{ }^{\text {TH }}$ C SUB- ECONOMICS

LEARN AND WRITE IN YOUR NOTEBOOK

## MACRO-ECONOMICS

## LESSON 1 -INTRODUCTION OF MACRO-ECONOMICS

Prepare 10 multi choice questions from this lesson
LESSON 2 - BASIC CONCEPT OF MACRO -ECONOMICS

Prepare any 20 multi - choice questions from this lesson.
Q.NO. 1 What is the difference between micro-economics and macro-economics
Q.NO. 2 What are the scope and significance of macro- economics ?
Q.NO. 3 Describe the great depression of 1929
Q.NO. 4 What are the central issues of micro and macro economics?
Q.NO. 5 What is meant by production process?
Q.NO. 6 Define intermediate goods. Give examples?
Q.NO. 7 Define final goods .Give examples
Q.NO. 8 Define capital goods .With examples.
Q.NO. 9 Defference between depreciation and capital loss.
Q.NO. 10 Define consumption goods
Q.NO 11 Define circular flow of income.
Q.NO. 12 Name four sectors of economy.
Q.NO. 13 What is inventory investment.
Q.NO. 14 Defference between expected obsolescence and unexpected obsolescence.
Q.NO. 15 Define stock and flow.
Q.NO. 16 What is intersecteral flow?
Q.NO 17 Define fiscal policy and BOP status.
Q.NO. 18 Deffrence between final consumer goods and final producer goods.
Q.NO. 19 Give some examples of macro economics studies.
Q.NO. 20 What are semi-durable consumer goods?

## INDIAN ECONOMY

## LESSON I INDIAN ECONOMY ON THE EVE OG INDEPENDENCE

Prepare any 15 MCQs from this lesson.

## LESSON 2 ECONOMIC SYSTEM AND COMMON GOALS OF FIVE YEAR PLAN

Prepare any 15 MCQs from this lesson

## LESSON 3 INDIAN ECONOMY (1950-1990)

Prepare any 15 MCQs from this lesson
Q.NO. 1 State three main features of Indian economy at the time of independence.
Q.NO. 2 What was the state of agricultural sector of the Indian economy on the eve of independence.
Q.NO. 3 What was the state of industrial sector of Indian economy on the eve of independence.
Q.NO. 4 Comment on the state of export and import of the Indian economy on the eve of independence
Q.NO. 5 Explain the defferent types of economic system.
Q.NO. 6 Explain the objectives of self- sufficiency as adopted in Indian planning
Q.NO. 7 What are the main land reforms undertaken in India?
Q.NO. 8 What are the industrial policy features of 1956 ?
Q.NO. 9 How GDP growth is linked with foreign trade of a country?
Q.NO. 10 Explain the relative importance of large scale and small scale industry in the growth process of the Indian economy.

## Holiday homework Accountancy class 12

- Complete your class work and home work copy in all aspect .
- Complete your comprehensive project -

Comprehensive problem .
Solution-
Journal entries
Ledger
Trail balance
Trading account
Profit and loss account
Balance sheet
Conclusion

- Revise all the chapters that completed in class .
- Solve cbse 5 sample papers .
- Complete the assignment work .


## Holiday homework Business studies class 12

- Complete your class work and home work copy in all aspect.
- Complete your project file introduction and survey according to cbse guildlines : TOPICS (select any one topic):
Principles of management .
Business environment
Marketing management
Stock exchanmge
- Revise all the chapters that completed in class .
- Solve cbse 5 sample paper .
- Complete the assignment work.
- Project work on G20


# K.V.NO.AFS HINDAN GHAZIABAD <br> MATHS SUMMER HOLIDAY HOMEWORK <br> CLASS-XII <br> SUBJECT-MATHS 

## SECTION A

(Multiple Choice Questions)
Each question carries 1 mark
1.If matrix A is both symmetric and skew symmetric , then
(a) A is diagonal matrix
(b) A is square and zero matrix
(c) A is square matrix
(d) None of these
2.If A and B are symmetric matrices of same order , then $\mathrm{AB}-\mathrm{BA}$ is a :
(a) Skew symmetric matrix
(b) Symmetric matrix
(c) Zero matrix
(d)Identity matrix
3.The number of all possible matrices of order 3 X 3 will each entry 0 or 1is :
(a) 27
(b) 18
(c) 81
(d) 512
4.If the area of a triangle with vertices $(-3,0),(3,0)$ and $(0, \mathrm{k})$ is 9 sq. units. Then the value of $k$ will be:
(a) 9
(b) 3
(c) -9
(d) 6
5. If matrix $\left[\begin{array}{ccc}2 & 3 & -1 \\ x+9 & -1 & 2 \\ 3 x & 2 & -1\end{array}\right]$ is a singular matrix, then the value of x is :
(a) $\frac{-3}{16}$
(b) $\frac{3}{16}$
(c) $\frac{4}{13}$
(d) $\frac{8}{10}$
6. If A is a square matrix of order $3,|A|=-3$, then $\left|A A^{\prime}\right|=$
(a) 9
(b) -9
(c) 3
(d) -3
7..If A is a skew-symmetric matrix of order 3 then $|\mathrm{A}|$ is
(a) 0
(b) -1
(c) 1
(d) 3
8..Matrix $A=\left[\begin{array}{ccc}0 & 2 b & -2 \\ 3 & 1 & 3 \\ 3 a & 3 & -1\end{array}\right]$, is given to be symmetric, find the value of $a$ and $b$.
(a) $\mathrm{a}=2 / 3, \mathrm{~b}=2 / 3$
(b) $a=2 / 3, b=3 / 2$
(c) $a=-2 / 3, b=-3 / 2$
(d) $a=-2 / 3, b=3 / 2$
9..If $A$ is a square matrix such that $A^{2}=A$, then $(I+A)^{2}-3 A$ is
(a) I
(b) 2 A
(c) 3 I
(d) A
10.Let A be a square matrix of order $3 \times 3$ s.t $|\mathrm{A}|=5$, then $|3 \mathrm{~A}|$ is equal to
(a) 45
(b) 27
(c) 81
(d) 135
11.If $A=\left[\begin{array}{ccc}1 & 2 & -1 \\ -1 & 1 & 2 \\ 2 & -1 & 1\end{array}\right]$ then value of $|\operatorname{adj}(\operatorname{adj} A)|$ is
(a) $14^{4}$
(b) $14^{3}$
(c) $14^{2}$
(d) $14^{1}$
12.-For what value of x , is the matrix $\mathrm{A}=\left[\begin{array}{ccc}0 & 1 & -2 \\ -1 & 0 & 3 \\ x & -3 & 0\end{array}\right]$ a skew symmetric matrix ?
(a) 0(b) 2 (c) -2
(d) -3
13.If $\mathrm{A}=\left[\begin{array}{lll}2 & 0 & 0 \\ 0 & 2 & 0 \\ 0 & 0 & 2\end{array}\right]$ and $\mathrm{B}=\left[\begin{array}{lll}1 & 2 & 3 \\ 0 & 1 & 3 \\ 0 & 0 & 2\end{array}\right]$, then $|A B|$ is equal to
(a) 32
(b) 16
(c) 8 (d) 4

14If $\mathrm{A}=\left[\begin{array}{lll}3 & 0 & 1 \\ 0 & 1 & 2 \\ 0 & 0 & 2\end{array}\right]$ then $|3 A|=$
(a) $3|A|$
(b) -162
(c) $27|A|$
(d) $12|A|$
15.If $\mathrm{A}=\left[\begin{array}{lll}1 & 3 & 3 \\ 1 & 4 & 3 \\ 1 & 3 & 4\end{array}\right]$ then $(\mathrm{A} \operatorname{adj} \mathrm{A})=$
(a) I
(b) 2 I
(c) 3 I
(d) -I

16 For matrices $A$ and $B$ where $A=\left[\begin{array}{c}1 \\ -4 \\ 3\end{array}\right]$ and $B=\left[\begin{array}{lll}1 & 5 & 7\end{array}\right]$, then $(A B)^{T}=$
(a) $\mathrm{A}^{\mathrm{T}}+\mathrm{B}^{\mathrm{T}}$
(b) $A^{T} B^{T}$
(c) $B^{T} A^{T}$
(d) $-A^{T} B^{T}$
17. The determinant $\left|\begin{array}{ccc}\mathrm{x} & \sin \theta & \cos \theta \\ -\sin \theta & -\mathrm{x} & 1 \\ \cos \theta & 1 & \mathrm{x}\end{array}\right|$ is
(a) Independent of $\theta$ only
(b) Independent of $x$ only
(c) Independent of both $\theta \& x$
(d) None of the above

## ASSERTION-REASON BASED QUESTIONS

In the following questions, a statement of assertion (A) is followed by a statement of Reason (R). Choose the correct answer out of the following choices.
(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 but R is true.
18. Assertion: The function $f(x)=\sin x$ does not possess inverse if $x \in R$.

Reason: The function $f(x)=\sin x$ is not one-one onto if $x \in R$.
19..Assertion(A):The domainof the function $\sec ^{-1} 2 \operatorname{xis}\left(-\infty,-\frac{1}{2}\right] \cup\left[\frac{1}{2}, \infty\right)$

Reason(R): $\sec ^{-1}(-2)=-\frac{\pi}{4}$
20.Assertion: $\cot ^{-1}(-x)=\pi-\cot ^{-1} x$

Reason:The range of $\cot ^{-1} x$ is $(0, \pi)$

## SECTION B

This section comprises of very short answer type-questions (VSA) of 2 marks each.
21.Find the principal value of $\tan ^{-1} \sqrt{3}-\sec ^{-1}(-2)$.
22.Check whether the relation of perpendicularity in the set of all lines of a plane is Equivalence or not.
23..Find the principal value of $\cos ^{-1}\left(\cos \frac{7 \pi}{6}\right)$

## Section - C

(This section comprises of short answer type questions (SA) of 3 marks each)
24.Find the principal value of $\sin ^{-1}\left[\cos \left(\sin ^{-1} \frac{1}{2}\right)\right]$
25. Show that the function $f: R \rightarrow R$ defined by $f(x)=\frac{2 x-1}{3}, x \in R$ is one one and on to function
26.Given matrix $\mathrm{A}=\left[\begin{array}{lll}5 & 0 & 4 \\ 2 & 3 & 2 \\ 1 & 2 & 1\end{array}\right], \mathrm{B}^{-1}=\left[\begin{array}{lll}1 & 3 & 3 \\ 1 & 4 & 3 \\ 1 & 3 & 4\end{array}\right]$ compute $(\mathrm{AB})^{-1}$
(This section comprises of long answer-type questions (LA) of 5 marks each)
27.Let $\mathrm{A}=\mathrm{R}-\{3\}$ and $\mathrm{B}=\mathrm{R}-\{1\}$. Consider the function $\mathrm{f}: \mathrm{A} \rightarrow \mathrm{B}$ defined by $\mathrm{f}(x)=$ $\left(\frac{x-2}{x-3}\right)$.

Prove that f is one-one and onto.
28. Show that each of the relation $R$ in the set $A=\{x \in Z: 0 \leq x \leq 12\}$, given by $R=\{(a, b): \mid a$ $-b \mid$ is
a multiple of 4$\}$ is an equivalence relation. Find the set of all elements related to 1 .
29. If $A=\left[\begin{array}{ccc}2 & -3 & 5 \\ 3 & 2 & -4 \\ 1 & 1 & -2\end{array}\right]$, find $A^{-1}$, $U \operatorname{sing} A^{-1}$ solve the following system of equations :

$$
\begin{array}{r}
2 x-3 y+5 z=11 \\
3 x+2 y-4 z=-5 \\
x+y-2 z=-3
\end{array}
$$

30..Find the product AB , where $\mathrm{A}=\left[\begin{array}{ccc}1 & -1 & 0 \\ 2 & 3 & 4 \\ 0 & 1 & 2\end{array}\right]$,

$$
\begin{aligned}
& B=\left[\begin{array}{ccc}
2 & 2 & -4 \\
-4 & 2 & -4 \\
2 & -1 & 5
\end{array}\right] \text { and use it to solve the equations: } \\
& x-y=3, \quad 2 x+3 y+4 z=17, \quad y+2 z=7
\end{aligned}
$$

31.If $A=\left[\begin{array}{ccc}2 & 3 & 1 \\ -3 & 2 & 1 \\ 5 & -4 & -2\end{array}\right]$,find $A^{-1}$ and hence solve the given equations:

$$
2 x-3 y+5 z=11, \quad 3 x+2 y-4 z=-5, \quad x+y-2 z=-3
$$

## PROJECT/PRACTICAL WORK:

ACTIVITY 1:TO VERIFY THAT THE RELATION R IN THE SET L OF ALL LINES IN THE PLANE ,DEFINED BY $\mathrm{R}=\{(1, \mathrm{~m})$ : line l is perpendicular to line m$\}$ IS NEITHER REFLEXIVE NOR TRANSITIVE.

ACTIVITY 2:TO DEMONSTRATE A FUNCTION WHICH IS NOT ONE-ONE BUT IS ONTO.

ACTIVITY 3:TO DRAW THE GRAPH OF $\sin ^{-1} \mathrm{x}$

## COMPUTER SCIENCE

| 1 | Consider the followingTABLE EMPLOYEE and answer any four questions. |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | EMPID CATEGORY SALARY <br> E01 CLERK 20000 <br> E02 MANAGER 50000 <br> E03 RECEPTIONIST 35000 <br> E04 CLERK 25000 <br> E05 DIRECTOR 80000 <br> 1)Write SQL COMMAND to create table employee. <br> 2)find the degree and cardinality of the employee table. <br> 3)Identify the primary key . |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| 2 | Consider the following table named "Emp" and answer any four questions from (i)- (v) |  |  |  |  |  |
|  | ID | Name | Age | City | Salary | Deptno |
|  | 5055 | Ram | 25 | Delhi | 10000 | 10 |
|  | 5067 | Shyam | 28 | Mumbai | 12000 | 20 |
|  | 5075 | Krishna | 32 | Jaipur | 11000 | 10 |
|  | 5058 | Ajay | 35 | Delhi | 14000 | 30 |
|  | 5060 | Vijay | 40 | Nagpur | 17000 | 40 |
|  | i) What will be the output of the following: <br> 1.SELECT AVG(salary) FROM EMP. <br> 2.SELECT EMPID from emp where age=25; <br> ii)Sandeep has given the following command to obtain the lowest salary department-wise. <br> Select min(salary) from emp where group by deptno; <br> but he is not getting the desired result. Help her by writing the correct command. |  |  |  |  |  |
| 3. | What is the difference between WHERE and HAVING clause? |  |  |  |  |  |



| 5 | Hub | 8000 | 1 | $31 / 10 / 2009$ | 2 | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

## English holiday homework class 12th

Complete all the questions in the separate holiday homework notebook Q1 You are Naseeb/Nigaar, the Cultural Secretary of Ramjas College, New Delhi. Draft a notice inviting the names of the students to participate in a Fashion Show to celebrate cultural diversity of India.

Q2You are Anup/ Anupama, Secretary, Residents' Welfare Association, MIG housing Society, Sector 8 Rohini. The Residents' Welfare Association is organising an Awareness campaign about the Water Harvesting Techniques. Draft a notice in about 50 words asking the residents to participate in the campaign.

Q3 You are Sunila/Sameer of 25, Kailash Colony, Mumbai. Write an informal letter of invitation in not more than 50 words to your friend Kamleshwar to spend her Autumn Break with you in Mumbai.

Q4 You are Ruskin Bond/Jhumpa Lahiri, a famed short-story writer. You have been invited by the Secretary, Literary Club of Kendriya Vidyalaya, Pitampura, Delhi to conduct a Creative Writing Session for the students. Draft a formal letter of acceptance of the invitation, in about 50 words.

Q5 Lack of job opportunities in the rural areas is forcing people to migrate to cities. Every big city thus, has a number of slums in it. Life in these slums is miserable. Write a letter in 120150 words to the editor of The Hindu discussing how we can improve the living conditions in these slums. You are Kavita/Kavi, M7, Mall Road, Delhi.

Q6 Vivekananda Constructions is planning to start a co-working space in the heart of the capital near Connaught Place, New Delhi. They are looking for an interior designer for tastefully creating a working space to suit national and international clients. You consider yourself most suitable for this project after having worked for ITC for 3 years handling their worldwide projects. As Bhavesh /Bhawna Parmar, write a letter to the HR Manager, Vivekananda Constructions, Sector 120, Gurugram applying for the job along with your resume and testimonials.

Q7 You are Akshit/Akshita, Student Reporter for the School Magazine of Sunshine School, Rohini. Your school had organised an Adult Literacy Camp in its neighbourhood. Write a report in 120-150 words, on the camp for your school magazine.
You may use the following clues: number of volunteers - hours spent in teaching - location of class - chairs, blackboards, etc. - number of people attending the camp -

Q8Over the past few years there has been a constant rise in coaching institutes and private tuition centers all over India. Write an article in about 120-150 words highlighting the exploitation of young minds that seek sincere counselling and proper direction. You are Gurpreet, a student of class XII of Indira Public School, Jamshedpur.
[You may use the following clues to write your article along with your own ideas: poor quality of coaching; cutthroat competition; high fees; lack of time for self-study; stress; financial burden on the poor \& middle classes; need for professional counselling, etc.]

Q9 Solve the sample question paper provided by the teacher.

## KENDRIYA VIDYALYA NO. 2 AFS HINDAN <br> PHYSICA L EDUCATION <br> CLASS -XII (2023-24) <br> HOLIDAY HOME WORK

Q1. Planning helps to focus on the objective means ?
a) "Every minute you spend in planning saves ten minutes in execution".
b) The new ideas and thoughts are bought into action during the planning
c) Planning focus on setting and achieving objectives
d) All of the above

Q2. Without directing $\qquad$ and $\qquad$ has no meaning?
a) Planning or organizing
b) Budgeting, controlling
c) Financing, staffing
d) None of these

Q3. What is Bye?
a) Placing of teams according to previous performance
b) Advantage given to a team to not play in initial round
c) It's a method of drawing fixture.
d) Point system for team games

Q4. Choose the committee which works upon following means like Newspaper,T.V, Radio , Press conference?
a) Finance committee
b) Publicity committee
c) C) Transport Committee
d) Accommodation Committee

Q5. League tournament is also known as?
A) Combination tournament
B) Consolation tournament
C) Round Robin tournament
D) None of these

## B. Very short answer questions

Q6. What is 'seeding'?
Q7. What do you by a 'bye'?
Q8.what is Intramural?
Q9.What is health run?

## C. Short Answer Questions

Q10. What are the objectives of planning mention all?
Q11. Draw a fixture of 11 teams on Knockout basis?
Q12.Write the advantage of Extramural?
Q13.Write the importance of tournament?

## D. Long Answer Questions

Q14. Write a short note on
a) Reception and receiving committee
b) Accommodation and transport committee
c) Refreshment and first aid committee
d) Decoration and ceremony committee

THE END

