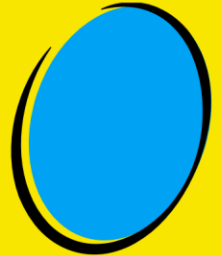
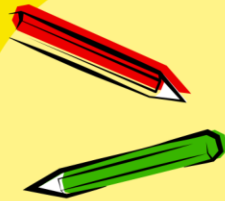


JPDAY PUBLIC SCHOOL

GARHI JHANJAHRA ROAD, GANOUR
(UNDER THE DIRECT CONTROL OF DAYCMC, NEW DELHI)



HOLIDAYS' HOMEWORK



Class: 1



MAY 29, 2023
TO
JULY 01, 2023

SESSION: 2023-24

A fully English medium and the best school in area.
For all-round development of students

The school will reopen on July 03, 2023.

TOGETHER WE CAN



Nothing is more powerful for your future than being a gatherer of good ideas and information. That's called doing your homework.

Jim Rohn

While doing your homework keep remembering Thomas A. Edison

When he says

Genius is one percent inspiration and ninety-nine percent perspiration. As a result, a genius is often a talented person who has simply done all of his homework.

Dear parents

We wish you a very happy and fruitful time with your children.

Summer vacation is the most awaited time for the students as they want to play, enjoy and relish with their friends, neighbours and relatives. This is a time for them to stay away from the mundane schedule of daily life. They want to enjoy it in leaps and bounds. But we request you to keep their energy channelised. You should be a part of their enjoyment but time and again a check is required. Now it's your responsibility to make them stay connected with their studies along with fun and frolic & encourage them to do their homework in a neat and tidy manner.



Here are some of the suggested activities that you can do as a family:

1. Prepare a well being plan for self.
2. Stick to routines or starting new ones.
3. Get up and go to sleep at regular times.
4. Help them explore new hobbies and interest.
5. Read, solve puzzles, play board games, etc.
6. Keep a gratitude journal. Writing down three things you are grateful for every day. Congratulate yourself and others on having a "MEGA DAY".
7. Take out time for Reading, Music, Dance, Singing, Laughing.
8. Set Challenges– Encourage each other to take up new activities and complete them.
9. Be Creative with Space– Find a corner in the house and allow yourself and your children to decorate it.
10. Involve your children in household activities also..
11. Take them for outing to place of their interest & let them explore the world.
12. Communicate with your children and let them know you fully.

As parents you are requested to keep a watchful eye on your children and stop them from engaging in :

1. Excessive use of mobile phones.
2. playing online games
3. spending a lot of time alone away from family members.

Be Safe





SUBJECT-PHYSICS

A. Complete Lab manual

Section -A

1. To verify the laws of combination (series) of resistance using a meter bridge.
2. To find the resistance and resistivity of a given wire , using meter bridge.
3. To find the resistance and figure of merit of a galvanometer using half deflection method.
4. To find the frequency of A.C mains using Sonometer.

Section- B

1. To find the focal length of a convex lens by plotting the graph between u and v .
2. To find the value of v for different values of u in case of concave mirror and to find the focal length.
3. To draw the I-V characteristic curve for pn junction in forward and reverse bias.
4. To determine the angle of minimum deviation for a given prism by plotting a graph between angle of incidence and angle of deviation.

B. Write Activities in Lab manual

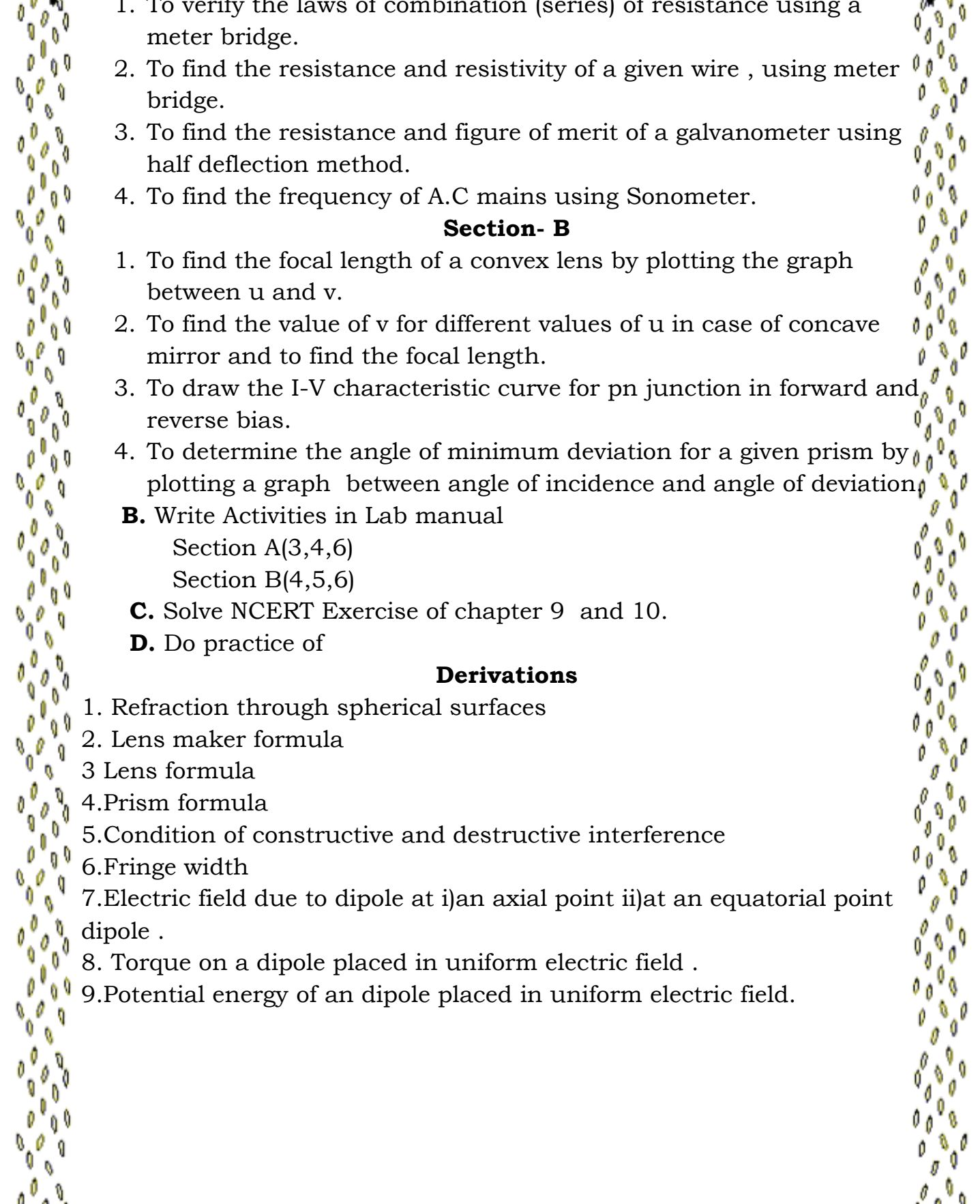
Section A(3,4,6)

Section B(4,5,6)

C. Solve NCERT Exercise of chapter 9 and 10.

D. Do practice of

Derivations

1. Refraction through spherical surfaces
 2. Lens maker formula
 3. Lens formula
 4. Prism formula
 5. Condition of constructive and destructive interference
 6. Fringe width
 7. Electric field due to dipole at i)an axial point ii)at an equatorial point dipole .
 8. Torque on a dipole placed in uniform electric field .
 9. Potential energy of an dipole placed in uniform electric field.
- 



Devices

1. Simple microscope
2. Compound microscope
3. Astronomical telescope
4. Cassegrain telescope
5. Newtonian telescope

Application

1. Total internal reflection
2. Gauss theorem

SUBJECT -CHEMISTRY

(ART INTEGRATED LEARNING) AIL PROJECT:

1. Make a **3d** model in group of 3-4 students .on following topics :
 - Roll no (1-10): Shape of molecules showing sp sp² sp³ hybridization
 - Roll no (11-20): sigma and pie bond
 - Roll no (21-26, 27) : sn¹ and sn² configuration
2. Make **projects** as discussed in class. Topics will be assigned in class group.
3. Complete **lab manual** as per prescribed curriculum.
4. Solve **previous year questions** of ch2, 3,10 in fair notebook. **(Atleast 50 in total)**
5. Do **NCERT exercise** of Ch-Haloalkanes and Haloarenes in fair notebook.

Subject -Mathematics

1. Make the project on the topic "**FUNCTION**"
 - Function
 - Type of function
 - Existence of inverse of a function (by drawing graph)
 - Inverse of a function
2. Make the project on the topic "**calculus**"
 - Derivative and its applications
 - Integration and its applications
 - Differential equation.

OR

Project on vector and 3-D

3. Solve the following ASSIGNMENTS

ASSIGNMENT 1

- The domain of the function $\cos^{-1}\sqrt{x-1}$ is
a) $[-1,1]$ b) $(-\infty,1]$ c) $[0,1]$ d) none of these
- The value of $\cos\left(\frac{\pi}{6} + \cot^{-1}(-\sqrt{3})\right)$ is
a) 1 b) $-\frac{\sqrt{3}}{2}$ c) 0 d) -1
- The principal value of $\sin^{-1}\left(\cos\frac{34\pi}{5}\right)$ is
a) $\frac{4\pi}{5}$ b) $\frac{3\pi}{10}$ c) $\frac{3\pi}{10}$ d) none of these
- The value of $\sin(2\sin^{-1}0.6)$ is
a) 0.48 b) 0.96 c) 1.2 d) $\sin(1.2)$
- The range of principal value branch of $\sec^{-1}(x)$ is
a) $(-\frac{\pi}{2}, \frac{\pi}{2})$ b) $[-\frac{\pi}{2}, \frac{\pi}{2}] - \{0\}$ c) $[0, \pi] - \{\frac{\pi}{2}\}$ d) $(0, \pi)$
- The principal value of $\sin^{-1}\left(\cos\frac{3\pi}{5}\right)$ is CBSE 2020
a) $\frac{\pi}{10}$ b) $\frac{3\pi}{5}$ c) $-\frac{\pi}{10}$ d) $-\frac{3\pi}{5}$
- $\tan^{-1}3 + \tan^{-1}\alpha = \tan^{-1}\left(\frac{3+\alpha}{1-3\alpha}\right)$ is valid for what value of α . CBSE 2020
a) $\alpha \in (-1/3, 1/3)$ b) $\alpha > 1/3$ c) $\alpha < 1/3$ d) all value of α
- $\cos(\sin^{-1}\frac{2}{\sqrt{5}} + \cos^{-1}x) = 0$, then x is equal to CBSE 2021
a) $\frac{1}{\sqrt{5}}$ b) $-\frac{2}{\sqrt{5}}$ c) $\frac{2}{\sqrt{5}}$ d) 1
- What is the domain of $\cos^{-1}(2x-3)$ CBSE 2021
a) $(-1,1)$ b) $(1,2)$ c) $[-1,1]$ d) $[-1,1]$
- The simplest form of $\tan^{-1}\left(\frac{\sqrt{1+x}-\sqrt{1-x}}{\sqrt{1+x}+\sqrt{1-x}}\right)$ is CBSE 2021
a) $\frac{\pi x}{4}$ b) $\frac{\pi+x}{4}$ c) $\frac{\pi}{4} \cos^{-1}x$ d) $\frac{\pi}{4} + \frac{1}{2} \cos^{-1}x$
- The principal value of $[\tan^{-1}\sqrt{3} - \cot^{-1}(-\sqrt{3})]$ CBSE 2021
a) π b) $-\frac{\pi}{2}$ c) 0 d) $2\sqrt{3}$

(ASSIGNMENT 2)

1. Evaluate the following determinants:

I. $\begin{vmatrix} a+ib & c+id \\ c-id & a-ib \end{vmatrix}$ II. $\begin{vmatrix} \sin 30^\circ & \cos 30^\circ \\ -\sin 60^\circ & \cos 60^\circ \end{vmatrix}$

III. $\begin{vmatrix} x^2-x+1 & x-1 \\ x+1 & x+1 \end{vmatrix}$ IV. $\begin{vmatrix} 6 & 0 & -1 \\ 2 & 1 & 4 \\ 1 & 1 & 3 \end{vmatrix}$

2. Find the value of x and y in the following :

i. $\begin{vmatrix} 3 & y \\ x & 1 \end{vmatrix} = \begin{vmatrix} 3 & 2 \\ 4 & 1 \end{vmatrix}$

ii. $\begin{vmatrix} x-2 & -3 \\ 3x & 2x \end{vmatrix} = 3$

iii. $\begin{vmatrix} x+1 & x-1 \\ x-3 & x+2 \end{vmatrix} = \begin{vmatrix} 4 & -1 \\ 1 & 3 \end{vmatrix}$ CBSE 2013 A

iv. $\begin{vmatrix} 2x & 5 \\ 8 & x \end{vmatrix} = \begin{vmatrix} 6 & 5 \\ 8 & 3 \end{vmatrix}$ Exemplar

3. Evaluate :

1) $\Delta = \begin{vmatrix} 0 & \sin\alpha & -\cos\alpha \\ -\sin\alpha & 0 & \sin\beta \\ \cos\alpha & -\sin\beta & 0 \end{vmatrix}$

2) $\Delta = \begin{vmatrix} \cos\alpha\cos\beta & \cos\alpha\sin\beta & -\sin\alpha \\ -\sin\beta & \cos\beta & 0 \\ \sin\alpha\cos\beta & \sin\alpha\sin\beta & \cos\alpha \end{vmatrix}$

4. Prove that the determinant $\begin{vmatrix} x & \sin\theta & \cos\theta \\ -\sin\theta & -x & 1 \\ \cos\theta & 1 & x \end{vmatrix}$ is independent of θ .

5. Evaluate the determinant $\Delta = \begin{vmatrix} 1 & \sin\alpha & 1 \\ -\sin\alpha & 1 & \sin\alpha \\ -1 & -\sin\alpha & 1 \end{vmatrix}$. Also, prove that $2 \leq \Delta \leq 4$.

6. If A(x₁,y₁), B(x₂,y₂), and C(x₃,y₃) are the vertices of an equilateral triangle whose each side is equal to a, then prove that $\begin{vmatrix} x_1 & y_1 & 2 \\ x_2 & y_2 & 2 \\ x_3 & y_3 & 2 \end{vmatrix} = 3a^4$

7. Find the equation of line joining the point A(1,3) and B(0,0) using determinants and find k if D(k,0) is a point such that area of $\Delta ABD = 3$ sq. unit.
CBSE 2013, 2020 Ans : ± 2

8. Using determinant, find the value of k so that the points (k, 2-2k), (-k+1, 2k) and (-4-k, 6-2k) may be collinear. Ans: $k = -1, \frac{1}{2}$

9. If $A = \begin{bmatrix} 2 & -1 \\ 3 & 2 \end{bmatrix}$ and $B = \begin{bmatrix} 0 & 4 \\ -1 & 7 \end{bmatrix}$, find the determinant of the matrix $3A^2 - 2B$. Ans (727)

10. If $P = \begin{bmatrix} 1 & x & 3 \\ 1 & 3 & 3 \\ 2 & 4 & 4 \end{bmatrix}$, is adjoint of 3x3 matrix A and $|A| = 4$ then find the value of x. (Ans x=11)

ASSIGNMENT 1 Chapter 5

Differentiate the following :

1. If $f(x) = |\cos x|$, find $f'(\frac{\pi}{4})$ and $f'(\frac{3\pi}{4})$.

NCERT EXAMPLAR

2. If $f(x) = |\cos x - \sin x|$, find $f'(\frac{\pi}{6})$ and $f'(\frac{\pi}{3})$.

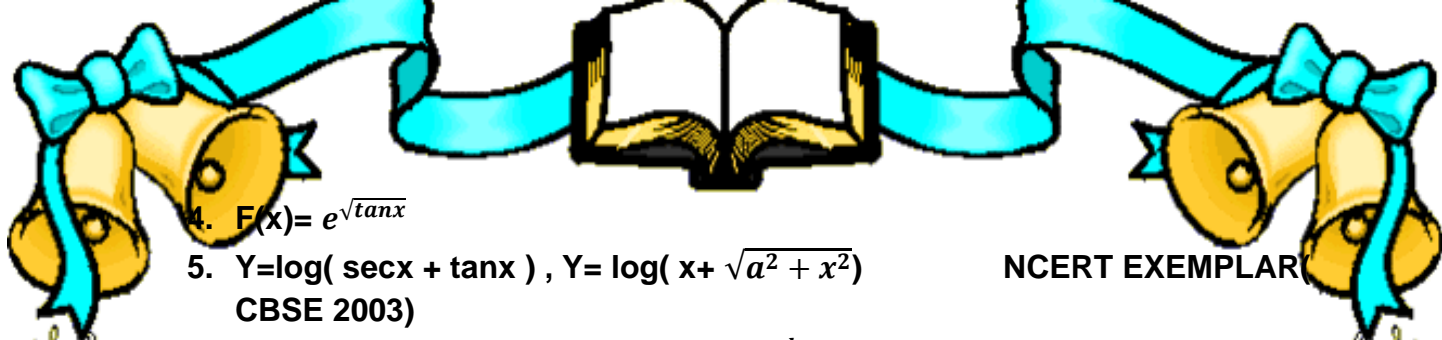
NCERT

EXAMPLAR

3. If $f(x) = |\log x|$, $x > 0$, find $f'(1/e)$ and $f'(e)$.

NCERT EXAMPLAR

Differentiate the following w.r.t x : (4-6)



4. $F(x) = e^{\sqrt{\tan x}}$

5. $Y = \log(\sec x + \tan x)$, $Y = \log(x + \sqrt{a^2 + x^2})$
CBSE 2003

NCERT EXEMPLAR

6. If $y = (x + \sqrt{a^2 + x^2})^n$, then prove that $\frac{dy}{dx} = \frac{ny}{\sqrt{a^2 + x^2}}$

7. If $f(x) = \sqrt{1 + x^2}$, $g(x) = \frac{x+1}{x^2+1}$ and $h(x) = 2x-3$, find $f'(h'(g'(x)))$.

CBSE 2015

8. If $y = \sqrt{\frac{1-x}{1+x}}$, then prove that $(1-x^2) \frac{dy}{dx} + y = 0$.

9. Differentiate $\log_7(\log x)$ w.r.t. x

10. Differentiate $\log \sqrt{\frac{1+\cos x}{1-\cos x}}$ w.r.t. x

11. Differentiate $\sin^m x \cos^n x$.

12. If $y = x e^{-x^2}$ then find $\frac{dy}{dx}$.

CBSE 2015

13. Differentiate the following function w.r.t. x

i. $\tan^{-1} \left\{ \sqrt{\frac{1-\cos x}{1+\cos x}} \right\}$ - $\pi < x < \pi$.

NCERT

EXAMPLAR

ii. $\tan^{-1}(\sec x + \tan x)$, - $\pi/2 < x < \pi/2$,
EXAMPLAR

NCERT

iii. $\tan^{-1} \left\{ \frac{\sqrt{1+\sin x} + \sqrt{1-\sin x}}{\sqrt{1+\sin x} - \sqrt{1-\sin x}} \right\}$

iv. $\tan^{-1} \left\{ \frac{a \cos x - b \sin x}{b \cos x + a \sin x} \right\}$, - $\pi/2 < x < \pi/2$.

v. $\tan^{-1} \left\{ \frac{\sqrt{1+x^2} + \sqrt{1-x^2}}{\sqrt{1+x^2} - \sqrt{1-x^2}} \right\}$, - $1 < x < 1$, $x \neq 0$

CBSE 2015

vi. $Y = \sin^{-1}(x\sqrt{1-x} - \sqrt{x}\sqrt{1-x^2})$

CBSE 2010

vii. $Y = \tan^{-1} \left(\frac{1+\cos x}{\sin x} \right)$

CBSE 2018

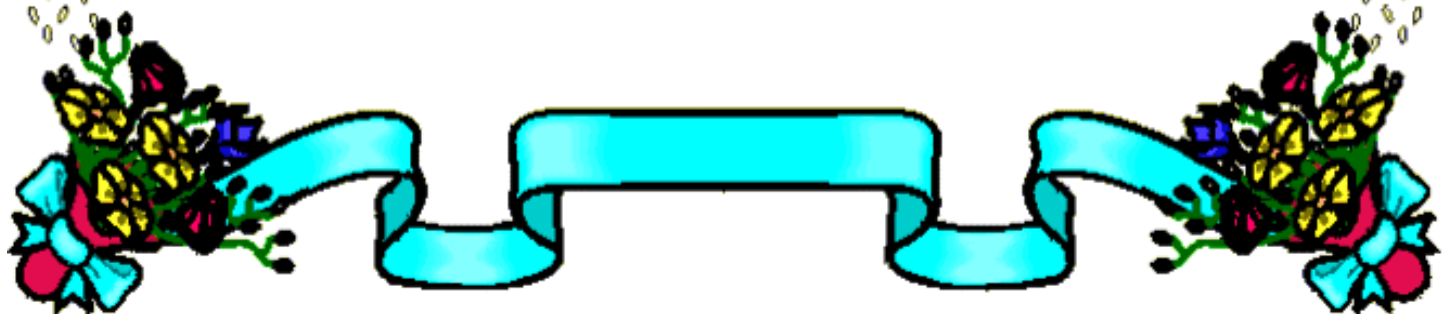
viii. $Y = \cos^{-1} \left(\frac{\cos x + \sin x}{\sqrt{2}} \right)$, - $\pi/4 < x < \pi/4$.

14. If $y = \sin^{-1}(6x\sqrt{1-9x^2})$, $\frac{-1}{3\sqrt{2}} < x < \frac{1}{3\sqrt{2}}$

CBSE 2017

15. Differentiate $\sin^{-1} \left\{ \frac{2^{x+1} \cdot 3^x}{1+(36)^x} \right\}$ w.r.t. x

cbse 2013





SUBJECT -BIOLOGY

- 1) Prepare an investigatory project for board Examination.
- 2) Write Biology Experiments according to the curriculum in practical file.

The format to be followed:

AIM, Material required, Procedure, Diagram, Observation, Conclusion and Precautions.

- 3) Revise the completed syllabus which is done in class.
- 4) Do previous year questions of all the chapters done in class (at least 10 questions from each chapter)



SUBJECT -INFORMATICS PRACTICES

1. Prepare the notes and do unsolved exercise of chapters 1, 2 and 5
2. Prepare Practical file and Project file (Project of each student should be different from others. Some demo project videos will be shared in Whats App group 'XII-IP(2023-24)') for final exams.
3. Practical file must include these type of Python and MySQL programs

Data Handling

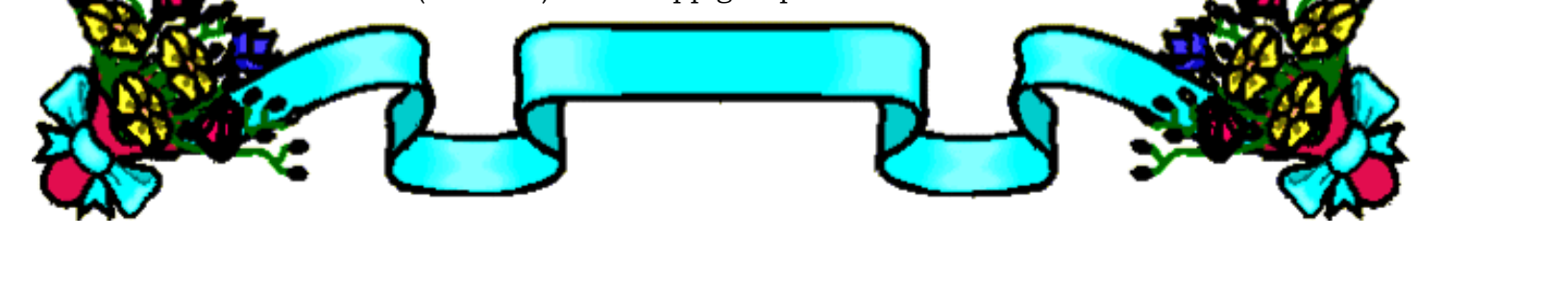
- a. 1. Create a panda's series from a dictionary of values and a ndarray
- b. 2. Given a Series, print all the elements that are above the 75th percentile.
- c. 3. Create a Data Frame quarterly sale where each row contains the item category, item name, and expenditure. Group the rows by the category, and print the total expenditure per category.
- d. 4. Create a data frame for examination result and display row labels, column labels data types of each column and the dimensions
- e. 5. Filter out rows based on different criteria such as duplicate rows.
- f. 6. Importing and exporting data between pandas and CSV file

Visualization

- g. 1. Given the school result data, analyses the performance of the students on different parameters, e.g subject wise or class wise.
- h. 2. For the Data frames created above, analyze, and plot appropriate charts with title and legend.
- i. 3. Take data of your interest from an open source (e.g. data.gov.in), aggregate and summarize it. Then plot it using different plotting functions of the Matplotlib library.

Data Management

- j. 1. Create a student table with the student id, name, and marks as attributes where the student id is the primary key.
- k. 2. Insert the details of a new student in the above table.
- l. 3. Delete the details of a student in the above table.
- m. 4. Use the select command to get the details of the students with marks more than 80.
- n. 5. Find the min, max, sum, and average of the marks in a student marks table.
- o. 6. Find the total number of customers from each country in the table (customer ID, customer Name, country) using group by.
- p. 7. Write a SQL query to order the (student ID, marks) table in descending order of the

4. Solve MySQL assignment sheets in fair note book and assignment sheets will be shared in 'XII-IP (2023-24)' whats app group.
- 



SUBJECT -PHYSICAL EDUCATION

Part -1 (Theory)

1. Make notes of unit 1,2and 3 on your physical Education notebook.
2. Revise unit 1,2and 3 for class test.

Part -2 (Practical)

Students need to start work on the Physical Education Practical file. The instructions are already given to you in the class. Please be neat in your presentation and don't forget to underline important Headings and Topics. This File will be evaluated for your board exam.

Practical file should include :

Practical1. Physical FitnessTest :

SAI Khelo India Test , Brockport Physical Fitness Test (BPFT)

- Practical-2: Procedure for Asanas, Benefits Contraindication for any four Asanas for each lifestyle disease.

Practical-3: Anyone IOA recognised Sport/Game of choice. Labelled diagram of field and equipment. Also mention its Rules, Terminologies and Skills.

Part 3 (Physical activity)

Do 30 mint.regular any physical activity or exercise according to your interest

SUBJECT -ENGLISH

1.Read the following carefully and make a question bank containing at least 75 questions to be used in '**Interclass Quiz Competition**'.

Flamingo:

Lesson 1- The Last Lesson

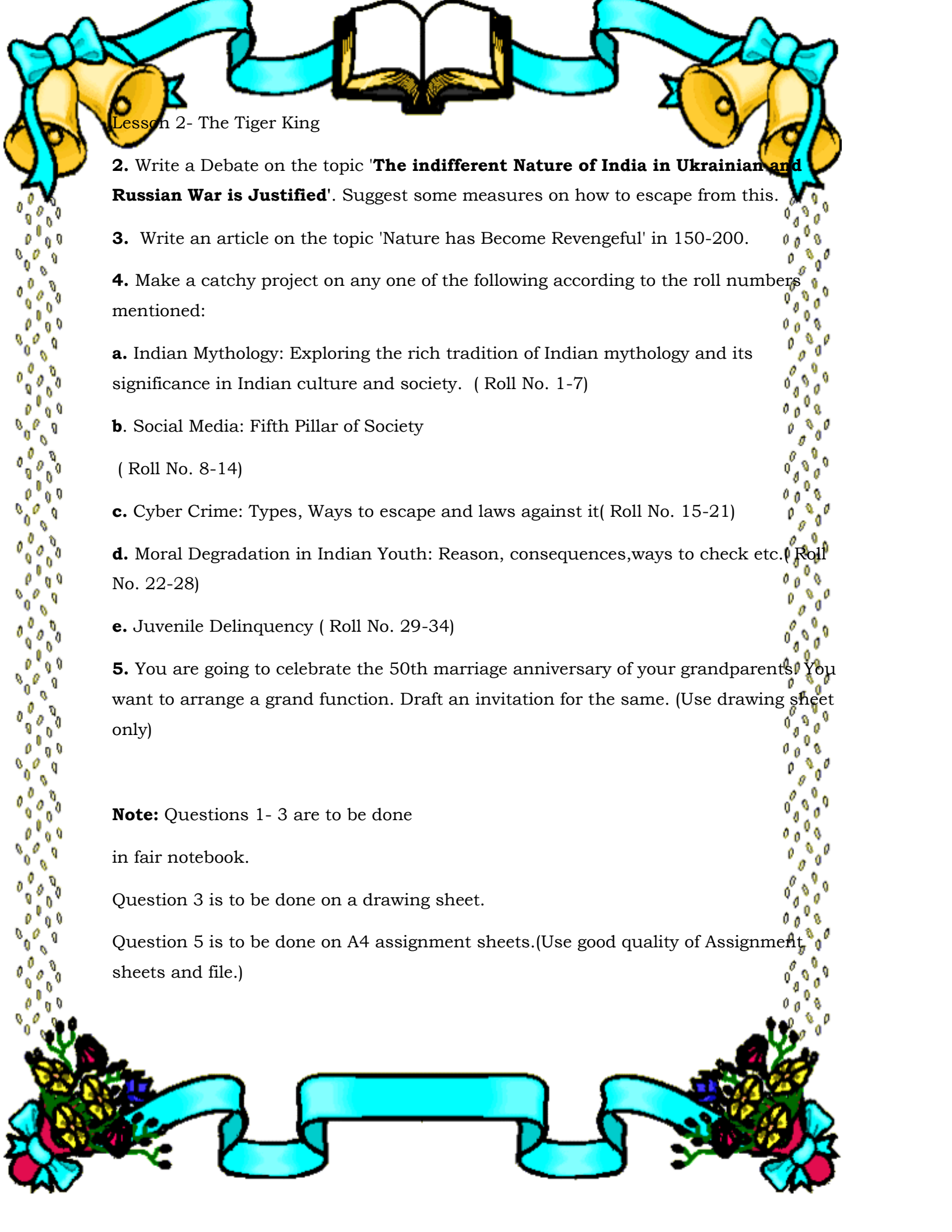
Lesson 2- Lost Spring

Lesson 3- My Mother at Sixty Six

Lesson 4- The

Lesson 1- The Third Level





Lesson 2- The Tiger King

2. Write a Debate on the topic '**The indifferent Nature of India in Ukrainian and Russian War is Justified**'. Suggest some measures on how to escape from this.
3. Write an article on the topic 'Nature has Become Revengeful' in 150-200.
4. Make a catchy project on any one of the following according to the roll numbers mentioned:
 - a. Indian Mythology: Exploring the rich tradition of Indian mythology and its significance in Indian culture and society. (Roll No. 1-7)
 - b. Social Media: Fifth Pillar of Society
(Roll No. 8-14)
 - c. Cyber Crime: Types, Ways to escape and laws against it(Roll No. 15-21)
 - d. Moral Degradation in Indian Youth: Reason, consequences,ways to check etc.(Roll No. 22-28)
 - e. Juvenile Delinquency (Roll No. 29-34)
5. You are going to celebrate the 50th marriage anniversary of your grandparents. You want to arrange a grand function. Draft an invitation for the same. (Use drawing sheet only)

Note: Questions 1- 3 are to be done

in fair notebook.

Question 3 is to be done on a drawing sheet.

Question 5 is to be done on A4 assignment sheets.(Use good quality of Assignment sheets and file.)

