

**OM SHANTI SHIKSHA SADAN SR. SEC. SCHOOLNATHUPUR,  
(SONIPAT)HR  
CLASS -XII SCIENCE  
SUMMER VACATION ASSIGNMENT  
ACADEMIC SESSION 2025-26**



**Sir Albert Einstein**

**Early Life**

- Born: March 14, 1879, in Ulm, Germany
- Grew up in Munich, Germany
- Developed a strong interest in science and mathematics

**Career and Achievements**

- \*Theory of Special Relativity (1905)
- \*Theory of General Relativity (1915)
- \*Famous Equation:  $E=mc^2$

**Kindly note : Holidays shall begin from 1st June,2025 . School  
shall reopen after summer vacation on 1st July,2025.**

# English Core

## General Instructions:

1. All tasks to be completed in a separate English notebook .
2. Maintain neatness, clarity, and proper headings.
3. Originality of thought and creativity will be appreciated.
4. Submit the homework on the first day after the holidays.

## A. FLAMINGO –

### 1. The Last Lesson

- \* Write a summary of the story in 200 words.
- \* Character sketch of M. Hamel and Franz.
- \* Answer any five short questions from your textbook.

### 2. Lost Spring

- \* Write the central idea of the lesson.
- \* What social message does the story convey? (150 words)
- \* Prepare two long answer questions (value-based).

### 3. Deep Water

- \* Write a diary entry as Douglas after overcoming his fear.
- \* Prepare a comparative chart: Fear vs Courage based on the text.

## B. FLAMINGO – POETRY

### 1. My Mother at Sixty-Six

- \* Write the central idea of the poem.
- \* Find and explain any five poetic devices.
- \* Answer three extract-based questions.

### 2. Keeping Quiet

- \* Explain the theme and message of the poem in your own words.
- \* Write a paragraph on the relevance of the poem in today's world.

## C. VISTAS -

### 1. The Third Level

- \* Write a brief character sketch of Charley.
- \* Prepare a flowchart of the story's sequence (real vs imaginary).
- \* Answer five short and two long questions.

### 2. The Tiger King

- \* Write the summary of the lesson in your own words.
- \* Identify and explain any ten difficult words from the lesson.

### 3. Journey to the End of the Earth

- \* Write a paragraph: "What Antarctica teaches us about the future."

## D. WRITING SKILLS

### 1. Notice Writing

- \* Write two notices:
- \* Regarding a blood donation camp in school.
- \* Regarding participation in an inter-school literary fest.

## 2. Letter to the Editor

\* Write a letter to the editor on “Increasing Use of Social Media among Teenagers”.

## 3. Article Writing

\* Write an article on “Value of Discipline in Student Life” (150–200 words).

## E. LISTENING AND SPEAKING TASKS

### 1. Listening Task

- \* Watch any two motivational Talks and write:
- \* The speaker’s name and topic
- \* Summary of the talk (100–120 words each)

### 2. Speaking Task

- \* Prepare for ASL by writing and practicing a speech on:  
“Role of Youth in Nation Building”

## F. Write 20 handwritings in 4 lines Note book in cursive form.

## Hindi

### पाठ्यपुस्तक आरोह भाग 2 काव्य खंड

अध्याय-1 आत्मपरिचय, एक गीत (हरिवंश राय बच्चन)

अध्याय-2 पतंग (आलोक धन्वा)

### गद्य खंड

अध्याय-11 भक्तिन (महादेवी वर्मा)

अध्याय-12 बाजार दर्शन (जैनेंद्र कुमार)

उपरोक्त अध्यायों का अध्ययन करते हुए कुल 40 बहुविकल्पीय प्रश्न उत्तर बनाकर लाएं

और अभ्यास के सभी प्रश्नों को याद करें।

वितान पाठ्यपुस्तक के पहले दो पाठ- सिल्वर वैडिंग और जूझ को पढ़ते हुए, सभी अभ्यास के प्रश्न याद करें।

# निम्नलिखित में से किसी एक विषय पर चित्र सहित जीवनी लिखें।

हरिवंश राय बच्चन

स्वामी विवेकानंद

महादेवी वर्मा

# जनसंचार के साधनों से संबंधित एक मॉडल (चार्ट) तैयार करें।

# ग्रीष्मावकाश आपने कैसे बिताया विषय पर एक अनुच्छेद लिखिए।

# करुण रस या वीर रस में से किसी एक रस पर स्वयं रचित कविता कंठस्थ कर गायन शैली में तैयार करें।

# हस्तलेख सुधार हेतु प्रतिदिन एक सुलेख लिखें।

## MATHS

1. Write about the following **Ramanujam, Harish Chandra** on A4 sheets

2. Make a sheet of 2-3 pages based on important units of mathematics.

3. Solve chapter 1,3,4 and 5 with extra question in your holiday homework notebook.

4. Make a chart based on Trigonometry Identities.

5. Complete your practical file with at least 12 experiment.

## Math in Sports

**Topic: Vectors, Probability, Calculus**

**Task:** Analyze a sport (e.g., cricket, football, basketball) using math. For example, use vectors to calculate ball trajectories or probability to predict winning chances.

## Daily Life Maths diary

**Topic: Practical Maths Applications**

**Task:** Maintain a diary for 7 days, noting how and where you used Maths in daily life....  
Shopping, Cooking, budgeting, measurements, etc.

**Outcome:** A short diary with at least 7 entries.

## Career Corner

**Topic: Careers in Math**

**Task:** Research 3 careers that involve math (E.g., Data Scientist, Architect, Actuary).

**Outcome:** Short write up on each, explaining what math concepts are used.

**Do prepare detailed notes on any two topics**

# PHYSICS

## CHAPTER – 1 : ELECTRIC CHARGES AND FIELDS

1. Make notes on the following topics :

Electric charge and its basic properties, conductors and insulators, different methods of charging of objects, Coulomb's law, Electric field and its physical significance, electric field lines,

electric flux, Gauss's law and applications of Gauss's law, electric dipole and its physical significance, electric field due to a dipole

2. (i) Derive relation for Force between multiple charges and Electric field due to a system of charges using principle of superposition.

(ii) Derive relation for electric field due to an infinitely long uniformly charged wire, uniformly charged infinite plane sheet, uniformly charged thin spherical shell using Gauss's law.

3. Solve exercises 1.1 to 1.34 in your notebook.

## CHAPTER -2 : ELECTROSTATIC POTENTIAL AND CAPACITANCE

1. Make notes on the following :

Electrostatic potential, potential due to a point charge and due to a system of charges, Equipotential surfaces, potential energy due to a system of charges, Potential energy in an external field, Electrostatics of conductors, Dielectrics and Polarisation, Capacitor and Capacitance, effect of dielectric on capacitance, energy stored in a capacitor

2. Derive relation for equivalent capacitance for  $n$  capacitors in series combination and for parallel combination

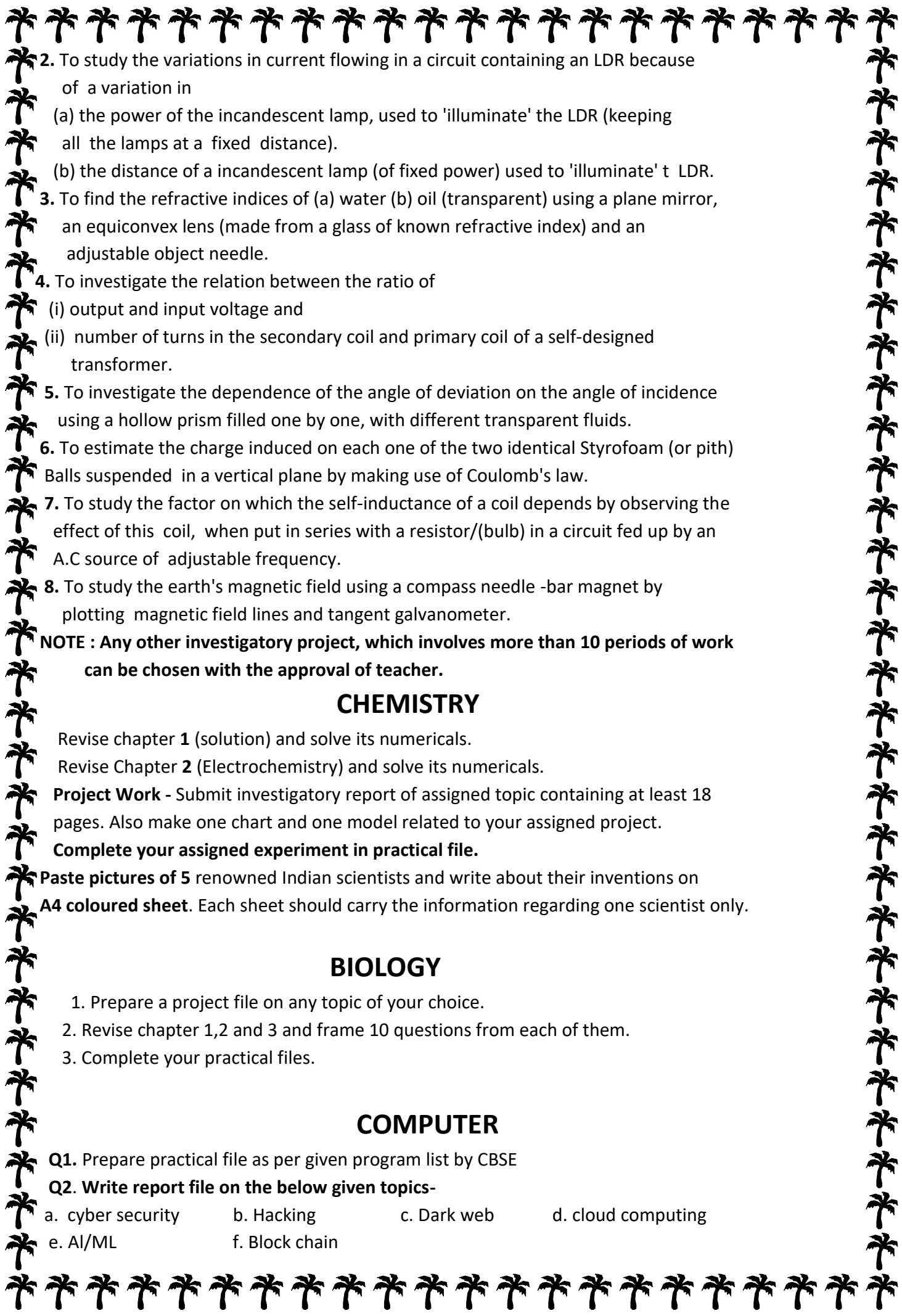
## PROJECT:

Make an investigatory project :

(Scientific investigations involving laboratory testing and collecting information from other sources)

A few suggested projects.

1. To study various factors on which the internal resistance/EMF of a cell depends.

- 
2. To study the variations in current flowing in a circuit containing an LDR because of a variation in
- (a) the power of the incandescent lamp, used to 'illuminate' the LDR (keeping all the lamps at a fixed distance).
  - (b) the distance of a incandescent lamp (of fixed power) used to 'illuminate' t LDR.
3. To find the refractive indices of (a) water (b) oil (transparent) using a plane mirror, an equiconvex lens (made from a glass of known refractive index) and an adjustable object needle.
4. To investigate the relation between the ratio of
- (i) output and input voltage and
  - (ii) number of turns in the secondary coil and primary coil of a self-designed transformer.
5. To investigate the dependence of the angle of deviation on the angle of incidence using a hollow prism filled one by one, with different transparent fluids.
6. To estimate the charge induced on each one of the two identical Styrofoam (or pith) Balls suspended in a vertical plane by making use of Coulomb's law.
7. To study the factor on which the self-inductance of a coil depends by observing the effect of this coil, when put in series with a resistor/(bulb) in a circuit fed up by an A.C source of adjustable frequency.
8. To study the earth's magnetic field using a compass needle -bar magnet by plotting magnetic field lines and tangent galvanometer.

**NOTE : Any other investigatory project, which involves more than 10 periods of work can be chosen with the approval of teacher.**

## CHEMISTRY

Revise chapter 1 (solution) and solve its numericals.

Revise Chapter 2 (Electrochemistry) and solve its numericals.

**Project Work** - Submit investigatory report of assigned topic containing at least 18 pages. Also make one chart and one model related to your assigned project.

**Complete your assigned experiment in practical file.**

**Paste pictures of 5 renowned Indian scientists and write about their inventions on A4 coloured sheet.** Each sheet should carry the information regarding one scientist only.

## BIOLOGY

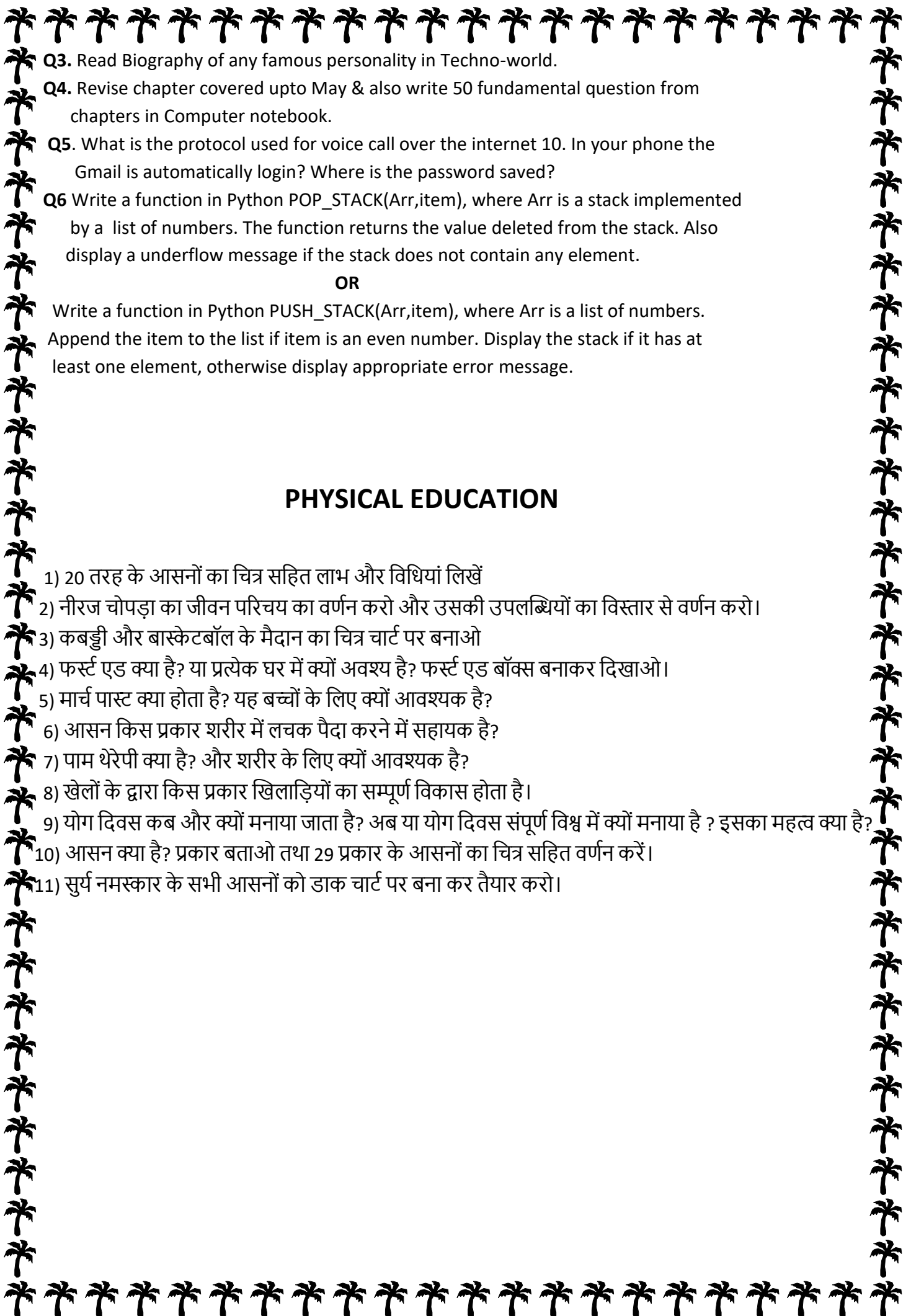
1. Prepare a project file on any topic of your choice.
2. Revise chapter 1,2 and 3 and frame 10 questions from each of them.
3. Complete your practical files.

## COMPUTER

**Q1.** Prepare practical file as per given program list by CBSE

**Q2. Write report file on the below given topics-**

- |                   |                |             |                    |
|-------------------|----------------|-------------|--------------------|
| a. cyber security | b. Hacking     | c. Dark web | d. cloud computing |
| e. AI/ML          | f. Block chain |             |                    |



Q3. Read Biography of any famous personality in Techno-world.

Q4. Revise chapter covered upto May & also write 50 fundamental question from chapters in Computer notebook.

Q5. What is the protocol used for voice call over the internet 10. In your phone the Gmail is automatically login? Where is the password saved?

Q6 Write a function in Python POP\_STACK(Arr,item), where Arr is a stack implemented by a list of numbers. The function returns the value deleted from the stack. Also display a underflow message if the stack does not contain any element.

OR

Write a function in Python PUSH\_STACK(Arr,item), where Arr is a list of numbers. Append the item to the list if item is an even number. Display the stack if it has at least one element, otherwise display appropriate error message.

## PHYSICAL EDUCATION

- 1) 20 तरह के आसनों का चित्र सहित लाभ और विधियां लिखें
- 2) नीरज चोपड़ा का जीवन परिचय का वर्णन करो और उसकी उपलब्धियों का विस्तार से वर्णन करो।
- 3) कबड्डी और बास्केटबॉल के मैदान का चित्र चार्ट पर बनाओ
- 4) फर्स्ट एड क्या है? या प्रत्येक घर में क्यों अवश्य है? फर्स्ट एड बॉक्स बनाकर दिखाओ।
- 5) मार्च पास्ट क्या होता है? यह बच्चों के लिए क्यों आवश्यक है?
- 6) आसन किस प्रकार शरीर में लचक पैदा करने में सहायक है?
- 7) पाम थेरेपी क्या है? और शरीर के लिए क्यों आवश्यक है?
- 8) खेलों के द्वारा किस प्रकार खिलाड़ियों का सम्पूर्ण विकास होता है।
- 9) योग दिवस कब और क्यों मनाया जाता है? अब या योग दिवस संपूर्ण विश्व में क्यों मनाया है ? इसका महत्व क्या है?
- 10) आसन क्या है? प्रकार बताओ तथा 29 प्रकार के आसनों का चित्र सहित वर्णन करें।
- 11) सूर्य नमस्कार के सभी आसनों को डाक चार्ट पर बना कर तैयार करो।

