

**ST. MICHAEL'S SR. SEC. SCHOOL**

3 Pusa Road, New Delhi

**CLASS XI HOLIDAY HOMEWORK**

**(2026-27)**

**ENGLISH**

1. To prepare a Project on **any one** topic:

- a) **We're Not Afraid to Die...** - *Survival Stories: Ordinary People, Extraordinary Courage*
- b) **Discovering Tut** - *Mysteries of Mummies: Science Meets History*
- c) **Mother's Day** - *Breaking Stereotypes: Women, Work, and Family Roles*
- d) **Birth** - *Miracle of Life: Doctors, Ethics, and Responsibility*
- e) **The Adventure** - *What If History Changed? Exploring Alternate Realities*

Structured framework for preparing a **project file (consisting of 10-15 pages)** on any of the topics listed.

1. **Index**
2. **Certificate of completion**
3. **Content** (Title of the project, Brief introduction to the chosen chapter/topic, Key themes and relevance)
4. **Aims and Objectives** (To understand the literary text in depth)
5. **Research** (Background of the author and text, Historical or social context of the theme, Related case studies, articles, or examples from real life, Supporting visuals - charts, timelines, images)
6. **Methodology** (Reading and textual analysis, Comparative study with other works or real-life events, Use of secondary sources: books, journals, online archives, Interviews/surveys)
7. **Report** (Detailed explanation of findings/Analysis of characters, themes, and literary devices, Connection of the text to broader issues e.g., survival psychology, gender roles, ethics, environment, Critical insights and personal reflections)
8. **Topic Presentation in Class (Speech-** presentation of the project highlights, Use of visual aids: charts, PPT slides, posters, Engaging the audience with questions or short activities, Summarizing key takeaways)
9. **Conclusion** (Restating the importance of the chosen theme, Reflection on what was learned through the project, Suggestions for further exploration or relevance in today's world)
10. **Bibliography**

## Mosaic Exhibition: Topics for Poster Making

(Only for those students selected by the teacher)

Students will complete this work in an A3 Size sheet.

1. World Book Day
2. Education for All
3. Mental Health Awareness
4. Digital Safety Matters
5. Save Wildlife Save Ourselves
6. Say No to Bullying
7. Healthy Mind, Healthy Body
8. Library: A Treasure of Knowledge
9. School: A Place to Learn and Grow
10. Empower the Differently Abled

## CHEMISTRY ASSIGNMENT

- 1) What is the value of one mole?
- 2) 1L of a gas at STP weighs 1.97g. What is molecular mass?
- 3) How is volume measured in laboratory? Convert 0.5L into ml and 30cm<sup>3</sup> to dm<sup>3</sup>
- 4) Calculate the number of moles in the following masses –
  - (i) 7.85g of Fe
  - (ii) 7.9mg of Ca
- 5) How much potassium chlorate should be heated to produce 2.24L of oxygen at NTP?
- 6) Calculate the weight of lime (CaO) obtained by heating 2000kg of 95% pure limestone (CaCO<sub>3</sub>)
- 7) What volume of 10M HCl and 3M HCl should be mixed to obtain 1L of 6M HCl solution?
- 8) Vitamin C is essential for the prevention of scurvy. Combustion of 0.2000g of vitamin C gives 0.2998g of CO<sub>2</sub> and 0.819g of H<sub>2</sub>O. What is the empirical formula of vitamin C?
- 9) Calculate the energy of 2 moles of photons of radiation whose frequency is  $5 \times 10^{14}$ Hz
- 10) States Heisenberg's Uncertainty Principle.

- 11) We don't see a car moving as a wave on the road, why?
- 12) We don't see a car moving as a wave on the road, why?
- 13) What transition in the hydrogen spectrum would have the same wavelength as the Balmer transition,  $n = 4$  to  $n = 2$  of  $\text{He}^+$  spectrum?
- 14) What designations are given to the orbitals having  
(i)  $n = 2, l = 1$  (ii)  $n = 2, l = 0$  (iii)  $n = 4, l = 3$   
(iv)  $n = 4, l = 2$  (v)  $n = 4, l = 1$ ?
- 15) Write the electronic configuration of (i)  $\text{Mn}^{4+}$ , (ii)  $\text{Fe}^{3+}$  (iii)  $\text{Cr}^{2+}$  and  $\text{Zn}^{2+}$  Mention the number of unpaired electrons in each case.
- 16) Complete the experiments marked in the practical file.
- 17) Complete the project/model according to your subjects allotted for mosaic exhibition.
- Roll no 13–roll no 19 will do for chemistry.

## MATHS

- Complete all assignments from the chapters completed in class.
- Revise all completed chapters thoroughly.
- Solve all textbook:
  - ❖ Examples
  - ❖ Exercises
- Complete Maths Lab Activities from the Maths Lab Manual.
- Find and write 1 real-life applications of each chapters covered on ruled sheets.
- Prepare a separate formula notebook including:
  - ❖ Important formulas
  - ❖ Theorems
  - ❖ Properties and identities
- Solve 2 Case Study questions from each chapter on ruled sheets.
- Practice previous years' CBSE board questions from the completed chapters.
- Solve one worksheet every week to improve speed and accuracy.
- Read about the contribution of any one famous mathematician.
- Keep all classwork, homework, assignments, and practical records neatly completed and updated.

**Kindly Note: Students allotted Maths Models for Mosaic should submit after holidays.**

**Submit formula notebook separately and ruled sheets in a file after holidays.**

## **BIOLOGY**

A. Write all the experiments in your Lab file and draw all the diagrams.

B. Prepare a working model according to the following roll no.

Roll No. 27- Food Adulteration Testing Lab

Roll No. 28- Photosynthesis setup

Roll No. 29- Blood Group Testing Demonstration

Roll No. 30- Human skeleton moving joints model

Roll No. 31- Cell Division (Mitosis) Rotating Model

Roll No. 32- Pacemaker Working Model

C. Complete the following assignment questions in biology notebook-

1. Differentiate between:

Nomenclature

Identification

Classification

2. Explain the hierarchy of biological classification with suitable examples.

3. Differentiate between Monera and Protista on the basis of:

Cell type

Cell wall

Nutrition

Reproduction

4. Why are viruses considered as a connecting link between living and non-living things?

5. Write short notes on:

a) Cyanobacteria

b) Mycoplasma

c) Slime moulds

6. Explain alternation of generations in plants with a simple diagram.
7. What is heterospory? Name one plant showing heterospory and mention its significance.
8. Explain why bryophytes are called the “amphibians of the plant kingdom.”
9. Explain the characteristic features of phylum Chordata.
10. Differentiate between:  
Porifera and Cnidaria  
Annelida and Arthropoda

## PHYSICS

- 1) Revise Chapter 2-- Motion in a Straight line  
Chapter 3 – Motion in a Plane
  - 2) Complete the Assignments given from Chapters 2 and 3
  - 3) Practice Numericals from Chapters 2 and 3 of NCERT
- Mosaic Exhibition: Topics for Model Making  
(Only for those students selected by the teacher)-Roll No 20 to 26
1. Mechanics
  2. Inertia
  3. States of matter- Solids and Fluids (their Properties)
  4. Rotational motion
  5. Renewable energy
  6. Wireless electricity transfer

## COMPUTER SCIENCE

- 1) Complete the practical File.(Put the printouts along with Index page)
- 2) Make a digital poster on Cyber Safety.
- 3) Complete back exercises of Ch 3, Ch 4 and Ch 5 in Register.

**MOSAIC Roll No:- 6 ,12-** Make a project based on application of Python.

**Roll No:- 7,8** -Make a Power Point Presentation on Application of Artificial Intelligence in Computer Vision and Natural Language Processing.( 20 to 25 slides)

**Roll No:-9,10-** Make a Power Point Presentation on Cloud Computing( 20 to 25 slides)

## PHYSICAL EDUCATION

Students need to do the following work in their practical manual

1. Labeled diagram of 400 m. Track and field with computation.
2. Describe changing trends in sports & games in terms of changes in playing surface  
Wearable gears, equipment, technological advancement.
3. Labeled diagram of any one ioa recognised team sport/ game of choice and  
Mention rules. Terminologies and skills.
4. Sai khelo india test.
5. Brockport physical fitness tests.

## VALUE EDUCATION

During the summer vacation, students are required to prepare a creative project on an A3 size sheet on the topics “Quitting Smoking” and “Combating Drug Abuse” from the Term–1 syllabus of Value Education.

The project should reflect awareness, creativity, and positive values through:

Drawings

Slogans

Posters

Facts

Quotations

Real-life messages promoting a healthy and addiction-free lifestyle

Students are encouraged to use original ideas, attractive presentation, and meaningful content instead of lengthy written work.

The objective of this activity is to help students understand the importance of making responsible choices and developing a healthy personality.

### Instructions:

- The work must be done neatly on an A3 size sheet.
- Mention the student’s name, class, and section clearly on the project.
- The completed project must be submitted after the summer break.