

# VASISHTHA GENESIS SCHOOL, BABEN, BARDOLI

## 11 Science

### DIWALI HOLIDAY ASSIGNMENT

#### 1) MATHEMATICS

Prepare a brief overview of the following chapters:

**1. Binomial Theorem**

**2. Conic Section**

The Overview should include:

- Relevant formulas that are essential for understanding and solving problems.
- Identify key concepts, definitions or principles related to the topic.
- Include examples / diagrams / mind maps to clarify concepts.

Present your homework in a clear and organized manner in your Class Notebook using headings, bullet points are numbered lists to structure your content. This practice will help you understand the concepts better and prepare you for upcoming lessons and examination.

#### 2) BIOLOGY

Instructions:

a. Write a note on the following topics in about 150-200 words

b. This task is to be completed in your Class Biology Notebook.

Q.1 Explain in detail how a dialysis process is done. Also discuss pre and post dialysis care of a patient.

Q.2 Mention roles of Vitamin B12 in human body. Discuss the effects of B12 deficiency on human physiology.

Q.3 What is neuro-generative disorders? Analyze the basic differences among several brain disorders like Encephalitis, Brain Tumor, Epilepsy and Meningitis.

Q.4 Noble prize in Medicine 2024: Discovery of microRNA and its role in post-transcriptional gene regulation.

#### 3) PHYSICS

Complete your project / practical file for the following Experiments as per CBSE guidelines.

1) To find the force constant of a helical spring by plotting a graph between load and extension.

2) To determine the coefficient of viscosity of a given viscous liquid by measuring terminal velocity of a given spherical body.

3) To study the relationship between the temperature of a hot body and time by plotting a cooling curve.

Note:

The project file must contain diagrams wherever necessary.

The project file must be in typed word form and be compiled in a file along with colourful printouts wherever necessary. **(A4 size)**

Those who are involved in preparation of working model(s) also need to submit project manual of their model(s).

#### 4) CHEMISTRY

Student are to make Chemistry project based on the topics and instruction given below:

- ❖ Checking the bacterial contamination in drinking water by testing sulphide ion
- ❖ Study of the methods of purification of water.
- ❖ Testing the hardness, presence of Iron, Fluoride, Chloride, etc., depending upon the regional variation in drinking water and study of causes of presence of these ions above permissible limit (if any).
- ❖ Investigation of the foaming capacity of different washing soaps and the effect of addition of Sodium carbonate on it
- ❖ Study the acidity of different samples of tea leaves.
- ❖ Determination of the rate of evaporation of different liquids . Also Study the effect of acids and bases on the tensile strength of fibers.
- ❖ Study of acidity of fruit and vegetable juices
- ❖ To study the occurrence of oxalate ions in guava fruit at various stages of ripenin.

**The Project is to include the following:**

- ❖ Cover page, with the project's title, school details/details of students.
- ❖ Statement of purpose/objectives/goals
- ❖ Certificate of completion under the guidance of the teacher.
- ❖ Acknowledgement
- ❖ Index
- ❖ List of resources/bibliography

#### 5) ENGLISH

The Project-Portfolio/Project Report is a compilation of the work the students produce while working on their ALS Project. CBSE–PROJECT-PORTFOLIO / PROJECT REPORT – 10 MARKS (5 PROJECT + 5 VIVA)

**The Project - Portfolio may include the following:**

- Cover page, with the project's title, school details/details of students.
- Statement of purpose/objectives/goals
- Certificate of completion under the guidance of the teacher.
- Acknowledgement
- Index
- Action plan for the completion of assigned tasks.
- Materials written assignments, essays, content, research, reports, pictures, maps and other material evidence of learning progress and academic accomplishment.
- The 800-1000 words Report.
- Student/group reflections.
- If possible, Photographs that capture the positive learning experiences of the student(s).
- List of resources/bibliography.

**THE FOLLOWING POINTS MUST BE KEPT FOR CONSIDERATION WHILE ASSESSING THE PROJECT PORTFOLIOS:**

- |  |                                   |
|--|-----------------------------------|
| • Quality of content of the project                      | • Clarity of thoughts and ideas   |
| • Accuracy of information                                | • Creativity                      |
| • Adherence to the specified timeline                    | • Contributions by group members  |
| • Content in respect of (spelling, grammar, punctuation) | • Knowledge and experience gained |

**PROJECT TOPICS**

(will be given Roll No. wise by the subject teacher(s) in class)

- |   |  |
|---|--|
| <p>(1) Portrait of a Lady- Elaborate on</p> <ul style="list-style-type: none"> <li>• Feminism</li> <li>• Relationships and their importance with reference to the chapter</li> <li>• Balance of commitments and bond of friendship.</li> </ul> <p>(2) A Photograph- Detail</p> <ul style="list-style-type: none"> <li>• Stages of life</li> <li>• Bond of parents and child</li> <li>• Acceptance of realities of life</li> </ul> <p>(3) We are not afraid to.....Discuss</p> <ul style="list-style-type: none"> <li>• Courage to face adversity</li> <li>• Family bond</li> <li>• Famous personalities who overcame their fear</li> </ul> <p>(4) Laburnum Top</p> <ul style="list-style-type: none"> <li>• Find a parallel poem of Laburnum Top</li> <li>• Discuss their themes on the basis of similarity and differences.</li> <li>• Comment on the style of both poets.</li> </ul> <p>(5) The Adventure</p> <ul style="list-style-type: none"> <li>• Prepare a diary entry of Professor Gaitonde about his experience of Azad Maidan</li> <li>• Comment on Partition of India</li> <li>• Describe catastrophic theory and the lack of determinism in quantum theory.</li> </ul> <p>(6) The Summer of the Beautiful White Horse</p> <ul style="list-style-type: none"> <li>• Plot the character flow of Mourad and John Byro.</li> <li>• Describe the traits and history of Garoghlanian family with map.</li> <li>• Compare the chapters 'Summer of beautiful white horse' and 'The Address' on the basis of honesty.</li> </ul> <p>(7) The Address- Elaborate on</p> <ul style="list-style-type: none"> <li>• Role of mother in life</li> <li>• Moralistic values as mentioned in the chapter</li> <li>• Impact of Holocaust</li> </ul> <p>(8) Voice of the Rain- Research on</p> <ul style="list-style-type: none"> <li>• What is Nature poetry</li> <li>• 3 Nature poets with their creations</li> </ul> | <p>(10) Childhood</p> <ul style="list-style-type: none"> <li>• Traits of Childhood</li> <li>• Values and Emotions</li> <li>• Stages of Life</li> </ul> <p>(11) Role of Internet in student life</p> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Data</li> <li>• Graphs</li> <li>• Case study</li> <li>• Pictures</li> </ul> <p>(12) English language is a tool in Business Communication</p> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Data</li> <li>• Graphs</li> <li>• Case study</li> <li>• Pictures</li> </ul> <p>(13) Talking Cultures (Speaking Etiquettes)</p> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Data</li> <li>• Graphs</li> <li>• Case study</li> <li>• Pictures</li> </ul> <p>(14) Print media Vs. Social Media</p> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Data</li> <li>• Graphs</li> <li>• Case study</li> <li>• Pictures</li> </ul> <p>(15) Changes in the reading culture over the centuries</p> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Data</li> <li>• Graphs</li> <li>• Case study</li> <li>• Pictures</li> </ul> <p>(16) Use of Augmented reality in studies</p> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Data</li> </ul> |
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- Parallel between Voice of the Rain and Rain on the Roof
- Water cycle
- (9) Discovering Tut The Saga Continues.....Collect data on
  - History and Ancestry of Tutankhamun
  - Archaeological study
  - Insight in Egypt
- Graphs
- Case study
- Pictures
- (17) Extinct Languages
  - Introduction
  - Data
  - Graphs
  - Case study
  - Pictures

#### IMPORTANT NOTE:

- The project is to be prepared on A4 size Coloured Project Papers and put into a Spring File before submission.
- The project should be completed within 20-25 pages.
- Photos are to be attested as evidence and references – Related to findings during research, Questionnaires, Survey Pie Charts (if survey taken), and photos of you conducting the survey/interview.
- **The entire project should be Handwritten only.**

#### 6) INFORMATICS PRACTICES

Practical file (30 SQL queries) : Sample Internet link : <https://sultan-chand.com/ws/ipp11/#p=41>



Data Management: (Suggested SQL Commands)

1. To create a database
2. To create student table with the student id, class, section, gender, name, dob, and marks as attributes where the student id is the primary key.
3. To insert the details of at least 10 students in the above table.
4. To display the entire content of table.
5. To display Rno, Name and Marks of those students who are scoring marks more than 50.
6. Create a student table with the student id, name, and marks as attributes where the student id is the primary key.
7. Insert the details of a new student in the above table.
8. Delete the details of a student in the above table.
9. Use the select command to get the details of the students with marks more than 80.
10. Find the min, max, sum, and average of the marks in a student marks table.
11. Find the total number of customers from each country in the table (customer ID, customer Name, country) using group by.
12. Write a SQL query to order the (student ID, marks) table in descending order of the marks.

#### 7) PHYSICAL EDUCATION

Practical 1: Make a labelled diagram of a 400 m track and field with computations.

Practical 2: Describe the changing trends in sports and games in terms of changes in playing surface, wearable gears, equipment, and technological advancements.