

Apex Public School

Sant Nagar, Burari, Delhi

Summer Vacation Holiday Homework (2024-25)

Class XI

English Core (301)

(English-Literature)

Write each of the following questions in 100-120 words.

- Explain the reasons of changing relationship between the grandmother and the author.
- Sketch the character of the grandmother.
- Discuss the values highlighted in the chapter The 'Portrait of a Lady'.
- Identify the poetic devices used in the poem 'A Photograph' and discuss their meanings.

(English-Reading)

Read any two of the novels suggested below:

- The Adventures of Huckleberry Finn by Mark Twain
- 1984...by George Orwell
- To Sir with Love- E.R.Braithwaite
- Great Expectations- Charles Dickens and summarize any two of them in about 250-300 words each

(English-Grammar)

1. Write all Modals and their uses.

(English-Project Work)

The Project-Portfolio may include the following:

- Cover page, with title of project, school details/details of students.
- Statement of purpose/objectives/goals
- Certificate of completion under the guidance of the teacher.
- Action plan for the completion of assigned tasks.

- Materials such as scripts for the theater/role play, questionnaires for interview, written assignments, essays,

survey-reports and other material evidence of learning progress and academic accomplishment.

- The 800-1000 words essay/Script/Report.
- Student reflection.
- If possible, Photographs that capture the positive learning experiences of the student.
- List of resources/bibliography.

Choose one topic from below mentioned:

- TOPIC:1 Gender Bias
- TOPIC:2 Autobiography of the Smartphone
- TOPIC:3 Domestic Violence
- TOPIC:4 Healthcare
- TOPIC: 5 How to Improve Communication Skills
- TOPIC: 6 How to Deal with Mental Breakdowns
- TOPIC:7 How Math Changed the World
- TOPIC: 8 The Importance of School Volunteering and Social Work

PHYSICS

1. To make a paper scale of given least count, e.g., 0.2cm, 0.5 cm.
2. Make an investigatory project on Bernoulli's Principle.
3. NCERT Exercises (2.1 to 4.10)

CHEMISTRY

Prepare a report on the following topics

1. Conference of parties: Timeline and the major highlights of them.
2. Waste to Chemicals: Transforming wastes and residues to energy, fuels and other useful chemicals
3. Endangered Elements: Managing the extraction, use, reuse and alternative development for elements in the chemical enterprise that are facing critical supply risks.
4. Nobel Laureates in Chemistry (Any5): Their life and works.

General Instructions

- i. The report can be typewritten/Handwritten with pictures.**
- ii. In case its typewritten use font size 14.**
- iii. Write only on one side of the sheet.**
- iv. Use A-4 coloured/white sheets**

Assignments to be done for the chapters taught (refer school website)

BIOLOGY

- 1) Prepare short report on:**
 - a) DNA Sequencing**
 - b) Post Complications of Covid 19**
 - c) Human Genome Project**
- 2) Nobel Laureates and their contributions in the field of Medicine (since 2018 to2023)**

General Instructions:

- i. Report can be typed or handwritten with pictures.**
- ii. For typed report use font size 14, Times New Roman.**
- iii. Write only on side of the sheet.**
- iv. Use A-4 coloured or white sheets**

Mathematics

Lab Manual Activity

- To find the number of subsets of a given set and verify that if a set has n number of elements, then the total number of subsets is 2^n .**
- To verify that for two sets A and B, $n(A \times B) = pq$ and the total number of relations from A to B is $2pq$, where $n(A) = p$ and $n(B) = q$.**

Worksheet - SETS

Which of the following are sets? Justify your answer.

1. The collection of all the months of a year beginning with letter M
2. The collection of difficult topics in Mathematics.

Let $A = \{1,3,5,7,9\}$. Insert the appropriate symbol \in or \notin in blank spaces: – (Question- 3,4)

3. 2 _____ A
4. Write the set $A = \{x : x \text{ is an integer, } -1 \leq x < 4\}$ in roster form
5. Write the set $B = \{3,9,27,81\}$ in set-builder form.

Which of the following are empty sets? Justify. (Question- 6,7)

6. $A = \{x : x \in \mathbb{N} \text{ and } 3 < x < 4\}$
7. $B = \{x : x \in \mathbb{N} \text{ and } x^2 = x\}$

Which of the following sets are finite or Infinite? Justify. (Question-8, 9)

8. The set of all the points on the circumference of a circle.
9. $B = \{x : x \in \mathbb{N} \text{ and } x \text{ is an even prime number}\}$
10. Are sets $A = \{-2,2\}$, $B = \{x : x \in \mathbb{Z}, x^2 - 4 = 0\}$ equal? Why?
11. Write $(-5,9]$ in set-builder form

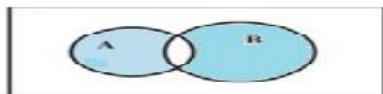
12. Write $\{x : x \in \mathbb{R}, -3 \leq x < 7\}$ as interval.
13. If $A = \{1,3,5\}$, how many elements has $P(A)$?
14. Write all the possible subsets of $A = \{5,6\}$.

If $A =$ Set of letters of the word 'DELHI' and $B =$ the set of letters the words 'DOLL' find (Question- 17,18,19)

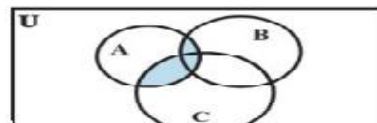
15. $A \cup B$
16. $A \cap B$
17. $A - B$
18. Are sets $A = \{1,2,3,4\}$, $B = \{x : x \in \mathbb{N} \text{ and } 5 \leq x \leq 7\}$ disjoint? Why?

What is Represented by the shaded regions in each of the following Venn-diagrams. (Question 19,20)

- 19.



- 20.



21. If $A = \{1, 3, 5, 7, 11, 13, 15, 17\}$
 $D = \{2, 4, 6, 8, \dots, 10\}$
and U is universal set then find $A' \cup [(A \cup B) \cap B']$

Informatics Practices / Computer Science

Prepare a chart on any 1 of the following:

- **Units of memory**
- **Functional components of computer system**
- **Classification of computer software**
- **Python tokens**
- **Python datatypes**
- **All method functions of math module and random module**
- **Data types of MYSQL**
- **Ascii table between having decimal no and char only**
- **Logic gates with its diagram**
- **Logic gate with it's truth table**
- **Conditional and looping statements with syntax**
- **List of string methods**
- **List of list data type methods**
- **List of tuple and dictionary methods**
- **List of types of operators**
- **Computer generations and their importance in 3 points each .**
- **Various input devices with images**
- **Various output devices and storage devices with images**
- **SQL constraints with its explanation of use**
- **SQL functions**

Note : Chart should be pasted on a thermocol and covered with transparent plastic.

Accountancy

1. Visit the nearest business unit and prepare a report on identifying the following:

- The nature of business.**
- Fixed Assets and Current assets used**
- Expense**
- Source of income**

2. Revise the following

☐ Principles of Accounting

☐ Accounting Terminology

Economics

- 1. Revise taught chapters and Do given questions in fair note book.**
- 2. Do given worksheet in fair note book.**
- 3. Prepare questionnaire as per instructions given in class.**

BUSINESS STUDIES

- 1. Prepare a collage on the following topics as allotted:**
 - Popular Co-Operative societies in India with their details.**
 - Various scams that took place in India after independence with their volume and reasons.**
 - Aids to trade.**
 - Industry and its types.**
 - Forms of Business Organization with examples.**
- 2. Revise chapters 1st and 2nd for PA- 1**
- 3. Read at least one business related news daily and note down in your notebook.**

HISTORY

Choose any one topic from the below given topics and make project

- 1. Facts of the Industrialization in sixteenth- eighteenth centuries.**
- 2. Crusades: causes; rationale; events; outcomes; Holy Alliance**
- 3. Ancient History in depth: Mesopotamia**
- 4. Greek Philosophy and City States**
- 5. Contributions of Roman Civilization**
- 6. The spirit of Renaissance: Manifestation in art; Literature; Sculpture; Influence on Trading Community; Social Fabric; Philosophy; Political Values; Rational Thinking; Existentialism**
- 7. Aspects of Development -South American States /Central American States**
- 8. Different schools of thoughts- Realism: Humanism: Romanticism**
- 9. Piecing together the past of Genghis Khan**

10. Myriad Realms of Slavery in ancient, medieval, and modern world

11. History of Aborigines – America /Australia

12. Facets of Modernization – China /Japan/Korea

- ❖ Complete questions and answers of chapter 1st and 2nd.
- ❖ Revision of P. A syllabus

Political Science

1. Prepare a project according to CBSE guidelines.

- Ring file to be used
- Use white or light coloured interleaf sheets.

Suggested topics:

- Constitution
- Elections in India
- Fundamental Rights, Fundamental Duties and DPSP
- Federalism
- Local Governments
- Any other topic from the syllabus.

2. Revise chapters 1st, 2nd and 3rd.

Legal Studies

- Complete your questions and answers in the notebook for all the chapters.
- Revise all the chapters and prepare for PA I.

Sociology

The function of sociology, as of every science, is to reveal that which is hidden. – Pierre Bourdieu

- ✚ Prepare and complete your sociology project according to your individual topic.
(As per CBSE guidelines and instructions given in class.)

Note: No need to do the binding now. Final binding will be done after verification by the subject teacher after the summer break.

- ✚ Complete your sociology notebook.
- ✚ Revise chapter 1st and prepare for PA I.