ARMY PUBLIC SCHOOL JAMMU CANTT
HOLIDAYS HOMEWORK-XI (2023-24)
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ENGLISH (301)
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Dear Children
We wish you happy and safe summer break. To maintain the educational continuum and to keep boredom at bay, your teachers have designed enriching assignments and projects which will keep you constructively busy.
So, don your thinking cap and wear your magic mantle to unleash your creative side.
Have Fun!!!

Instructions-
a. Holidays homework is to be done on a separate notebook.

b. Homework should be done in orderly manner in neat and clean handwriting.

BEING CREATIVE
A. Paste a photograph of your favourite person and write about him/her. (Lesson: The Portrait of a Lady)
B. Paste a photograph of your with your mother and write a poem expressing your feelings.(Poem: The Address)

WRITING SECTION

Write articles on
A. Health is Wealth
B. Importance of yoga
C. Child Labour – A Curse

READING IS FUN :

The Teacher I Never Met: Mr Eshan Sharma
Read the novel and write book review.

GRAMMAR SECTION:
1. Do five Gap Filling Exercises.(Integrated grammar-modals, subject verb agreement and tenses)

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PHYSICS (042)
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Read the following topics
1. UNITS AND MEASUREMENTS
2. MOTION IN A STRAIGT LINE
3. MOTION IN A PLANE (VECTORS)

THEORY ASSIGNMENT
Solve NCERT exercises of the following chapters:
1 UNITS AND MEASUREMENTS
2. MOTION IN A STRAIGT LINE
3. MOTION IN A PLANE (VECTORS)
Solve at least five numerical based on:
1. Applications of dimensions.
2. Equations of motion.
3. Laws of vector addition (Triangle & llelogram law)
4. Cross product and dot product of vectors

ARTINTEGRATED ACTIVITY
Make a PowerPoint presentation on any of the following topics:

1. Fundamental and derived quantities.
2. **Speed** (uniform, Non uniform, average, instantaneous), **velocity** (uniform, Non uniform, average, instantaneous), **acceleration** (uniform, Non uniform, instantaneous) illustrate with examples.
3. Various types of vectors.
4. Triangle and parallelogram law of vectors with examples.

INVESTIGATORY PROJECT –(Any one)

NOTE: Students will select one project out of the following and send in the group, one who will select the project first will be allocated with that project. Prepare a **written report as per the format discussed in the Physics lab. [Maximum of 10-15 A-4 size pages**]

S. NO.	PROJECTS
1	To make a paper scale of given least count, e.g., 0.2cm and 0.5 cm.
2	To plot a graph for any set of data with proper choices of scales and error bars.

Note: All work should done on Home Work notebook in a neat and proper order as provided above

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CHEMISTRY (043)

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Read the following topics

1. Law of chemical combination
2. Mole concept
3. Structure of atom

THEORY ASSIGNMENT

Solve NCERT exercises of the following chapters:

1. Some basic concept of chemistry
2. Structure of atoms

Solve at least five numerical based on:

1. Mole concept.
2. Empirical and molecular formula
3. Debroglie wavelength and Hesinberg's uncertainty
4. Molarity , Molality and Molefraction

ARTINTEGRATEDACTIVITY

Make a PowerPoint presentation on any of the following topics:

1. Mole concept
2. Concentration of solution
3. Quantum numbers
4. Discovery of electron, proton and neutron

Note: All work should done on respective copy in a neat and proper order as provided above

1. Let $A = \{x: x^2 - 5x + 6 = 0\}$, $B = \{2,4\}$, $C = \{4,5\}$. Write $A \times (B \cap C)$.
2. If $A = \{1,2,3,4,5\}$, then write the number of proper subsets of A.
3. For any sets A and B show that $P(A \cap B) = P(A) \cap P(B)$.
4. Let A and B be sets; if $A \cap X = B \cap X = \emptyset$ $and A \cup X = B \cup X$ for some set X. Show that A=B.

CASE STUDY

5. In a library, 25 students read physics, chemistry and mathematics books. It was found that 15 students read mathematics, 12 students read physics while 11 students read chemistry. 5 students read both mathematics and chemistry, 9 students read physics and mathematics. 4 students read physics and chemistry and 3 students read all three subject books.
Based on the above information, answer the following questions.

(i) The number of students who reading only chemistry is
     (a) 5   (b) 4   (c) 2   (d) 1
(ii) The number of students who reading only mathematics is
     (a) 4   (b) 3   (c) 5   (d) 11
(iii) The number of students who reading only one of the subjects is
     (a) 5   (b) 8   (c) 11   (d) 6
(iv) The number of students who reading none of the subject is
     (a) 2   (b) 4   (c) 3   (d) 5

CHAPTER 2 - RELATIONS AND FUNCTIONS

1.   Let $f = \{(1,1), (2,3), (0,-1), (-1,-3)\}$ be a linear function from Z to Z, find f(x).
2.   Find the domain and range of $\sqrt{16 - x^2}$.

3.   If A={2,4,6,9}, B={4,6,18,27,54} and a relation R from A to B is defined by R={(a,b): aϵ A, bϵ B, a is a factor of b and a < b} then find R in roster form.

4.   Draw graph and find image $f(x)=\begin{cases}x-1, & x<2 \\ 2x+3, & x\geq 2\end{cases}$

5.   Find the number of relations from set A to set B if n(A)=3 and B={2,3,4,6,7,8}.

CHAPTER 3 - TRIGONOMETRIC FUNCTIONS

1. If $\cos\frac{x}{2}=-\frac{1}{\sqrt{10}}, \frac{\pi}{2}<\frac{x}{2}<\frac{3x}{4}$, find $\cos x$.
2. Solve the equation $(\sqrt{3}-1)cosx+(\sqrt{3}+1)sinx=2$.
3. Prove that : $\cos 5x=16\cos^5 x-20\cos^3 x+5cosx$.
4. Prove that : $\cos^2 x+\cos^2\left(x+\frac{\pi}{3}\right)+\cos^2\left(x-\frac{\pi}{3}\right)=\frac{3}{2}$
5. Solve for x: $2\cos^2 x+3sinx=0$.

ART INTEGRATED PROJECT (DO IT ON A SEPARATE FILE)

Comparison of Gujarat and Jammu and Kashmir in terms of population, folk dances, literacy rate and climate.

ACTIVITY WORK:
(DO THESE ACTIVITIES ON MATHS LAB MANUAL)

1. 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.
2. To verify that for two sets A and B, n (A×B) = pq and the total number of relations from A to B is 2^{pq}, where n(A)=p and n(B)=q.
3. To represent set theoretic operations using Venn diagrams.

NOTE:
1. Maintain your notebook.
2. Revise following chapters during summer break:
   A) Sets
       B) Relations And Functions
   C) Trigonometric Functions

Note: *Formulate 10 MCQs from each chapter and write them on the notebook with correct option number.*

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BIOLOGY (044)
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PROJECT
1. New discoveries in field of medicines, genetics or biotechnology.

ART INTEGRATION ACTIVITIES
2. Learn and write botanical names and zoological names of plants and animals in your locality.
3. Make the PPT of the topics allocated for seminars (cell biology).

REVISION FOR UT -1
4. Complete your notebook in all aspects for the chapters covered.
5. Give hierarchical classification of House fly , mango and wheat.
6. Write a short note on the following: Cyanobacteria, Euglenoids, Phycomycetes.

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COMPUTER SCIENCE (083)
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Revise the following chapters:
1. Computer and its Organization
2. Number System
3. Boolean Algebra
4. Problem Solving
5. Getting started with Python

ART INTEGRATED ACTIVITY

Make a PowerPoint presentation on the following topics:

GROUP	GROUP MEMBERS	TOPIC
Group-I	Hanshika	Input Devices and its Types
		Types of Software
Group-II	Nitesh Kumar	Output Devices and its Types
		Operating System and its functions
Group-III	Aashi	Memory and its Types
		Tokens in Python

Note:Each group member has to prepare the PowerPoint presentation for both the topics.

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INFORMATICS PRACTICES (065)
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Revise the following chapters:
1. Computer System
2. Getting started with Python
3. Python Fundamentals

ART INTEGRATED ACTIVITY

Make a PowerPoint presentation on the following topics:

GROUP	GROUP MEMBERS	TOPIC
Group-I	Mandeep Singh	Input Devices and its Types
		Types of Software
Group-II	Nikita and Sanjana	Output Devices and its Types
		Operating System and its functions
Group-III	Muskan and Sakshi	Memory and its Types
		Tokens in Python

Note:*Each group member has to prepare the PowerPoint presentation for both the topics.*

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PHYSICAL EDUCATION (048)
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THEORY:

Complete the notebook and revise the following chapters:
a. Changing trends and career in PE
b. Olympic value education
c. Yoga

PRACTICAL:

Write thefollowing practical in record file :
1. Lifestyle Disease: Procedure for asanas, benefits & contraindication of any two asanas for each lifestyle disease (As briefed in the class)

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NCC (076)
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Revise all the chapters done so far and complete your notes.
1. NCC organization.
2. National Integration.

Do the following in your NCC notebook:
1. Cut and paste or draw pictures on NCC activities in which you participated in school.

2. Write types of Pollution, Effect of different types of Pollution, Measures to control the different types of Pollution, in your NCC notebook. (From unit-9)

3. Explain waste magement and types of Waste.

ARTINTEGRATEDACTIVITY

Make a pdf of the following chapters as per your roll numbers.

1. Organisational structure of NCC
2. Role of NCC cadets in National Integration

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ACCOUNTANCY (055)
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➢ Revise all the chapters that has been completed till 20th of May and complete your notes.
➢ Every student has tocompulsorily undertake project on one of the following topics:
1. Collection of source documents, Preparation of Vouchers and Recording of Transactions with the help of Vouchers.

Or

2. Bank Reconciliation statement with reference of SBI or PNB Bank where all the observations are clearly mentioned e.g Reasons behind the difference between cash book and pass book.

ARTINTEGRATEDACTIVITY

Draw the scene of a bank which will portrays the cash counters, Help desk, pass book printing machine, loan counters incorporated the topic of BRS.

NOTE:
❖ *The project must be made on assignments sheets.*
❖ *It must not be less than 20 pages.*
❖ *Use of pictures is mandatory.*

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BUSINESS STUDIES (054)
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- ➢ Revise all the chapters that has been completed till 20th May and complete your notes.
- ➢ Do 10case studies from the chapter (Evolution and fundamental of Business).
- ➢ Every student has tocompulsorily undertake project on one of the following topics:
  1. Aids to Trade-Insurance. (PPT)

  Or
  2. Visit to Great India Place Mall.
  3. All the observation tools are clearly documented e.g Interviews, Pictures, Questionnaires etc.

ARTINTEGRATEDACTIVITY

- ❖ Collecting the photos of outside appearance of shop of different type of retailers and Shopping malls.
- ❖ Designing through photoshop.
- ❖ Designing an Advertisement.
- ❖ Designing a logo of imaginary product
- ❖ Dialogue delivery by animated characters.

NOTE:
- ❖ *The project must be made on assignments sheets.*
- ❖ *It must not be less than 20 pages.*
- ❖ *Use of pictures is mandatory.*

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ECONOMICS (030)
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- ➢ **Revise the whole syllabus completed till 20 May 2023.**
  - • Unit-1 Introduction to statistics for economics.
  - • Unit-5 Collection of data Unit
- ➢ Complete your notebook.
- ➢ Every student has to compulsorily undertake one project work from the following topics:

S.No.	*Name of Project Topic*
1	*Green housing*
2	*Solar energy, a cost effective comparison.*
3	*Need of evergreen revolution in Indian economy*
4	*Water harvesting technique*
5	*Global warming and its effect*
6	*Agriculture of your village*
7	*Heritage sites in your city and their role in local economy*
8	*Vocal for local product*
9	*Problem of air*
10	*Census of India*

Note: The project must be made on the assignments sheets. It must not be less than 20 pages.Use of pictures is mandatory.

ART INTEGRATION PROJECTS

A short informative visual presentation (video of 3-5 minutes) on any of the economic issues (problems) related to their surrounding economy. The presentation should include-Explaining the selected problem briefly. Solution to the problem.How the solution can be implemented?
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POLITICAL SCIENCE (028)
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- Learn and revise the syllabus for UT-01. The chapters for the UT-01 syllabus are:
    1. Constitution: Why and how?
    2. Rights in the Indian Constitution.
    3. Election and representation
    4. Executie
- Prepare notes of the chapters done so far on your fair note books.
- Every student has to compulsorily undertake one project work. Following Topics for project work are allotted to you according to your roll no's:

TOPICS	ROLL NO
Rights in the Indian Constitution with reference to citizenship Amendment Act	01-10
India's federal system.	11-20
Local government with reference to Panchayati Raj Act of 1992.	21-30
India's federal system	31-40
Local government with reference to Panchayati Raj Act	41-50

ART INTEGRATION PROJECTS:

A short informative visual presentation (video of 3-5 minutes) on any of the political issues and program related to you area. The presentation should include-Explaining the selected problem briefly. Solution to the problem. How the solution can be implemented?

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FINE ARTS
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- Basic shapes with Poster colours
- Scenery with any medium
- Nature study
- Object drawing
- Revise unit 1

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GEOGRAPHY (029)
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Learn the chapters done till date.

BOOK 1

Chapter 1: Geography as a Discipline
Chapter 2: The Origin & Evolution of the Earth

BOOK 2

Chapter 1: INDIA: Size & Location
Chapter 2: Do practice map work (both India and World)
*Countries of ASIA, AFRICA, NORTH ANERICA, SOUTHAMERICA, EUROPE
*Major ocean & sea of the world
*Learn & write counties & capital of each continent

ART INTEGRATION PROJECTS:

- ❖ Make a PPT of 10-15 slides on Relationship of geographywith other subjects & importance of physical geography.
- ❖ Make a collage / PPT on importance of Indian ocean
- ❖ Make a poster on theories of Evolution of universe

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HISTORY (027)
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Revise the following chapters:
Chapter 1: Writing and city life
Chapter 2: An Empire across three continents

Frame MCQ'S of the following Chapters:
Chapter 1: Writing and city life
Chapter 2: An Empire across three continents

ART INTEGRATION PROJECTS:

1. Write down significant features of Mesopotamian civilization on a scrapbook, illustrate it with pictures.
2. Prepare a PPT on Roman Empire in 1st to 3rd century. (Roll no 1 to 20)
3. Prepare a PPT on Roman Empire after 3rd century. (Roll no 21 to 40)

PROJECT WORK

Prepare a project file on the following topics:
1. Ancient history in depth: Mesopotamian civilization (Roll no 1 to 20)
2. Roman civilization (Early Empire and Late Empire) Roll no 21 to 40)

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- Prepare notebook of Chapter 1 & Chapter 2
- Prepare question bank.
- Read concepts daily.
- Do activities of NCERT.

- Design a newsletter with the help of news/articles related to research work done in 'Human Psychology and Behavior in Contemporary Times'. (One page of the newsletter to be of A4 size and minimum 4 such sheets to be used).Give an attractive name to your newsletter.

OR

- B. Interview a professional in the field of Psychology. (Hint-questions related to qualification, area of job, challenges involved and the personality characteristics needed for being successful and happy professionally in the field, etc.).Take guidance from your parents in fixing an appointment. Telephonic interviews too can be conducted. Compile it in a folder consisting of A4 size sheets.

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SANSKRIT (322)
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- धातुरूपेषुप्रत्ययाणांप्रयोगंकृत्वालिखन्तु।
  - १) क्त्वा२) ल्यप्३) तुमुन्.   ४)तव्यत्७) अनीयर्६) क्त.   ७) क्तवतु
  - १) भू२) कृ३) पा४) स्था७) दृश्६) अस्७) कथ

- आत्मनेपदिनःधातुरूपाणिलिखन्तु-
  - १) लभ्२) सेव्३) याच्४) मुद्

- सर्वनामानिशब्दरूपाणिलिखन्तु-
  - १) यत्२) तत्३) किम्४) अस्मद्७) युष्मद्

- पाठ्यपुस्तकंभास्वती
  - १) प्रथमःपाठः–(कुशलप्रशानम्) स्मरणंकुर्वन्तु-
  - २) संस्कृतभाषाकाउद्भवएवंविकास
  - ३) वैदिकसाहित्यक्याहै?
  - ४) रामायणम्
  - ७) महाभारतम्
  - ६) पुराण

- एतेषांसामान्यपरिचयाःस्युः।

- कलात्मककार्यम्
  - १) जम्मू-काश्मीरराज्यस्यतथागुजरातराज्यस्यचित्रनिर्माणंकृत्वाअनयोःसांस्कृतिकवर्णनंन्यूनातिन्यूनं दशवाक्येषुकुर्वन्तु

CHAPTER 1- SETS

6. Let $A = \{x : x^2 - 5x + 6 = 0\}$, $B = \{2,4\}$, $C = \{4,5\}$. Write $A \times (B \cap C)$.
7. If $A = \{1,2,3,4,5\}$, then write the number of proper subsets of A.
8. For any sets A and B show that $P(A \cap B) = P(A) \cap P(B)$.
9. Let A and B be sets; if $A \cap X = B \cap X = \emptyset$ and $A \cup X = B \cup X$ for some set X. Show that A=B.

CASE STUDY

10. In a library, 25 students read physics, chemistry and mathematics books. It was found that 15 students read mathematics, 12 students read physics while 11 students read chemistry. 5 students read both mathematics and chemistry, 9 students read physics and mathematics. 4 students read physics and chemistry and 3 students read all three subject books.
    Based

on the above information, answer the following questions.

(i) The number of students who reading only chemistry is
(a) 5   (b) 4   (c) 2   (d) 1
(ii) The number of students who reading only mathematics is
(a) 4   (b) 3   (c) 5   (d) 11
(iii) The number of students who reading only one of the subjects is   (a) 5   (b) 8   (c) 11   (d) 6
(iv) The number of students who reading none of the subject is   (a) 2   (b) 4   (c) 3   (d) 5

CHAPTER 2 – RELATIONS AND FUNCTIONS

6.   Let $f = \{(1,1),(2,3),(0,-1),(-1,-3)\}$ be a linear function from Z to Z, find f(x).

7.   Find the domain and range of $\sqrt{16 - x^2}$.

8.   If A={2,4,6,9}, B={4,6,18,27,54} and a relation R from A to B is defined by R={(a,b): aϵ A, bϵ B, a is a factor of b and a < b} then find R in roster form.

9.   Draw graph and find image f(x)=$\begin{cases} x - 1, & x < 2 \\ 2x + 3, & x \geq 2 \end{cases}$

10.   Find the number of relations from set A to set B if n(A)=3 and B={2,3,4,6,7,8}.

ART INTEGRATED PROJECT (DO IT ON A SEPARATE FILE)

 COMPARISON OF GUJARAT AND JAMMU AND KASHMIR IN TERMS OF POPULATION, FOLK DANCES, LITERACY RATE AND CLIMATE.

ACTIVITY WORK: (DO THESE ACTIVITIES ON MATHS LAB MANUAL)

4.   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.

5.   To verify that for two sets A and B, n (A×B) = pq and the total number of relations from A to B is 2^{pq}, where n(A)=p and n(B)=q.

6.   To represent set theoretic operations using Venn diagrams.

NOTE :
   1. *MAINTAIN YOUR NOTEBOOK.*
   2. *REVISE FOLLOWING CHAPTERS DURING SUMMER BREAK*
        A) *SETS*
        B) *RELATIONS AND FUNCTIONS*

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***************************STAY HOME STAY SAFE *********************