

Class XI Mathematics Holiday Homework

Instructions: Solve all questions neatly in a separate notebook. Show complete steps wherever required. The worksheet covers Sets, Relations & Functions, Trigonometry, and Complex Numbers in the spirit of NCERT Exemplar problems.

1. Solve question paper of Half-Yearly examination 2026.
2. Students are required to collect 20 questions (with solution) from each completed chapter, based on UPSC–NDA previous year questions (PYQs).
3. The following project works are to be undertaken during the rainy vacation:

Chapter: Sets

- **Survey Project:** Conduct a survey in your class (e.g., favourite sports, subjects, or social media platforms). Represent the data using **Venn diagrams** and apply set operations (union, intersection, complement).
- **Library Management:** Create sets of books by category (Science, Literature, Mathematics). Show intersections (books belonging to multiple categories) and differences.

◇ Chapter: Relations & Functions

- **School Timetable Analysis:** Represent subjects and teachers as sets, then define relations (teacher \rightarrow subject). Discuss whether the relation is one-to-one, onto, or many-to-one.
- **Family Tree Mapping:** Use functions to represent parent-child relationships. Show examples of injective, surjective, and bijective mappings.

◇ Chapter: Trigonometry

- **Height & Distance Project:** Measure the height of a tree or building using a clinometer or mobile app. Apply trigonometric ratios to calculate heights and distances.
- **Astronomy Connection:** Study how trigonometry is used to calculate the distance between planets or stars. Present with diagrams and calculations.

◇ Chapter: Complex Numbers

- **Electrical Engineering Application:** Explore how complex numbers are used in AC circuits (current and voltage representation). Present with phasor diagrams.
- **Geometric Representation:** Plot complex numbers on the Argand plane and show transformations (rotation, reflection). Create a mini art project using geometric patterns.

✦ Suggested Format for project work

1. **Introduction** – Brief explanation of the topic.
2. **Objective** – What the project aims to show.
3. **Methodology** – Steps taken, data collected, or problems solved.
4. **Mathematical Work** – Equations, calculations, diagrams.
5. **Conclusion** – Key findings and applications.
6. **Bibliography** – Sources or references used.

19/6/26

DEPARTMENT OF PHYSICS

Rainy-Vacation Homework – 2026

Class 7th

To study & solve the NCERT Textbook (Curiosity : Textbook of Science for Class 7th) exercise from the following chapters:-

1. Electricity : Circuits & their Components
2. Heat Transfer in Nature

Class 8th

To study & solve the NCERT Textbook (Curiosity : Textbook of Science for Class 8th) exercise from the following chapters:-

- 1. Pressure, Winds, Storms & Cyclones
2. Light : Mirrors & Lenses

Class 9th

To study & solve the NCERT Textbook (Exploration : Textbook of Science for Class 9th) exercise from the following chapters:-

1. How Forces Affect Motion
2. Work, Energy & Simple Machines

Class 10th

To solve the Physics questions of at least 5 previous years CBSE board question papers of Science, asked from the following chapters:-

1. Light – Reflection & Refraction
2. Human Eye & Colourful World
3. Electricity

Link:- www.cbse.gov.in/cbsenew/question-paper.html

Class 11th

To study & solve the NCERT Textbook exercise & NCERT Exemplar Problems from the following chapters:-

1. Units & Measurements
2. Motion in a Straight Line
3. Motion in a Plane
4. Laws of Motion
5. Work, Energy & Power
6. System of Particles & Rotational Motion
7. Gravitation

Class 12th (Science)

To solve the questions of at least 5 previous years CBSE board question papers of Physics, asked from the following chapters:-

1. Electric Charges & Fields
2. Electrostatic Potential & Capacitance
3. Current Electricity
4. Moving Charges & Magnetism
5. Electromagnetic Induction
6. Ray Optics & Optical Instruments

Link:- www.cbse.gov.in/cbsenew/question-paper.html

&

To prepare an 'Investigatory Project' as per the CBSE curriculum.

M. Patel
18-06-26

Netarhat Awasiya Vidyalaya


Sub - CHE

Rainy vacation homework for class 11

1. Write name and structure of first 10 members of all function group of your test book.

Write short notes on

2. Wave nature of electromagnetic radiation and particle nature of electromagnetic radiation
3. Photoelectric effect
4. Emission and absorption spectra
5. Dual behaviour of matter
6. Heisenberg uncertainty principle
7. Quantum numbers
8. Aufbau principle
9. Pauli exclusion principle
10. Write the solution of exercise of chapter : some basic concept of chemistry, Structure of atom, Classification of elements and periodicity, Chemical bonding and molecular structure, Equilibrium.


20/06/26
HOD Chemistry

वर्षावकाश - 2026
Home work Biology

For Class-10-

1. Read chapter no. 7 (How do organisms reproduce) of class 10 ncert science book. Solve all the questions given in the end of that chapter.
2. Visit agriculture fields near your home. Talk to farmers and prepare lists of crop being cultivated, fertilizers and manure being used, types of irrigation system, any other methods (traditional or modern) farmers are using in crop production.

For Class-11-

1. Collect different types of flowering plants from your locality. Cut stem of about 15 cm length, dry for few hours and preserve it under a book. After winter vacation discuss its morphological structures with your teacher.
2. Observe, identify and find out different types of insects. butterfly, etc and its role in the process of pollination. List them all.
3. Read chapter no. 12 (Respiration in plants) of class 11ncert biology book. Solve all the questions given in the end of that chapter.

For Clas - 12 -

1. Read chapter no. 11 (Organisms and populations) of class 12ncertbiology book. Solve all the questions given in the end of that chapter.

Department of Biology

NETARHAT AWASIYA VIDYALAYA, NETARHAT
DEPARTMENT OF ENGLISH
READING AND WRITING COMPETITION, 2026
SENIOR GROUP (9 to 12)

A. TOPICS FOR ESSAY WRITING

- The Impact of AI on the Future of Education
- Pros and Cons of Online Learning vs. In-Person Learning
- The Role of Social Media in Shaping Teenagers' Worldviews
- Climate Change and Its Effects on Future Generations
- Should Schools Teach Practical Life Skills (like Budgeting)?
- The Importance of Raising Mental Health Awareness
- Plastic: Boon or Curse to the Environment?
- The Significance of Sports and Exercise in Student Life
- Impact of Fast Fashion on the Environment
- Road Safety Awareness: The Need of the Hour
- The Day Technology Stopped Working Worldwide
- A Letter from the Future Changes Everything
- Discovering a Hidden Talent That Changes Your Life
- A Life-Changing Summer Adventure
- A Secret Society in the High School

B. POEM & STORY WRITING COMPETITION (Word limit: 250 - 300 words)

Option 1: Classic + Open-ended

*Write a short story based on your own imagination.

_ Your story can be about any theme — adventure, mystery, friendship, or fantasy. Give it a suitable title and let your creativity flow.

Option 2: Personal touch

"The Day I Became the Hero of My Own Story"

_ Weave an original tale where you are the main character. It can be real, exaggerated, or completely fictional — but it should be yours.

Option 3: For rainy vacation theme

"An Unexpected Adventure During the Rainy Vacation"

_ Imagine you're on your rainy vacation and something unexpected happens. Craft an original story describing what happened next.

Option 4: Inspiring

"If I Could Write My Future, This Is How the Story Would Go"

_ Pen down an original story about a dream, goal, or moment from your imagined future. Make it vivid and personal.

Note: 1) submit the topic till 20/08/2026

2) Plagiarism of any kind will not be accepted

3) Judging criteria: Creativity, plot, language, and title.

Shikha Hemran
19/08/26
(H.O.D English)

[Signature]
(Principal) *19/08/26*

NETARHAT AWASIYA VIDYALAYA, NETARHAT
DEPARTMENT OF ENGLISH
READING AND WRITING COMPETITION, 2026
SENIOR GROUP (9 to 12)
ARTICLE WRITING COMPETITION

Social & Current Issues

1. Social Media: Boon or Bane for Teenagers?
2. The Impact of Artificial Intelligence on Future Jobs
3. Climate Change: Whose Responsibility Is It?
4. Online Learning vs Classroom Learning — Which Works Better?
5. Mental Health Matters: Breaking the Stigma in Schools

Environment & Sustainability

6. Plastic-Free Schools: A Dream or a Possibility?
7. Water Conservation — Every Drop Counts
8. Should Fast Fashion Be Banned to Save the Planet?
9. The Role of Youth in Fighting Global Warming
10. My Vision for a Green India by 2047

Personal Growth & Values

11. The Power of Reading in the Digital Age
12. Failure Is the Stepping Stone to Success — Do You Agree?
13. Time Management: The Skill Every Student Needs
14. Is Academic Pressure Killing Creativity?
15. Kindness Costs Nothing But Means Everything

Technology & Innovation

16. Are Smartphones Making Us Smart or Lonely?
17. Space Exploration: Waste of Money or Gateway to the Future?
18. Cyberbullying — How Can Students Fight Back?
19. Should There Be an Age Limit for Using Social Media?
20. The Future of Education with ChatGPT & AI Tools

Light + Creative Angles

21. If I Were the Education Minister for a Day
22. A Day Without Internet — Chaos or Calm?
23. Sports Should Be Compulsory in Every School — Agree or Disagree?
24. My Dream Vacation and What It Taught Me
25. Books vs Movies: Which Tell Stories Better?

Note: 1) submit the topic till 20/08/2026

2) Plagiarism of any kind will not be accepted

3) Judging criteria: Creativity, plot, language, and title.

Shikha Hemran
13/08/26
(H.O.D English)

Netarhat Awsiya Vidyalaya

Shikha Hemran
19/08/26
(Principal)

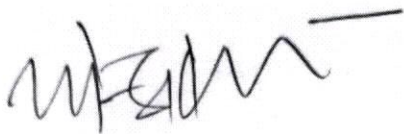
Netarhat Awsiya Vidyalaya

कक्षा-ग्यारह

1. वितान भाग-1 के पाठ भारतीय गायिकाओं में बेजोड़: लता मंगेशकर, आलो-आँधारि और गलता लोहा के अंत दिए गए सभी प्रश्नों के उत्तर लिखें।
2. निम्नलिखित विषयों पर रचनात्मक लेख लिखें
'स्मार्टफोन की स्क्रीन और खोता हुआ बचपन'
रविवार का दिन और आलस्य
अचानक आई मूसलाधार बारिश और नेतरहाट
3. अपने क्षेत्र में बढ़ते साइबर अपराध पर चिंता व्यक्त करते हुए तथा पुलिस गश्त बढ़ाने का अनुरोध करते हुए जिला पुलिस अधीक्षक को एक शिकायती पत्र लिखिए।
4. प्रेमचंद और कबीर का साहित्यिक परिचय लिखें।

कक्षा-बारह

1. वितान भाग-2 के पाठ सिल्वर वैडिंग, जूझ और अतीत में दबे पाँव के अंत दिए गए सभी प्रश्नों के उत्तर लिखें।
2. सूर्यकांत त्रिपाठी 'निराला' और फणीश्वरनाथ 'रेणु' का साहित्यिक परिचय लिखें।
3. निम्नलिखित विषयों पर रचनात्मक लेख लिखें।
मेरे कमरे की खिड़की से बाहर का नज़ारा
जब घर में अचानक बिजली चली गई
शहर की सुबह बनाम गाँव की सुबह
4. आपके क्षेत्र में नियमित रूप से बिजली कटौती की समस्या हो रही है। इससे छात्रों की पढ़ाई और आम जनजीवन प्रभावित हो रहा है। इस समस्या को उठाते हुए किसी प्रतिष्ठित समाचार पत्र के संपादक को पत्र लिखिए।



अध्यक्ष (हिन्दी विभाग)

NETARHAT AWSIYA VIDYALAYA

NETARHAT

Rainy Vacation Homework 2026 – Economics

Class 11th

Subject: Statistics for Economics & Introductory Microeconomics

Part A: Statistics

1) Collect data on the monthly expenditure of 10 families in your locality.

- Prepare:
 - (a) Frequency Distribution Table
 - (b) Arithmetic Mean
 - (c) Median
 - (d) Mode
- Represent the data through:
 - (a) Bar Diagram
 - (b) Pie Chart

Part B: Microeconomics Assignment

1) Answer the following:

- (a) Explain the central problems of an economy.

2) Differentiate between:

- (a) Positive Economics and Normative Economics
- (b) Microeconomics and Macroeconomics
- (c) State and explain the Law of Demand with a suitable schedule.

Pawan K. Singh
20/01/26

NETARHAT AWASIYA VIDYALAYA
DEPARTMENT OF GEOGRAPHY (वर्षावकाश गृहकार्य, 2026)

YEAR: INTER I ARTS

SUBJECT: GEOGRAPHY

- Q.No.1** Make list of Indian states and their capital.
Q.No.2 Make list of continent wise country and their capital.
Q.No.3 Make list of Indian rivers with their origin and destination.
Q.No.4 Make list of world rivers with their origin and destination.
Q.No.5 Make list of Indian multipurpose projects with rivers name.
Q.No.6 Make list of wildlife sanctuary of India with states name.
Q.No.7 Make list of important cities located on Indian rivers bank.
Q.No.8 Make list of important international airports with respective Indian states.
Q.No.9 Make list of important sea ports with respective Indian states.
Q.No.10 Make list of Important Highways of India with their highway number.

11th Political Science

1. Collect newspaper clippings about elections in India and any other country. Classify the clippings in the following categories.

System of representation

Voter eligibility

Role of the Election Commission

2. Make a Chart sheet on Comparison of FPTP and PR system of election.

3. Read a cartoon on universal adult franchise compared to an elephant ? Is it unmanageable ? Or is it like the story in which everyone describes the elephant only by its parts ?

4. Explain article 324 of the Indian Constitution.

5. Write the pledge of " National Voter's Day." Highlight its importance.


19/06/26
Mukesh Kumar

Head, Political Science

Netarhat Awasiya Vidyalaya

NETARHAT AWASIYA VIDYALAYA, NETARHAT

AGRICULTURE DEPARTMENT

HOME WORK JUNE 2026

CLASS -VII

Write and Remember botanical name of the followings–

निम्नलिखित के वानस्पतिक नाम लिखें एवं याद करें

- (a) Ten Vegetables (दस सब्जी) (b) Ten Fruits (दस फल)
(c) Ten Flowers (दस फूल) (d) Ten Medicinal plants (दस औषधीय पौधे)
(e) Ten Ornamental plants (दस सजावटी पौधे) (e) Ten Cereals (दस अनाज)
-

CLASS -VIII

Prepare fair notes for Mango and Rose cultivation.

Write in details- Plants propagation and its different method with diagram.

CLASS – IX

Prepare chapter end question-answers of unit 1, 2 and 3

CLASS – X

(1) Prepare a fair notes and chapter end question-answers of the following chapters –

- (a) Agricultural production and management.
(b) Production and management of Horticultural crops.
(2) Learn in details- Chapter no 3 and 4.
-

CLASS – XI

(1) Learn and prepare a fair note of the following chapters –

- (a) Scope and Importance.
(b) Physical Environment.
(c) Agriculture Economics – Package and cultivation practices of Rice, Wheat, Mango, Potato, Pea, Soybean, Jute, Sugarcane, Rose and Marigold.
-

CLASS – XII

(1) Prepare a fair notes of the following chapters –

- (a) Advance crop production.
(b) Organic Farming.
(c) Subsidiary enterprises of agriculture.
(2) Solve at least 05 full syllabus Sample paper.

Mamta Kumari

(Mamta Kumari)

Agriculture Instructor

Netarhat Awasiya Vidyalaya

18/06/26

17/06/26

नेतरहाट आवासीय विद्यालय

वर्षावकाश-2026 गृहकार्य

1.कक्षा सप्तम

- 1.विद्यालय-प्रार्थना के सभी गीतों को सुन्दर और स्पष्ट अक्षरों में लिखें तथा याद करें।
- 2.सुन्दर अक्षरों में सम्पूर्ण राष्ट्रीय गीत को लिखें तथा याद करें।
- 3.जीवन में संगीत के महत्त्व पर अपने विचार (लगभग १०० शब्दों में) व्यक्त करें।

2.कक्षा- अष्टम

- 1.विद्यालय प्रार्थना के सभी गीतों को सुन्दर और स्पष्ट अक्षरों में लिखें तथा याद करें।
- 2.सुन्दर अक्षरों में सम्पूर्ण "राष्ट्रीय गीत" को लिखें तथा याद करें।
- 3.अपने वाद्य यन्त्र का एक सुन्दर चित्र बनाकर इसके सभी अंगों के नाम लिखें।

3.कक्षा नवम

- 1.परिभाषा लिखें-(i)वादी स्वर, (ii)संवादी स्वर, (iii)संगीत, (iv)सप्तक (भेद सहित) (v)लय (भेद सहित)
- 2.सुन्दर अक्षरों में सम्पूर्ण राष्ट्रीय गीत को लिखें तथा याद करें।
- 3.अपने वाद्य यन्त्र का एक सुन्दर चित्र बनाकर इसके सभी अंगों के नाम लिखें।

4.कक्षा दशम

- 1.परिभाषा लिखें-(i)वादी स्वर, (ii)संवादी स्वर (iii)संगीत, (iv)सप्तक (भेद सहित) (v)लय (भेद सहित)
- 2.सुन्दर अक्षरों में सम्पूर्ण राष्ट्रीय गीत को लिखें तथा याद करें।
- 3.अपने वाद्य यन्त्र का एक सुन्दर चित्र बनाकर इसके सभी अंगों के नाम लिखें।

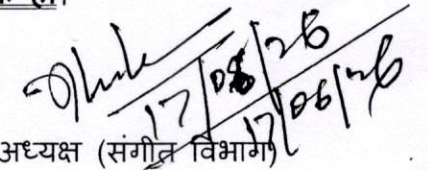
5.कक्षा एकादश (गायन)

- 1.जीवनी लिखें- (i)पंडित विष्णु दिगंबर पलुस्कर और (ii)पंडित विष्णु नारायण भातखंडे
- 2.निम्नलिखित तालों का पूर्ण परिचय देते हुए लिपिबद्ध करें- (i)तीनताल (ii)चारताल, (iii)एकताल

टिपणी :- सभी छात्र अपने गृहकार्य को संगीत की अभ्यास पुस्तिका में ही बनाकर जमा करेंगे।

वर्षावकाश-25 आप सभी के लिए शुभ और मंगलदायक हो।

॥धन्यवाद॥


17/06/26
17/06/26
अध्यक्ष (संगीत विभाग)