PRABHU DAYAL PUBLIC SCHOOL
HOLIDAY HOMEWORK (2025-26)
CLASS-XII

"Success is the sum of small efforts repeated day
in and day out."

Dear Parents,

Summer Vacation is a time for the children to enjoy and relax. These days are precious and valuable and can be made most from if judiciously used. We should always remindourselves that children will not remember us for the gifts we shower upon them but willalways cherish the time we spent with them. It is time to nurture young minds, inculcatemoral values and narrate family anecdotes to keep them in touch with their roots. It's summertime again! The time to strengthen family bond, tying threads of family tree,sharing joys and sorrows and having a good time together.

Here are a few tips to make the vacation a fruitful time for your child:

➢Look for interesting books and read as much as you can about the places and people. Take good care of your health and hygiene. Avoid heavy and oily food and increase intake of fresh fruits and water to keep yourself well hydrated and energetic.

➢Use Holiday Homework as an opportunity to spend quality time together. The roleof the parent is to be a facilitator and guide to steer the child in the right direction.

➢Encourage your child to take up yoga or any other form of healthy activity duringthe vacation.

➢Involve children in household chores.

➢Enjoy walking with them in parks and appreciate nature.

General instructions:

In order to keep our students well engaged and to revise and be thorough with theportions we have completed so far, we are sending the Summer Holiday Homework. Werequest parents to encourage the kids to finish their homework during the summerholidays. This will help them to have a revision of all the portions without over burdeningthem. Original work by the child shall be acknowledged and assessed.

Follow the guidelines given by teachers to complete specific activities.

Happy holidays!

HOLIDAY HOMEWORK

CLASS 12

ENGLISH

The **Project - Portfolios** is a compilation of the work that the students produce during the process of working on their ALS project

The Project- Portfolio may include the following

1. Cover page, with title of project, school details / details of students.
2. Statement of purpose /objectives /goals
3. Certificate of completion under the guidance of the teacher.
4. Action plan for the completion of assigned tasks.
5. Materials such as scripts for the survey, questionnaires for interview and other material evidence of learning progress and academic accomplishment
6. The 800 -1000 words essay / script /report
7. Student reflections
8. If possible, paragraphs that capture the positive learning experiences of the students
9. Lists of resources / bibliography

Select **any one topic of your choice** and prepare the Project Work for CBSE Practical Exam.

1.The impact of globalization on the economy and society.
2.Exploring the role of technology in education.
3..Climate change: Causes, effects, and solutions.
4Gender equality and women empowerment.
5.Mental health awareness and strategies for coping with stress.
6The future of work: Automation, AI, and employment trends.
7.The role of media in shaping public opinion and democracy.
8..The impact of social media on interpersonal relationships.
9.Urbanization: Opportunities and challenges in developing countries.
10.Cybersecurity: Threats and preventive measures.
11.Present a brief report on the life and works of any ONE of the poets/authors of your choice.(from the prescribed texts)
12.Child Labour -a stumbling block on the road to development.
13. Terroism and its impacts.
14. Use of Artificial Intelligence and its pros and cones
15. Contributions made by anonymous Indians to the freedom movement. OR the unsung heroes of freedom movement. (Indigo)

PHYSICS

The holiday homework in Physics is comprised ofbelow mentioned parts. You are expected to do all of them and submit in accurate form after your summer vacations get over:

1. Make complete Physics Practical file and Activity file in separate files respectively. The pdfs for the same are already provided to you. On the plain side of your file, for each experiment, make empty Observation table and write all points of the Observation with blanks. They will be filled after you perform the practical in Physics lab. Similarly, calculations and graphs will be done with your own readings.
2. Prepare complete Project report for the investigatory project allotted to you. Once the project is performed in the lab, then only write readings, do calculations and draw graphs respectively in your project report.
3. Do all the intext solved examples of Chapter 1 and Chapter 2 of NCERT in your homework notebook.
4. Do all the end chapter exercise given at the end of Chapter 1 and Chapter 2 of your NCERT in your homework notebook. Don't do Additional exercise which is also there after each chapter of NCERT.

NOTE: for points 3 and 4, there is no need to make separate holiday homework notebook. Do them in your regular homework notebook of physics.

CHEMISTRY

Prepare a CHEMISTRY INVESTIGATORY PROJECT on the topic assigned to you by the subject teacher in the class.Use A4 size sheets for the project including various newspaper clippings, images, latest discoveries and inventions relevant to the topic. Follow the given headings in the project:

a) INTRODUCTORYPAGE
b) CERTIFICATE
c) ACKNOWLEDGEMENT
d) INDEX/CONTENTS
e) INTRODUCTION
f) AIM
g) CHEMICALSREQUIRED
h) PROCEDURE/EXPERIMENT(S)
i) OBSERVATIONS
j) RESULT
k) CONCLUSION
l) BIBLIOGRAPHY

2. Revise the portion of syllabus completed in the class and write at least 2 questions daily of the chapters

i. Haloalkanes and Haloarenes
ii. Alcohol, Phenol and Ether
iii. Solution

COMPUTER SCIENCE

Do the following assignment in CS notebook.
Programming language-python

1 a) Write any two features of dictionary, list and tuples?

b) What are actual and formal parameters?

c)Explain default arguments?

d) Expalin following file modes .-

r,rb,r+,rb+

w,wb,w+,wb+

a,ab,a+,ab+

e) list different file operations.

f) what is file handle?

g) Explain scope of a variable in python by giving an example.

2. write a program to find the maximum element in the list entered by the user.

3. Write a program to perform linear search using a list.

4. Write a function to find the sum of all values which are ending with 3 from a list. Function is receiving list as parameter.

5. Write a program to input 3 students names and their age to store it in dictionary and print the age of a particular student.

6. Write a program which accepts a number from the user and print the frequency of the number in the list lst given under, if the number is not in the lst it should print “number not available”.

7a) Write a program to perform write ,append and read operation in the text file.

b) Write a function BTCount() in Python, which should read each character of a text file "TESTFILE.TXT" and then count and display the count of occurrence of alphabets B and T individually (including small cases b and t too).

c) Write a function in Python that counts the number of "Me" or "My" words present in
a text file "STORY.TXT". If the "STORY.TXT" contents are as follows:
"My first book was Me and My Family. It gave me chance to be Known to the world."
The output of the function should be:
Count of Me/My in file: 4

8 A binary file "STUDENT.DAT" has structure (admission_number, Name, Percentage). Write a function countrec() in Python that would read contents of the file "STUDENT.DAT" and display the details of those students whose percentage is above 75. Also display number of students scoring above 75%

9 Write a function which receive x and n as parameters and return the sum of the following series: $1+x+x^2+x^3+x^4+. .....x^n$

10.Write a program to read a text file by using the following read methods-

read()

read(n)

readline()

readlines()

BIOLOGY

1. Learn the concepts taught in class.
2. Read and understand the investigatory project.
3. Solve HOTS questions from the chapter taught in class.
4. Complete writing down the practical exercises in record file.
5. Practice drawing the diagrams and labeling them.

ECONOMICS

6. 1. Practice the following numerical questions:
   *Practise any 10 numerical of national income. Show your workings clearly.
   *Questions are to be done in your class registers only.
7. 2. Prepare a project as per CBSE guidelines as briefed in the class. You have to abide by the topic allotted to you only.

8. **<u>GUIDELINES</u>** -
*Use a ring file as your project file and cover it neatly. Write your particulars on the project file

9. which include- Name, Board Roll. No, Subject, Class & Section, Session: 2025-26 and Topic.
* Project should be of 25-30 (excluding graphs and diagrams) covering the entire

10. content and should be hand written only.

11. *You can include newspaper articles, IMF/World bank reports, NITI Aayog reports, Government

12. policies etc.
* Plagiarism is not allowed and you must mention the source of the information to ensure

13. authenticity of the research work.

14. *Presentation of the project should be in the following manner-

15. 1. Topic

16. 2. Acknowledgement

17. 3. Certificate

18. 4. Index

19. 5. Introduction of topic

20. 6. Causes, Consequences and remedies

21. 7. Various stakeholders and effect on each of them

22. 8. Advantages and disadvantages of situations or issues identified.

23. 9. Short-term and long-term implications of economic strategies suggested in the course of

24. research.

25. 10. A **case study** or real life application of the topic is a must.

26. 11. Conclusion

27. 12. Bibliography – Citation of materials referred to should be included.

28. 13. Thank you sheet

Mass Media Studies

Project: Prepare a 4-5 minute documentary on any one of the topics listed below.

Topics:

1. The Life of a Tree – Document the history and significance of an ancient tree in your locality.

2. Urban Wildlife: Animals Adapting to Cities– Explore how species like leopards, monkeys, and birds survive in urban landscapes.

3. The Mystery of Medicinal Plants – Investigate indigenous knowledge and the healing power of nature.

4. The Untold Stories of Historical Monuments – Uncover lesser-known facts about famous sites like Qutub Minar, Red Fort, or Hampi.

5. The Architectural Marvels of Ancient India – Examine the science behind temples, forts, and stepwells.

6. The Lost Cities of India – Document ruins like Vijayanagara or Dholavira.

7. The Secret Tunnels & Hidden Chambers – Explore myths and mysteries surrounding famous monuments.

8. A Day in the Life of a Monument Caretaker – Highlight the people who preserve history behind the scenes.

Guidelines:

- This is a group activity, where each student will play a significant role.

- Responsibilities include research, filming, editing, voice-over narration, and adding subtitles to the documentary.

- Ensure the documentary is engaging, well-researched, and visually appealing.

- Creativity and teamwork are key elements—make it informative, compelling, and unique

Revise the syllabus covered for PWTI.

PHYSICAL EDUCATION

1. Project over Three Life Style Disease with procedure of five Asanas, Benefits and contradiction for each lifestyle disease

2. Project of Physical fitness test - SAI KHELO INDIA FITNESS TEST

3. Explain in detail Female Athlete Triad

HOLIDAY HOME WORK

XII MATHEMATICS

Q.1 Let A={1,2,3,4…….9} and relation R on AXA defined a by(a,b) R (c,d) if a+d=b+c for all (a,b),(c,d) ∈ AXA, show that R is an equivalence relation. Also find the equivalence class of (2,5).

Q2. If R be the relation defined on Q (set of rational numbers) as aRb ⟺ |a-b| $\leq \frac{1}{2}$ then show that R is not transitive.

Q3. Is the function f : N → N, where N is the set of natural numbers is defined by

f(x) = $\begin{cases} n^2 & , n\ is\ odd \\ n^2+1, & n\ is\ even \end{cases}$ onto?

Q4. Let R be a relation on the set A of real numbers be defined as (a,b) ∈ R ⟹ 1 + ab > 0 for all a , b ∈ A . Show that R is not transitive.

Q.5 Let A=R-{2} ,B=R-{1} , if f:A→B , f(x)=$\frac{x-1}{x-2}$ then f is a bijective function.

Q-6 A function f is defined on all real numbers except 2/3 as f(x)=$\frac{4x+3}{6x-4}$, $then\ show\ that f$ is one-one and onto function.

Q-7 Solve for x, $(\tan^{-1}x)^2 + (\cot^{-1}x)^2) = \frac{5\pi^2}{8}$

Q-8 Prove that $2\tan^{-1}\left(\frac{1}{5}\right) + \sec^{-1}\left(\frac{5\sqrt{2}}{7}\right) + 2\tan^{-1}\left(\frac{1}{8}\right) = \pi/4$

Q9 Draw the graphs of $\sin^{-1}x$, $\cos^{-1}x\ and\ \tan^{-1}x$.

Q-10 Solve for x, $\cos^{-1}\left(\frac{x^2-1}{x^2+1}\right) + \frac{1}{2}\tan^{-1}\left(\frac{2x}{1-x^2}\right) = 2\pi/3$

Q.11 Find the minimum and maximum value of $(\sin^{-1}x)^2 + (\cos^{-1}x)^2$

Q-12 Write in simplest form $\sin^{-1}\left(\frac{12x+5\sqrt{1-x^2}}{13}\right)$

Q.13 f:R→ R,f(x)=IxI , show that f is neither one-one nor on to function.

Q.14 A=$\begin{bmatrix} 1 & 2 & 1 \\ 1 & 0 & 3 \\ 2 & -3 & 0 \end{bmatrix} and\ B = \begin{bmatrix} 9 & -3 & 6 \\ 6 & -2 & -2 \\ -3 & 7 & -2 \end{bmatrix}$, find AB , hence solve the equations. X+2y+z=7, x+3z=11, 2x-3y=1

Q.15If A=$\begin{bmatrix} 1 & -2 & 0 \\ 2 & 1 & 3 \\ 0 & -2 & 1 \end{bmatrix}$, find A^{-1}, hence solve the system of equations

X+2y=3 , 2x-y+2z=1, 3y+z=3

Q.16 If $\begin{bmatrix}1 & 2\\ 2 & 5\end{bmatrix} A \begin{bmatrix}1 & -2\\ 1 & 1\end{bmatrix} = \begin{bmatrix}3 & 1\\ 4 & 2\end{bmatrix}$ .find matrix A.

Q17. If A and B are skew symmetric matrices of same order then nature of AB+BA?

Q18. Using matrix, solve the equations: 2/x-3/y+3/z=10 ; 1/x+1/y+1/z =10 ; 3/x-1/y+2/z=13

Q19. Prove that diagonal elements of a skew symmetric matrix are zero.

Q20. Express given matrix as a sum of symmetric and skew symmetric matrix

$$A=\begin{bmatrix}1 & 2 & 3\\ 5 & 6 & 7\\ -1 & 0 & 1\end{bmatrix}$$

Q.21 if f(x)= $\begin{cases} \frac{1-sin^3x}{3cos^2x}, x < \pi/2 \\ a, x = \pi/2 \\ \frac{b(1-sin\ )}{(\pi-2x)^2}, x > \pi/2 \end{cases}$, is continuous function, then find the value of a and b.

Q.22 Show that the function(x) is continuous at x=2 but not differentiable at x=2

$$F(x)=\begin{cases} 3x-2, o < x \le 1 \\ 2x^2 - x, 1 < x \le 2 \\ 5x-4, x > 2 \end{cases}$$

Q.23 If $y = e^{a\cos^{-1}x}, prov\ that\ (1-x^2)y_2 - xy_1 - a^2y = 0$

Q.24 If $x = 2cost - \cos 2t, y = 2\sin t - sin2t\ , find \frac{d^2y}{dx^2} at\ t = \frac{\pi}{2}$.

Q.25 If $y = x^x, showthat\ \frac{d^2y}{dx^2} - \frac{1}{y}\left(\frac{d}{d}\frac{y}{x}\right)^2 - \frac{y}{x} = 0$.