SHANTI GYAN NIKETAN SR. SEC. PUBLIC SCHOOL

Class XI (2025-26) - Holiday Home Work

ENGLISH

1. Watch the assigned movie from the list given below:
   - A Beautiful Mind (2001)
   - The Blind Sight (2009)
   - The Social Network (2010)
   - The Life of Pi (2012)
   - The Story of Everything (2014)
   - A Plastic Ocean (2016)

Compile the following headings in a file after watching any one movie:
   - Introduction
   - Plot construction
   - Characters
   - Objective/message
   - Critical appreciation/review

2. Design a poster on 'Diversity and Secularism' giving a message of peace and harmony.
3. Write a speech on 'Media - A Pillar of Democracy'
4. Make any one A-3 size poster of any good quotation, phrases, proverbs, Great Poets, Dramatists, Novelist, story writers in a neat and creative manner.

MATHEMATICS

1 Topic –Trigonometry or Circular function

1. Find the values of the following trigonometric ratio:

(i) $\sin 315°$ (ii) $\cos 210°$ (iii) $\cos(-480°)$ (iv) $\sin(-1125°)$
(v) $\text{cosec}\, 390°$ (vi) $\cot 570°$ (vii) $\tan 480°$ (viii) $\cos 270°$
(ix) $\tan\frac{19\bar{\lambda}}{3}$ (x) $\sin\left[\frac{-11\bar{\lambda}}{3}\right]$ (xi) $\cot\left[\frac{-15\bar{\lambda}}{4}\right]$ (xii) $\sec 6\pi$

2. Find the values of the following trigonometric ratio:

(i) $\sin\left(\frac{25\pi}{3}\right)$ (ii) $\cos\left(\frac{41\pi}{4}\right)$ (iii) $\tan\left(\frac{-16\pi}{3}\right)$ (iv) $\cot\left(\frac{29\pi}{4}\right)$

(v) $\text{Sin}\left(-\frac{19\pi}{3}\right)$ (vi) $\text{Tan}\left(-\frac{33\pi}{4}\right)$ (vii) $\text{cosec}(-1110°)$ (viii) $\sin(765°)$

(ix) $\cot(-600°)$ (x) $\text{Sin}1140^{\circ}$ (xi) $\sin 5\pi$ (xii) $\tan\left(\frac{5\pi}{4}\right)$

3. If $\tan x = \frac{3}{4}$ and $\pi < x < \frac{3\pi}{2}$, find the values of

4. Find the value of

(i) $\sin\frac{x}{2}$ (ii) $\cos\frac{x}{2}$ (iii) $\tan\frac{x}{2}$.

(i) Sin 15° (ii) Cos 15° (iii) Tan 15° (iv) Sin 75°
(v) Cos 75° (vi) Tan 75° (vii) Sin 105° (viii) Cos 105°

5. prove that

(i) $\sin 70°\cos 10° - \cos 70°\sin 10° = \frac{\sqrt{3}}{2}$ (ii) $\cos 50°\cos 10° - \sin 50°\sin 10° = \frac{1}{2}$

(iii) $\cos 80° \cos 20° + \sin 80° \sin 20° = \frac{1}{2}$ (iv) $\sin 36° \cos 9° + \cos 36° \sin 9° = \frac{1}{\sqrt{2}}$

(v) $\sin\frac{7\pi}{12}\cos\frac{\pi}{4} - \cos\frac{7\pi}{12}\sin\frac{\pi}{4} = \frac{\sqrt{3}}{2}$ (vii) $\sin\frac{\pi}{4}\cos\frac{\pi}{12} + \cos\frac{\pi}{4}\sin\frac{\pi}{12} = \frac{\sqrt{3}}{2}$

(vii) $\frac{\cos(90°+\theta)\sec(270°+\theta)\sin(180°+\theta)}{\cos ec\,(-\theta)\cos(270°-\theta)\tan(180°+\theta)} = \cos\theta$ (viii) $\cos\frac{2\pi}{3}\cos\frac{\pi}{4} - \sin\frac{2\pi}{3}\sin\frac{\pi}{4} = \frac{-(\sqrt{3}+1)}{2\sqrt{2}}$

(ix) $\tan^2\frac{\pi}{3} + 2\cos^2\frac{\pi}{4} + 3\sec^2\frac{\pi}{6} + 4\cos^2\frac{\pi}{2} = 8$ (x) $4\sin\frac{\pi}{6}\sin^2\frac{\pi}{3} + 3\cos\frac{\pi}{3}\tan\frac{\pi}{4} + \text{cosec}^2\frac{\pi}{2} = 4$

(xi) $\cos\left(\frac{3\pi}{2}+\theta\right)\cos(2\pi+\theta)\left[\cot\left(\frac{3\pi}{2}-\theta\right) + \cot(2\pi+\theta)\right] = 1.$

6.Prove that:

(i) $tan\ 225°\ cot\ 405° + tan\ 765°\ cot\ 675° = 0$

(ii) $\sin\frac{8\bar{\lambda}}{3}\ cos\frac{23\bar{\lambda}}{6} + cos\frac{13\bar{\lambda}}{3}\sin\frac{35\bar{\lambda}}{6} = \frac{1}{2}$

(iii) $\cos 24° + \cos 55° + \cos 125° + \cos 204° + \cos 300° = \frac{1}{2}$

(iv) $\tan(-225°)\cot(-405°) - \tan(-765°)\cot(675°) = 0$

Physics

I. Complete Physics Experiment file according to the instructions of subject Teacher.
II. Make a chart on A3 sheet on any Physics Topic from syllabus of class 11th or 12th.
III. Solve the following assignment in Fair notebook

1. Name the physical quantities whose dimensional formulae are as follows:
   (i) ML^2T^{-2} (ii) MT^{-2} (iii) $ML^{-1}T^{-2}$ (iv) ML^2T^{-3}
2. Define dimensional formulae of the following: (i) Power (ii) Gravitational constant (iii) Planck's Constant (iv) Coefficient of viscosity (v) Surface Tension
3. Find the value of 120 J/min on a system that has 100 g, 100 cm and 1 min as the base unit.
4. Convert one dyne into Newton.
5. If the units of force, energy and velocity are 20 N, 200 J and 5 m/s, find the units of length, mass and time.
6. Test the dimensional consistency of the following equations: (i) v = u + at (ii) $s = ut + 0.5at^2$

   (iii) $0.5mv^2 = mgh$
7. Find the dimensions of a*b in the relation: $F = a\sqrt{x} + bt^2$, where F is force, x is distance and t is time.
8. Find the dimension of a, b, c and d if the distance covered by a particle in time t is given by $x = a+bt+ct^2+dt^3$.
9. A planet moves around the sun in nearly circular orbit. Its period of revolution 'T' depends upon: (i) radius 'r' of the orbit (ii) mass 'M' of the sun and (iii) the gravitational constant 'G'. Show dimensionally that $T^2 \alpha r^3$. Taking the proportionality constant as 2π, write the expression for T.
10. The frequency 'f' of stretched string depends upon: (i) its length l, (ii) its mass per unit length 'm' and (iii) the tension 'T' in the string. Obtain dimensionally an expression for frequency 'f'.
11. The escape velocity v of a body depends upon (i) the acceleration due to gravity of the planet and (ii) the radius of the planet R. Establish dimensionally the relationship between v, g and R.
12. State the number of significant figures in the following measurements: (i) $0.009m^2$ (ii) 5.049 (iii) 0.02800 m (iv) $1.27*10^{27}$ kg (v) 0.05090 cm
13. Define (i) error (ii) accuracy (iii) precision (iv) significant figures.
14. 5.74 g of a substance occupies 1.2 cm^3. Express its density keeping significant figures in view.

15. Solve the following and express the result to an appropriate number of significant figures (i) Add 7.1 cm,5.66cm and 14.89 cm (ii) 80.5*132.5*0.10 m^3.

16. The number of particles given by $n = -D (n_2-n_1)/(x_2-x_1)$; are crossing a unit area perpendicular to x-axis in unit time, n_1 and n_2 are the number of particles per unit volume for the values of x meant to be x_1 and x_2. What is dimensional formula of diffusion constant D?

17. Derive the following relationships using dimensions: (a) The velocity 'v' of a wave along a plucked string depends on the tension 'T' in the string, its length 'l' and the mass 'm' of the string. (b)The terminal velocity 'v' of a steel sphere moving under gravity through a viscous liquid depends on the weight of the sphere 'mg', the coefficient of viscosity 'η' and the radius of the sphere 'r'.

CHEMISTRY

1) Prepare investigatory project on anyone topics as mentioned below
   - i) Extraction of essential oils in saunf (aniseed)
   - ii) Study of quality of casein present in different samples of milk
   - iii) Study of oxalate ions in guava fruit at different stages of ripening
   - iv) Study of common food adulterants in food stuff
   - v) Analysis of honey
   - vi) Analysis of vegetable and fruit juice
   - vii) Potassium bisulphate as food preservative
   - viii) Preparation of soyabean milk
   - ix) Digestion of starch by salivary amylase
   - x) Sterilisation of water using bleaching powder
   - xi) Biodiesel
   - xii) You can use any other relevant topic related to your syllabus
2) Complete your practical file
3) Learn periodic table and atomic no. at least up to 30
4) Prepare chapter 1 for upcoming class test.

BIOLOGY

1. Practice the questions given in the assignment.
2. Complete the following experiments in the practical file. Get the details of the file from your subject teacher

Experiments to be completed in the experiment notebook

1. Study of the parts of a compound microscope.
2. Study of mitosis in onion root tip cells from permanent slides.
3. Preparation and study of T.S. of dicot and monocot roots and stems (primary).
4. Study of osmosis by potato osmometer.
5. Study of plasmolysis in epidermal peels (e.g. Rhoeo/lily leaves or flashy scale leaves of onion bulb).
6. Study of distribution of stomata on the upper and lower surfaces of leaves.
7. Test for the presence of sugar, starch, proteins and fats in suitable plant and animal materials.
8. Separation of plant pigments through paper chromatography

NOTE: Things to take care while preparing the file

- Write Aim, Principle, Requirements, Procedure, Result and Precautions on Right Hand Page (Ruled Page) of your file.
- Observation Table, Diagrams, Graph, should be on the Left-Hand Page (Blank Sheet)
- Each and every diagram should be well labelled and drawn with pencil only.

Computer Science

Prepare Presentation on the following topics (Refer Book Chapter-1, 10& 11)

S.NO.	TOPIC	ROLL NO.
1.	Basic component of computer system	1-10

2.	Software and Types of Software	11-20
3.	Society, Law and Ethics	21-30
4.	Cyber Safety	31 Onwards

General Instructions :

1. Make 10-12 slides on each topic.
2. Bring the printouts in proper file cover.

PSYCHOLOGY

1. CASE STUDY

Socialization is a process by which individuals acquire knowledge, skills and dispositions which enable them to participate as effective members of group and society. It is a process that continues over the entire life span and through which one learns develops ways of effective functioning at any stage of development. It forms the basis of social and cultural transmission from one generation to the next. Its failure in any society may endanger the very existence of that society.

Answer the following questions.

1. Why socialization is necessary in daily life
2. What is the age criterion of socialization?
3. What is the basis of socialization?

2. Project work (Poster making)

Focus: Design posters on topic related to psychology or mental health awareness.
Tasks: # choose a thing such as' mental health awareness ', 'importance of sleep 'or' stress management'.
Develop a visually appealing and impact full poster design.
Include a clear message and relevant slogans.

ACCOUNTANCY

1. Revise Ch.: 1, 2,5,6
2. Do the following question in Homework Notebook
   - Ch.2 Page2.23 Case Study Based Question, Page 2.24 – Question 1
   - Ch.5 Accounting Equation Question – 5,6,7,8,10,11,12,14,15,16,17to 26.
   - Ch.6 Accounting Procedures
     Make a Chart or PPT
     Topic: a) Types of Accounts and Rules of Debit & Credit
     b) Carrier Option in Commerce Stream

BUSINESS STUDIES

1. Read the section of' THE ECOMOMIC NEWS' in newspaper and figure out 10 news Clippings/headings for 15 days. Paste them in a scrap book. Find words related to commerce and trade from the same and write their meaning.
2. Make a PPT on Economic and Non –Economic activities.
3. Revise Ch.1 and 2 for Unit Test.

ECONOMICS

1) What do you mean by a statistical enquiry?
2) What are the two main sources of data?
3) Name the different types of data.
4) What do you mean by primary data?
5) What is the meaning of secondary data?
6) Mention the two sources of secondary data.

7) Mention two important sources of published data.

8) State the type of data which involves less time and expenses.

9) State two merits of primary data.

10) Out of primary and secondary data, which one is collected for a definite purpose?

11) In which type of data, precaution is highly required?

12) State the method which estimates populations in a country.

13) What is 'Direct Personal Investigation'?

14) State one advantage of Direct Personal Investigation.

15) Mention one demerits of indirect oral investigation.

16) Mention two situations where direct personal investigation is suitable.

17) What do you mean by a questionnaire?

18) When the multiple choice questions should be used?

19) What do you mean by enumerators?

20) What is the difference between a questionnaire and a schedule?

21) What do you mean by census method?

22) State the main advantages of census method.

23) State demerits of census method.

24) "The government and policy makers use statistical data to formulate suitable policies of economics development." Illustrate with two examples.

25) Statistical methods are no substitute for common sense. Comment with examples from your daily life.

Political Science

Guidelines for Project Work : The expectations of the project work are that

1. Introduction of topic/title
2. identify the causes,consequences,main events,origin and remedies
3. Advantages and disadvantages of situation or issues identified
4. selection of respondendent
5.Validity,reliability of case study used for the project
6. Methodology

Class XI

*Political theory -An introduction *Liberty * Secularism

* Federal system in India * International peace * Citizenship

* 73rd Amendment * Human Rights * Fundamental Rights

* Directive principles * Framework of Indian Constitution * Indian executive

* Indian Constitution as a Bag of Borrowing

*Role of election commission in election system of India any other relevent topic from your NCERT book

Do assignment of chapter executive and equality.

HISTORY

A). Art Piece

1. Warka head (1-14)
2. Cuneiform script (15-28)

3. Sculpture of Emperor Constantine (29-41)

B). Project file

1. Ancient History in depth: Mesopotamia
   (Hint... writing, trade, art, mathematics, astronomy, features of main cities.)
2. Contributions of Roman civilisation
   (Hint…Political achievements, legal system, culture- languages, art and architecture, economic growth and trade.)

C). Revise the syllabus for UT I

GEOGRAPHY

(GROUP 1)

1. Make a project on Global Warming.
   (Points to be covered)
   Explain global warming, Greenhouse gases, consequences of global warming, international concern about global warming, any one article in the newspaper related to global warming to be pasted.
   (GROUP 2)
2. Prepare a project on Polar Climatic Region.
   (GROUP 3)
3. Prepare a project on Mediterranean Climatic region.
   (GROUP 4)
4. Prepare a project on Tropical Monsoon Climate
   (Points to be covered)
   Show the regions on the world map, characteristic features of the climate, name the regions or countries where this climate prevails, natural vegetation, crops, culture, traditional festivals, languages spoken, costumes, indigenous people of these regions.

PHYSICAL EDUCATION

Prepare Practical File on these three topics mentioned below:-

- Practical – 1: Write about Fitness tests administration. (SAI Khelo India Test)
  According to unit – 6.
- Practical – 2: Write the Procedure for Asanas, Benefits & Contraindications for any two Asanas for each lifestyle disease.
  (Lifestyle Diseases:- Obesity, Diabetes, Hypertension, Asthma and Back Pain & Arthritis. 2 Asanas for each disease, total 10 – 12 Asanas.) According to unit – 3.
- Practical - 3: Write any one IOA recognised Sports/Game of your choice. Support it with Labelled diagram of Field & Equipment. Also mention it's Rules, Terminologies & Skills.

NOTE:- Draw/ paste pictures for all practical.

And you may take help from Google for all 3 practicals.

Purchase a PHE practical file for Class XI from market and complete holidays homework.

ENTREPRENEURSHIP

1) What is the need of entrepreneurship in an economy? Give at least six benefits.
2) "Innovation is the hallmark of entrepreneurship". Why is "innovation" referred as the basic function of an Entrepreneur?

3) Explain any two disadvantages of being an Entrepreneur?
4) Differentiate between entrepreneur and entrepreneurship.
5) Describe entrepreneurial functions of an entrepreneur.
6) What is the need of entrepreneurship in an economy?
7) Mehak wants to start a textile unit near Gurgaon. Discuss the commercial fund which she will require to plan and perform the same.
8) Explain any four managerial functions of an entrepreneur?
9) Explain any four Promotional functions of an entrepreneur.
10) Describe the process of entrepreneurship.
11) What is an enterprise?
12) Who is an entrepreneur?
13) Who plays the role of entrepreneur in a socialist country?
14) Explain any two advantages of being an Entrepreneur?
15) What is the primary economic reward of an entrepreneur?
16) What is entrepreneurship?
17) State any two features of entrepreneurship.
18) State the functions of an entrepreneur.
19) State three characteristics of entrepreneurship,
20) Give two myths of entrepreneurship and clarify them.
21) How does entrepreneurship generate jobs and improve standard of living?
22) "Entrepreneurs are born not made". Do you agree" Give Reasons.
23) Give two advantages of entrepreneurship as a career.
24) Mention the first and the last step in the process of entrepreneurship.
25) What is a startup? State its features.

YOGA

Prepare practical file.

1) Surya Namaskar all 12 asanas along with pictures.
2) Write all asanas technique ,benefits and precautions along with pictures.
   (Starting from Tadasanas to Makarasans)
   Practice the asanas regularly every morning.

FINE ARTS

1.Make any two Potraits on A-3 size Ivory sheet with oil pastels and pencil colours.

2.Prepare any 2 compositions on A-3 cartidge sheet with water/poster colours.

3.Make beautiful Rangoli/Alpana on full size Ivory sheet in any shape. With different coloured papers.

4.Draw and colour Landscape & Village scene on A-3(caritdge sheet use mix media of colours)