

**Bhartiyam Vidya Niketan**  
**Vacation Homework (2019-2020)**  
**Class XII**

Subject	Homework
Economics	Investigate the following topics & prepare an introductory file <b>(Any one)</b> (a) GST & its impact on GDP      (b) Human Development Index (c) Self Help Groups                (d) Demonetisation & its Impact (e) Make In India - The way ahead   (f) Sarva Shiksha Abhiyan (g) Digital India- Step towards the Future (h) Alternate fuel - Types & Importance (i) Rainwater Harvesting - A Solution to Water Crisis (j) Organic Farming - Back to the Nature
Accountancy	<b>I.</b> Solve practical problem questions based on the following chapters. Chapter -1 Accounting for Partnership Firm Fundamental Chapter-2 Nature and Valuation of Goodwill <b>II Project Work</b> Make any twenty journal entries and post in to the ledger and make trial balance and prepare final accounts
Business Studies	<b>I.</b> Read the case studies of: Principles of Management <b>II.</b> To observe and learn the application of general principles of management advocated by Fayol by an Industrial Visit.
Chemistry	<b>Investigatory projects</b> Note: Any one out of these eight projects can be chosen with the approval of the teacher and can be completed during vacation holidays. 1. Study the presence of oxalate ions in guava fruit at different stages of ripening. 2. Study the quantity of casein present in different samples of milk. 3. Preparation of soyabean milk and its comparison with the natural milk with respect to curd formation, effect of temperature etc. 4. Study of the effect of Potassium bisulphite as food preservative under various conditions (temperature, concentration, time etc.) 5. Study of digestion of starch by salivary amylase and effect of pH and temperature on it. 6. Comparative study of the rate of fermentation of following materials, wheat flour, gram flour, potato juice, carrot juice etc. 7. Extraction of essential oils present in Saunf (Aniseed), Ajwain (Carom), Mlaichi (Cardamom) 8. Study of common food adulterants in fat, oil, butter, sugar, turmeric powder, chilli powder and pepper.
Physics	Check the continuity of Electrical Devices and differentiate on the basis of voltage current graph, Obeying Ohm's Law or Not.
Biology	<b>Net Search &amp; preparation of file on the following topics.</b> Organic farming, Hybridisation, Cancer, AIDS, Antibiotics, Common Diseases of Gwalior (Particularly on Amoebiasis)
Maths	Do Assignment No. 1
History	1. Do the Assignment of chapters 1 to 10 2. Do the worksheet of chapters 1 to 10 3. Make the file on any topic already mentioned.
Political Science	<b>I. To prepare power point presentation for the following topics.</b> Note: Any one out of these projects to be completed during summer vacation. (a) Cold War                            (b) Chipko Movement      (c) Bharti Kisan Union (d) Green Revolution (e) Globalisation                            (f) White Revolution (g) Narmada Bachao Andolan   (h) Security in the Contemporary World (i) Anti Arrack Movement        (j) India's External Relations (k) India and Globalisation        (l) Non-aligned Movement (m) Environmental and Natural Resources <b>II. Analysis of General Lok Sabha Election 2019 - Seven Phases</b> (a) Date of notification            (b) Last date of filing nomination (c) Scrupline of nomination      (d) Polling Date      (e) Result

Hindi	<p>XII-B 1. सूर्यकांत त्रिपाठी 'दिलीप' 2. रामचंद्र शुक्ल (लेखक)</p> <p>XII-D 1. जयशंकर प्रसाद (कवि) 2. ठाकुर प्रसाद द्विवेदी (लेखक)</p> <p>उपरोक्त में से किसी एक कवि/लेखक पर 1000 शब्दों में प्रोजेक्ट तैयार करें।</p> <p>1. जीवन परिचय 2. कार्यक्षेत्र 3. रचना 4. भाषा शैली</p> <p>5. साहित्य में स्थान - योगदान पुरस्कार</p> <p><b>नोट - A4 Sheet पर कार्य (सचित्र) करना है।</b></p>
English Core	<p><b>A. Practice Question - for each type of writing task</b></p> <p><b>(a) Notices</b></p> <p>1. You are Shailendra Tomar, Sports In-charge of Army Public School, Pune. Draft a notice informing students of an Inter-house Basketball Match, giving necessary details in not more than 50 words.</p> <p>2. You are Neha Yadav, Activity In-charge of Delhi Public School, Kanpur. Your school is collecting material to be sent to flood victims in Odisha. Draft a suitable notice in not more than 50 words.</p> <p>3. You are the Cultural Secretary of your school. Draft a notice regarding an Inter School Dance Competition asking interested students to give their names. Give the necessary details regarding the competition in not more than 50 words.</p> <p><b>(b) Letter to the Editor</b></p> <p>1. You are Parul/Praveen Tomar, a class XII student at Bright Public School, Tekanpur. You are concerned about the frequent changes in the CBSE Syllabus and also the pressure of both syllabus and competitive exams on students. Write a letter to The Editor of the Hindu, expressing your views in about 250 words.</p> <p>2. You are Aruna/Arun Singh. You were supposed to go to Chennai for an exam but missed your exam as the train was delayed by more than eight hours. You are upset about this. Write a letter to the Editor of the Hindustan Times, complaining about delays in the train arrival and departure affecting the public in about 250 words.</p> <p><b>(c) Advertisements</b></p> <p>1. You are the marketing executive of a company launching a new health drink. Draft a suitable commercial advertisement regarding it including brand name, special features, logo, a promotional offer and tag line in not more than 50 words.</p> <p>2. You have bought a new car and wish to dispose of your old car. Draft a suitable advertisement in 50 words.</p> <p>3. You wish to give your flat for rent. Draft a suitable advertisement in 50 words.</p> <p><b>NB-</b> To be done in the note book</p> <p><b>II. Prepare to speak for a minute on any topic related to a theme in the chapters covered so far.</b></p>

#### Class Tests (Revised Dates)

Date	Day	Subjects
June 24, 2019	Monday	Hindi/Painting
June 25, 2019	Tuesday	Economics
June 26, 2019	Wednesday	Physics/Accountancy/Political Science
June 27, 2019	Thursday	Maths/Biology
June 28, 2019	Friday	English Core
June 29, 2019	Saturday	Chemistry/History/Business Studies
July 1, 2019	Monday	Physical Education

- Quarterly Examination will be held as scheduled from July 24, 2019 (Date sheet given on Almanac page 136)
- **All the H.W. Assignment Sheets can be downloaded from the school website May 8 onwards.**
- School re-opens on June 24, 2019 (Monday) Timing: Message will be sent.



# BHARTIYAM VIDYA NIKETAN

Holiday Assignment -1

Class - XII

Subject : Maths

1. If  $a + b + c = 0$  then  $\begin{vmatrix} a-x & a & b \\ c & b-x & a \\ b & a & c-x \end{vmatrix} = 0$ , find the value of  $x$ .

2. If  $\begin{vmatrix} 1+a & 1 & 1 \\ 1+b & 1+2b & 1 \\ 1+c & 1+c & 1+3c \end{vmatrix}$  where  $a \neq 0, b \neq 0, c \neq 0$  then  $a^{-1} + b^{-1} + c^{-1} = ?$

3. If  $\Delta = \begin{vmatrix} \log x & \log y & \log z \\ \log 2x & \log 2y & \log 2z \\ \log 3x & \log 3y & \log 3z \end{vmatrix} = ?$

4. If  $\begin{vmatrix} p & q-y & r-z \\ p-x & q & r-z \\ p-x & q-y & r \end{vmatrix} = 0$   $\frac{p}{x} + \frac{q}{y} + \frac{r}{z} = ?$

5.  $\Delta = \begin{vmatrix} 1 & 1 & 1 \\ mC_1 & {}^{m+1}C_1 & {}^{m+2}C_1 \\ mC_2 & {}^{m+1}C_2 & {}^{m+2}C_2 \end{vmatrix} = ?$

6.  $\Delta = \begin{vmatrix} 1! & 2! & 3! \\ 2! & 3! & 4! \\ 3! & 4! & 5! \end{vmatrix} = ?$

7. If  $\Delta = \begin{vmatrix} 6i & -3i & 1 \\ 4 & 3i & -1 \\ 20 & 3 & i \end{vmatrix} = x + iy$  then  $(x, y)$  is

8. Find the value of determinant  $\Delta = \begin{vmatrix} 0 & b-a & c-a \\ a-b & 0 & c-b \\ a-c & b-c & 0 \end{vmatrix}$

9. Show that if the determinant  $\Delta = \begin{vmatrix} 3 & -2 & \sin 3\theta \\ -7 & 8 & \cos 2\theta \\ -11 & 14 & 2 \end{vmatrix} = 0$  then  $\sin \theta = 0$  or  $1/2$

10. If A, B, C are the angle of triangle then  $\Delta = \begin{vmatrix} \sin^2 A & \cot A & 1 \\ \sin^2 B & \cot B & 1 \\ \sin^2 C & \cot C & 1 \end{vmatrix}$

11. The determinants  $\Delta = \begin{vmatrix} \cos(x+y) & -\sin(x+y) & \cos 2y \\ \sin x & \cos x & \sin y \\ -\cos x & \sin x & \cos y \end{vmatrix}$  is independent of x only.

12. If  $f(x) = \begin{vmatrix} 0 & x-a & x-b \\ x+a & 0 & x-c \\ x+b & x+c & 0 \end{vmatrix}$  then show that  $f(0) = 0$

13. If  $A + B + C = 0$  then prove that

$$\begin{vmatrix} 1 & \cos C & \cos B \\ \cos C & 1 & \cos A \\ \cos B & \cos A & 1 \end{vmatrix} = 0$$

14. If the co-ordinate of the vertices of an equilateral triangle with sides length 'a' are  $(x_1, y_1)$   $(x_2, y_2)$   $(x_3, y_3)$  then

$$\begin{vmatrix} x_1 & y_1 & 1 \\ x_2 & y_2 & 1 \\ x_3 & y_3 & 1 \end{vmatrix} = \frac{3a^4}{4}$$

15. If a, b, c are positive and unequal show that value of the determinant

$$\Delta = \begin{vmatrix} a & b & c \\ b & c & a \\ c & a & b \end{vmatrix} \text{ is negative}$$

16. If  $A = \begin{bmatrix} 1 & 0 \\ -1 & 0 \end{bmatrix}$  and  $B = \begin{bmatrix} 0 & 1 \\ 1 & 0 \end{bmatrix}$  then prove  $AB = \begin{bmatrix} 0 & 1 \\ -1 & 0 \end{bmatrix}$  and  $BA = \begin{bmatrix} 0 & -1 \\ 1 & 0 \end{bmatrix}$  and  $AB \neq BA$ .

17. If  $A = \begin{bmatrix} 2 & 0 & 1 \\ 2 & 1 & 3 \\ 1 & -1 & 0 \end{bmatrix}$  then find  $A^2 - 5A + 4I$  and hence find matrix such that  $A^2 - 5A + 4I + X = 0$

18. If  $A = \begin{bmatrix} \cos \alpha & -\sin \alpha \\ \sin \alpha & \cos \alpha \end{bmatrix}$  then for what value of  $\alpha$ , A is an identity.

19. Using ERT, elementary row operation  $A = \begin{bmatrix} 6 & 5 \\ 5 & 4 \end{bmatrix}$  find  $A^{-1}$

20. Using matrix solve the following system equation

$$8x + 4y + 3z = 18$$

$$2x + y + z = 5$$

$$x + 2y + z = 5$$