



**SARASWATI VIDYA MANDIR SR. SEC. SCHOOL**  
**SECTOR-Q ALIGANJ LUCKNOW-226024**



**Class:- XII**

**Sub:- Hindi**

**Summer Holiday Homework:- 2023-2024**

**प्रोजेक्ट वर्क (कार्य-योजना)**

1. "अन्तर्राष्ट्रीय योग दिवस" पर एक फीचर लेखन लिखिए।
2. स्वतंत्रता संग्राम सेनानियों के नाम चित्र, विवरण सहित लिखिए।
3. एक प्रेरक-प्रसंग (लघुकथा) लिखिए।
4. 'सूर्यकान्त त्रिपाठी 'निराला' और 'धर्मवीर भारती' का चित्र-सहित जीवन परिचय लिखिए।
5. "हताशा में आशा की किरण युवा" पर एक आलेख लिखिए।
6. यात्रा वृत्तान्त-आप कहीं घूमने गये हैं। तो वहाँ का 'यात्रा-वृत्तान्त' चित्र सहित लिखिए।

**नोट:- निम्नांकित प्रश्नों के उत्तर व्याकरण कॉपी में लिखिए।**

1. रिपोर्ट (प्रतिवेदन) लेखन- अपने मोहल्ले में हुई चोरी की वारदात पर एक रिपोर्ट।
2. पत्र लेखन:-
  1. अपने क्षेत्र के पेड़-पौधों के अनियंत्रित कटाव को रोकने के लिए अपने जिलाधिकारियों को एक प्रार्थना पत्र लिखिए।
  2. अपने नगर-विकास प्राधिकरण के सचिव को अपनी कॉलोनी के विकास के लिए पत्र लिखिए।
3. अनुच्छेद लेखन:-
  1. मिट्टी तेरे रूप अनेक।
  2. भारतीय नारी की दोहरी भूमिका।
4. फीचर लेखन:-
  1. मेरा देश और मेरा कर्तव्य।
  2. बेरोजगारी: एक गम्भीर समस्या।
5. प्रतिदिन एक पेज सुलेख लिखिए। (सुलेख कार्य टेस्ट कॉपी पर लिखें।)



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**Class:- XII**

**Sub:- English**

**Summer Holiday Homework:- 2023-2024**

1. Prepare any one topic for ASL Speech.
2. Write speech/topic of ASL on Punch sheet and decorate it. Prepare a file of it.
3. Draft any one poster on Chart paper on any social Awareness theme.
4. Write any quotation on punch sheet and colour it.
5. Learn Question Answers of Chapter
  - (i) The Last Lesson (Flamingo)
  - (ii) Lost Spring (Flamingo)
  - (iii) Deep Water (Flamingo)
6. Learn Poetic Devices of
  - Poem 1. My Mother at 66
  2. Keeping Quiet
7. Read Chapter
  1. The Third Level
  2. The Tiger King

With correct pronunciation and fluency.
8. Prepare one topic for ASL Speech in correct pronunciation and record it in your phone for Board ASL.



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**Class:- XII**

**Sub:- Maths**

**Summer Holiday Homework:- 2023-2024**

**Q.1 Prove that**

$$\tan^{-1} \left\{ \frac{\sqrt{1+\cos x} + \sqrt{1-\cos x}}{\sqrt{1+\cos x} - \sqrt{1-\cos x}} \right\} = \frac{\pi}{4} - \frac{x}{2}$$

**Q.2 Simplify:-**

(i)  $\sin^{-1} \left( \frac{\sin x + \cos x}{\sqrt{2}} \right), \frac{\pi}{4} < x < \frac{5\pi}{4}$

(ii)  $\cos^{-1} \left( \frac{\sin x + \cos x}{\sqrt{2}} \right), \frac{5\pi}{4} < x < \frac{9\pi}{4}$

**Q.3 Find a matrix x such that 2A+ B+X = 0**

Where  $A = \begin{bmatrix} -1 & 2 \\ 3 & 4 \end{bmatrix}$  and  $B = \begin{bmatrix} -3 & -2 \\ 1 & 3 \end{bmatrix}$

**Q.4 Find X & Y, if X+Y =  $\begin{bmatrix} 7 & 0 \\ 2 & 5 \end{bmatrix}$  and X-Y =  $\begin{bmatrix} 3 & 0 \\ 0 & 3 \end{bmatrix}$**

**Q.5 Find  $\frac{dy}{dx}$**

(i)  $\cos^{-1} \left( \frac{1-x^2}{1+x^2} \right)$

(ii)  $\sin^{-1} \left( \frac{1-x^2}{1+x^2} \right)$

(iii)  $\cos^{-1} \left( \frac{2x}{1+x^2} \right)$

(iv)  $\sec^{-1} \left( \frac{1}{2x^2-1} \right)$

(v)  $\tan^{-1} \sqrt{\frac{1-\cos x}{1+\cos x}}$

(vi)  $\tan^{-1} \left( \frac{\cos x}{1+\sin x} \right)$

(vii)  $\tan^{-1} (\sec x + \tan x)$

(vii)  $\sin^{-1} \left( \frac{2^x+1}{1+4^x} \right)$

**Q.6 Y = log ( $\sqrt{x} + \frac{1}{\sqrt{x}}$ )**

Prove that  $\frac{dy}{dx} = \frac{x-1}{2x(x+1)}$

**Q.7 Y =  $\sqrt{x+1} + \sqrt{x-1}$**

Prove that  $\sqrt{x^2-1} \frac{dy}{dx} = \frac{1}{2}y$

**Q.8 Y =  $\frac{1}{2} \log \left( \frac{1-\cos 2x}{1+\cos 2x} \right)$**

Prove that  $\frac{dy}{dx} = 2 \operatorname{cosec} 2x$

**Q.9**  $Y = \log \{ \sqrt{x-1} - \sqrt{x+1} \}$

Show that  $\frac{dy}{dx} = \frac{-1}{2\sqrt{x^2-1}}$

**Q.10**  $Y = \log \sqrt{\frac{1+\tan x}{1-\tan x}}$

Prove that  $\frac{dy}{dx} = \sec 2x$

**Q.11** If  $f(x) = \sqrt{\tan \sqrt{x}}$

Find  $f^{-1} \left( \frac{\pi^2}{16} \right)$

**Q.12**  $\log(x^2 + y^2) = 2 \tan^{-1} \left( \frac{y}{x} \right)$

Show that  $\frac{dy}{dx} = \frac{x+y}{x-y}$

**Q.13** If  $\cos^{-1} \left( \frac{x^2-y^2}{x^2+y^2} \right) = \tan^{-1} a$

Prove that  $\frac{dy}{dx} = \frac{y}{x}$

**Q.14**  $\sqrt{1-x^6} + \sqrt{1-y^6} = a(x^3 - y^3)$

Prove that  $\frac{dy}{dx} = \frac{x^2}{y^2} \sqrt{\frac{1-y^6}{1-x^6}}$

**Q.15**  $\sin(xy) + \frac{y}{x} = x^2 - y^2$ , Find  $\frac{dy}{dx}$

**Q.16**  $\cos y = x \cos(a+y)$

Prove that  $\frac{dy}{dx} = \frac{\cos^2(a+y)}{\sin a}$

**Q.17**  $e^x + e^y = e^{x+y}$

Prove that  $\frac{dy}{dx} + e^{y-x} = 0$

**Q.18**  $\sec \left( \frac{x+y}{x-y} \right) = a$

Prove that  $\frac{dy}{dx} = \frac{y}{x}$

**Q.19**  $y\sqrt{x^2+1} = \log(\sqrt{x^2+1} - x)$

Show that  $(x^2+1) \frac{dy}{dx} + xy + 1 = 0$

**Q.20** If  $x^m y^n = (x+y)$

Prove that  $\frac{dy}{dx} = \frac{y}{x}$

**Q.21**  $e^{x+y} - x = 0$       Prove that  $\frac{dy}{dx} = \frac{1-x}{x}$

**Q.22**  $Y = x \sin y$

$$\frac{dy}{dx} = \frac{y}{x(1 - x \cos y)}$$

**Q.23**  $e^y = y^x$

Prove that  $\frac{dy}{dx} = \frac{(\log y)^2}{(\log y - 1)}$

**Q.24**  $x = a(1 - \cos \theta)$ ,  $y = a(\theta + \sin \theta)$

Find  $\left(\frac{dy}{dx}\right)_{\theta = \frac{\pi}{2}} = ?$

**Q.25**  $y = x^3 \log x$

Prove that  $\frac{d^4 y}{dx^4} = \frac{6}{x}$

**Q.26**  $y = e^x (\sin x + \cos x)$

Prove that  $\frac{d^2 y}{dx^2} - 2 \frac{dy}{dx} + 2y = 0$

**Holiday Homework**  
**Biology**  
**Class 12**

1. Write the contribution of following scientists in the field of biology
  - Dr. Hargovind Khurana
  - Dr. Jagdish Chandra Basu
  - Dr Prafful Chandra Ray
2. Read chapter 3, 4, and 5 and make 40 questions answers from each chapter.
3. Draw the diagram of following and write the function of labelled parts:
  - Microsporengia
  - Pollen grain
  - Anatropus ovule
  - Female gametophyte
  - Dicot and monocot embryo
  - Seminiferous tubule
  - Sperm
  - Ovary
  - Implantation of blastosyst
  - Menstrual cycle
4. Make a investigatory project on any topic from your syllabus
5. Prepare a model based on Biotechnology.
6. Prepare practical file of given specimen:
  - a. pollination by-
    - wind
    - insects
    - birds.
  - b. T.S. of-
    - Testis
    - Ovary
    - Blastula
  - c. Ascaris
  - d. Entamoeba Historica



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**Class:- XII**

**Sub:- Chemistry**

**Summer Holiday Homework:- 2023-2024**

**Q1. Write the chemical Reaction for the following named Reactions:**

- a. Wurtz Reaction
- b. Fitting Reaction
- c. Wurtz Fitting Reaction
- d. Sandmeyer's Reaction
- e. Reimer Tiemann Reaction
- f. Kolbe's Reaction
- g. Williamson's Synthesis
- h. Aldol Condensation
- i. Cannizaro Reaction
- j. Wolf kishner Reduction
- k. Clemmenson's Reduction
- l. Gabriel Phthalimide Synthesis
- m. Hoffmann 's Bromamide Reaction
- n. Carbylamine Reaction
- o. Gattermann Koch Reaction
- p. Schotton Baumann Reaction
- q. Friedel Craft Alkylolation
- r. Friedel Craft Acylation

**Q2. Write the structure & IUPAC name of the following compound:**

- a. Aspirin
- b. Oil of Wintergreen
- c. Salicylic Acid
- d. Salicylaldehyde
- e. Anisole
- f. Aniline
- g. Acetanilide
- h. Toluene
- i. Acetophenone
- j. Picric Acid
- k. O-cresol
- l. Benzophenone
- m. Diphenyl
- n. D.D.T

**Q3. Do atleast 10 numerical of previous year of Chapter Solutions and Electrochemistry**

**Q4. Make a project on any one topic on A4 size paper atleast 10 pages including mind map of reactions.**

- a. Alcohols
- b. Phenols
- c. Ethers
- d. Aldehyde
- e. Ketones
- f. Carboxylic Acid
- g. Haloalkanes
- h. Haloarenes
- i. Alkanamines
- j. Arylamines







# **SARASWATI VIDYA MANDIR SR. SEC. SCHOOL** **SECTOR-Q ALIGANJ LUCKNOW-226024**



**Class:- XII**

**Sub:- Economics**

## **Summer Holiday Homework:- 2023-2024**

**Q.1** Write the important dates of Chapter- Indian Economy on the Eve of Independence and Indian Economy (1950-90).

**Q.2** Write 50 Particulars/Item included or not included in national income with reasons.

Like

Particular/Items	Included or Not Included	Reason
Example:- Service of a house wife	Not included	It is difficult to determine the value of Their services in monetary term.

### **Q.3 Fill in the Blanks.**

**(1) Identify the missing terms in the following equations.**

(i)  $NNP_{FC} = NNP_{MP} - \underline{\hspace{2cm}}$ .

(ii)  $\underline{\hspace{2cm}} = \text{National Income} - \text{Domestic Income}$ .

(iii)  $NDP_{FC} = \underline{\hspace{2cm}} - \text{Depreciation}$ .

(iv)  $GDP_{FC} = \underline{\hspace{2cm}} + NDP_{FC}$

(v)  $\underline{\hspace{2cm}} = NDP_{MP} + \text{Depreciation} + \text{NFIA}$ .

**(2) Fill in the blanks using > , < or = symbol for the following situations:**

Situation	Result
(i) $\text{NFIA} = 0$	: National Income $\underline{\hspace{1cm}}$ Domestic Income.
(ii) Subsidies > Indirect Taxes	: $GDP_{FC} \underline{\hspace{1cm}} GDP_{MP}$
(iii) Factor income to rest of the world > Factor income from rest of the world	: $NNP_{FC} \underline{\hspace{1cm}} NDP_{FC}$
(iv) $\text{NIT} = 0$	: $GDP_{FC} \underline{\hspace{1cm}} GDP_{MP}$
(v) -ve NFIA	: $GDP_{FC} \underline{\hspace{1cm}} GNP_{FC}$





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**Class:- XII**

**Sub:- Accountancy**

**Summer Holiday Homework:- 2023-2024**

**Accountancy**

Write formula of Int on Drawing, Int on Cap, Int on loan,  
Commission.

Format of P/L Appropriation A/C

Do Q. of P/C App. A/C & Partner's Cap A/C

**Business Studies**

- Classification of Bank
- Types of Bank Account
- Function of Bank.
- Meaning of Management, write the function of Management &  
Apply function of Management in your family function with detail.



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**Class:- XII**

**Sub:- Computer Science**

**Summer Holiday Homework:- 2023-2024**

SECTION A	
1.	State True or False "Variable declaration is implicit in Python."
2.	Which of the following is an invalid datatype in Python? (a) Set (b) None (c) Integer (d) Real
3.	Given the following dictionaries  <pre>dict_exam={"Exam":"AISSCE", "Year":2023} dict_result={"Total":500, "Pass_Marks":165}</pre> Which statement will merge the contents of both dictionaries? a. dict_exam.update(dict_result) b. dict_exam + dict_result c. dict_exam.add(dict_result) d. dict_exam.merge(dict_result)
4.	Consider the given expression: <pre>not True and False or True</pre> Which of the following will be correct output if the given expression is evaluated?  (a) True (b) False (c) NONE (d) NULL
5.	Select the correct output of the code: <pre>a = "Year 2022 at All the best"</pre>

6	<pre>a = a.split('2') b = a[0] + ". " + a[1] + ". " + a[3] print (b)</pre> <p>(a) Year . 0. at All the best  (b) Year 0. at All the best  (c) Year . 022. at All the best  (d) Year . 0. at all the best</p>	
7	<p>Write short notes on</p> <ol style="list-style-type: none"> <li>1. Modem</li> <li>2. Arphanet</li> </ol>	
8	<p><b>Differentiate Between Bridge &amp; Gateway</b></p>	
9	<p><b>Differentiate Between Internet &amp; Intranet</b></p>	
10	<p><b>Differentiate Between Hub &amp; Switch</b></p>	
11	<p>What is PAN Explain with figure</p>	
12	<p>Explain Different Types of Network</p>	
13	<p><b>Explain Guided &amp; Unguided Media</b></p>	
14	<p><b>What is Switching Explain its type</b></p>	
16	<p>Fill in the blank:  _____ is a communication methodology designed to deliver both voice and multimedia communications over Internet protocol.</p> <p>(a) VoIP            (b) SMTP            (c) PPP            (d)HTTP</p>	
17	<p>What will the following expression be evaluated to in Python?  <pre>print(15.0 / 4 + (8 + 3.0))</pre></p> <p>(a) 14.75            (b)14.0            (c) 15            (d) 15.5</p>	

18	<p>Write the output of the following program</p> <pre>def fun(hello , n=2):     print(hello * n) fun('world') fun('honest',3)</pre>	
19.	<p>Write the output of the following program</p> <pre>a=45 def display():     global a     print(a)     a=10 display() print(a)</pre>	
20	<p>Write a program in python using function to input any string and check it is palindrome or not</p>	
21	<p>Rao has written a code to input a number and check whether it is prime or not. His code is having errors. Rewrite the correct code and underline the corrections made.</p> <pre>def prime():     n=int(input("Enter number to check :: "))     for i in range (2, n//2):         if n%i=0:             print("Number is not prime \n")             break         else:             print("Number is prime \n')</pre>	
22.	<p>(a) Write two points of difference between Circuit Switching and Packet Switching.</p> <p>(b)Write two points of difference between XML and HTML.</p>	

23.	<p>(a) Given is a Python string declaration:</p> <pre>myexam="@@CBSE Examination 2022@@"</pre> <p>Write the output of: <code>print(myexam[::-2])</code></p> <p>(b) Write the output of the code given below:</p> <pre>my_dict = {"name": "Aman", "age": 26} my_dict['age'] = 27 my_dict['address'] = "Delhi" print(my_dict.items())</pre>	
24.	<p>(a) Write the full forms of the following: (i) SMTP (ii) PPP</p> <p>(b) What is the use of TELNET?</p>	
25.	<p>(a) Predict the output of the Python code given below:</p> <pre>def Diff(N1,N2):     if N1&gt;N2:         return N1-N2     else:         return N2-N1  NUM= [10,23,14,54,32] for CNT in range (4,0,-1):     A=NUM[CNT]     B=NUM[CNT-1]     print(Diff(A,B), '#', end=' ')</pre> <p>(b) Predict the output of the Python code given below:</p> <pre>tuple1 = (11, 22, 33, 44, 55 ,66) list1 =list(tuple1) new_list = [] for i in list1:     if i%2==0:         new_list.append(i) new_tuple = tuple(new_list) print(new_tuple)</pre>	







**SARASWATI VIDYA MANDIR SR. SEC. SCHOOL**  
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**Class:- XII**

**Sub:- Physical Education**

**Summer Holiday Homework:- 2023-2024**

**Make a Project file on yoga (Punch File)**

**Contents-**

**\* Meaning of Yoga**

**\* Elements of Yoga**

**\* 5 sitting Asanas (Name of Asana, Figure, Process , Benefits)**

**\* 5 standing Asanas. " "**

**\* 5 laying Asanas. " "**