



# JAMDAGNI PUBLIC SCHOOL

Laksar Haridwar

## SUMMER HOLIDAY HOMEWORK

CLASS XII C (SCIENCE STREAM)  
(2024-25)

**“Learning should be joyful and full of excitement. It’s life’s greatest adventure an illustrated adventure into the minds of the noble and the learned.”**

Dear Parent,

Summer holidays present a unique opportunity to children to rejuvenate themselves, enhance their knowledge and unearth the reservoir of talent and hidden potential that they carry within themselves. Summer is indubitably a time to enjoy the bounties of nature and take on the essential task of self-discovery and inner enrichment. Using the invaluable gift of time in a productive and fruitful manner shall help learners grow into skilled, confident, mature and responsible individuals.

The school is committed towards furnishing students with expansive horizons of physical and intellectual growth, along with socio-emotional advancement. We believe that through the thoughtfully curated almanac of experiential and inter-disciplinary projects, students shall develop an innate sense of joy and veneration towards learning. In addition, independent work and group activities assigned to students shall help in the inculcation of crucial life skills such as critical thinking, problem solving, communication skills and empathy in them. The holiday homework to students shall also be evaluated as part of their internal assessment.

Keeping in view the importance of these marks, please encourage your ward to attempt these projects with sincerity, diligence and dedication and earn remarkable grades when school reopens in June 2024.

Hoping to see all our children hale and hearty.

With best wishes.

Principal  
JPS Laksar.



# **ENGLISH**

## **1.CHILD LABOUR IN INDIA**

“Child labour perpetuates poverty, unemployment, illiteracy, population growth and other social problems.”  
Kailash Satyarthi

You have studied the lesson ‘Lost Spring’ by Anees Jung. It deals with child labour in India. Based on your understanding of the lesson and the problem it mentions, make a project titled ‘CHILD LABOUR IN INDIA’

Include the following sub-headings:

Causes of child labour

Effects on the social environment

Laws on child labour

National child labour policies & schemes

Prevention and elimination of child labour

Industries employing children.

2. Make a case study (800-1000 words) on any 1 industry that employs child labour. Furnish all relevant details and statistics. Attach 3-4 pictures.

3. Learn all syllabus of Pre-mid term for exam.

## **4.ART- INTEGRATED ACTIVITY**

Write a script of the chapter ‘Lost Spring’ in dialogue form.

DATE OF SUBMISSION: 26th JUNE 2024

# **INFORMATICS PRACTICES**

Ques1 - Prepare a PowerPoint presentation on Internet and Web- WWW , web servers, URLs ,Web site, Web Sites, Web page, Components and types.

Ques 2- Make a list of 15 domain names(ID) , their Affiliation and Remarks. You can use A4 sheet.

- Maximum - 30 slides
- Minimum- 25 slides
- Font size-12, Alignment - justify, Fontstyle- Times New Roman
- Content of the Slide should be short and to the point . Keep the text to a minimum.
- First page must contain - Name of the student , Class , Section Roll number, Topic name.
- Last page is of Thank you. Front page and last page should be Computerized and It'll be in word format.
- File must be spiral binding or stick file.

# **HINDI**

1- \*उत्तराखंड और कर्नाटक\* के खानपान एवं त्योहार\* पर प्रकाश डालते हुए परियोजना कार्य फाइल तैयार करिए।

2- \*भक्तिन और बाजार दर्शन\* पाठ को ध्यानपूर्वक पढ़कर दोनों पाठ से दस- दस बहुविकल्पीय प्रश्नों को स्वयं बनाइए और अपनी हिंदी नोटबुक में लिखिए।

3- \*फूल कराते हैं ताजगी का अहसास\* इस विषय पर एक रचनात्मक लेख लिखिए।

# **CHEMISTRY**

(i) Complete the Practical Record, covering Experiment No. 1 to 5 in accordance with the provided instructions in your lab manual.

(ii) Remember to work on the attached worksheet provided for your classwork. Access the worksheet through these links: ( use A4 sheets or assignment sheets)

<https://in.docworkspace.com/d/sIATa-dww76iygY>

[https://in.docworkspace.com/d/sIG\\_a-dww5LeysgY](https://in.docworkspace.com/d/sIG_a-dww5LeysgY)

(iii) Solve numerical problems based on Chemical Kinetics which is given in your class work note book.

## PHYSICS

1. Write and perform the given below activities in your Physics practical notebook.

Activity 1. To assemble a household circuit comprising three bulbs, three (on/off) switches, a fuse and a power source.

Activity 2. To assemble the components of a given electrical circuit.

2. Solve the given chapter based assignment in your assignment notebook.

## MATHEMATICS

ASSIGNMENT NO: 01

	SECTION-A	
1.	<b>Let <math>f : [2, \infty) \rightarrow \mathbb{R}</math> be the function defined by <math>f(x) = x^2 - 4x + 5</math>, then the range of <math>f</math> is</b>  (a) $\mathbb{R}$ (b) $[1, \infty)$ (c) $[4, \infty)$ (d) $[5, \infty)$	1
2	<b>Let <math>f : \mathbb{R} \rightarrow \mathbb{R}</math> be defined by <math>f(x) = 1/x \forall x \in \mathbb{R}</math>. Then <math>f</math> is</b>  (a) one-one    (b) onto                      (c) bijective                      (d) $f$ is not defined	1
3	<b>A relation <math>R</math> in a set <math>A</math> is called _____, if <math>(a_1, a_2) \in R</math> implies <math>(a_2, a_1) \in R</math>, for all <math>a_1, a_2 \in A</math>.</b>  (a) symmetric    (b) transitive                      (c) equivalence                      (d) non-symmetric	1
4	<b>The domain of <math>\sin^{-1}(2x)</math> is</b>  (a) $[0, 1]$ (b) $[-1, 1]$ (c) $[-1/2, 1/2]$ (d) $[-2, 2]$	1
5	<b>If <math>\sin^{-1}x + \sin^{-1}y = \pi/2</math>, then value of <math>\cos^{-1}x + \cos^{-1}y</math> is</b>  (a) $\pi/2$ (b) $\pi$ (c) 0                      (d) $2\pi/3$	1
6	<b>Find the minor of the element of second row and third column in the following determinant</b> $\begin{vmatrix} 2 & -3 & 5 \\ 6 & 0 & 4 \\ 1 & 5 & -7 \end{vmatrix}$ (a) 13                      (b) 4                      (c) 5                      (d) 0	1
7	<b>How many reflexive relations are possible in a set <math>A</math> whose <math> A  = 3</math>.</b>  (a) 63                      (b) 64                      (c) 32                      (d) 81	1
8	<b>A relation <math>R</math> in set <math>A = \{1, 2, 3\}</math> is defined as <math>R = \{(1, 1), (1, 2), (2, 2), (3, 3)\}</math>. Which of the following ordered pair in <math>R</math> shall be removed to make it an equivalence relation in <math>A</math>?</b>  a) (1, 1)                      b) (1, 2)                      c) (2, 2)                      d) (3, 3)	1

9	If for a square matrix A, $A^2 - A + I = 0$ , then $A^{-1}$ equals : (a) A (b) A+I (c) I- A (d) A-I	1
10	$\sin[\pi/3 - \sin^{-1}(-1/2)]$ is equal to (a) 1/2 (b) $1/3$ (c) -1 (d) 1	1
	<b>Section- B</b>	
11	Check whether the relation R in R defined by $R = \{(a, b) : a \leq b^3\}$ is reflexive, symmetric or transitive.	2
12	Let L be the set of all lines in XY plane and R be the relation in L defined as $R = \{(L_1, L_2) : L_1 \text{ is parallel to } L_2\}$ . Show that R is an equivalence relation. Find the set of all lines related to the line $y = 2x + 4$ .	2
13	<b>Evaluate :</b> $3\sin^{-1}\left(\frac{1}{\sqrt{2}}\right) + 2\cos^{-1}\left(\frac{\sqrt{3}}{2}\right) + \cos^{-1}(0)$ .	2
14	Check whether the relation R defined in the set $\{1, 2, 3, 4, 5, 6\}$ as $R = \{(a, b) : b = a + 1\}$ is reflexive, symmetric or transitive.	2
15	If A is a matrix of order $2 \times 3$ and B is a matrix of order $3 \times 1$ what is the order of AB ?	2
	<b>Section-c</b>	
16	If $A = \begin{pmatrix} 3 & 1 \\ -1 & 2 \end{pmatrix}$ , show that $A^2 - 5A + 7I = 0$	5
17	Show that the function $f: \mathbb{R} \rightarrow \mathbb{R}$ given by $f(x) = x^3$ is injective.	5
18	Find the number of all onto functions from the set $\{1, 2, 3, \dots, n\}$ to itself.	5
19	<b>Find the value of the following:</b> $\tan^{-1}(1) + \cos^{-1}\left(\frac{-1}{2}\right) + \sin^{-1}\left(\frac{-1}{2}\right)$	5
20	<b>Find the principal values of the following:</b> (a) $\operatorname{cosec}^{-1}(2)$ (b) $\cos^{-1}\left(\frac{-1}{2}\right)$ (c) $\tan^{-1}(-1)$ (d) $\sec^{-1}\left(\frac{2}{\sqrt{3}}\right)$	5
21	<b>Find the value of the following:</b>	5

	1. $\cos^{-1}\left(\cos\frac{13\pi}{6}\right)$	2. $\tan^{-1}\left(\tan\frac{7\pi}{6}\right)$	
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