

LOYOLA CONVENT SCHOOL

HOLIDAY HOMEWORK 2025-26 (DURGA PUJA & DIWALI)

CLASS-XI

ENGLISH:

- 1. Read any famous story book like Great expectations, The mother I never knew, The Alchemist, Train to Pakistan etc and write a Book Review. Paste pictures also.
- **2.** You are Karan Kumar/ Karuna Bajaj, a leading lawyer practising in Surat. You want to buy an independent house at City Light Road to be used as office-cum-residence. Draft an advertisement in about 50 words for the classified columns of a local newspaper. You can be contacted at 45645678.
- 3. Design a poster on the theme of "Climate change and the world in 2050".
- **4.** As Mukul / Mahima of Alps Public School, write a speech to be delivered in school assembly highlighting the importance of cleanliness suggesting that the state of cleanliness reflects the character of its citizens. (120-150 words)
- 5. "Academic excellence is the only requirement for a successful career." Write a debate either for or against the motion. (120 150 words)

[NOTE: To be done in C.W. Copy]

MATHS:

Abstract - 1:

Set: A set is a well-defined collection of objects. The objects constituting a set are elements or members of the set.

If X is a set an element x is a member of, or belongs to the set X, then this is expressed as $x \in X$.

There are two methods of representing a set.

- (a) Roster method or Tabular method &
- (b) Set-builder method

Example:

"A set of natural numbers between 1 and 25, which are divisible by 3"

The above set is expressed in two different forms:

Let A be the given set.

Roster Form: $A = \{3, 6, 9, 12, 15, 18, 21, 24\}$

Set-builder Form: $A = \{x : x = 3n, n \in \mathbb{N}, n \leq 8\}$

Different Types of Sets:

- (i) Empty Set/Void Set/Null Set
- (ii) Singleton Set
- (iii) Finite Set
- (iv) Infinite Set
- (v) Equivalent Sets
- (vi) Equal Sets
- (vii) Subset

- (viii) Disjoint Sets
- (ix) Universal Set
- (x) Power Set

Project - 1:

Write the definitions of all the sets mentioned above. Also, give your own example for each set and express the same example in both the forms (Roster Form & Set-builder Form).

Abstract - 2:

Trigonometric Functions:

Trigonometric ratios are defined for acute angles as the ratio of the sides of a right-angled triangle. The extension of trigonometric ratios to any angle in terms of radian measure (real number) are called trigonometric functions.

Trigonometric functions are also known as a **Circular Functions** can be simply defined as the functions of an angle of a triangle. It means that the relationship between the angles and sides of a triangle are given by these trig functions. The basic trigonometric functions are sine, cosine, tangent, cotangent, secant and cosecant

Project - 2:

- ❖ Draw a table to show the signs of the six trigonometric identities in all four quadrants.
- * Represent the Domain and Range of six trigonometric functions using a table.
- ❖ Draw the graph of all six trigonometric functions.
- ➤ Reflect your thoughts about these two Projects as PPT/on A4 sheets and submit by 06.10.2025. It should be like a self-assessment.
- Note: You can refer Google/ You Tube/ Any sources for better understanding but try to do the given task by self-thought.

Project – 3:

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Complete the following activities in Lab Manual Book and submit by 06.10.2025

Lab Activity - 1:

To find the no. of subsets of a given set and verify that if a set has n number of elements, then the total no. of subset is 2^n .

Lab Activity - 2:

To interpret geometrically the meaning of i = square root of (-1) and its integral powers.

Lab Activity - 3:

To prepare a model to illustrate the values of sine function and cosine functions for different angles which are multiples of $\pi/2$ and π .

Lab Activity - 4:

To distinguish between a relation and a function.

Lab Activity - 5:

To plot the graphs of $\sin x$, $\sin 2x$, $2\sin x$ and $\sin \frac{x}{2}$ using same coordinate axes.

PHYSICS:

To prepare investigatory projects on the following topics:

- Projectile motion of a body
- Gravitation
- Elastic behavior of solids
- Study loss /gain of KE/PE of a bouncing ball on different surfaces
- Simple harmonic motion
- Time period of a Simple pendulum
- Effects of friction on different bodies
- Doppler effect with different frequecies

Answer the following questions:

- 1. A ball is kicked at an angle of 30deg with the vertical. If the horizontal component of its velocity is 19.6m/s, find the maximum height and horizontal range.
- 2. A machine gun fires a bullet of mass 40g with a speed of 1200m/s. The person holding the gun can exert a maximum force of 144N on it. What is the no.of bullets that can be fired from the gun per second.
- 3. A 30kg shell is flying at 48m/s. When it explodes, it's one part of 18kg stops, while the remaining part flies on. Find the velocity of the later.
- 4. A small object placed on a turn table just slips when it is placed at a distance of 4cm from the axis of rotation. If the angular velocity of the turn table is doubled, then at what distance objects slips from the axis of rotation.
- 5. If the linear momentum of a body is increases by 50%, what will be the % increase in the kinetic energy of the body.

CHEMISTRY:

- 1. Define the terms molarity and molality and solve the Ex.Q. -1..29,1.30,1.34,1.35,1.36
- 2. Discuss the Quantum Numbers with details aspects.
- 3. State: (a) de Broglie's dual nature of electrons (b) Heisenberg 's uncertainty principle (c) Aufbaus principle (d) Pauli exclusion principle (e) Hund's rule of maximum multiplicity with details example.
- **4.** Solve Ex.Q. 2.5,2.6,2.8,2.9,2.10,2.11,2.12,2.13,2.16,2.17,2.18,2.20,2.21,2.23,2.43,2.44,2.62,2.64,2.65 & 2.67
- **5.** Define the terms: (a) Ionisation enthalpy (b) Electron gain enthalpy (c) Electronegativity. Write their trends in the modern periodic table with reason.
- **6.** Solve: 3.13,3.16,3.20,3.31,3.32,3.38 & 3.40

BIOLOGY:

A. Answer the following questions

- 1. Explain the composition of triglycerides.
- **2.** What are the gums made of? How is Fevicol different than gums?
- 3. Describe the cofactors in all the three categories with the example of each
- 4. Differentiate starch, cellulose and glycogen.
- 5. What happens when milk is converted into curd? describe from your understanding of protein.

[NOTE: To be done in classwork copy.]

B. complete the following practicals

- 1. Study and observe the following spotting
- 2. Parts of a compound microscope
- **3.** Virtual specimens /slides/, models and identifying features of amoeba, hydra, liver fluke, ascaris, leech earthworm ,prawn, silkworm, Honey Bee, snail starfish ,Shark, rohu frog, lizard, pigeon and rabbit
- 4. Mitosis in onion root tips cells and animal's cells (grasshopper) from permanent slides
- **5.** Types of inflorescence (cymose and racemose)

[NOTE: To be done in practical copy.]

COMPUTER:

- 1. Write a Python program that takes a sentence from the user, splits it into words, stores the words in a list, and prints the number of words, the list of words in reverse order, and all words that start with a vowel.
- 2. Accept five strings from the user, store them in a tuple, and then print how many of them are palindromes. Also, display the words that contain more than three vowels.
- 3. Write a Python program that accepts a sentence, splits it into words, and prints a new list containing words longer than 5 characters. Then, create a tuple of the lengths of all these words and print the average word length using a loop.
- **4.** Take marks of six subjects from the user and store them in a list. Calculate the total and percentage, assign a grade using conditional statements, and store all subjects with marks above 75 in a tuple.
- 5. Write a program that accepts a string from the user, converts all characters to lowercase, removes spaces, and then counts how many unique characters it has. Also, print all characters that appear more than once.
- **6.** Accept ten numbers from the user and store them in a list. From this list, create a tuple of prime numbers, print the highest and lowest prime number, and also print all numbers that are divisible by both 3 and 5.
- 7. Write a Python program that takes a list of words from the user, and for each word:

Print its length,

Check if it's a palindrome,

And if the length is even, store it in a tuple; otherwise, store it in a list.

Finally, print both the list and tuple.

8. Accept a list of integers from the user and perform the following:

If the number is even, convert it to a string and store it in a new list.

If the number is odd, store its square in a tuple.

Then check if the string '4' is present in the new list and print an appropriate message.

- 9. Write a program that accepts a sentence from the user, breaks it into words, and sorts the words alphabetically using nested loops (without using sort() or sorted() functions). Then print the sorted list and store the first three and last three words into a tuple.
- 10. Take a paragraph input from the user. Split it into words and store them in a list. Count and print how many words are unique. Then, using conditional statements, print whether the number of unique words is more than the number of duplicate words."

ACCOUNTANCY:

- 1 Explain the meaning of any three of the following terms:
 - 1. Full Disclosure
 - 2. Consistency
 - 3. Materiality
 - 4. Conservatism
- 2 From the following particulars, preparePetty Cash Book for the month of April, 2023:

Date	Particulars	₹
2023		
April 1	Drew for Petty Cash	5,000
April 3	Paid for postage	300
April 5	Paid telephone bill	400
April 8	Paid for cartage	140
April 9	Paid for postage	200
April 12	Paid for sundries	100
April 27	Paid for stationery	300

If the Imprest amount is₹ 5,000, show what amount the Petty Cashier would be entitled to draw in the beginning of the next month.

3 Explain and give example of each of the following accounting terms:

1. **Expenses** 2. **Drawings** 3. Gain Prepare an Accounting Equation and Balance Sheet on the following basis: Ganesh started business with cash₹ 20,000. He purchased furniture for₹ 2,000. 2. 3. He paid rent of₹ 200. He purchased goods on credit₹ 3,000. He sold goods (cost price ₹ 2,000) for ₹ 5,000 on cash. On 1st April, 2023 the position of BhanuBros., Noida was as follows: 5 Cash in Hand ₹ 6,000, Cash at Bank ₹ 25,600, Stock of Goods ₹ 9,000, Machinery ₹ 45,000, Furniture ₹ 18,000, Faruk ₹ 20,500 (Debtor), Naveen ₹ 26,000 (Debtor), Loan ₹ 50,000, Arun ₹ 6,700 (Creditor). Pass the Opening Journal entry. Enter the following transactions in the Sales Book of M/s Rajesh & Sons, Uttar Pradesh: -2023 Jan. Sold to Raman Stationery House, Uttar Pradesh:-5 50 Dozen Pencils @₹ 20 per doz 20 Dozen Pens @₹ 5 per Pen Trade Discount 10% Sold to Sharma Stationery Shop, Rampur:-8 10 Dozen Note Books @₹ 60 per doz. 15 Gross Rubbers @₹ 10 per doz. Sold old newspapers for ₹ 150 20 Sold to Iconic Stationery House, Gorakhpur for 24 Cash:-25 Dozen Pencils @₹ 22 per doz. Sold to Faruk Khan & Sons, Hyderabad:-28 10 Reams of paper @₹ 80 per Ream Discount 15% Sold old furniture to Kunal & Co., Hyderabad on 31 credit₹ 2,200 Journalise the following transactions in the books of Mukesh, Kerala: Rahul of Bikaner, Rajasthan who owed Mukesh ₹ 25,000 became insolvent and received 60 paise in a (i) rupee as full and final settlement. Mukesh owes to his landlord ₹ 10.000 as rent. GST (ii) pavable @ 6% each Charge depreciation of 10% on furniture costing ₹ (iii) 50.000. (iv) | Salaries due to employees ₹ 20,000. Sold to Sanjay goods in cash of ₹ 10,000 less 10% trade discount plus CGST and SGST @ 6% each and (v) received a net of ₹ 8,500 plus CGST and SGST. Provided interest on capital of ₹ 1,00,000 @ 10% per (vi)

Goods lost in theft ₹ 5,000, which were purchased

paying IGST @ 12% from Bikaner, Rajasthan.

(vii)

	8	Enter the following transactions in a simple Cash Book of. Lata, Delhi
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Date 2018	Particulars	Amount (Rs)
Jan. 01	Started Business with Cash	1,00,000
Jan. 02	Opened a bank account and deposited	50,000
Jan. 03	Purchased goods for cash for Rs 20,000 plus CGST and SGST @ 6% each from Kala Electricals, Delhi	
Jan. 03	Sold goods of Rs 5000 plus IGST @ 12% to Ram of Chandigarh on credit	
Jan. 05	Received from Ram	3,000
Jan. 07	Paid Rent of Rs 4000 plus CGST and SGST @ 6% each	
Jan. 10	Withdrew cash from bank	7,000
Jan. 27	Purchased furniture in Cash Rs 15000 plus CGST and SGST @ 6% each from a trader of Delhi	
Jan. 31	Paid Salaries	5,000

- 9 Explain the meaning of the following terms:
 - Assets
 - 2. Capital
 - 3. Goods
 - 4. Drawings
 - 5. Trade Receivables
- On 31^{st} March, 2023, the total assets and external liabilities were \mathbb{Z} 2,00,000 and \mathbb{Z} 6,000 respectively. During the year, the proprietor had introduced additional capital of \mathbb{Z} 20,000 and withdrawn \mathbb{Z} 12,000 for personal use. He made a profit of \mathbb{Z} 20,000 during the year. Calculate the capital as on \mathbb{Z} 1 April, 2022.
- 11 | Journalise the following transactions:
 - 1. Bought goods from Alok for₹ 2,00,000 at a trade discount of 15% and cash discount of 2%. Paid 80% amount immediately.
 - 2. Purchased goods for ₹ 20,000 from X and supplied it to Y for ₹ 26,000.
 - 3. Cash is withdrawn from bank₹ 5,000 for personal use and ₹ 25,000 for office use.
 - 4. Goods destroyed by fire: Cost Price₹ 40,000.
 - 5. Provide 20% depreciation on machinery costing₹ 50,000.
 - 6. Out of insurance paid this year,₹ 3,000 is related to next year.
 - 7. Allow₹ 5,000 as interest on capital and charge ₹ 1,000 as interest on drawings.
 - 8. Sohail who owed us₹ 25,000 was declared insolvent and a cheque of 40 paise in a₹ is received from him in full settlement.
 - 9. Paid Income Tax₹ 10,000 by cheque.
 - 10. Salary paid₹ 80,000 and Salary Outstanding ₹ 20,000.
- 12 | Mention the subsidiary books in which the following transactions are recorded along with reason thereof:
 - 1. Purchase of furniture on credit for use in shop.
 - 2. Sale of goods on credit.
 - 3. Goods returned by Debtors.
 - 4. Purchase of stock on credit.
 - 5. Providing for interest on capital to proprietor.
 - 6. Goods returned to creditors.

- 7. Bill accepted by proprietor from creditor.
- 8. Sale of goods for cash.
- From the following list of balances extracted from the books of Kumar prepare a trial balance as at 31st March, 2013. The amount required to balance should be entered as capital.

Name of Accounts	Amt (Rs.)	Name of Accounts	Amt (Rs.)
Purchases	3,64,000	Proprietor's Withdrawals	12,000
Stock on 1st April, 2012	70,000	Sundry Debtors	72,000
Sales	8,00,000	Sundry Creditors	24,000
Sundry Expenses	3,000	Bad Debts	2,000
Leasehold Premises	1,00,000	Investment @ 10%	40,000
Freehold Premises	3,60,000	Interest on Investment	4,000
Return Inwards	5,000	Long-term Borrowings	1,20,000
Furniture and Fixtures	58,000	Loan from SBI	1,60,000
Equipment	1,60,000	Interest on Loan	13,000
Repairs to Equipment	1,000	Petty Cash Account	80
Depreciation	16,000	Balance at Bank	6,920
		Stock on 31st March, 2013 (not adjusted)	92,000

Enter the following transactions in Return Outward Book of New Furniture House, Jaipur (Rajasthan) assuming CGST @ 6% and SGST @ 6% and post it into Ledger:

2023	
Nov. 7	Returned to Mahakal Furniture Store, Gandhinagar (Gujarat):
	5 Chairs @₹ 2,000 each
	1 Table for₹ 15,000
	Less: 10% Trade Discount
22	Returned 8 Chairs to Sky Furniture House, Kota (Rajasthan) @₹ 1,500 each, being not of specified quality
24	Returned one Dining Table to Jain & Co., Bikaner (Rajasthan) being not according to sample₹ 50,000
28	Allowance claimed from Good Luck Furniture Shop, Gandhinagar (Gujarat) on account of mistake in the invoice₹16,000

15 Journalise the following transactions. Post them into the ledger and prepare a trial balance.

Date	Particulars	Amt (Rs.)
2013		
Apr 1	Vishal started a business with cash	16,00,000
Apr 2	Deposited in bank	8,00,000
Apr 3	Goods purchased by cheque	4,80,000
Apr 5	Goods purchased from Raj	3,20,000
Apr 7	Good sold for cash	1,60,000
Apr 10	Goods sold to Rohan	4,80,000
Apr 15	Cash received from Rohan	4,60,000
	He was allowed a discount	20,000
Apr 17	Paid to charity	4,000
Apr 18	Paid to Raj	1,56,000
	Received discount from him	4,000
Apr 25	Paid salary	20,000
	Paid rent	16,000
Apr 30	Purchased furniture from vijay and paid by cheque	60,000

- 16 Show the accounting equation on the basis of the following transactions:
 - 1. Commenced business with Cash₹ 20,000; Goods ₹ 50,000 and Furniture ₹ 30,000.
 - 2. Purchased goods from Govind on Credit₹ 40,000.
 - 3. Sold goods for Cash₹ 40,000 (Costing ₹ 30,000).
 - 4. Sold goods to Sham on Credit₹ 65,000 (Costing ₹ 50,000).
 - 5. Withdrew for personal use goods costing₹ 5,000.
 - 6. Purchased typewriter for personal use of the proprietor₹ 20,000.
 - 7. Purchased chairs for office use for Cash₹ 10,000.
 - 8. Paid for printing₹ 500 and received Commission ₹ 1,200.
 - 9. Introduced fresh Capital₹ 40,000.
 - 10. Paid to Govind₹ 30,000. Columns:
- 17 | Explain the meaning of gain and profit. Distinguish between these two terms.
- 18 Pass journal entries for the following

2013	
Sept 2	Purchased an Iron safe for business for 80,000.
Sept 3	Purchased filing cabinet for office use Rs 32,000 and paid Rs 160 as cartage on it.
Sept 4	Purchased a portable typewriter Rs 64,000.
Sept 5	Purchased an electric fan for Rs 16,000.
Sept 6	Purchased a 'Horse' for business for Rs 1,20,000.
Sept 7	Purchased post cards for Rs 200, envelopes for Rs 400 and stamps for Rs 800.
Sept 8	Purchased office stationery for Rs 3,200.
Sept 15	Gave as charity-cash Rs 1,600 and goods Rs 3,200.
Sept 20	The horse bought on 6th September died, is carcass was sold for Rs 8,000.
Sept 25	Sold household furniture for Rs 80,000 and paid the money into business.
Sept 31	Paid landlord Rs 96,000 for rent. One third of the building is occupied by the proprietor for residential use.

19 Explain the following:

- 1. Full Disclosure Principle
- 2. Money Measurement Principle
- 3. Materiality Principle
- 4. Accounting Period Principle

20 From the following transactions, prepare Cash Book with Cash and Bank

2023		₹
May 1	Cash in hand	4,800
	Bank Overdraft	30,400
May2	Fresh Capital introduced	20,000
May3	Deposited into Bank	15,000
May4	Sold goods to Manoj on Credit	6,200
May 5	An amount of ₹ 4,200 due from Arvind written off as bad debts in the previous year, now recovered.	
May6	Withdrew from the bank for the payment of Life Insurance Premium	3,000
May8	Received a cheque from Manoj for ₹ 6,000 in full settlement of his account and deposited the same into the Bank.	
May10	Sold goods to Vishal on Credit.	30,000
May12	Received a cheque for ₹ 28,000 from Vishal in full settlement.	
May15	Cheque received from Vishal sent to Bank	
May18	Vishal's cheque returned by Bank dishonoured. Bank charged ₹ 25 on this cheque.	
May 20	Received a cheque of \P 6,800 from Vinayak which was endorsed to Ankit on 23 rd May.	
May 25	Withdrew cash from Bank ₹ 5,000 for paying gift to his daughter on her birthday.	
May 26	Bought goods from Mehta General Store for ₹ 10,000 on credit and they allowed us trade discount of 25%.	
May 28	Paid to Mehta General Stores in cash in full settlement	7,000
May 28	Sale of old machinery, payment received in cash ₹ 7,700.	
May 30	Paid Salary by cheque ₹ 1,500. Paid Rent in cash ₹ 2,200.	
May 31	Paid into Current Account the entire balance after retaining ₹ 5,000 at office.	

BST:

- 1: Read the chapter SOURCE OF BUSINESS FINANCE and solve the following questions: -
- What advantages does issue of debentures provide over the issue of equity shares?
- -State the characteristics of public deposits and retained earnings as methods of business finance.
- 2: COMPLETE THE PROJECT FILE OF BST ON THE ASSIGNED TOPICS AND SUBMIT IT ON 6.10.24

ECONOMICS:

1. Explain with the help of suitable graphs the different shapes of frequency curves.

In your answer, describe and illustrate the following types:

2.

Normal Curve or Symmetrical Curve Positively Skewed Curve

Negatively Skewed Curve

U-Shaped Curve"

3.

"Bi-modal Curve

J-Shaped Curve

Reverse J-Shaped Curve

Mixed Curve or Multi-modal Curve"

POLITICAL SCIENCE:

- 1. Explain the features of federalism with suitable examples from India
- 2. Discuss the significance of local government in strengthening democracy in India.
- **3.** "Federalism ensures unity in diversity." Explain with examples.
- 4. How do State Election Commissions strengthen grassroots democracy
- 5. Evaluate the challenges faced by local governments in India today

HISTORY:

- 1. Make a flow chart of the Roman empire along with its time line.
- 2. Make a flow chart of the Mongol Empire and its time line.
- 3. What do you understand by THE THREE ORDERS of the European Society? Write about each one of the Orders in 250 words.

NOTE: The TIME LINE should be written as given in the chapters of your History Text Book.

GEOGRAPHY:

- 1. Explain the monsoonal climate of India with air pressure and wind system in winter and summer season and the distribution of rainfall in India with the help of map and relevant pictures.
- 2. Write a note on any six (6) National Parks of India label it on the outline political map of India and paste the relevant pictures.
- 3. Describe the different types of vegetation (forest) of the world with the relevant pictures of trees and wildlife.
- 4. Collect information about two bird-sancturies of India and explain with the help of map and relevant pictures.

^{*}Important:-COMPLETE THE PROJECT FILE OF ECONOMICS AND SUBMIT IT ON 6.10.25

HINDI:

निम्नलिखित दिए गए विषयों पर लगभग 120 शब्दों में रचनात्मक लेख लिखिए -

- 1.जनसंचार के विविध साधन
- 2.दिया और तूफान : मानव जीवन का सत्य
- 3.लोकतंत्र में मीडिया की भूमिका
- 4. आपके विचार में एक आदर्श विद्यार्थी कैसा होना चाहिए?
- 5.यातायात के साधनों ने मनुष्य जीवन को आरामदायक बना दिया है। यदि ये साधन न होते तो मनुष्य को किन-किन परेशानियों को झेलना पड़ता?
- *. भूमिका-विचित्र कल्पना, यातायात का महत्त्व।
- *. मध्य- 1. समय और स्थान की दूरी में कमी।
- * स्विधा, प्रगति, सभ्यता, संस्कृति, 'वस्धैव क्ट्म्बकम्' की भावना का विकास।
- * अगर ये साधन न होते कूपमण्डूकता, अज्ञान, अवनित, दुःखमय जीवन, विद्या के प्रसार में बाधा, विषमताओं की वृद्धि, अन्संधानों में अवरोध।
- *उपसंहार यातायात के साधनों का भविष्य, विज्ञान का योगदान, सभ्यता और सुख का विकास।

PHYSICAL EDUCATION:

P.E. Lab Manual

- ➤ Practical-1: Fitness tests administration. (SAI Khelo India Test)
- ➤ Practical-2: Procedure for Asanas, Benefits & Contraindication for any two Asanas for each lifestyle disease.
- ➤ Practical-3: Anyone one IOA recognized Sport/Game of choice. Labelled diagram of Field & Equipment. Also mention its Rules, Terminologies & Skills.