

## ENGLISH LITERATURE

STUDENTS ARE ADVISED TO GO THROUGH THE ANALYSIS OF EVERY TEXT GIVEN BELOW AND SOLVE THE QUESTIONS WHICH FOLLOW.

### THE MERCHANT OF VENICE

#### ACT I ANALYSIS

##### SCENE I

Antonio, a Venetian merchant, complains to his friends, Salarino and Solanio, that a sadness has overtaken him and dulled his faculties, although he is at a loss to explain why. Salarino and Solanio suggest that his sadness must be due to his commercial investments, for Antonio has dispatched several trade ships to various ports. Salarino says it is impossible for Antonio not to feel sad at the thought of the perilous ocean sinking his entire investment, but Antonio assures his friends that his business ventures do not depend on the safe passage of any one ship. Solanio then declares that Antonio must be in love, but Antonio dismisses the suggestion. The three men encounter Bassanio, Antonio's kinsman, walking with two friends named Lorenzo and Gratiano. Salarino and Solanio bid Antonio farewell and depart. When Gratiano notices Antonio's unhappiness and suggests that the merchant worries too much about business, Antonio responds that he is but a player on a stage, destined to play a sad part. Gratiano warns Antonio against becoming the type of man who affects a solemn demeanor in order to gain a wise reputation, then he takes his leave with Lorenzo. Bassanio jokes that Gratiano has terribly little to say, claiming that his friend's wise remarks prove as elusive as "two grains of wheat hid in two bushels of chaff" (I.i.115–116). Antonio asks Bassanio to tell him about the clandestine love that Bassanio is harboring. In reply, Bassanio admits that although he already owes Antonio a substantial sum of money from his earlier, more extravagant days, he has fallen in love with Portia, a rich heiress from Belmont, and hopes to win her heart by holding his own with her other wealthy and powerful suitors. In order to woo Portia, however, Bassanio says he needs to borrow more money from Antonio. Antonio replies that he cannot give Bassanio another loan, as all his money is tied up in his present business ventures, but offers to guarantee any loan Bassanio can round up.

##### SCENE II

At Belmont, Portia complains to her lady-in-waiting, Nerissa, that she is weary of the world because, as her dead father's will stipulates, she cannot decide for herself whether to take a husband. Instead, Portia's various suitors must choose between three chests, one of gold, one of silver, and one of lead, in the hopes of selecting the one that contains her portrait. The man who guesses correctly will win Portia's hand in marriage, but those who guess incorrectly must swear never to marry anyone. Nerissa lists the suitors who have come to guess—a Neapolitan prince, a Palatine count, a French nobleman, an English baron, a Scottish lord, and the nephew of the duke of Saxony—and Portia criticizes their many hilarious faults. For instance, she describes the Neapolitan prince as being too fond of his horse, the Palatine count as being too serious, the Englishman as lacking any knowledge of Italian or any of the other languages Portia speaks, and the German suitor of drunkenness. Each of these suitors has left without even attempting a guess for fear of the penalty for guessing wrong. This fact relieves Portia, and both she and Nerissa

remember Bassanio, who has visited once before, as the suitor most deserving and worthy of praise. A servant enters to tell Portia that the prince of Morocco will arrive soon, news that Portia is not at all happy to hear.

### **QUESTIONS**

- I. Who is Antonio? What is the reason for his sadness?
- II. What according to Solanio were the reasons for Antonio's sadness?
- III. What was stated in Portia's father's will?
- IV. What was Portia's opinion about the other suitors?

### **PROSE**

#### **A FACE IN THE DARK- ANALYSIS**

A Face in the DarK by Ruskin Bond narrates an incident that revolves around Mr. Oliver, an Anglo-Indian teacher who taught in an English school in Shimla. He often went to Shimla which was a few kilometers away and return by evening. One day while he was returning from Shimla, it was late in the evening and he decided to take a short cut through the pine forests. He carried his torch along and moved briskly. When he was at a short distance from his school, he saw a boy sitting with his head held between his hands and sobbing silently. He asked the boy why he was sitting out there as it was not allowed for the boys to move out of the school. The boy said nothing, still sobbing strangely. Mr. Oliver asked him to lift his face up and when the boy lifted his face up, what Mr. Oliver saw, he was terrified and he started running towards his school. When he saw the watchman with his lantern, he asked him why he was running. Mr. Oliver told him that he saw a boy who had no face, i.e., no eyes, ears, or any other feature on his face. The watchman asked him if the boys face looked like it, and he raised the lantern up to his face. Mr. Oliver saw his face, no eyes, no ears and no features. At that moment the wind blew and put the lamp out.

### **QUESTION**

- I. Who was Mr. Oliver?
- II. How do we know that Mr. Oliver was not a nervous person?
- III. Whom did Mr. Oliver encounter with, in the forest?
- IV. What was the similarity between the boy and the watchman?

#### **AN ANGEL IN DISGUISE- ANALYSIS**

An Angel in disguise is written by American writer T. S. Arthur (1851). The death of an alcoholic woman in the village, leaving behind her three children is met with indifference. After her funeral, the eldest son and the second daughter are adopted by two of the villagers. But the third, and the youngest – Maggie, who has a damaged spine and is fully bed ridden as a result of a fall, gets left behind. Joe Thompson, the wheelwright of the village feels bad for Maggie and takes her home even though he knows his wife will not be happy. As expected, his wife is not too happy. Joe comforts her quoting the Bible. Next day Mrs. Thomson asks her husband how he will get rid of Maggie and he replies he will work extra to see that Maggie is send to the poorhouse. At dusk when he comes back, he is surprised to find his wife sitting by Maggie's bed side and talking to her. While having supper she asks again, what he will do with Maggie, to

which he answers that she will be taken to the poorhouse the next day. After supper, Joe sees his wife taking food to Maggie and waiting for her to finish it. Joe understands that Maggie's innocence and love has won over his wife's bitter and stony nature. Shortly his wife tells him that she would like to keep Maggie for a couple of days more. But happily, for all three of them, the 'couple of days' goes on and on and they live together as a happy family.

### **QUESTIONS**

- I. How did the mother die?
- II. How many children did she leave behind?
- III. Why was Maggie not adopted by anyone?
- IV. Who finally adopted Maggie?

## **POETRY**

### **THE HEART OF THE TREE- ANALYSIS**

"The heart of a tree", a poem Henry Cuyler Bunner is about the true beauty about nature and its elements. The main theme of this poem is "What does he plant who plants a tree?". The poet says that it's not just a tree we plant but a friend of sun and sky. And he describes the tree to be the flag of breezes free and that it as the shaft of beauty that is towering high. He says that we plant a home to heaven and for song and mother-croon of bird. This brings cool shade and tender rain and the seeds and buds of tomorrow. He says that tree is the glory of the plain and forest's heritage. And the harvest of a coming age is the joy that unborn eyes shall see. One plants a tree in love of home and loyalty. And the poem has a very beautiful ending which says that, "A nation's growth from sea to sea. Stirs in his heart who plants a tree". This means that one who plants a tree would bring blessings and that helps in the nation's growth.

### **QUESTIONS**

- I. Bring out the main theme of the poem?
- II. How are the others benefited by planting a tree?
- III. How does a small tree help in the growth of a nation?
- IV. Why does the poet describe a tree as a home to heaven?

## **TELEVISION- ANALYSIS**

Roald Dahl is one of the most prolific modern writers in English and is well known as a children's author. The poem 'Television' is a famous poem of Dahl that advises and inspires to read books instead of watching the television. This is one of the most relevant poems of our time. The poem takes a comic look at a serious problem among young children today. It warns us about the dangers of watching television excessively. TV robs our minds of the power of imagination and creativity. He advises us to read books as it will enable us to discover deeper levels of joy, find fulfillment in life and open a whole new and exciting world for us.

### **QUESTIONS**

- I. To whom is the poet addressing these words?
  - II. What according to the poet will enable us to discover deeper level of joy?
  - III. What according to poet are the harmful effects of watching television?
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## ENGLISH LANGUAGE

### I. Write a composition on any one of the following [300-350 words]:

1. A day in the life of a traffic police constable.
2. Religion has no importance in our lives today. Argue for or against the statement.
3. You have been given a chance to spend a day in the past. Which age in the history of mankind would you choose and why? Describe how you spent this day.

### II. Select one of the following :

1. Your friend has fractured his leg and has been confined to bed for a month. Write a letter to him sympathising with his plight and giving him details about the happenings in school.
2. You found a bag containing some important documents on the seat of a bus you were travelling in. The address of the owner was in the bag. Write a letter to the owner of the bag asking him how he would collect his bag and telling him how you had come across it.

### III. Fill in the blanks with the suitable words:

1. I am tired \_\_\_\_\_ doing nothing.
2. He is tired \_\_\_\_\_ his exertions.
3. Trust \_\_\_\_\_ God and do the right.
4. I cannot trust my child \_\_\_\_\_ money.
5. He says he cannot trust \_\_\_\_\_ his memory.
6. Wood is useful \_\_\_\_\_ many purposes.
7. This book is not useful \_\_\_\_\_ me.
8. Donot be vexed \_\_\_\_\_ me.
9. He is worthy \_\_\_\_\_ a medal.
10. Rana Pratap did not yield \_\_\_\_\_ Akbar.

### IV. Join the following sentences without using 'and,but,so'.

1. Arun is strong. Arun can lift a heavy suitcase up the stairs.
2. Milk is healthy. It is healthier than any other food.
3. Mohan is a good cobbler. He is the best in our town.
4. A deer doesnot run fast. A cheetah runs faster.

# MATHEMATICS

## Chapter:-Factorization

### Assignment:-1

When a polynomial is the product of two or more polynomials, each of the polynomials is called **factors**.

The method of expressing a given polynomial as a product of two or more polynomials is called **factorization**.

Example1:            Factorise:-  $a^3+a-3a^2-3$

$$=(a^3-3a^2)+(a-3)$$
$$=a^2(a-3)+(a-3)$$
$$=(a-3)(a^2+1)$$

Example2:            Factorise:-  $a^2+10a+24$

$$=a^2+6a+4a+24$$
$$=a(a+6)+4(a+6)$$
$$=(a+6)(a+4)$$

Home Work:- Factorise the given expressions.

- $8x^3-6x^2+10x$
- $3a(x^2+y^2)+6b(x^2+y^2)$
- $X^2+xy-x-y$
- $1-a-b+ab$
- $a(a-2b-c)+2bc$

## Chapter:-Expansions

### Assignment:-2

An equation which is true for all values of its variables is called **identity**.

Important identities-

1.  $(a+b)^2=a^2+2ab+b^2$

2.  $(a-b)^2=a^2-2ab+b^2$

3.  $(a+b)^3=a^3+3a^2b+3ab^2+b^3$

4.  $(a-b)^3=a^3-3a^2b+3ab^2-b^3$

$$5.(a+b+c)^2=a^2+b^2+c^2+2ab+2bc+2ca$$

$$\begin{aligned}\text{Example1- } (2a-3b)^2 &= (2a)^2 - 2 \cdot 2a \cdot 3b + (3b)^2 \\ &= 4a^2 - 12ab + 9b^2\end{aligned}$$

$$\begin{aligned}\text{Example2- } \left(3x + \frac{1}{x}\right)^2 &= (3x)^2 + 2 \cdot 3x \cdot \frac{1}{x} + \left(\frac{1}{x}\right)^2 \\ &= 9x^2 + 6 + \frac{1}{x^2}\end{aligned}$$

Home Work:- Expand the following expressions.

- $\left(3x - \frac{1}{2x}\right)^2$
- $(x+3)(x+5)$
- $(x-7)(x+9)$
- $(x-2y-z)^2$
- $(2x-3y+4z)^2$











साहित्य सागर (Short Stories)  
Ch-1. बात अठन्नी की लेखक - श्री सुदर्शन ।

कहानी के मुख्य पात्र -

1. रसीला - इंजीनियर साहब का पुराना नौकर
2. रमजान - जिला मजिस्ट्रेट का चौकीदार, रसीला का मित्र
3. शेरब सलीमुद्दीन - जिला मजिस्ट्रेट, जगत सिंह का पड़ोसी
4. जगतसिंह - इंजीनियर, रसीला के मालिक
5. दासी - शेरब साहब का दासी

श्री सुदर्शन जी की यह कहानी साप्ताहिक तथा न्याय के दोहरे स्तर पर कटाक्ष करती है। आज भी समाज में बड़े-बड़े अपराधी आजाद घूमते हैं और छोटे-छोटे अपराध करने वाले पकड़े जाते हैं और सजा काटते हैं। ऊँचे पद पर आसीन अफसर स्वयं रिश्तत से अपने घर भरते हैं तथा गरीब और विवश आम आदमी का शोषण करते हैं। ये अपराध करके ऐश-आराम का जीवन जीते हैं। इसके विपरीत गरीब व विवश इंसान साधारण से अपराध का कठोर दंड पाते हैं।

रसीला इंसि इंजीनियर जगत सिंह के यहाँ नौकर है। परिवार गाँव में है। दस रुपये महीना वेतन है। रसीला का बेटा गाँव में बीमार हो जाता है पर इलाज के लिए पैसे नहीं हैं। पेशगी माँगने पर इंजीनियर बाबू मना कर देते हैं। रसीला को उदास देख रमजान उसे पाँच रुपये उधार देता है। रसीला का बेटा ठीक हो जाने पर वह उधार के सादे चार रुपये वापस कर देता है बस अठन्नी बाकी रह जाती है। एक दिन जगतसिंह पाँच रुपये की मिर्हाई माँगवाई। रसीला ने केवल सादे चार रुपये की मिर्हाई लाया और अठन्नी बचाकर रमजान को वापस कर अपना कर्ज चुकाया। इंजीनियर बाबू को पता चल जाता है और वह ~~पुलिस~~ पुलिस को रिश्तत देकर पीटने के लिए कहता है और कबूल करवाता है। उसकी यह चोरी पकड़ी जाती है और उसे दर. महीने की सजा

ही जाती हैं। विडंबना यह है कि सजा देने वाले मजिस्ट्रेट और सजा दिलवाने वाले इंजीनियर बाबू दोनों ही पॉन और हजार की रिश्तत लेते हैं और चैन की नींद सोते हैं।

- प्र. 1. रसीला का चरित्र चित्रण करें।  
 प्र. 2. कहानी का उद्देश्य स्पष्ट करें।  
 प्र. 3. रमजान कौन रहता है? उसका परिचय देते हुए बताइये कि वह कैसा व्यक्ति है?  
 प्र. 4. 'रिश्तत' शब्द से क्या अभिप्राय है?

### पाठ 2 - 'काकी' (सियारामशरण गुप्त)

कहानी के मुख्य पात्र -

- 1) श्यामू - छोटा बालक जिसकी माँ की मृत्यु हो गयी।
2. विश्वेश्वर - श्यामू के पिता
3. मौला - सुरिव्या दासी का बेटा, श्यामू का मित्र
4. काकी - श्यामू की माँ, उमा नाम है।

सियारामशरण गुप्त द्वारा रचित कहानी 'काकी' बाल-मनोविज्ञान पर आधारित है। इस कहानी के माध्यम से लेखक ने एक मातृहीन बालक की वेदना को दिखवाया है। इस कहानी में बाल मन की कोमलता व संवेदनशीलता का बहुत ही मार्मिक चित्रण हुआ है। छोटे बच्चे अपनी माँ से अधिक लगाव रखते हैं। माँ से बिछड़ना वे सहन नहीं कर पाते हैं। माँ के बिना उनका जीवन नीरस हो जाता है, इस कहानी में श्यामू का व्यवहार भी इस स्थिति को स्पष्ट करता है। बच्चे जीवन की वास्तविकता से अपरिचित होते हैं वे यह भी नहीं समझ पाते कि मृत्यु के पश्चात् व्यक्ति पुनः धरती पर वापस नहीं आ सकता।  
 श्यामू अपनी माँ उमा को काकी कहता है।

एक दिन श्यामू सुबह उठता है तो देखा है कि काकी मूमि पर लैटी है और परिवार के सब लोग उसके चारों तरफ बैठ कर विलाप कर रहे हैं। जब काकी को शमशान ले जाने लगे तो श्यामू ने बहुत शोर मचाया। गुरुजनों तथा घर बड़ों ने विश्वास दिलाया कि उसकी काकी मामा के घर गई है परन्तु धीरे-धीरे उसे सच्चाई पता चल जाता है कि काकी ऊपर राम के पास गई है। श्यामू उदास हो आसमान की तरफ देखा करता था तथा काकी को वापस बुलाने की कल्पनाएँ करता है। आकाश में एक पतंग को उड़ते देख उसके मन में विचार आता है कि इस पतंग और डोर के माध्यम से वह काकी को आसमान से नीचे उतार लेगा, वह अपने पिता से पतंग व डोर के पैसे माँगा है लेकिन वे ताल देते हैं। श्यामू अपनी योजना मौला को बताता है और अधीरता के कारण श्यामू अपने पिता की जेब से चवन्नी निकालकर मौला को पतंग मँगवाने के लिए देता है। श्यामू ने मौला के सुझाव पर की डोर पतली है टूट सकती है तो पुनः पिता की जेब से एक रुपया चुराया और मोटी रस्सी मँगवाई कागज पर काकी लिखवा कर पतंग पर चिपका दिया। विश्वेश्वर को पता लगते ही श्यामू को थप्पड़ लगा दिया और पतंग को फाड़ दिया। जब पतंग पर काकी लिखा देखा तो उसे सारी बात समझ में आई और वह हतप्रभ रह गया। श्यामू अपनी माँ की कमी को पूरा करने के लिए चोरी करता है

— प्रश्नों के उत्तर लिखो —

1. मौला कौन है? उसका परिचय दें।
2. लेखक ने इस कहानी के माध्यम से क्या स्पष्ट करना चाहा है।
3. कहानी के माध्यम से एक बालक के जीवन में काँ माँ के स्थान को स्पष्ट करो।

## साहित्य सागर (Short poems)

Date \_\_\_\_\_  
Page \_\_\_\_\_

Ch-1 साखी (कबीर दास)

कवि परिचय - कबीर दास का जन्म सन 1398 में वाराणसी में हुआ था। इनका पालन-पोषण नीरु और नीरु नामक जुलाहा दंपति ने किया था। कबीर दास जी स्मृत-निर्गुण ब्रह्म के उपासक थे। समाजसुधारक कबीर दास का नाम भक्तिकालीन प्रमुख कवियों में लिया जाता है। वे निराकार ईश्वर की अराधना में विश्वास रखते हैं। इनकी भाषा को पंचमैत्रि विचड़ी या सधुक्कड़ी भाषा कहा जाता है। इनकी सभी रचनाएँ तीन कबीर ग्रंथावली में संकलित हैं। ये रचनाएँ तीन प्रकार की हैं - साखी, सबद, रमैनी। 'साखी' कवि के वे प्रथम अनुभव हैं जिन्हें कवि ने मनुष्य के समझ प्रस्तुत किया है। 'साखी' दोहों में सदाचार व सत्संगति के उपदेश हैं।

दोहा -

- गुरु गोविंद दीऊ खड़े कारे लागू पायें  
बलिहारी गुरु आपनो, जिन गोविंद दियो बताय ॥

व्याख्या - इस दोहे में कबीर दास जी गुरु की महत्ता स्पष्ट करते हुए कहते हैं कि गुरु का स्थान ईश्वर से भी उच्च है। वे कहते हैं कि गुरु और भगवान दोनों मेरे समझ खड़े हैं। मैं पहले किलके चरण स्पर्श करूँ? वे अपना उत्तर स्वयं ढूँढते हुए कहते हैं कि मुझे पहले गुरु के चरणों में श्रद्धा, प्रेम और भक्ति से स्वयं को न्योहवार कर देना चाहिए क्योंकि गुरु ने ही मुझे ईश्वर तक पहुँचने का मार्ग बताया है। भाव यह है कि गुरु हमारे अज्ञान को मिटाकर ज्ञान का प्रकार देते हैं जिससे हम भगवान तक पहुँच सकते हैं। अतः शिष्य के लिए गुरु का महत्व गोविंद से भी अधिक है।

- जब मैं था तब हरि नहीं, अब हरि है मैं नहीं।  
प्रेम गली अति साँकरी, तामे दो न समाही ॥

व्याख्या - इस दोहे में कबीर दास जी हमें अंकार को भावना को त्यागने का परामर्श देते हुए कहते हैं कि अंकार और ईश्वर एक स्थान पर नहीं रह सकते हैं। जब हमारे मन में "मैं" अर्थात् अहं भाव होता है तो वहाँ ईश्वर का वास नहीं होता है। अहंकारी व्यक्ति कभी भगवान को नहीं पा सकता। भगवान का अर्थ है - 'प्रेम' और ये प्रेम कभी

गली बहुत संकरी है, इसमें या तो ईश्वर प्रेम रह सकता है या अंधकार। भाव यह है कि 'अंधकार' मनुष्य का सबसे बड़ा शत्रु है इसका त्याग करके ही ईश्वर के सांनिध्य को पा सकते हैं।

उ " कौंकर पत्थर जोरि कै, मसजिद लई बनाय।

ता चदि मुल्ला बाँग दे, क्या बधरा हुआ खुदाय ॥ "

व्याख्या - प्रस्तुत दोहे में कबीर दास जी धार्मिक आंदोलनों पर करारा चोट करते हुए धर्म का दिखावा करने का विरोध करते हैं। मुसलिम समुदाय के अराधना पद्धति पर व्यंग्य करते हुए कहते हैं कि पत्थरों कंकड़ों को एकत्रित करके मस्जिद बना दी जाती है उस पर चढ़कर मोतवी बाँग देता है अर्थात् अज्ञान की आवाज देता है कबीर कहते हैं कि क्या खुदा बधरा है जो इतना चिल्लाकर बुलाना पड़ेगा - अर्थात् बड़ी-बड़ी मस्जिदें बनाना नमाज अदा करना केवल बाह्य प्रदर्शन है। हम सच्चे मन से मन में ही खुदा को याद करें तो उनका सांनिध्य प्राप्त होगा।

पू " पाहन पूजे हरि मिले, तो मैं पूजूं पहाड़।

ताते ये चाकी मली, पीस खाय संसार ॥ "

व्याख्या - इस सार्वी में हिन्दू समाज में व्याप्त मूर्ति-पूजा का खंडन किया है। कबीर मूर्ति-पूजा, माला जपना, तिलक और जोगियों का वस्त्र पहनने का विरोध करते हुए कहते हैं कि पत्थर की मूर्तियों की पूजा करने से यदि ईश्वर मिल जाते तो कवि पत्थर ही नहीं अपितु पूरे पहाड़ की पूजा करते। क्योंकि पहाड़ छोटी सी मूर्ति की अपेक्षा बहुत बड़ा है। कवि कहते हैं कि ऐसे पत्थर की पूजा से तो चक्की की पूजा करें, क्योंकि इसके द्वारा अनाज पीसकर लोग अपना पेट भर लेते हैं। अर्थात् परोपकार पूजा-पाठ में ज्यादा अच्छा है। ईश्वर हमारे मन में वास करते हैं वे कण-कण में व्याप्त हैं अतः उन्हें पाने के लिए किसी मंदिर-मस्जिद में जाने की आवश्यकता नहीं है।

इ सात सैमंद की मसि करौ, लेखनी सब बनराय।

सब धरती कागद करौ, हरि गुण लिखा न जाय ॥ "

व्याख्या - प्रस्तुत दोहे में कवि ईश्वर की महानता का वर्णन करते हुए कहते हैं कि भगवान के गुण अनन्त हैं। उनके गुणों का वर्णन करना असंभव है। वे कहते हैं कि सात समुद्रों के पल का

का स्याही के रूप में प्रयोग करें, समस्त वन की लकड़ी की लेखनी बना ले तथा सारी धरती को कागज के रूप में प्रयोग किया जाय तब भी ईश्वर के गुण नहीं लिखे जा सकते हैं। ईश्वर सर्वव्यापी तथा सर्वशक्तिमान है वे कण-कण में विराजमान है अर्थात् ईश्वर के शक्ति या महिमा को शब्दों के द्वारा बाँधा नहीं जा सकता है।

प्रश्नों के उत्तर दो-

1. 'प्रेम गति अति साँकरी' का भाव स्पष्ट करें।
2. कबीर ने जौलवी का उपहास किस प्रकार और क्यों किया?
3. गुरु और जीविदों में कवि ने किसे बड़ा बताया है? क्यों?
4. बनराय शब्द का क्या अर्थ है? कवि ने इसका प्रयोग किस अर्थ में किया है?
5. कवि ने हिन्दुओं तथा मुसलमानों को अपने दोहों द्वारा क्या संदेश दिया है?

Chapter 3- स्वर्ग बना सकते हैं (रामधारी सिंह 'दिनकर')

शब्द कवि 'दिनकर' जी का जन्म बिहार के बेगूसराय जिले में सन् 1908 में हुआ था। इनकी रचनाएँ औजपूर्ण हैं, वीर रस की प्रधानता लिए प्रेरणादायी हैं।

उत्तुत पदार्थ 'दिनकर' जी की प्रसिद्ध रचना 'कुरुक्षेत्र' से लिया गया है। महाभारत के युद्ध के बाद युधिष्ठिर आत्मगतानि व अपराध बोध से ग्रसित हो जाते हैं। वे प्रायश्चित्त की आग में जलते हुए 'मौष्म पितामह' के पास जाते हैं। वे धर्मराज को उपदेश देते हैं और कहते हैं कि लोगों में समानता लाओ तभी विश्व में शांति हो सकती है।

'मौष्म पितामह' कहते हैं - है युधिष्ठिर, यह धरती किसी की स्वरीदी हुयी दासी नहीं है अपितु इस धरती पर जन्म लेने वाले प्रत्येक व्यक्ति की हैं। इस धरती पर सभी निवासियों का जन्म समान रूप से हुआ है। सभी को खुला आसमान चाहिए, मुक्त रूप से रीशनी तथा ज्ञानरूपी प्रकाश भी पूर्ण रूप से मिलना चाहिए। सभी को खुली हवा

चाहिए। खुली हवा स्वतंत्रता का प्रतीक है। कवि चाहते हैं कि प्रत्येक मानव विकास करे और किसी प्रकार की बाधा उसके विकास को न सके। सबके अधिकार समान हो। इस प्रकार कवि मानव-मानव के बीच होने वाले भेद-भाव को मिटाना चाहते हैं।

कवि कहते हैं कि मानवता की राह सरल नहीं है। इस मार्ग पर अनेक बाधाएँ हैं। कमी-कमी तो ये बाधाएँ इतने बड़े होते हैं कि पहाड़ के समान रास्ता रोक लेते हैं।

कवि कहते हैं कि अन्धधुंध के विरुद्ध मानवता के आंदोलन का शोर तब तक कम नहीं होगा जब तक प्रकृति के साधन सबको समान रूप से उपलब्ध नहीं होंगे।

इस सन्चारि को मूलकर मनुष्य अपने स्वार्थ में लगा हुआ है उसे केवल अपनी रक्षा का भय है। ऐसे व्यक्ति परस्पर एक दूसरे पर भी संदेह करते हैं और उन्हें भय रहता है कि उनका धन छिन न जाए।

द्वारती पर भगवान का दिया इतना है कि यदि संचय का भाव न हो तो सब उसका उपयोग कर सकते हैं। अभी इतने मनुष्य पैदा नहीं हुए कि सुख कम पड़े जाए। मनुष्य जब इस बात को समझ लेगा कि सब को समान सुख मिल सकता है समानता का भाव फैल जाएगा और यह द्वारती स्वर्ग बन जाएगी।

प्रश्नों के उत्तर लिखो -

1. प्रस्तुत कविता से आपने क्या सीखा? लगभग 50 शब्दों में लिखो -
2. संसार में शांति बनाने के लिए कवि के अनुसार क्या होना चाहिए? 50 शब्दों में लिखो -
3. कवि के अनुसार द्वारती को कौन स्वर्ग बना सकता है और कैसे? कविता के आधार पर लिखो।

## **Class 9 History (1st Chapter):**

History tells us how human beings used to live in different ages. Throughout History we come across different civilisations as for example the Harappan & the Egyptian Civilisation. Sources act as the main component to reconstruct the bygone ages. Sources like Seals, the Dancing Girl etc. of this civilisation help us to understand this period. This civilisation had a quite modern town planning & drainage system where the streets were made of fire burnt bricks & the drains were covered with manholes. Two significant features of this civilisation had been The Great Granary & The Great Bath. The people were involved in trade & commerce alongwith agriculture. They used to pray to Mother Goddess & Shiva Pashupati. There are different views among the scholars as regard to the end of this civilisation.

### **Questions:**

1. Mention one source to reconstruct the history of the Harappan Civilisation.
2. State any two features of the Great Bath.
3. Beside Harappa name any one place where Granaries have been found.
4. How do we know Harappa has trade via the sea routes?
5. Mention any one feature of the bearded Man.

## **Class 9 Civics(1st Chapter):**

The Constituent Assembly was set up before independence & consisted of 385 members with the goal of framing the Constitution of India. This assembly adopted & enacted the Constitution on 26th November 1949 & it consists of 395 Articles & 12 Schedules. It also contains the Preamble which happens to be the framework of the Constitution. Indian Constitution is a written constitution which speaks about Quasi Federal Government, Fundamental Rights & Duties, Universal Adult Franchise etc.

### **Questions:**

1. Define the term Constitution
2. Why the Constituent Assembly known as Mini India?
3. State the date of the Enforcement of the Constitution.
4. Define the word Preamble.
5. Who had been the head of the Drafting Committee?

# Geography

## Ch-1, Earth as a planet

Earth, our home is the third planet from the sun, it is the only planet known to have an atmosphere containing free oxygen, oceans of water on its surface and of course, life. Earth is the fifth largest of the planets in the solar system. It is the only astronomical object known to historical viewpoint. Earth is the only place in the known universe confirmed to host life. With a radius of 3,959 miles and it's the only one known for sure to have liquid water on its surface. Earth is also unique in terms of monikers. Its surface is mostly water (about 70%) and it has moderately dense nitrogen and oxygen atmosphere that supports life, rich in iron and nickel. Earth is a dense, molten oblate sphere with a solid core and a thin outer crust. It rotates about its polar axis as it revolves around the sun. Surface pressure 101.325kPa, surface gravity 9.80665m/s sq, mean radius 6371.0km, mean density 5.514g/cm cube, mean anomaly 358.617 degree. Earth formed over 4.5 billion years ago, according to radiometric dating and other sources of evidence.

### Question:

1. How did life begin?
2. How does earth's interior work?
3. Who named the planet earth?
4. How did earth and other planets form?
5. How has life shaped earth and how has earth shaped life?
6. How old is our earth and describe its structure.

## Ch-2 (Latitude and Longitude)

Latitude and Longitude, coordinate system by means of which the position or location of any place on earth's surface can be determined. Latitudes are often referred to as parallel with east west running circles, latitude are used together with longitudes to specify the precise location of features on the surface. The parallels of latitude crossed at right angle by a series of half circles extending north and south from one pole to another are called the meridians of longitude. There are all together 180 degree latitudes, 90 degree in the northern hemisphere and 90 degree in the southern hemisphere. The latitudinal location is helpful in determining the difference in climate. The equator is the boundary line that divides the globe into northern and southern hemisphere. The grid consists of two sets of horizontal and vertical lines, which are called parallels of latitude and the meridians of longitudes. The first persons to calculate the size of the earth was Eratosthenes, he realized that earth can be divided into a basic grid of lines which would help in pinpointing a location.

### Question:

1. What do you mean by Latitude and Longitude ?
2. What do you mean by grid?
3. Which is the largest latitude?
4. What are latitude and longitude lines also called?
5. How many degrees are there in one hemisphere?
6. What is the name of the imaginary line that passes through the North Pole and the South Pole?

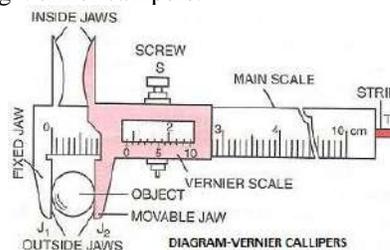
CLASS-IX  
SUBJECT-PHYSICS  
CHAPTER-1: MEASUREMENT AND EXPERIMENTATION

- Measurement-Comparison of the specified physical quantity with the known standard quantity of the equivalent nature.
- Unit-It is the quantity of a constant magnitude which is used to measure the magnitudes of other quantities of the same nature.
- Fundamental quantities-Length, Mass and Time.
- Different unit system and fundamental units:

System of unit	CGS system	MKS/SI system	FPS system
Fundamental units	Centimeter (cm) Gram (g) Second(s)	Metre (m) Kilogram (kg) Second(s)	Foot (ft) Pound (lb) Second(s)

- Bigger units of length-AU, ly, lm, ls, Parsec etc.
- Bigger units of mass-quintal, metric tonne, solar mass etc.
- Bigger units of time- lunar month, year, leap year, decade, century, millennium etc.

- Measurement of length using Vernier callipers:



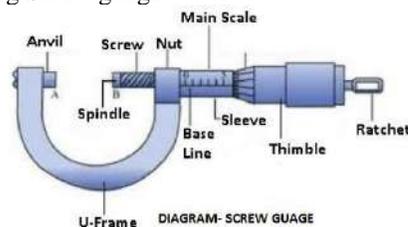
Least count (LC)-The least count of a vernier callipers is the smallest length which it can measure. It is measured by the formula,  $Least\ count(LC) = \frac{Value\ of\ one\ division\ on\ main\ scale}{Total\ number\ of\ division\ on\ vernier\ scale}$

Zero error-On considering both the jaws of the vernier calliperse, if the zero mark on the main scale is in the same line with the zero of the vernier scale then, it is said the instrument is free from zero error. But if, the zero mark of the vernier scale is on the right side of the zero mark on the main scale then it is positive zero error, otherwise negative zero error.

Total reading-It is measured by the formula,  $Total\ reading = Main\ scale\ reading + (Vernier\ scale\ division \times Least\ count)$

Corrected reading-It is measured by the formula,  $Corrected\ reading = Total\ reading - Zero\ error\ (with\ sign)$

- Measurement of length using Screw gauge:



On rotating a screw it advances linearly. The linear distance by which the screw is moved in its one complete rotation is equal to the distance between its two consecutive threads, and it is called pitch of the screw.

Least count- Least count of a screw guage is measured by the formula,

$$Least\ count(LC) = \frac{Distance\ moved\ on\ one\ complete\ rotation\ by\ the\ screw\ guage}{Total\ number\ of\ division\ on\ circular\ scale}$$

Zero error-If on touching the screw of the circular scale, the zero of the circular scale is along the baseline of the main scale, then the screw guage is said to be free from zero error. But if the zero of the circular scale is below the base line of the main scale, then it is said to have positive zero error, otherwise negative zero error.

Total reading-It is measured by the formula,  $Total\ reading = Main\ scale\ reading + (Circular\ scale\ division \times Least\ count)$

Corrected reading-It is measured by the formula,  $Corrected\ reading = Total\ reading - Zero\ error\ (with\ sign)$

- Simple pendulum- Time period of a simple pendulum is measured using formula  $T = 2\pi \sqrt{\frac{l}{g}}$

CLASS-IX  
SUBJECT-PHYSICS  
ASSIGNMENT-1  
CHAPTER-1: MEASUREMENT AND EXPERIMENTATION  
(F.M.-25)

**Question-1**

[5×1=5]

- 1 mean solar day =.....sec
2. Define the term ‘vernier constant’.
3. How is the time period of a simple pendulum affected if the length of the pendulum is made four times?
4. If LC of a screw gauge is 0.01 mm then the pitch is found to be.....mm
5. What is the proper rule for writing the units of physical quantity?

**Question-2**

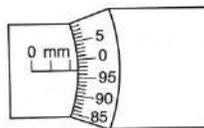
[4×2=8]

1. The distance of a star from the earth is 8.33 light minutes. What do you mean by this statement? Express the distance in metre.
2. Which one between vernier callipers and screw gauge gives most accurate result and why?
3. Name two factors on which time period of a simple pendulum does not depend.
4. (i) What is backlash error in screw gauge?  
(ii) How you can measure internal diameter of a hollow cylinder using vernier callipers?

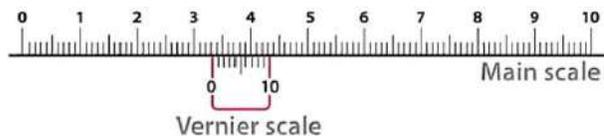
**Question-3**

[4×3=12]

1. In the following diagram pitch of the screw is 1 mm. Find: (i) the least count of screw gauge and (ii) the reading represented in the diagram.



2. While measuring the length of a rod with vernier calipers, figure below shows the position of its scales. What is the length of the rod?



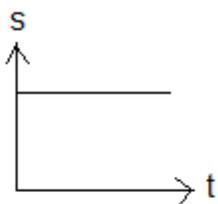
3. (i) What is seconds pendulum? (ii) A pendulum completes 2 oscillations in 5 s. If  $g = 9.8 \text{ms}^{-2}$ , find its length.
4. Draw a graph showing the variation of  $T^2$  with  $l$ . How will you use this graph to determine the value of acceleration due to gravity ( $g$ )?

\_\_\_\_\_

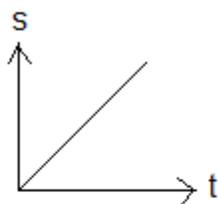
CLASS-IX  
SUBJECT-PHYSICS  
CHAPTER-2: MOTION IN ONE DIMENSION

- One dimensional motion-It is the motion of any object in a straight line.
- Distance  $>$  Displacement, Distance  $\neq 0$ , Displacement=0
- Speed=distance/time
- Velocity=displacement/time
- Speed= +ve always, velocity= +ve as well as -ve, average speed $\neq 0$ , average velocity=0
- Acceleration= change of velocity/time
- Retardation= -ve acceleration.
- Graphical representation of linear motions:

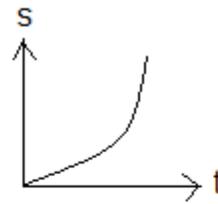
Displacement (s) vs time (t) graph



1: Stationary motion

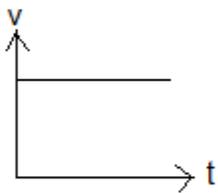


2: Object moving with uniform velocity

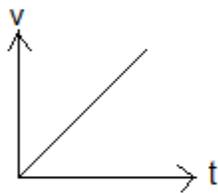


3: Object moving with non-uniform velocity

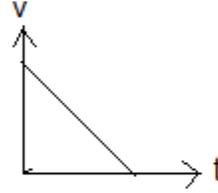
Velocity (v) vs time (t) graph



1: Stationary motion

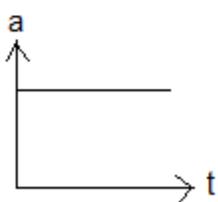


2: Object moving with uniform acceleration

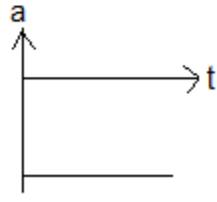


3: Object moving with uniform retardation

Acceleration (a) vs time (t) graph



1: uniform acceleration



2: uniform retardation

- Equation of motions:
  - $v = u + at$  (for retardation  $v = u - at$ ) (under gravity  $v = u + gt$ )
  - $s = ut + \frac{1}{2} at^2$  (for retardation  $s = ut - \frac{1}{2} at^2$ ) (under gravity  $s = ut + \frac{1}{2} gt^2$ )
  - $v^2 = u^2 + 2as$  (for retardation  $v^2 = u^2 - 2as$ ) (under gravity  $v^2 = u^2 + 2gs$ )

[where, u=initial velocity, v=final velocity, a=acceleration, t=time, s=displacement]

CLASS-IX  
SUBJECT-PHYSICS  
ASSIGNMENT-2  
CHAPTER-2: MOTION IN ONE DIMENSION  
(F.M.-25)

**Question-1**

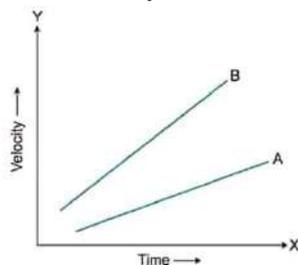
[5×1=5]

1. Which of the quantity, velocity or acceleration determines the direction of motion?
2. When is instantaneous speed the same as the average speed?
3. A body starts from rest with a uniform acceleration  $2 \text{ ms}^{-2}$ . Find the distance covered by the body in 2 s.
4. If a stone and a feather are dropped simultaneously in vacuum from the top of a tower, then which of the two will reach the ground first? Give reason.
5.  $15 \text{ m/s} = \dots\dots\dots \text{km/min}$ .

**Question-2**

[4×2=8]

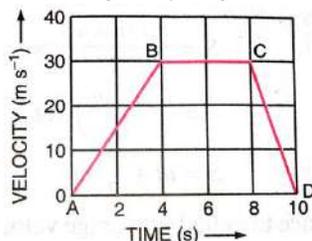
1. 'The magnitude of displacement is either equal to or less than the distance'-explain with example.
2. 'The value of g remains the same at all places on the Earth's surface'. Is the statement true? Give reason for your answer.
3. Prove the relation  $v = u + at$  graphically.
4. Figure below shows the velocity-time graphs for two cars A and B moving in the same direction. Which car has greater acceleration? Give reasons to your answer.



**Question-3**

[4×3=12]

1. A train travels with a speed of 60 km/h from station A to Station B and then comes back with a speed 80 km/h from station B to station A. Find: (i) the average speed and (ii) the average velocity of the train.
2. State how the velocity-time graph can be used to find (i) acceleration of a body, (ii) the distance travelled by the body in a given time and (iii) the displacement of the body in a given time.
3. The velocity-time graph of a moving body is given in the diagram below,



- Find : (i) the acceleration in parts AB,BC and CA  
(ii) displacement in each part AB,BC,CD and  
(iii) total displacement.

4. A car is moving in a straight line with speed 18 km/h. It is stopped in 5 s by applying the brake. Find:  
(i) the speed of car in m/s and (ii) the retardation.

## Class 9 chemistry

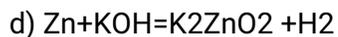
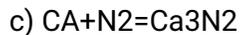
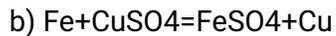
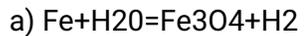
### Chapter 1: The language of chemistry

- Chemistry is a branch of science that deals with the properties of substance and matter.
- The smallest particle of a chemical element is atom. Two or more atoms combine to form molecules which represent the smallest fundamental unit of a chemical compound.
- A compound is a chemical substance composed of molecules from more than one element that form bonds between them
- An element can be defined as simple substances that exist and which cannot be broken down by chemical reaction.
- Valency can be defined as the combining capacity of an element.
- A radical is a atom or group of atom that has a positive or negative charge on it. Examples being ammonium ion, sodium ion, chloride ion, sulphate ion with the first two being positive ion and the last two being negative ion.
- A compound can be represented by a molecular formula. It is a way of representing information about the chemical properties of the atoms that constitute the compound. It denotes the type of atoms in a compound and their numbers. Example formula of sodium chloride is NaCl which means it contains 1 atomic sodium and 1 atom of chlorine.
- Chemical equation is the symbolic representation of a chemical reaction in the form of symbols and formulae, wherein the reactant entities are given on the left-hand side and the product entities on the right-hand side. A equation always needs to be balanced according to the law of conservation of mass.
- Relative molecular mass is the ratio of the average mass of one molecule of an element or compound to one twelfth of the mass of an atom of carbon-12.
- Molecular weight is the measure of the sum of the atomic weight values of the atom in a molecule. To calculate molecular weight one needs to add the atomic weight of each given element according to the molecular formula. For example molecular weight of magnesium nitride ( $Mg_3N_2$ ) =  $3 \times 24 + 2 \times 14 = 100$ , wherein at. wt of Mg is 24 and N is 14.
- Percentage composition is defined as the percentage by weight of an element in a compound. To calculate percentage composition the formula is:

$$\left( \frac{\text{atomic weight of the element}}{\text{molecular weight}} \right) \times 100$$

## HOME ASSIGNMENT

1) Balance the following equation:



2) Calculate the relative molecular mass of:

a) Hydrated copper sulphate

b) water

c) Sodium chloride

d) Calcium nitrate

e) ammonium carbonate

[Atomic weight Cu=63.5, S=32, O=16, H=1, Na=23, Cl=35.5, Ca=40, N=14, C=12]

3) Calculate the percentage composition of Nitrogen in urea ( $\text{CH}_4\text{N}_2\text{O}$ )

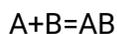
4) Calculate the percentage of sulphur in  $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$

## Chapter 2: Chemical changes and reactions

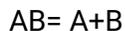
- A chemical reaction is the process of breaking the bonds of existing substances and forming new bonds to create new substances
- A chemical reaction can occur when heat, light is applied. It also occurs when compounds are mixed or kept in close contact.
- A chemical change is responsible for a chemical reaction to take place because new substances are formed. Conditions required for chemical change are: evolution of gas, change of colour, formation of precipitate, change of state.

- There are 4 types of chemical reactions:

- Combination reaction: In this type of reaction 2 or more compounds combine to form a new substance.



Decomposition reaction: In this type of reaction a compound is broken down to form new substances.



Displacement reaction: In this type of reaction in which one element replaces another element in a compound.



Double displacement reaction: In this type of reaction there is mutual exchange of positive and negative radicals between the compounds.



Double displacement reactions are of two types: neutralization and precipitation reactions. In neutralization reaction a base and acid react to form salt and water. In precipitation reaction a precipitate (insoluble solid substances) is formed.

- Reactions can also be classified based on heat formation: Reactions in which heat is given out is called exothermic reaction and the reaction where heat is given out is endothermic reaction.

## HOME ASSIGNMENT

- 1) Define chemical reaction
- 2) What are the conditions for chemical reaction to occur
- 3) Define precipitation reaction
- 4) What is endothermic reaction. Give an example
- 5) Define decomposition reaction. How is it different from Displacement reaction
- 6) What do you observe:
  - a) When lead nitrate is heated
  - b) When copper sulphate is heated
  - c) When iron is dropped in copper sulphate solution
  - d) when zinc carbonate is heated
- 7) Identify the types of reaction: (write the chemical equation first)
  - a) copper carbonate is heated to form copper oxide, carbon dioxide
  - b) ammonia reacts with hydrochloric gas to form ammonium chloride
  - c) silver nitrate reacts with sodium chloride to form silver chloride and sodium nitrate
  - d) water is electrolysed to form hydrogen and oxygen

**DREAMLAND SCHOOL**  
**CLASS IX (session 2020-21)**  
**BIOLOGY HOME WORK**

## **Chapter 1: Cell-The Unit of Life**

### **Quick Review of the chapter-**

- Cell is the structural and functional unit of life.
- Cell theory put forwarded by Schleiden and Schwann.
- Cell if of two types mainly-Plant cell and Animal cell.
- There is another category of cell division depending on the nature of nucleus, i.e., prokaryotic cell and eukaryotic cell.
- There different cell organelles in both the types of cell such as-cell membrane, cytoplasm, ,mitochondria,ER,Ribosomes ,Golgi bodies , nucleus, lysome,vacuole all of them having specific functioning.
- Some organelles such as Plastid,cel, wall are only present in plant cell. On the other hand some are only present in animal cell such as centrosome(discussed as difference between plant cell and animal cell).

### **Assignment Questions-**

A] Name the following:

- I. The power house of the cell.
- II. Carriers of gene?
- III. The protein factory of the cell.
- IV. The membrane of vacuole.
- V. Name the pigment present in chromoplast.

B] Write major function of the following structures:

- I. Centrosome.
- II. Mitochondria
- III. Nucleus.
- IV. Vacuole .

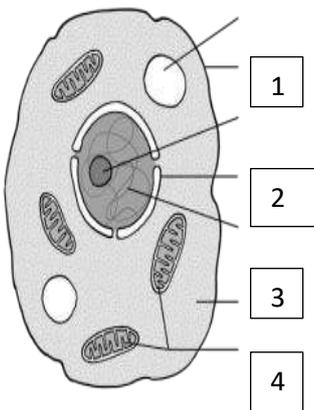
C] Do as directed:

- I. Mention the propositions of the Cell Thoery. Who prposed it.
- II. Draw and label the parts of a well-defined nucleus.

D] Give reason for the following:

- I. Ripen mango becomes yellow in colour.
- II. Mitochondria is known as the power house of the cell.
- III. Lysosome is known as the suicidal bag of the cell.

E] Follow the diagram and answer the question;



- I. Identify the cell. Give support to your answer.
- II. Name the parts labeled 1 to 4.
- III. Mention the function of parts labeled 2
- IV. Write the difference between the parts labeled 1 and 2.
- V. Write two differences between plant cell and animal cell.

F] Write difference between the following depending on the points given in brackets:

- I. RER and SER (Function).
- II. Cell membrane and cell wall.(nature)
- III. Prokaryotic cell and eukaryotic cell.(definition)
- IV. Cytoplasm and protoplasm.(location)

## **Chapter 2: Tissues-Plant and Animal tissues**

### **Quick Review of the chapter-**

- A tissue is a group of cell having same origine, performing similar type of function together.
- Tissue is majorly of two types –Plant tissue and Animal tissue.
- Plant is basically of two types' meristamatic tissue and permanent tissue.
- Meristematic tissue is of three types depending on its location-apical, laterial and intercalary meristamatic tissue.
- Each of the Meristematic tissue help in the growth of the plant and located in a specific place inside the plant body.
- Similarly permanent tissue is of two types-simple and complex permanent tissues.
- Simple permanent tissue is of three types-parenchyma, collenchyma and sclerenchyma each with specific location and function. Complex permanent tissue is of two types Xylem and phloem forming the vascular bundle of the plant.
- Animal tissue is majorly classified into four categories-Epithelial tissue, connective tissue , muscle tissue and nervous tissue-each with subdivisions and specific location and function.

### **Assignment Questions-**

A] Name the following:

- I. One involuntary muscle.
- II. The carrying tissue of plant.
- III. The cell of the nervous tissue.
- IV. Dividing tissue at the tip of the plant.
- V. The liquid connective tissue.

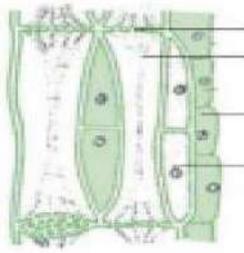
B] Mention exact location and function of the following structures:

- I. Squamous epithelial tissue.
- II. Ciliated epithelial tissue.
- III. Fibrous connective tissue.
- IV. Phloem
- V. Cambium.

C] Write difference between the following depending on the points given in brackets:

- I. Blood and lymph.(composition)
- II. Simple permanent and complex permanent tissue.(types)
- III. Tendon and ligament.(function)
- IV. Stratified epithelial tissue and cuboidal epithelial tissue.(location)
- V. Skeletal muscle and smooth muscle.(structure).

D] Follow the diagram and answer the question:



I. Identify the diagram and mention any one function of it.

II. Name the parts of the structure.

III. Name the another component of vascular bundle . Mention its composition and write its function.

E] Draw and label the following points of the neurone-cyton, axon, Dendron, dendrites, end bulb, Schwan cell, Myelin sheath, Node of Ranvier.

# Economics

## Ch-1 introduction to economics

**Wealth definition:** This definition was given by Adam Smith and his followers in (1723-90). In his book he wrote "an enquiry into the nature and causes of wealth of nation"(1776) defined economics as a science of wealth.

Q1 answer the following questions:

1. What do you mean by economic activity?
2. Who is known as father of economics.
3. Explain the Adam and Smith definition of economics.
4. What is micro economics?
5. What is macro economics?

## Ch-2 Basic concepts of economics.

**Desire:** A wish to have something.

Want is an effective Desire for a particular thing which can be satisfied by making an effort to acquire it.

Q2: answer the following question:

1. What are "goods" In economics?
2. Explain the term utility.
3. What is marginal utility?
4. Mention the characteristics of wealth.

## COMPUTER APPLICATION

### INTRODUCTION TO OOP

OOP stands for **Object-Oriented Programming**. Procedural programming is about writing procedures or methods that perform operations on the data, while object-oriented programming is about creating objects that contain both data and methods. The main aim of OOP is to bind together the data and the functions that operate on them so that no other part of the code can access this data except that function.

**Abstraction:** Abstraction is a process where you show only “relevant” data and “hide” unnecessary details of an object from the user.

**Encapsulation:** Encapsulation simply means binding object state(fields) and behavior (methods) together. If you are creating class, you are doing encapsulation.

**Inheritance:** The process by which one class acquires the properties and functionalities of another class is called inheritance. Inheritance provides the idea of reusability of code and each sub class defines only those features that are unique to it, rest of the features can be inherited from the parent class.

1. Inheritance is a process of defining a new class based on an existing class by extending its common data members and methods.
2. Inheritance allows us to reuse of code, it improves reusability in your java application.
3. The parent class is called the **base class** or **super class**. The child class that extends the base class is called the derived class or **sub class** or **child class**.

**Polymorphism** is the ability of an object to take on many forms. The most common use of polymorphism in OOP occurs when a parent class reference is used to refer to a child class object.

#### Questions:

1. What is the full form of OOP?
2. Define the OOP concept.
3. Define abstraction.
4. What is polymorphism?
5. What is sub class and super class in respect of inheritance?
6. What do you mean by encapsulation?
7. Explain inheritance.
8. Inheritance allows us to ..... of code, it improves ..... in your java application. (Fill in the blanks)

## ELEMENTARY CONCEPT OF OBJECT AND CLASSES

**Object:** is a bundle of data and its behavior (often known as methods). Objects have two characteristics: They have **states** and **behaviors**.

**Example:** Let's take an example.

**Object:** Car

**State:** Color, Brand, Weight, Model

**Behavior:** Break, Accelerate, Slow Down, Gear change. A software object replaces the characteristics and behaviours of a real world object with data members and member methods, respectively. The term instantiation is used for creating various objects. Different objects of a class have common behavior. The object of a class is represented through the attributes.

**Class** – A class can be defined as a template/blueprint that describes the behavior/state that the object of its type support. A class can be considered as a blueprint using which you can create as many objects as you like. A Class is also considered as an object factory.

### Questions:

1. Explain object with an example.
2. What is class in java?
3. How will you define a software object?
4. Mention four states (characteristics) and two methods for the following Classes:  
(a) Class Employee  
(b) Class Book

Fill in the blanks:

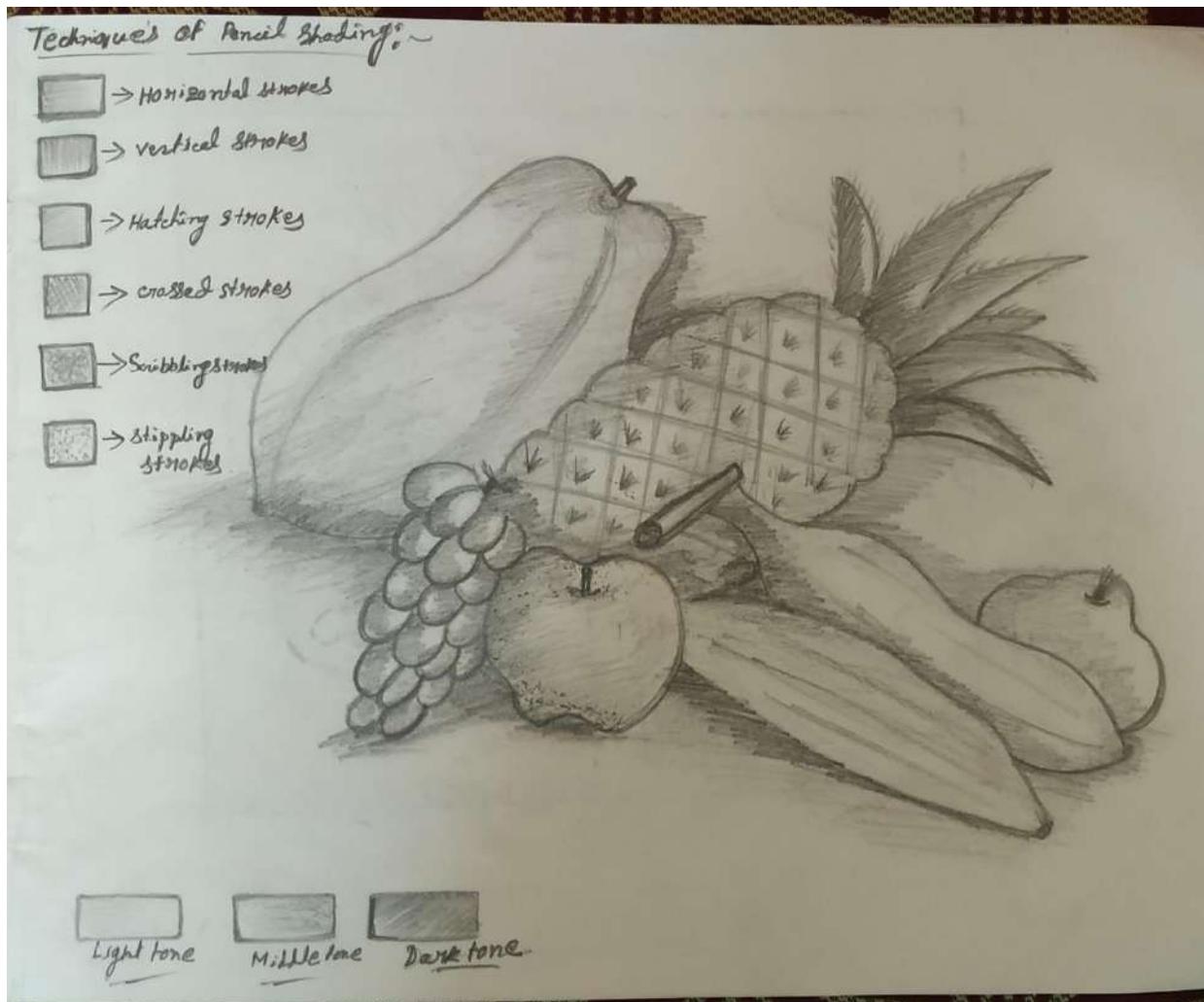
5. A ..... is also considered as an object factory.
6. The term ..... is used for creating various objects.
7. Class is a ..... of the objects.
8. The object of a ..... is represented through the attributes.

## Still Life

Still life is the art of drawing a non-living objects such as fruit, flowers and house hold items which are usually arranged on a table on shelf.

Still Life always be drawn above the eye level , It should never be below the eye level.

The portion of the drawing facing the light should be light tone and the side which is not facing the light should be dark tone.



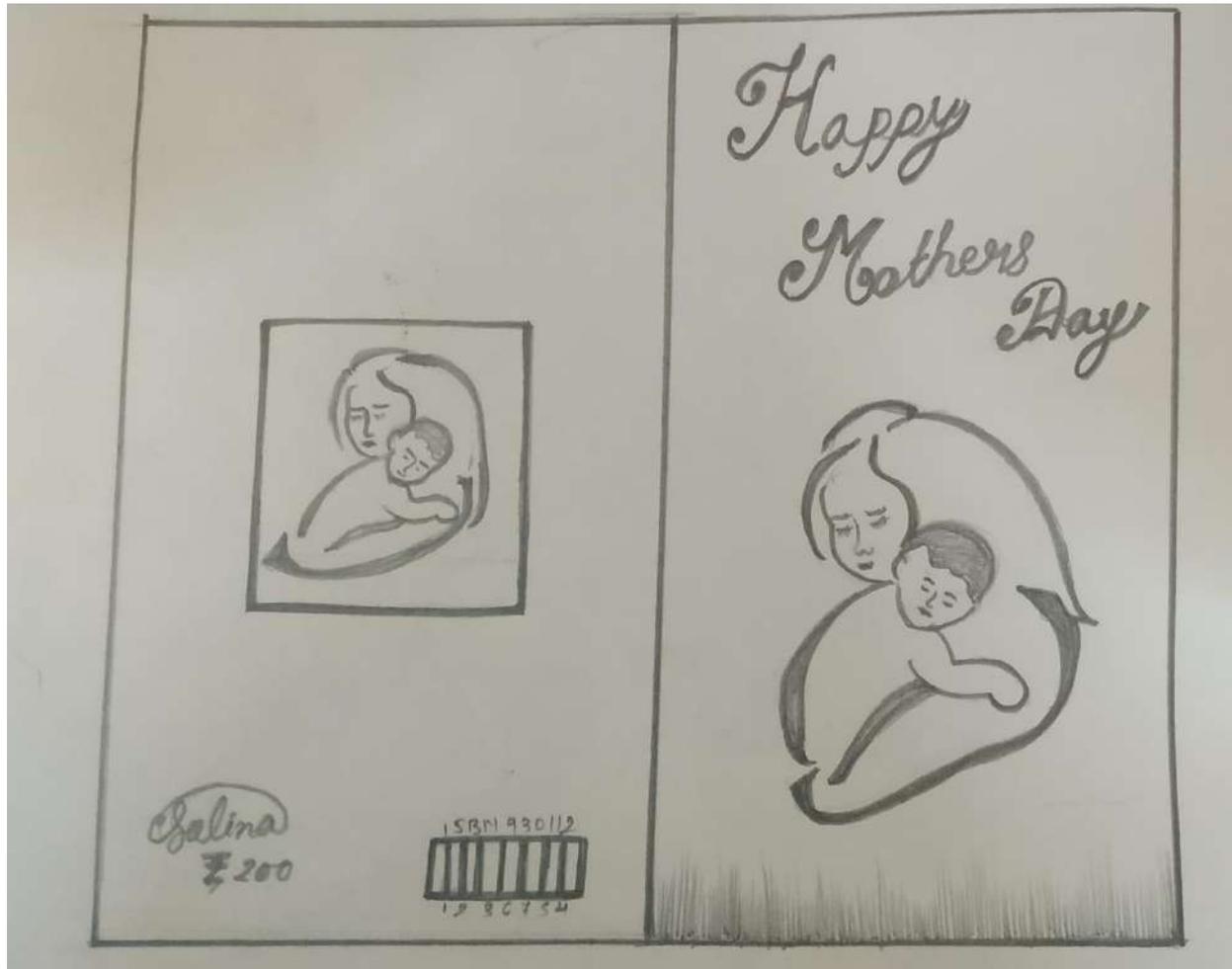
Home Assignments:-

Some vegetables and fruits are kept on the table, study the objects carefully and draw the still life using pencil shading of three shades light tone, medium tone and dark tone.

## Greetings Card

We can use greetings card in different types of occasion such as birthdays, anniversaries, different festivals, new year, mother's day, diwali, Christmas etc. Firstly, you have to draw design or lay out according to our topic. Then we have to decorate and design it in our imagination power. Example of Greetings card layout on mother's day is given below:-

ho



Home Assignment:-

1. Design a greetings card on "HAPPY BIRTHDAY" by using four colors.
2. Design a greetings card on "TEACHERS DAY" by using three colors.

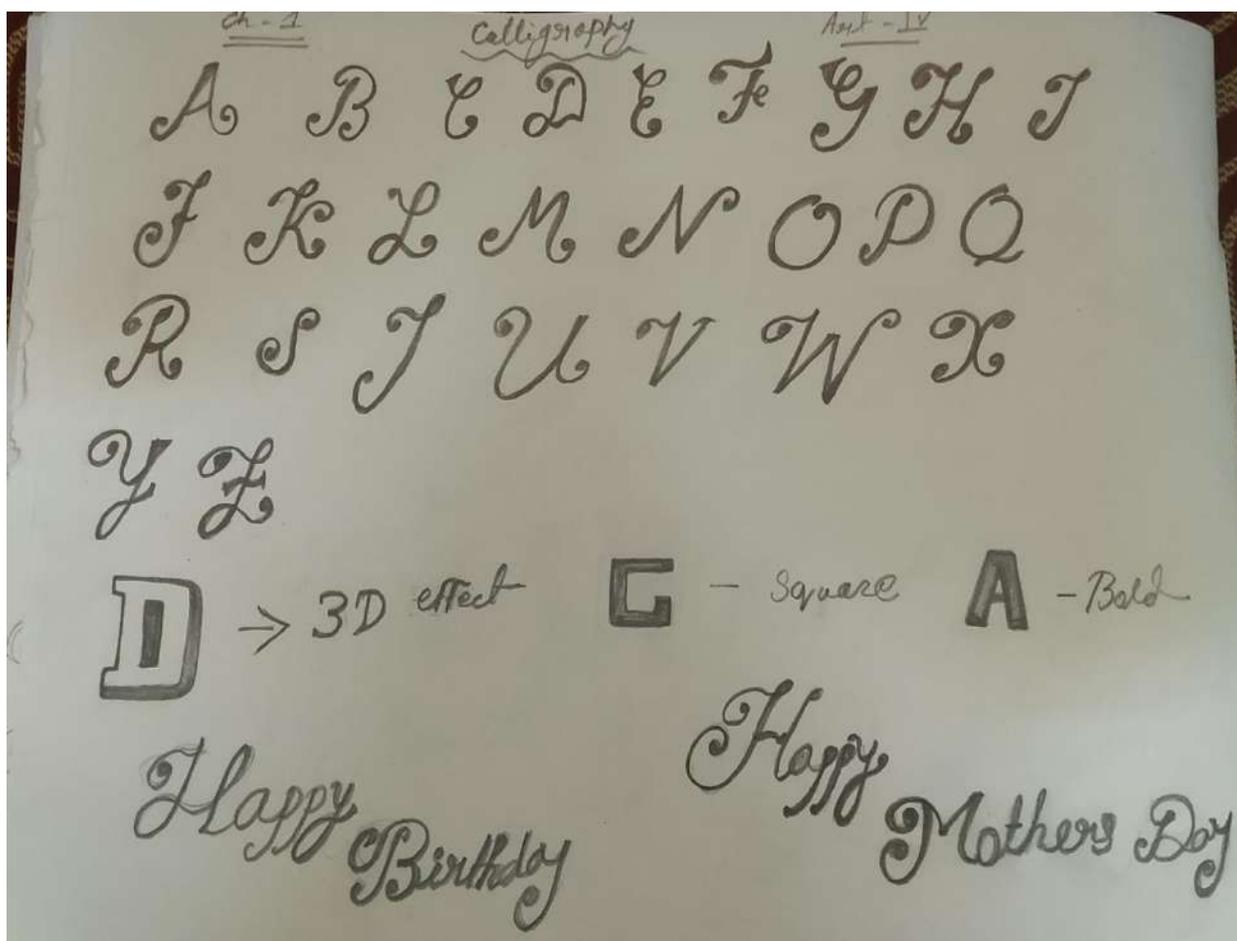
## Calligraphy

It is art of beautiful handwriting. Now a day's calligraphy is used in wedding, event invitations, poster designing book and logo designing, graphic designing etc.

The principal tools of a calligraphy are the pen and the brush. The common calligraphy pens and brushes are the quill, the dip pen and fountain pen.

Letters can be several types:-

1. Bold
2. Normal
3. Narrow
4. Italic
5. Outline etc.



Home Assignment:-

Do the calligraphy from A to Z as home work by the steps given above and do some cautation in calligraphy style.

## Class IX- EVS,CH-1 (Understanding our Environment) Notes

The use of scientific approaches to understand the complex system in which we live, the systematic study of our environment and our place in it, compared to other planets, earth's temperature are mild and relatively constant. Methods in environmental science are observation, the scientific method, quantitative reasoning. The agricultural revolution allowed human population to grow at an unprecedented rate, an area of land can support up to 500 times as many people by farming as it can by hunting and gathering, as population grew, they began to concentrate in smaller areas. These changes placed increased pressure on local environments. The agricultural revolution also changed the food we eat, the plants we grow and eat today are descended from wild plants, over the course of many generations the domesticated plants became very different from their wild ancestors. Environmental quality and social progress need to be addressed on global scale and economic improvement for world's poorest populations is possible without devastating the environment.

Q1. Why is the study of environmental science important to your everyday life?

Q2. What does the scientific method help test in environmental science?

Q3. What are some ways to increase life expectancy in environmental science?

Q4. Why social progress depends on environmental quality?

Q5. How do ecology and environmental science differ?