The Fun They Had

Q#1  What did Margie write in her diary?
Ans.  Margie wrote in her diary, “Today Tommy found a real book!”

Q#2  Had Margie ever seen a book before?
Ans.  No, Margie had never seen a book before.

Q#3  What things about the book did she find strange?
Ans.  She found many strange things about the book. It was a very old book. The stories were printed on paper. It had yellow and crinkly pages in which the words stood still. When the pages were turned back, it had the same words on it that it had when they were read for the first time.

Q#4  What do you think telebook is?
Ans.  A telebook is an electrically composed digital book.

Q#5  Where was Margie’s school? Did she have any classmates?
Ans.  Margie’s school was at her home in a room right next to her bedroom. No, she had no classmates.

Q#6  What subjects did Margie and Tommy learn?
Ans.  Margie and Tommy learnt all the subjects.

Q#1  “I wouldn’t throw it away.”
1.  Who says these words?
2. What does ‘it’ refer to?
   
   iii) What is ‘it’ being compared to by the speaker?

Ans. i) These words are said by Tommy.
   ii) ‘It’ refers to his telebook.
   iii) ‘It’ is being compared to the old kind of books.

Q#2 “Sure they had a teacher, but it wasn’t a regular teacher. It was a ma.”

1. Who does ‘they’ refer to?
   
   2. What does ‘regular’ mean here?
   
   iii) What is it contrasted with?

Ans. i) ‘They’ refers to school children.
   ii) Here ‘regular’ means the mechanical teacher which will be common in future.
   iii) It is contrasted to school teachers who are humans.

Q#1 What kind of teachers did Margie and Tommy have?

Ans. Margie and Tommy had mechanical teachers with big screen on which all the lessons were shown and the questions were asked. These teachers had slot where homework and test papers were put. They had to write them out in a punch code and the teachers calculated the marks in no time.

Q#2 Why did Margie’s mother send for the county inspector?

Ans. Margie was not performing up to the mark in her geography test. So her mother was worried. She wanted the county inspector to check if there was any problem with the child or with the virtual teacher.
Q#3  What did he do?

**Ans** He found that the computer programme was not working properly and was giving lessons which were of higher level than that Margie’s age required. He rectified the problem and it started giving lessons suitable for Margie’s age group.

Q#4  Why was Margie doing badly in geography? What did the county inspector do to help her?

**Ans** Margie was doing badly in geography because the geography section of the mechanical teacher had been adjusted at a higher level. The county inspector slowed down the geography sector of a mechanical teacher to an average ten-year-old level. He also told Mrs. Jones that Margie’s pattern of progress was satisfactory.

Q#5  What had once happened to Tommy’s teacher?

**Ans** Tommy’s teacher had developed some snag and its history section had blanked out completely. So it was taken away for a month for repairing.

Q#6  Did Margie have regular days and hours for school? If so, why?

**Ans** Yes, Margie had regular days and hours for school. This was because her mother believed that little girls learn better at regular hours.
Q#7 How does Tommy describe the old kind of school?

Ans Tommy says that centuries ago there used to be different kinds of schools. In these schools a human teacher used to give same lessons to all boys and girls of same age group. Students had to go to that school to study.

Q#8 How does he describe the old kind of teachers?

Ans He says that the teacher in olden times was a man, who taught the students inside a special building. He gave them home work and asked them questions. When Margie said that a man was not smart enough to be a teacher he contradicted her by saying that his father knew as much as his mechanical teacher.

Q#2 Why did Margie hate school? Why did she think the old kind of school must have been fun?

Ans. Margie hated school because to her, school meant loneliness amidst computers and telebooks as her teachers. Every day, her mechanical teachers were on at the same time. She had to put her homework and test papers in a slot. She had to write them in a punch code which she had learnt when she was six years old and the mechanical teacher calculated the marks in no time. She had to do all this work without any companion.

She thought that the old kind of school must have been fun because these schools were not present in the home itself but they were located away from homes in special buildings.
Children gathered in these schools and helped each other. They shared their thoughts and enjoyed reading. They were taught by a teacher who was a man and who taught them according to their age limit. They had a great fun in the schools.

Q#3  Do you agree with Margie that schools today are more fun than the school in the story? Give reasons for your answer.

Ans. Yes, we agree with Margie that schools today are more fun than the school in the story. The school in the story is totally sophisticated, electronic without any bit of emotions. It is on at a particular time, teacher in its characteristic robotic way, makes calculations abruptly without considering the mental strategy of a child. On the contrary the schools today are more fun because children have an emotional feel towards their school. They love and respect their teachers and in return, their teachers also love them. They feel happy in the company of their friends and read and play with them. The teacher does not teach them beyond their age limit. In short, the school of today is full of atmosphere of emotions, love and care and the school in the story is unemotional and electronic.

Q#4 What are the main features of the mechanical teachers and the schoolrooms that Margie and Tommy have in the story?

Ans. Margie and Tommy are taught by the mechanical teachers in their schoolrooms. The teachers are computers and their schoolrooms are full of all sorts of mechanical equipments. They appear in tests and examinations using a particular punch code and the teacher calculates the marks
within no time. The homework and other assignments are kept in particular slots. They don’t have books to read and the books in the computers remain there for many years. These schools were digital and did their work within seconds.

**How A Client Was Saved**

Q#1 Why had Rustomji’s smuggling offences not been discovered earlier?
Ans. Rustomji’s smuggling offences had not been discovered earlier because he was on best terms with the custom officials; thus, nobody was inclined to suspect him. They used to consider his invoices on trust. Some of them might have even connived at his smuggling.

Q#2 What did Rustomji consider to be the greatest cause for shame to him?
Ans. Rustomji considered the discovery of his guilt to be his destruction. Going to jail was the greatest cause for shame to him.

Q#3 What did Gandhiji consider to be a greater cause for shame?
Ans. According to Gandhiji, the greater cause for shame was in committing the offence.

Q#4 Which words that Rustomji use to describe his offence show us that he did not consider it to be a moral offence?
Ans. Rustomji called his smuggling activities merely ‘tricks of trade’. These words show that he did not consider smuggling to be a moral offence.

Q#5 Who, according to Gandhiji, was the one who would finally decide whether Rustomji was to be saved or not?
Ans. According to Gandhiji, it was the Custom Officer who was to decide whether Rustomji was to be saved or not and the Custom Officer would in turn be guided by the Attorney General.

Q#6 Gandhiji and the other counsel differed in the way in which they thought the case ought to be handled. How did a Gandhiji and

1. The other counsel hope to settle the case?
Ans. Gandhiji thought that the case shouldn’t be taken to court. It should be kept up to the custom officer to prosecute Rustomji or let him free.
The other counsel hoped that the case would be tried by a jury and a Natal jury would acquit Rustomji which seemed quite difficult.

Q#7  **Gandhiji spoke of two penances.**

1.  What were they?

2.  Which of them did Rustomji not have to do?

Ans.  Gandhiji spoke of two penances. The first penance was to pay penalty for the crime. The second penalty was the imprisonment. But according to Gandhiji, the real penance was to resolve never to smuggle again.

   b)    Rustomji did not have to be imprisoned because it would ruin his edifice of name and fame.

Q#8  **Why did Gandhiji have to go to the Attorney General as well as to the custom officer?**

Ans.  Gandhiji had to go to Attorney General as well as Custom Officer because both of them were employed in taxation process. Moreover, the Custom Officer was guided by the Attorney General. So, after persuading the custom officer, he had to motivate the Attorney General regarding the guilt.

Q#9  **Which two qualities of Gandhiji helped him to persuade the Attorney General not to drag Rustomji into court?**

Ans.  Gandhiji’s persuasiveness and frankness helped him to persuade the Attorney General not to drag Rustomji into court.

Q#10  **What did Rustomji (a) lose (b) partly save by the settlement of the case.**

Ans.  Rustomji lost twice the amount of money which he had earned by smuggling.

Rustomji partly saved his edifice of name and fame by the settlement of the case.

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**The Happy Prince**

Q#1  **Why do the courtiers call the prince ‘The Happy Prince’? Is he really happy? What does he see around him?**

Ans.  The courtiers call the prince ‘The Happy Prince’ because he lives in the royal palace doesn’t have any sorrow in his life. So he remains happy throughout his life and thus is really a happy prince.
He seems to be happy but in real sense, he is not happy. Real happiness can only be felt when one faces various troubles and sorrows in his life. The prince was happy but not in a real sense.

After his death, as a statue, he sees all sorts of miseries and ugliness which his subjects used to face while he used to enjoy in his royal palace.

**Q#2  Why does the Happy Prince send a ruby for the seamstress? What does the swallow do in the seamstress’s house?**

**Ans.** The Happy Prince sends a ruby for the seamstress because she is very poor. She does not have any money to get fruits and medicines for her ailing son. She is working very hard on her embroidery work but still her living condition is very miserable.

The swallow enters the rooms and finds the lady fast asleep. He places the great ruby on the table beside her thimble and flies round the bed, fanning him by his wings so as to relieve him of his discomfort.

**Q#3  For whom does the prince send the sapphires and why?**

**Ans.** The prince sends the sapphires for a young playwright. He sends it to him because the young man is very poor. He is feeling very cold but still he is working to earn money. He is not having enough food. The prince thinks that the young man would sell the sapphires and get some food and firewood for himself to complete his work.

**Q#4  What does the swallow see when it flies over the city?**

**Ans.** The swallow sees all sorts of miserable and pitiful things. He sees that the rich are making merry and the poor people are sitting at their gates. He also sees the pale faces of starving children watching their dark, filthy streets. He sees two little boys lying in each other’s arms, trying to keep themselves warm and to sleep inspite of hunger, but they are forced to wander in the rain by a watchman.

**Q#5  Why does the Swallow not leave the prince and go to Egypt?**

**Ans.** The Swallow does not leave the prince and go to Egypt because the prince becomes blind after giving his eyes, made of ruby, to his suffering subjects. So, the swallow decides to tell him about the miseries of the citizens of his city and to stay with him forever.

**Q#6  Why is the statue of the prince described as looking like a beggar and being no longer useful?**

**Ans.** The statue of the prince is described as looking like a beggar because it is the feature of the beggar that he is very shabby and is without any jewels or royal things. Since, the statue has given all his precious ornaments to his people and is left with none, so, he is obviously comparable to a beggar. He is no longer useful to his people.
because he has been a statue depicting royalty but now it is not so. Thus, he has lost his significance and is no longer useful.

Q#7  **What proclamation does the Mayor make about the death of the birds?**

Ans. The Mayor makes a proclamation about the death of the birds that the birds are not allowed to die near the things of royal significance.

Q#8  **What impression do you gather of his personality from this?**

Ans. From this statement, we gather that the Mayor is a foolish person who is unknown of the fact that the proclamation and rules are applicable on humans only and not birds. Moreover, he seems to be an inefficient worker who is unaware of the miseries of his town and is taking interest in beautifying it just for formality.

Q#9  **What were the two precious things the angel brought to God? In what way were they precious?**

Ans. The two precious things the angel brought to God were – the Swallow and the leaden heart of the prince. Both of these were precious because the prince took pains in helping his subjects who were in miserable conditions and gave away his precious get up in order to help them. The Swallow also sacrificed himself for the good intention of the prince and stayed with him for the miserable people till his death.

Q#10  **What happened to the prince’s leaden heart? What feelings does the end of the story arouse in you?**

Ans. The leaden heart of the prince snapped into two parts after seeing the death of the Swallow. We feel that the prince has turned very emotional after seeing the troubles and miseries of his city. Moreover, the Swallow had stayed with him for a long time so now he loved him very much.

**Language Work:**

1. **Bring out:** - A teacher can bring out the best in a child.
2. **Bring Up:** - He was brought up by his grandparents in a village.
3. **Bring Forth:** - A lot of evidence was brought forth against him.
4. **Look Up:** - We look up to her with respect.
5. **Look Into:** I requested the police to look into the matter.

6. **Look After:** My friend looks after her grandfather very affectionately.

7. **Look Down Upon:** We should not look down upon poor people.

8. **Look Around:** He looked around for the lost keys.

9. **Fall In:** The roof of the old building fell in.

10. **Hang In:** You must hang in there till you get a better job.

11. **See Though:** I will try to see through your problem.

12. **See Off:** We went to the airport to see them off.

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**CART DRIVER**

**Central Idea:** The love a mother has for her children is far more than the love she has for her own self. A mother cannot bear her children to be in trouble and she even stakes her life for her young ones. This nature of mother is found in almost all the creatures of universe.

**Summary:** The poem entitled ‘Cart Driver’ has been pen locked by ‘Padma Sachdeva’. In this poem, the poetess describes the love of a mother for her children. The poem is presented in an eerie atmosphere in which a mother bird looks for the food for her young babies and all the time seems to be worried about them. The poetess says that a bulbul is out on a dreadful night to search food for her young ones which are hungry in the nest. She is very careful, cautious and vigilant. She is afraid as well and keeps her ears alert in case of any sound of predator. After getting grains for her babies, she hurries back to her nest because her young ones are chirping and twittering all the time, unknown of the fact that the forest is in the clutches of anguish caused by fear and mystery. Suddenly, she hears crackling sound of dry leaves made by the wheels of a bullock cart. The cart driver is fast asleep and the bullocks are moving on their own. She becomes very terrified because she imagines the forest on fire due to the overturning of the cart driver’s hookah as a result of stumbling. The atmosphere of the forest makes her imagination seem to be true. She panics and she tries to run back to her nest to save her babies but out of dread, fear and worry about her young ones she is unable to lift her legs.

**Thinking About the Poem:**
Q#1 Why is the Bulbul afraid? Why does the bulbul want to hasten to its nest?

Ans. The bulbul is afraid because the forest it lives in is full of terror and danger. Moreover, it has left its babies in its nest, so it becomes more worried and afraid.

The bulbul hastens to its nest because its young ones are very helpless and alone. So, it wants to be with them all the time to protect them in case of any danger.

Q#2 Why does the bulbul hide itself in the bushes?

Ans. The bulbul hides itself in the bushes because it hears crackling of dry leaves made by wheels of a cart.

Q#3 What does the bulbul imagine?

Ans. The Bulbul imagines the forest on fire.

Q#4 What feelings does bulbul’s imagination arouse in the readers?

Ans. Bulbul’s imagination makes the reader think about the insecurities of a mother for her children. Mothers by nature, are always worried about their children more than themselves. The poem reveals the fact that though motherhood is the strength with which a mother can do anything for her children but sometimes the same emotion may become her weakness and make her unable to even take a single step.

Q#5 Why is the poem named ‘Cart Driver’?

Ans. This poem could be given many titles like ‘A Mother’s Love’, ‘A Tussle’ but the name ‘Cart Driver’ is more appropriate because from the beginning we feel that a mother bird is striving hard to feed her young ones but it is only at the arrival of the cart driver, we come to know the extent of love, a mother has for her children. The bulbul imagines the forest on fire and tries hard to save her young ones without considering her own safety. These imaginations are aroused in the bird only when the bullock cart comes to the forest and the bulbul sees the cart driver sleeping.

Learning About Literary device

Q#1 What images does the poetess use to create an atmosphere of fear and silence in the poem?

Ans. In the poem, ‘Cart Driver’ the poetess uses various images of sight and sound to create an atmosphere of fear and silence. They are:

1. In the fearful silence of the forest.
2. The sound of the paws of a careful bulbul.
3. Its ears pricked to pick some sound somewhere.
4. The forest is in the throes of fear.
5. The bulbul trembles.
7. The bulbul hides itself in the bushes.
8. Imagines the forest on fire.
9. Cannot lift its legs out of fear.

**To The Cuckoo**

**Central Idea:**- The cuckoo is a beautiful bird with a mesmerizing voice. Its voice thrills our heart and makes us curious about the whereabouts of the bird. The beauty of this world is further enhanced by the beauty of different creatures created by God.

**Summary:** - The poem 'To The Cuckoo' has been authored by ‘William Wordsworth’ – a great nature lover rightly known as ‘Nature Poet’. The poet is thrilled by the voice of the cuckoo. He has personified the cuckoo and expressed his feelings to the bird as if it seems to understand him. The poet addresses the Cuckoo as Blithe Newcomer because this bird seems to be very cheerful and carefree and is a newcomer in the season of spring. The poet says that he used to hear the voice of cuckoo in his childhood; still continues to hear it and becomes mesmerized after listening to its beautiful tune. He wonders whether he should call it a bird or a wandering voice because he is never able to locate it and only hears its sound. The poet hears its loud sound while resting on the grass and this sound seems to pass from hill to hill, sometimes appearing to be near and at other times, far away. He says to the bird that although he does not understand its language but still the beautiful tune fills him with great movements of imagination. He welcomes the cuckoo with great admiration and seems to be in a fix whether to call it a bird, a voice or a mystery.

In the fifth stanza, the poet recapitulates the beautiful days of his childhood. He remembers that it is the same tune of the cuckoo which he used to hear in his childhood and this tune made him look for the bird at different places like bush, trees, sky. He remembers that he would wander in the woods and fields in order to search Cuckoo but still it remained a hope for which he craved for a long time. The poet further says that he still listens to the same beautiful tune
and thus recalls the beautiful days of his childhood. Lastly, he calls the bird as Blessed Bird because it is made to beautify this earth without any selfish needs. The poet says that this earth in which humans live and die seems to be fairy land, beautiful and attractive because it is a residential place of nature’s beautiful wonders like Cuckoo, which does not harm anyone unlike humans which do trivial things to disrupt the peace and harmony of the globe.

Q#1 How does the Cuckoo’s voice charm the poet?
Ans. The poet becomes very happy on listening to the tune. He wanders in the woods and fields to locate the birds which seems to him to be a mystery or an invisible thing.

Q#2 Why does the poet call Cuckoo ‘Wandering voice’ and ‘darling of Spring’?
Ans. The poet calls the Cuckoo ‘wandering voice’ because he is never able to locate the bird but only hears the sound of Cuckoo which seems to pass from hill to hill, sometimes far and sometimes near.

The poet calls it ‘Darling of Spring’ because it comes in the season of Spring and adds to the beauty of this season. So it appears as if it is very dear and closely related to Spring and thus is called ‘Darling of Spring’.

Q#3 Which childhood experiences does the poet describe in stanza five and six?
Ans. The poet describes his beautiful experiences of his childhood when he used to listen to the Cuckoo and look around to find the bird. He remembers how he used to wander in the woods and fields to find the Cuckoo which always remained a hope, he had craved for a long time.

Q#4 What does ‘golden time’ refer to?
Ans. ‘Golden time’ refers to beautiful childhood of the poet when he craved for the Cuckoo and used to be full of imagination and enthusiasm.

Learning About The Literary Device:

Q#5 Who is personified in the poem?
Ans. The Cuckoo is personified in the poem.

Q#6 What is the rhyme scheme of the poem?
Ans. The rhyme scheme in each stanza of the poem is: abab

Q#7 What imagery does Wordsworth use to portray the beauty of nature in the poem?
Ans. The imagery used by the poet is:-
1. Vale of sunshine and of flowers.
2. Through woods and on the green.
3. Faery land

**Palanquin Bearers**

**Central Idea:** The poem depicts the rich and colourful culture of India which oozes out from the tradition of Palanquin. The antique culture and traditions bestow a particular country with a great wealth of honour and prestige.

**Summary:** The poem entitled ‘Palanquin Bearers’ has been written by a great Indian poetess ‘Sarojini Naidu’ who is popularly known as ‘The Nightingale Of India’. The poetess has depicted the culture of carrying a bride in a Palanquin, in a very beautiful way. She has compared a beautiful bride in a Palanquin to numerous images. The bride enters the Palanquin in a very attractive way and she is full of dreams of her new life and she leaves it in a very sensitive manner and is full of emotions and sadness of leaving her home. The poetess describes the beauty of the bride through the sensitive feelings of the bearers while they carry her along to her new home. The Palanquin Bearers carry the bride very delicately. As the bride enters, the Palanquin moves from side to side like a flower moving in wind. The bride in the Palanquin glides along like a bird which glides on the foam created by the waves on a stream. The poetess says that she is carried away very lightly and without any sound like a smile which comes on the lips of a person who is in sweet dreams. The Palanquin Bearers carry the bride merrily and sing the songs of happiness while they carry her along. She is carried by the bearers like a gem which is tucked within the beads of a string.

In the second stanza, the poetess depicts the beauty of the bride as she is about to come out of the Palanquin. The Palanquin Bearers carry the bride very softly because she is very delicate. She hangs in the Palanquin like a beautiful dew drop with a twinkle or she resembles a star that hangs in the sky and appears to be very elegant. The beautiful bride raises from the Palanquin to come out like a beam of light produced on the crust of a wave. She is like a tear in the eyes of a bride that is, she is full of emotions and sadness of leaving her parent’s home. The poetess concludes the poem by repeating the feeling of the Palanquin Bearers who carry the bride beautifully.

**Q#1** What are the feelings of the Palanquin Bearers as they carry the princess inside the Palanquin?

**Ans.** The Palanquin Bearers are full of sensitive feelings as they carry the princess inside the Palanquin. They carry her very happily and delicately. They take great care while carrying her along because they know that the bride is prestigious, honoured and delicate.
Q#2 Lightly, O lightly we bear her along; she sways like a flower in the wind of our song? What are these opening lines suggestive of? Do you think that the Palanquin Bearers are sensitive to the presence of the bride?

Ans. These lines suggest that the bride in the Palanquin is very delicate and light. She moves from side to side as she enters the Palanquin like a delicate flower which is very sensitive and moves from side to side in slow breeze.

The Palanquin Bearers are very sensitive to the presence of the bride and carry her very lightly so that she is not harmed. They are very keen about her entry in the Palanquin.

Q#3 What is rhyme scheme of the poem? Pick out the pairs of rhyming words in the poem.

Ans. The rhyme scheme of the poem is: ab, cd, ef, gh, ij, kl.

The pairs of rhyming words are:

1. along song
2. stream dream
3. sing string
4. along song
5. tide bride
6. sing string

Learning About Literary Devices:

Q#4 In line 4 the poet says, ‘She floats like a laugh from the lips of a dream’ and in line 10 she writes, ‘She falls like a tear from the eyes of a bride’. Do you think that the poet has deliberately used the device of contrast? Why has she done so?

Ans. The poem is actually depicted in two parts. In first stanza, the poetess says, ‘She floats like a laugh from the lips of a dream’. It means that the bride is full of dreams of her new life. She is very happy and enthusiastic about her new life.

In the second stanza, the poetess says, ‘She falls like a tear from the eyes of a bride’. It means that she is very emotional and sad because she has left the home of her parents.

So, the poetess has deliberately used this contrast and it has beautified the poem.
Q#5  
**Simile:** A figure of speech used to compare the qualities of two objects or things using words such as ‘like’ or ‘as’. For example,

1. The poet compares the bride to a flower and
2. She hangs like a star in the dew of a song. The poem is full of similies. Pick out all the similes used by the poet in the poem.

**Ans.** The similes used in these poem are:

1. She sways like a flower in the wind of our song.
2. She skims like a bird on the foam of a stream.
3. She floats like a laugh from the lips of a dream.
4. She hangs like a star in the dew of our song.
5. She springs like a beam on the brow of the tide.
6. She falls like a tear from the eyes of a bride.

Q#6  
**Refrain:** Poets often use the device of refrain. Did you notice that some words, line/ parts of lines are repeated in the poem? Pick out these words or lines that are repeated. What effect does such repetition create in the poem?

**Ans.** The lines that are repeated are:

1. Lightly, O lightly we bear her along.
2. We bear her along like a pearl on a string.

This repetition creates an image of beautiful bride in a Palanquin and the feelings of Palanquin Bearers.

Q#7  
Complete the following table by matching lines from the poem with the related images conveyed by them:

1. **Skims like a bird:** Gliding movements of a bird flying over a stream.
2. **Sways like a flower:** - Moves from side by side like a flower.

3. **Floats like a laugh:** - Moves slowly like a smile which comes on the face of a person who is in dreams.

4. **Hangs like a star:** - Comes out of the Palanquin like a star that hangs in the sky.

5. **Springs like a beam:** - Rises up like a beam of light on the crust of wave.

6. **Falls like a tear:** - Is very beautiful and emotional like a tear.

**THE CHILDS PRAYER**

**Central Idea:**

The poem is about the pious and virtuous wishes of the child. He wants to enlighten himself in order to enlighten the world. He also wants to serve his nation and help the needy.

**Summary:**

The poem entitled ‘child’s prayer’ has been written by ‘Dr. Sir Mohammad Iqbal’. The poem is in the form of a child’s prayer to God. The child prays that his life may serve as a candle light for others. He wishes the darkness of ignorance to vanish from the world. He wishes to fill every corner of the world with the light of knowledge and goodness. He also wants to love his land and make it beautiful in the same way as blossoms make a garden beautiful. He wants God to develop in him such love as moth has for shining light. In other words, he is prepared even to sacrifice his life in the pursuit of knowledge. The mission of his life should be to love and serve the poor, the weak and those in pain. He wants his heart to be full of sympathy for the poor and the needy. At last the poet concludes the poem by praying for a strong determination so that he can always keep to the ways of virtue and abstain from evil.

**Qno1:** Who is the speaker of the poem and to whom is it addressed?

**Ans:** The poem “The Child’s Prayer” is a prayer written by Sir Muhammad Iqbal. The Speaker of the poem is a child and is addressed to God.

**Qno2:** What does the child wish to be? List his wishes in the order they are described in the poem.

**Ans:** The poem ‘The Child’s Prayer’ is a prayer. In this poem, the child is full of dreams and future hopes...
which he wants to be fulfilled. His wishes come out in the form of a prayer. He prays to God to make his life bright like a candle so that he could remove the darkness of ignorance and spread the light of knowledge everywhere. He wishes to beautify the world through knowledge. He is enthusiastic to serve and love the poor, the needy and the orphan. He wants to be sympathetic towards the weaker section of the society. He wants God to give him courage so that his mission to serve the humanity is fulfilled. Finally he asks God to keep him free from the clutches of evil and help him to lead the path of righteousness.

Qno3:- Why does the child want to be:  a) candle b) moth c) blossom?

Ans: The child wants to be a candle so that he could spread the light of knowledge to every nook and corner of the World and remove with it the darkness of ignorance and evil from every heart.

He prays to be a moth so that his enthusiasm and quest to gain knowledge never dies out until he is alive. The child wants to be a blossom so that he could beautify every corner of the earth with the flower of knowledge and make it a beautiful and a peaceful place to live in.

Qno4:- What is the child’s mission?

Ans: The child’s mission is to serve the humanity. He wishes to be sympathetic towards the poor and needy. He wants to end their worries and miseries.

If I were You

Qno1  At last sympathetic audience

(i) Who says this?

(ii) Why did he say this?

(iii) Is he sarcastic or serious?

Ans:  (i) Gerrard, the main character of the character of the play says these words

(ii) He said this to win the confidence of the intruder.

(iii) He is sarcastic.

Qno2  Why does the intruder chose Gerrard as the man whose identity he wants to take on?
Ans: The intruder is a thug and a fugitive; he has killed a cop and is being searched by police. He sees that Gerrard resembles him in his built and thus intends to kill and impersonate him to escape from the police.

Qno3 "I said it with bullets"

(i) Who says this?

(ii) What does it mean?

1. Is it the truth? Why does the speaker say this? What is the speaker’s reason for saying this?

Ans: (i) Gerrard says this

(ii) It means that Gerrard has also murdered someone and is a criminal.

(iii) No, this is not the truth. He says this only to outwit the intruder. He wants to make him believe that he, too, is a criminal like him.

Qno4 What is Gerrard’s profession? Quote the parts of the play that support your answer.

Ans. Gerrard was a playwright. He was working for some theatre group. We know this when he says in the end of the play“ Sorry I can’t let you have the props in time for rehearsal. I think I’ll put it in my next play”.

Qno5 You’ll soon stop being smart?

(i) Who says this?

(ii) Why does the speaker say it?

(iii) What, according to the speaker, will stop Gerrard from being smart?

Ans: 1) The intruder says this.

1. He says this because Gerrard seems to be in lighter mood and seems to have no fear of death. Actually he is trying to scare him.

2. Intruder threatens Gerrard that he would murder him.

Qno6 They can’t hang me twice
1. Who says this? 2) Why does the speaker say it?
Ans: 1) These words are said by intruder.

1. The intruder remarks that he can’t be hanged twice for the two murders, since he has already killed a cop and he doesn’t mind even killing Gerrard.

Qno7 “A mystery I propose to explain”. What is the mystery the speaker proposes to explain?
Ans: Gerrard wants to tell the intruder that he is not a Sunday school teacher. He is a criminal who has murdered someone and the police are after him.

Qno8 “This is your big surprise”
1. Where has this been said in the play? 2) What is the surprise?
Ans: 1) It has been said when the intruder is about to shoot Gerrard.

2. Gerrard tells the intruder that he is also a killer and wanted by police. He says that one of his men has been caught and police is expected to come any moment. It is really a surprise for the intruder who wants to impersonate Gerrard and live a peaceful life.

**SUBJECT: SCIENCE**

**GRAVITATION**

Gravitation Force: Every material body in the universe has tendency to attract every other body with a force. This force with which two material bodies attract each other is called gravitational force and the phenomenon is called gravitation. The force of gravitation exerted by the earth on any mass is called gravity. The force of gravitation acts even if the two objects are not connected by any means.

The gravitational force is very important. It is the gravitational force between the planets and sun that keeps them in circular orbits. Atmosphere is held to the earth by gravitational force.

Note: Before Newton, Scientists like Galileo Galileo probably understood that things fall due to attractive force of earth only.
Q#1  State Newton’s Universal law of gravitation? Define Gravitation.

Ans. In 1665, Newton put forward a law governing the force of gravitation known as Universal law of gravitation. This law states that ‘Every body in the universe attracts every other body with a force which is directly proportional to the product of their masses and inversely proportional to the square of the distance between them. The direction of the force is along the line joining the centres of the two bodies.

In \( m_1 \) and \( m_2 \) are the masses of the two bodies separated by a distance ‘r’ then

\[
F \propto m_1m_2 \quad \ldots \ldots (i)
\]

\[
F \propto \frac{1}{r^2} \quad \ldots \ldots (ii)
\]

Combining (i) and (ii), we get

\[
F \propto \frac{m_1m_2}{r^2}
\]

\[
F = G \frac{m_1m_2}{r^2}
\]

Where \( G \) is a constant known as Gravitational constant. If \( m_1 = m_2 = 1 \text{kg} \) and \( r = 1 \text{m} \), then \( F = G \)

Thus, the gravitational constant is numerically equal to the force of gravitation between two bodies of unit masses kept at a unit distance from each other. The value of \( G \) is \( 6.67 \times 10^{-11} \text{Nm}^2/\text{kg}^2 \). Its value does not depend on the medium between the two bodies.

Q#2  Does Newton’s third law of motion hold good for Gravitation? If so why do we see a stone falling to the earth and not the earth rising towards the stone?
According to Newton’s third law of motion ‘to every action there is an equal and opposite reaction.’ This law holds good for gravitation also because gravitation force is mutual. e.g. the force exerted by the earth on a falling stone is equal and opposite to the force exerted by the stone on Earth. However, the acceleration produced in them in different and depends upon their masses as per Newton’s second law of motion i.e. $a = \frac{F}{m}$. Since, the mass of earth is very large than stone, therefore the acceleration produced in earth is negligible as compared to that of stone. This is why stone falls of the Earth while earth does not rise at all.

**Q#3 What are Kepler’s Laws of Planetary Motion?**

**Ans.** Kepler Johannes was an Assistant of Tychobrahe. Tychobrahe had made excellent observations about cosmos, but he died before compiling his observations. Kepler made a careful analysis of these observations and was able to compile three laws known as Kepler’s laws of planetary motion. These laws explain the motion of planets around the sun. These laws are

1. Law of Orbits
2. Law of Areas
3. Law of Periods

1. **Law of Orbits:** It states that planet revolves around the sun in elliptical orbit with sun at one of the foci. The other focus then is of no significance.
1. **Law of Areas**: It states that radius vector (straight line joining the centre of the sun to the centre of planet) sweeps out equal areas in equal intervals of time. It is evident from the law that in the vicinity of the sun the planet moves very fast. When an planet is away from the sun it moves slowly.
2. **Law of Periods**: The law states square of the time period of the planet is directly proportional to the cube of semi measure axis or mean radius vector i.e.

\[ T^2 \propto R^3 \]

This implies that further the planet from the sun longer is its time period or year.

Q#4 **What is acceleration due to gravity? Derive an expression for it.**

**Ans.** The uniform acceleration produced in a freely falling body due to gravity of Earth is called acceleration due to gravity or gravitational acceleration. It is denoted by ‘g’. The value of g changes with height, depth and latitude. It is maximum at the surface of earth where its value is 9.8 m/s\(^2\). It is maximum at the equator and increases towards the poles. Its value of ‘g’ at the centre of the Earth is zero.

**Derivation**: Consider a freely falling body of mass ‘m’. Let M be the mass of the Earth and ‘r’ be the distance between the centre of body and the Earth.

\[ \therefore \text{By universal law of gravitation.} \]

\[ F = \frac{GmM}{r^2} \]  

This force ‘F’ produces an acceleration ‘g’ in the freely falling body. Therefore, by Newton’s second law of motion.

\[ F = mg \]
From (i) and (ii), we get

\[ mg = \frac{GmM}{r^2} \]
\[ g = \frac{GM}{r^2} \]

This shows that gravitational acceleration does not depend on the mass of the body. Thus, bodies of all masses should fall with the same acceleration at a given place.

**Q#5 What is the difference between ‘g’ and ‘G’**

<table>
<thead>
<tr>
<th>Sr.No.</th>
<th>‘g’</th>
<th>‘G’</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>‘g’ is the acceleration due to gravity. It is the uniform gravitational force between two bodies of unit mass.</td>
<td>The value of G remains same everywhere in the universe.</td>
</tr>
<tr>
<td>2</td>
<td>The value of ‘g’ changes from place to place.</td>
<td>Its value is 6.67 x 10^-11 Nm^2/kg^2.</td>
</tr>
<tr>
<td>3</td>
<td>Its value is 9.8 m/s^2 on the surface of earth.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Its value can be zero e.g. at the centre of earth.</td>
<td>Its value can never be zero</td>
</tr>
</tbody>
</table>

**Q#6 What are the equations of free fall?**

**Ans.** The equations of motion in case of freely falling bodies under gravity are known as equations of free fall. These are obtained by replacing ‘a’ by ‘g’ and ‘s’ by ‘h’ in equations of uniformly accelerated body. These are

\[ v = u + gt \]
\[ h = ut + \frac{1}{2} gt^2 \]
\[ v^2 = u^2 + 2gh \]

The value of ‘\( g \)’ is taken negative in case of bodies thrown upwards, and then the equations of free fall can be written as

\[ v = u - gt \]

\[ h = ut - \frac{1}{2} gt^2 \]

\[ v^2 = u^2 - 2gh \]

**Note:**

1) All the physical quantities in the direction of motion can be considered positive.
2) For a body dropped while at rest, \( u = 0 \).
3) When a body is thrown vertically upwards, velocity at highest point is zero.
4) The motion of a body under the influence of gravity is called free fall.

**Q#7** What is time of ascent and time of descent?

**Ans.** The time taken by a body thrown upwards to reach the highest point is called time of ascent.

Here, final velocity \( v=0 \). and \( a = -g \).

\[ \therefore v = u - gt \]

Or, \[ 0 = u - gt \]

1. \[ gt = u \]
2. \[ t = \frac{u}{g} \]
3. \[ v^2 = u^2 - 2gh \]
4. \[ 0^2 = u^2 - 2gh \]
5. \[ 2gh = u^2 \]
6. \[ h = \frac{u^2}{2g} \]

Thus, the maximum height attained = \( \frac{u^2}{2g} \). Now, the time taken by a body to come back from the highest point to the point where it was thrown is called time of descent.

Here, \( u = 0 \) and \( h = \frac{u^2}{2g} \)

\[ \therefore \text{By third equation of free fall} \]

\[ h = ut + \frac{1}{2} gt^2 \]

\[ \frac{u^2}{2g} = 0(t) + \frac{1}{2} gt^2 \]

\[ \frac{u^2}{2g} = gt^2/2 \quad \text{or} \quad t = \sqrt{\frac{u^2}{2g}}. \]

\[ t= \frac{u}{g} \]

Thus, time of ascent = time of descent in the absence of air resistance.

Q#8 What is the difference between mass and weight.

**Mass:**

(i) Mass is the quantity of matter contained in a body.

1. It is a scalar quantity.
2. It is usually denoted by ‘m’.
3. The S.I unit of mass is kg.
4. It is measured by a common balance or pan balance.
5. The mass of a body is same everywhere in the Universe.

**Weight :-**

(i) Weight of a body is the force with which a body is attracted towards the centre of the Earth.

1. It is a vector quantity and its direction is towards the centre of the earth.
2. It is usually denoted by ‘w’ and \( w = mg \).

3. The S.I unit of weight is Newton or kg·wt.

4. The weight is measured by spring balance.

5. The weight of a body varies due to variation in \( g \).

6. Weight of a body can be zero e.g. at the centre of earth.

**Q#9** Show that the weight of an object on the moon is 1/6th of its weight on Earth.

**Ans.** Consider a body of mass ‘\( m \)’. Let \( M_e \) be the mass of Earth, \( R_e \) be the radius of Earth, \( M_m \) be the mass of moon and \( R_m \) be the radius of moon.

\[ \therefore \text{Weight of an object on moon is given by} \]

\[ W_m = \frac{Gm M_m}{(R_m)^2} \] \hspace{1cm} (i)

Now weight of an object on Earth is given by

\[ W_e = \frac{Gm M_e}{(R_e)^2} \]

But \( M_e = 100 \times M_m \) and \( R_e = 4R_m \)

\[ W_e = \frac{Gm (100M_m)}{(4R_m)^2} \]

\[ W_e = \frac{100 \times Gm M_m}{4 \times (R_m)^2} \] \hspace{1cm} (ii)

Dividing (i) and (ii) , we get
\[ W_m = \frac{1}{W_e} \]
\[ W_m = 4 \]
\[ W_e = \frac{100}{4} \]
\[ W_m = \frac{1}{W_e} \]
\[ W_e = 6.2 \]

Thus, the weight of an object on the moon is \(1/6\)th of its weight on earth.

**Q#9**  **What do you understand by weightlessness?**

**Ans.** The condition when the apparent weight of a body appears to be zero is called weightlessness. A true weightlessness can be experienced in a region of outer space where the acceleration due to gravity is zero. A person standing on a weighing machine in a freely falling lift or space ship does not exert any force on the scale of machine because the Earth pulls the machine as rapidly as it pulls the man. The machine in this case shows apparent weight zero and hence the person appears to be weightless.

Similarly, a spring balance holding a mass if left fall freely will show zero reading i.e. the mass appears to be weightless.
Floatation

THRUST AND PRESSURE:

Thrust is defined as the force acting perpendicular to a given surface. For example, when we stand on the floor then the weight of our body acts perpendicular to the floor and equals thrust. Since, thrust is a force, therefore, its S.I unit is newton (N). The effect of the thrust on the surface is defined in terms of pressure. Pressure is defined as the thrust acting on a unit area of the body i.e.

Pressure = thrust/Area.

Since, thrust is the force acting perpendicular to the surface then we can write as

Normal force (force acting perpendicular to surface)
Pressure = \frac{F}{A}

(i)

The S.I unit of pressure is newton per square meter which is given the name Pascal (Pa) in the honour of Blaise Pascal a great scientist i.e.

Unit of F: newton (N)

Unit of P = \frac{\text{newton}}{\text{meter}^2} = \frac{\text{N}}{\text{m}^2} = \text{Pa}

From equation (i) it is clear that for the same thrust acting on two surfaces of different areas pressure will be more on the surface having lesser area. That is the reason why a nail has pointed tip, knives have sharp edges etc.

**Pressure in fluids:**

Fluid is that which flows i.e. liquids and gases. All liquids and gases have weight and they also exert pressure on the base and the walls of the container in which they are enclosed. Pressure exerted in any confined mass of fluid is transmitted undiminished in all directions that is known as Pascal’s law.

**Buoyancy:**

When an object is immersed in a fluid (liquid or gas) the liquid exerts an upward force on it, for example, when a piece of cork is immersed in a liquid, it comes to the surface after being released at the bottom. The tendency of a liquid to exert an upward force or thrust on the bodies immersed in it is termed as Buoyancy. The upward thrust exerted by the fluid on the
immersed body is termed as buoyant force. It is due to this buoyant force that we are able to swim in water, ships float in oceans etc.

**Causes of buoyant force:**

Consider an object immersed in a water containing vessel. Water exerts force on the sides of the container as well as on its top and bottom. The sideways force exerted by water on object being equal and opposite cancels out. Now, there is a force due to water acting on the top face of the object in vertically downwards direction and on the bottom face of the object acting in vertically upwards direction. Since, volume of water on the top face of the object being lesser than the volume of water on the bottom face of the object so, there is a net force acting in the vertically upwards direction giving rise to force.

![Diagram of buoyant force](image)

**Factors on which buoyant force depends**

The buoyant force acting on an object immersed in a liquid depends on two factors:

1. **Volume of object immersed in the liquid.**
2. **Density of the liquid.**

   **(1) volume of object immersed in the liquid:**

   Large the volume of water displaced by a body more will be the buoyant force acting on the body. Since the volume of water displaced by a body depends upon the volume of the object immersed in the water.

   **(2) density of the liquid:**
Higher the density of the liquid in which body is immersed more is the buoyant force exerted by such a liquid as compared to other liquids of low density for this reason, it is easier to swim in sea-water as compared to fresh water because of its higher density than fresh water. It exerts a large buoyant force on the bodies immersed in it.

**Archimedes principle:** The magnitude of buoyant force acting on objects immersed in a liquid (fluid) is given by Archimedes principle. Archimedes was a Greek scientist and his principle states.

“When a body is immersed fully or partially in a fluid (liquid or gas) it experiences an upward force which is equal to the weight of the fluid displaced by it.”

The weight of the liquid or fluid displaced by a body depends on the volume of the object immersed in the fluid, so in other words we can say that the buoyant force acting on a body depends on the volume of the liquid displaced by the body.

**Applications of Archimedes Principle**

- It is used in designing ships and submarines.
- It is used in determining the purity of milk. Using lactometers which are based on this principle.
- It is used in determining the relative density of the substances.
- Hydrometers are based on this principle which is used in determination of density of liquids.

**Density:** Density of a substance gives the compactness of matter contained in that substance. Density of a substance is defined as the ratio of the mass of the body to the volume of the body. If \( m \) be the mass of the body and \( V \) be its volume then density is given by

\[
D = \frac{M}{V} \quad \text{(i)}
\]
Unit of density

Unit of m(S.I)

Unit of D = ------------------- = \( \frac{kg}{m^3} \)

Unit of V(S.I)

The S.I unit of density is kilogram per cubic metre and C.G.S unit of density is gram per cubic centimeter.

If \( V = 1cm^3 \) then from eqn. (i) we get

Or \( D = M \)

So, density is numerically equal to mass of the body of unit volume.

Law of floatation

When a solid body is immersed in a fluid, the fluid exerts an upward force of buoyancy or buoyant force on the solid. If the buoyant force equals the weight of the solid, the solid will remain in equilibrium. This is called floatation. According to law of floatation the object will float if the weight of the object is equal to the weight of the liquid displaced by it.

Textual Questions

Q#1 Why is it difficult to hold a school bag having a strap made of a thin and strong string?

Ans. The pressure exerted by thin and strong string of the strap of school bag on the shoulders is very large because of their small area of contact with our shoulder muscles; therefore, it is difficult to hold a school bag having a strap made of a thin and strong string.

Q#2 What do you mean by buoyancy?

Q#3 Why does an object float or sink when placed on the surface of water?

Ans. An object will sink or float when placed on the surface of water depending on its relative density. If the relative density of the object is less than water then it experiences a large buoyant force due to which it floats and if the relative density of the object is greater than water then it experiences small buoyant force due to which it sinks.

For two different bodies of same masses of the body having higher density will occupy lesser volume as compared to low density body.
Relative density: The relative density of a substance is the ratio of its density to that of water i.e.

\[
\text{Relative density} = \frac{\text{Density of a substance}}{\text{Density of water}}
\]

Since, it is the ratio of similar quantities; it has no unit, now,

If volume of water = volume of substance then

\[
\text{Relative density} = \frac{\text{Mass of substance}}{\text{Mass of water}}
\]

Hence, relative density can also be defined as the ratio of the masses of the equal volumes of the substance and water. The relative density of a substance expresses the heaviness of the substance in comparison to water.

Q#4 You find your mass to be 42 kg on a weighing machine. Is your mass more or less than 42 kg?

Ans When we stand on a weighing machine, we replace air equal to volume of our body. So measured weight, \( W = \text{actual weight - upthrust} \)

\[
= mg - V \rho \text{ air } g
\]

.. Measured mass, \( m = \frac{W}{g} = (m - V_{\text{air}}) \)
That is the measured mass will be less than the actual mass. Therefore, our mass is more than 42 kg.

Q#5 You have a bag of cotton and an iron bar, each indicating a mass of 100 kg when measured, on a weighing machine. In reality, one is heavier than other can you say which one is heavier and why?

Ans Actually mass of cotton is more than the mass of iron bar.

Reason: weight measured = actual weight – buoyant force

.. Actual weight = weight measured + buoyant force

The volume of cotton is much more than the volume of iron bar; so buoyant force (B= volume of object x density of air x g) of air on cotton is much more than that of air on iron bar, so mass of cotton will be more than the mass of iron bar.

Q.6 Why will a sheet of paper fall slower than one that is crumbled into a ball?

Ans For given mass, a sphere has minimum surface area. The frictional force of air opposes the motion of the ball and frictional force (f) is directly proportional to surface area; therefore,

Effective weight of sheet in air = weight of ball-frictional force-buoyant force

.. Acceleration, $a = \frac{mg - B - F}{m}

a = g - \frac{B}{m} - \frac{F}{m}

g and $\frac{B}{m}$ are same in both cases; the value of $\frac{F}{m}$ is greater for sheet than for ball; hence acceleration will be smaller for sheet than ball; that is why sheet falls slower in air than the ball made of same sheet of paper.

Q.7 In what direction does the buoyant force on an object immersed in a liquid act?

Ans The buoyant force on an object immersed in a liquid acts in upward direction(i.e., opposite to weight of the object)

Q.8 Why does a block of plastic released under water come up to the surface of water?
Ans The density of plastic is less than that of water; so the force of buoyancy on plastic block \((V \rho_{\text{plastic}} g)\) will be greater than the weight of plastic block displaced, i.e., \((V \rho_{\text{water}} g)\); hence, the acceleration of plastic block will be in upward direction, hence plastic block under water come up to the surface of water.

Mathematically,

\[
\text{Acceleration, } a = B - W = \frac{V \rho_{\text{water}} g - V \rho_{\text{plastic}} g}{m}
\]

\[
\frac{V g}{m} (\rho_{\text{water}} - \rho_{\text{plastic}}) \text{ is positive in upward direction.}
\]

Q.9 The volume of 50g of a substance is 20 cm\(^3\). If the density of water is 1 g cm\(^{-3}\), will the substance float or sink?

Ans Density of substance, \(\rho = \frac{\text{mass}}{\text{volume}} = \frac{50 \text{ g}}{20 \text{ cm}^3}\)

\[= 2.5 \text{ g cm}^{-3}\]

As density of substance is greater than the density of water, therefore, the substance will sink in water.

Alternatively, the buoyant force exerted by water \((V \rho_{\text{water}} g)\) on substance, when fully immersed, is less than the weight of substance, i.e., \(B < W\); hence, the substance will sink in water.

Q.10 The volume of a 500 sealed packet is 350 cm\(^3\). Will the packet float or sink in water if the density of water is 1 g cm\(^{-3}\)? What will be the mass of the water displaced by this packet?

Ans Density of packet, \(\rho = \frac{\text{mass}}{\text{volume}} = \frac{500 \text{ g}}{350 \text{ cm}^3}\)

\[= \frac{10}{7} \text{ g cm}^{-3} = 1.43 \text{ g cm}^{-3}\]

As density of packet is more than the density of water, so the packet will sink in water.

Weight of water displaced by the packet

\[= \text{volume of packet} \times \text{density of water}\]
= (350 cm³) x (1 g cm⁻³) = 350 g

Obviously, the force of buoyancy, B = 350 g wt and weight of packet, W = 500 g Wt, i.e., B < W; so the packet sinks in water.

**ATOMS & MOLECULES**  
**CHEMISTRY**

**Laws of chemical combination:** The reaction of two or more substances to give the products is governed by certain laws. These laws are called laws of chemical combination & are as under:

1. Laws of conservation of mass.
2. Law of constant proportions.

1. **Law of conservation of mass (1774):** This law was put forth by Lavoisier (father of chemistry). According to this law, “During a physical or chemical change, the total mass of the products remains equal to the total mass of the reactants.” This law is also referred to as law of indestructibility of matter i.e. matter can neither be created nor destroyed in a chemical change. For e.g

\[
\text{CaCO}_3 \rightarrow \text{CaO} + \text{CO}_2
\]

Cal.Oxide Carbon-dioxide
100 g 56 g 44 g

It has been found experimentally that if 100 g of CaCO₃ are decomposed completely, 56 g of CaO & 44 g of CO₂ are formed.

2. **Law of constant (definite) proportion:** This law was put forth by Joseph Proust (1799). According to this law, “A pure chemical compound always contains the same elements combined together in same proportion by mass”. E.g. water is formed by the combination of two elements H & O, in the constant proportion of 1 : 8 by mass which means 9 gms of H₂O is composed of 8 g oxygen & 1 gm hydrogen.

Similarly, ammonia always consists of 3 elements, N & H combined together in the ratio of 14: 3 by mass.
Textual Questions

Q#1 In a reaction 5.3 g of sod. Carbonate reacted with ethanoic acid. The products formed were 2.2 g of CO₂, 0.9 g of H₂O & 8.2 g of sod. ethanoate. Show that these observations are in accordance with law of conservation of mass.

Ans. The reaction is as:

\[
2\text{CH}_3\text{COOH} + \text{Na}_2\text{CO}_3 \rightarrow 2\text{CH}_3\text{COONa} + \text{CO}_2 + \text{H}_2\text{O}
\]

<table>
<thead>
<tr>
<th>Ethanoic acid</th>
<th>Sod. Carbonate</th>
<th>Sod.ethanoate</th>
<th>Carbon dioxide</th>
</tr>
</thead>
</table>

Mass of reactants = 5.3 g + 6 g = 11.3 g

Mass of products = 2.2 g + 0.9 g + 8.2 g = 11.3 g

\[ \therefore \text{Mass of reactants} = \text{Mass of products} \]

Hence the given data is in accordance with law of conservation of mass.

Q#2 Hydrogen & Oxygen combine in the ration of 1:8 by mass to form water. What mass of oxygen gas would be required to react completely with 3g of Hydrogen gas?

Ans. As we know that,

1 g of H₂ reacts with 8 g of oxygen to form 9 gm of H₂O

So, 3g of H₂ reacts with 8 x 3 = 24 g of O₂.

Thus, 24g of O₂ would be required to react with 3g of H₂. Dalton’s Atomic Theory

Dalton proposed his atomic theory in 1803. This theory was regarding the nature of matter.
Postulates of Dalton’s Theory:

1. A sample of elements consists of many tiny particles called atoms.
2. Atoms ion neither be divided, destroyed or created. Even during any chemical reaction atoms only combine to form new products.
3. Atoms of same element are identical in all respects (mass etc.).
4. Atoms of different elements are characteristically different in all respects (shape, size, mass etc.)
5. Atom is the smallest unit that takes part in chemical combination.

Drawbacks / Limitations of Dalton’s atomic theory:

1. According to Dalton’s atomic theory, the atom is indivisible. But the modern at scientific investigation have clearly shown that the atom can be split into electrons, protons & neutrons.
2. The occurrence of isotopes has proved that the atoms of same element are not alike e.g.: _\text{C}^{12} & _\text{C}^{14}_.
3. The occurrence of isobars has proved that there are some atoms of different elements which have same mass e.g. Argon – 40 & Calcium -40
4. It failed to explain why & how atoms of different elements combine together to form compound atoms.
5. It fails to explain the Gay Lussac’s law of combining volumes i.e. “Under standard conditions of T & P, gases combine in simple ratio by volume & the volume of product, if gaseous, also bears simple ratio by the volume of reactants”
   \[ \text{H}_2 (g) + \text{Cl}_2 (g) \rightarrow 2\text{HCl} (g) \]
   1 vol 1 vol 2 vol.

Atoms: An atom is the smallest particle of an element which takes part in chemical reactions. It maintains its identity throughout all physical & chemical changes.

Size: The size of atoms is very small & can’t be seen even with the help of powerful microscope.

The atomic radius of some elements is as:
<table>
<thead>
<tr>
<th>Element</th>
<th>radius (nm)</th>
<th>Element</th>
<th>radius (nm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>0.037</td>
<td>N</td>
<td>0.074</td>
</tr>
<tr>
<td>He</td>
<td>0.093</td>
<td>O</td>
<td>0.073</td>
</tr>
<tr>
<td>Li</td>
<td>0.134</td>
<td>Na</td>
<td>0.154</td>
</tr>
<tr>
<td>C</td>
<td>0.077</td>
<td>Mg</td>
<td>0.13</td>
</tr>
</tbody>
</table>

**Modern symbols of atoms:**

Berzelius symbols are used to represent atoms in modern system. According to this system:

1. The symbol of an element consists of first letter of its common English or Latin name. This letter is written as capital letter.
2. If the first letter is common for two or more types of atoms, the first letter is followed by another letter not common. The first letter is written in capital while the 2\textsuperscript{nd} letter is written in small.

**Significance of the symbol of an element:**

A symbol of an element represents:

i) Name of the element

ii) One atom of the element.

iii) A definite mass of the element

**Atomic Mass:** The mass of an atom of an element is called its atomic mass. It was earlier expressed in “atomic mass unit” (abbreviated as amu) but now, it is expressed as “unified mass” & written as ‘u’ according to IUPAC (International unit of Pure & Applied Chemistry) recommendations.

$$1 \text{u} = \frac{\text{Mass of } ^{12}\text{C}_{\text{atom}}}{12}$$
\[ 1u = \frac{1.9924 \times 10^{-23}}{12} \text{ g} \]

\[ 1u = 1.66 \times 10^{-24} \text{ g} \quad \text{(in terms of gms)} \]

Or \[ 1u = 1.66 \times 10^{-27} \text{ kg} \quad \text{(in terms of kg)} \]

**Relative Atomic Mass:**

The relative atomic mass of an element is the mass of an atom of the element relative to \((1/12)\) g mass of carbon-12 atom.

**Example:**

<table>
<thead>
<tr>
<th>Element</th>
<th>Rel. atomic mass</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>1.0079 = 1</td>
</tr>
<tr>
<td>C</td>
<td>12.011 = 12</td>
</tr>
<tr>
<td>N</td>
<td>14.007 = 14</td>
</tr>
<tr>
<td>O</td>
<td>15.999 = 16</td>
</tr>
<tr>
<td>etc.</td>
<td></td>
</tr>
</tbody>
</table>

**Gram Atomic Mass:** The atomic mass of an element when expressed in grams is called the gram atomic mass of that element. It is also known as gram atom.

No. of gram atoms \[=\] Mass of element in gms

\[
\frac{\text{Atomic mass of element}}{\text{Mass of element in gms}}
\]

**Example:**

Calculate the no’ of gram atoms (gm atomic mass) present in 40 gms of calcium.

Ans. Mass of calcium \[=\] 40 g (given)

Atomic mass of Ca \[=\] 40
No. of gram-atoms = \frac{\text{Mass of ca in gms}}{\text{At. Mass of ca}} = \frac{40}{40} = 1

\textbf{Molecules:-}

A molecule is the smallest particle of an element or of a compound which can exist alone or freely under ordinary conditions & shows all the properties of that substance.

The total no.' of all types of atoms in one molecule of a substance is called atomicity.

Eg; In H$_2$, atomicity is 2

Similarly in H$_2$O – atomicity is 3

Based on the no' of atoms, the molecules can be classified as:

1. \textbf{Monatomic molecules:} - These are the molecules consisting of only one atom, eg He, Ne, Kr.
2. \textbf{Diatomic molecules:} - The molecules consist of two atoms either same or different eg: H$_2$, N$_2$, O$_2$, HCl, CO etc.
3. \textbf{Tri atomic molecules:} - These molecules consist of 3 atoms eg; O$_3$, CO$_2$, H$_2$O, NO$_2$, SO$_2$ etc.
4. \textbf{Tetra atomic molecules:} - These molecules consist of 4 atoms eg; NH$_3$, P$_4$, PCl$_3$, SO$_3$ etc.
5. \textbf{Pent atomic molecules:} - These molecules consist of 5 atoms eg; CCl$_4$, HNO$_3$, CH$_4$ etc.

\textbf{Molecular Mass:} - The molecular mass of a substance is the sum of the atomic masses of all atoms in a molecule of a substance. Eg;

Molecular Mass of H$_2$O = 2 x 1.0u + 1 x 16.0 u = 18 u

\textbf{Relative Molecular Mass:} - The relative molecular mass of a substance is the mass of one molecule of substance (element or compound ) relative to ( 1/12) of mass of C-12 atom.

\textbf{Gram Molecular Mass:} - The molecular mass of a substance expressed in grams is called the gram molecular mass of the substance. The gram- molecular mass of substance is also called gram molecules.
The no' of gram molecules = \[
\frac{\text{Mass of substance in g}}{\text{Molecular mass of substance}}
\]

**Avogadro’s Number**: - The number of atoms of an element present in one gram-atom of it or the no’ of molecules of it is called the Avogadro’s no’. It is represented as \(N_0\) or \(N_A\).

This no’ is equal to \(6.022 \times 10^{23}\).

**Mole**: - A collection of \(6.022 \times 10^{23}\)

\(N_A – \) atoms.

1 mole of oxygen gas = A collection of \(6.022 \times 10^{23}\) \(O_2\) – molecules.

Or

A collection of \(2 \times 6.022 \times 10^{23}\) \(O\) – atoms.

A mole is a unit for counting microscopic particles like atoms, electrons, ions, molecules etc.

Similarly,

1 mole of Sulphur (\(S_8\)) = \(6.022 \times 10^{23}\) molecules of \(S_8\)
= 8 x 6.022 x 10^{23} 	ext{ atoms of Sulphur.}

**Note**: Mass of 1 mole of a substance is called its molecular mass

**Formula Unit Mass**: The formula unit mass of a substance is the sum of atomic masses of all atoms in a formula unit of a compound. It is calculated in the same manner as we calculate molecular mass. The only difference is that it is calculated for ionic species (whose constituents are ions) for Nacl, HCl, CaCl₂ etc.

**Example**:

Q Calculate the formula unit mass of CaCl₂.

Sol. Atomic mass of Ca = 40

Atomic Mass of Cl₂ = 2 x 35.5 = 71

∴ Formula unit mass of CaCl₂ = 40 + 71 = 111 u

**Percentage composition**: The percentage composition of a compound represents the mass of each component in 100 g of the compound.

**Example**: Percentage composition of methane (CH₄) = 75 % C & 25 % H.

**Example**:

Q What is the percentage of S in sulphuric acid [H₂SO₄]
Sol.  Molecular mass of H₂SO₄ = (2 x 1) + (1 x 32) + (4 x 16)

= 2 + 32 + 64 = 98

∴ % of S in H₂SO₄ = \( \frac{32}{98} \times 100 \) [Mol. Mass of S]

\[ \frac{98}{98} \quad [\text{Mol. Mass of } H_2SO_4] \]

= 32.65 %

**Ion:** The charged species are known as ions. An ion is a charged particle & can be positively or negatively charged. A positively charged ion is called cation & negatively charged ion is called anion.

A cation is formed by the loss of one or more electrons by an atom. eg:

\[
\begin{align*}
\text{Li} & - 1 \text{e} \rightarrow \text{Li}^+ \\
\text{Na} & - 1 \text{e} \rightarrow \text{Na}^+ \\
\text{Fe} & - 2 \text{e} \rightarrow \text{Fe}^{2+} \quad [\text{Ferrous ion}] \\
\text{Fe} & - 3 \text{e} \rightarrow \text{Fe}^{3+} \quad [\text{Ferric ion}]
\end{align*}
\]

Similarly, an anion is formed when neutral atoms gain one or more electrons.

\[
\begin{align*}
\text{Cl} & \leftrightarrow 1 \text{e} \rightarrow \text{Cl}^- \\
\text{O} & \leftrightarrow 2 \text{e} \rightarrow \text{O}^{2-} \\
\text{S} & \leftrightarrow 2 \text{e} \rightarrow \text{S}^{2-}
\end{align*}
\]
When a group of atoms are joined together & carry a charge; a polyatomic ion is formed.

eg.

$\text{SO}_4^{2-}$, $\text{NH}_4^+$ etc.

**Valency** :- It is the no’ of electrons gained, lost or shared by an element to attain stable electronic configuration (or to make the octet of electrons in the outer-most shell).

It is also defined as the combining capacity of an element.

The valency of an element is variable i.e. not fixed. An element have more than one valency e.g; Phosphorous. Its valancy is 3, 5.

**Chemical Formula** :- Chemical formula of a compound is the symbolic representation of its composition. i.e; its constituents.

**Formulae of simple compounds**: 

Following rules are to be followed while writing chemical formulae of compounds:

6. The valancies or charges on the ion must balance.

7. When a compound consists of a metal & a non-meta, the symbol of metal is written first e.g; $\text{CaCl}$, $\text{NaCl}$, $\text{FeS}$, $\text{CuO}$ etc.

**How to write chemical formula:**

**Step 1** : Write down the symbols of elements constituting the compound.
Step 2: Write down the valancy of the element constituting the compound.

Step 3: Crossover the valencies of the combining atoms.

Example:

1. Write down the formula of Sod. Oxide.
Sol. We will proceed as:

Step 1: \( \text{Na} \quad \text{O} \)

\[ \text{Step 2:} \quad 1 \quad 2 \]

Step 3: \( \text{Na} \quad \text{O} \)

1. 2

Formula: \( \text{Na}_2\text{O} \) (Sod. Oxide)
Q#1  How is our atmosphere different from the atmosphere of Venus & Mars?

Ans.  The multi layered gaseous blanket surrounding the earth is called atmosphere. Atmosphere filters sunlight reaching the earth, affect climate & is a reservoir of several elements which are essential for life. The atmosphere of earth is a mixture of many gases like nitrogen, oxygen, carbon dioxide & water vapour. But in case of Venus & Mars, the major component of atmosphere is CO$_2$. It constitutes upto 95-97 % of atmosphere on Venus & Mars.

Q#2  How does atmosphere act as a blanket?

Ans.  The atmosphere act as a blanket as:

1. It keeps the average temperature of earth steady during the day as it reflects the infra red rays back which otherwise can increase the temperature of earth.

2. During night, it slows down the escape of heat into the outer space.

Q#3  What causes winds?

Ans.  During the day, the temperature of earth increases due to which the air above the land also gets heated up. As we know that hot air is lighter & has a property to rise up. This heated air also rises up in the atmosphere & displaces the cold air from that region of atmosphere (over the sea) creating a region of low pressure. This displacement of air from one region to the other creates wind.

Q#4  How are clouds formed?

Ans.  During the day, when water bodies are heated, a large amount of water evaporates & goes into the air. Furthermore, some amount of water-vapour is also released into the atmosphere due to various biological activities like respiration, temperature etc. The air gets heated up & rises up carrying water vapour with it. Air expands on rising & than cools which causes the water vapour in the air to condense & form tiny droplets. The water droplets get bigger & from clouds.

Q#5  List any three human activities that you think would lead to air pollution.

Ans.  An increase in the content of harmful substances like Carbon dioxide, Sulphur dioxide, Nitrogen dioxide, Hydrocarbons, Smoke, Dust etc. in air is known as air pollution.

The three human activities that we think would lead to air pollution are:
1. Deforestation
2. Combustion of fossil fuels like coal, petroleum etc.
3. Smoke from industries.

Q#6 Why do organisms need water?

Ans. Organisms need water because:
1. About 10% of every cell is composed of water.
2. Water is required to carry out a no’ of biological processes like digestion, transportation of nutrients, excretion & so on.
3. Water acts as universal solvent & helps in transportation of substances in dissolved form from one part of the body to the other.
4. Water is also required to carry out a no’ of domestic activities like cooking, bathing, agriculture (irrigation) etc.

Q#7 Name some human activities which may pollute a water sources.

Ans. Some human activities responsible for water pollution are:
1. Addition of some undesirable substances in water like polythene bags, fertilizers, pesticides etc.
2. Disposal of domestic wastes into water bodies.
3. Disposal of industrial wastes like mercury salts (used by paper industry) into water bodies.

Q#8 How is soil formed?

Ans. Soil is formed by the weathering of the parent rocks by some physical, chemical or biological agents. The temperature, water, ice, gravity, wind, snow, sun etc. are some of the climatic weathering agents. Chemical weathering consists of chemical decomposition of rocks. Decomposition of parent rocks by micro-organisms, plants or animals is called biological weathering of rocks. As a result of weathering, rocks are broken down in small particle, called primary soil which is later converted into mature soil.

Q#9 What is soil erosion?

Ans. The removal of top layer of soil by wind & rainfall is called soil-erosion. The top- soil is most valuable natural resource because it takes 100 years for 1 cm of top soil to get formed. Some of the factors responsible for soil erosion are:-
1. **Deforestation & over-grazing:** Both of these activities leave the top-soil bare of vegetation due to which binding force between soil particles decrease. The soil, therefore, can’t withstand the impact of wind & water & gets washed away easily.

2. **Soil characteristics:** Soil with low water holding capacity is carried away by wind & water easily.

3. **Climatic Factors:** These include humidity, rainfall, temperature, winds.

Q#10 What are the methods of preventing soil erosion?

Ans. The methods of preventing soil erosion are:

1. Aforestation: More & more plants should be grown because the roots of plants bind the soil particles together & prevent them from being carried away by strong winds & water.

2. Overgrazing by animals should be checked.

3. Bunds should be build to check the flow of water.

4. Terrace farming should be done in hilly areas.

5. Proper leveling of the land should be done so that water may be drained out easily.

Q#11 What are the different states in which water is found during the water cycle?

Ans. During the water cycle, water is found in soil (ice), liquid (water) & gaseous (vapour) states.

Q12 List any three activities which would lead to an increase in the CO₂ content in the air.

Ans. These three activities are:

1. **Deforestation:** Due to cutting down of trees on large scale, the CO₂ released during respiration by all organisms will remain unused thus leading to increase in the conc. of CO₂.

2. Burning of fossil fuels like petroleum in automobiles & industries release a large amount CO₂ into the atmosphere.

3. Burning of charcoal & coal for carrying out a no’ of domestic activities.

Q#13 What are the two forms of O₂ found in atmosphere?
1) Molecular oxygen i.e. a diatomic molecule having two oxygen-atoms.

1. Ozone i.e. a triatomic molecule having three oxygen atoms.

Q#14 What is green-house effect?

Ans. An increase in the earth’s temperature due to an increase in the CO$_2$ conc. is known as green-house effect. CO$_2$ in the atmosphere prevents the head radiations reflected by the earth from escaping into the outer space causing a rise in the temperature of earth

OR

In order to protect the plants from extreme cold, plants are grown in glass buildings called green house. The green house prevents the inner temperature from dropping too low, so that plant may not die of cold. This effect is called green-house effect.

*Note:- CO$_2$ is one of the green-house gases.*

Q#15 How are living organisms dependent on the soil? Are living organisms in water totally independent of soil as a resource?

Ans. Almost all living organisms are dependent on plants directly or indirectly because plants are producers in the food chain or we can say that without plants, food chain is incomplete. Since plants grow in the soil, living organisms are dependent on the soil. Furthermore, terrestrial organisms are directly dependent on soil because for them soil acts as a medium for their survival.

Organisms that live in water are not totally independent of soil as a resource because many nutrients present in the soil flow in the water via rain in the water bodies which are necessary for these organisms.

Q#16 You have seen weather reports on T.V & in newspapers. How do you think we are able to predict weather?

Ans. Weather can be predicted by studying wind patterns i.e. from where winds will originate & where they will stop. It is the wind patterns that decide the pattern of rainfall. This pattern also shows areas of low pressure & high pressure. In India, rains are mostly brought by South-West or North-East monsoons.

Q#17 Why is atmosphere essential for life?

Ans. Atmosphere is essential for life in following ways:-
1. One of the components of atmosphere is O\textsubscript{2} & this O\textsubscript{2} is used by all living organisms in the process of respiration for oxidation of food to release energy.

2. Another component of atmosphere i.e. CO\textsubscript{2} acts as a raw-material for plants in the process of photosynthesis.

3. The ozone-layer of atmosphere acts as a shield & protects the living organisms from the harmful effects of U.V radiations emitted by sun by absorbing them.

4. Atmospheric air regulates the temperature of the earth & keeps it at a level at which life could be sustained.

5. Atmosphere (air) acts as a medium for sound waves to travel from one place to another, therefore enable us to communicate.

Q#18 Write a note on how forests influence the quality of our soil & water resources.

Ans. i) Forests play a vital role in the recycling of air. Forests consists of large no’ of trees, shrubs & herbs. They take in CO\textsubscript{2} & release O\textsubscript{2} during photosynthesis. This O\textsubscript{2} demand is fulfilled by forests.

1. The roots of trees & plants bind the soil particles firmly. They form a vegetation cover over the fertile top soil. Thus, they prevent the removal of top soil & hence, prevent soil erosion.

2. Forests give out enormous amount of water in the form of water vapour into the atmosphere through transpiration. This water vapour helps in the formation of clouds which on precipitation cause rain. If forests are cut & not replenished, there will be reduction in the rainfall & hence the water-level of various bodies present on earth will fall.

Q#19 What is global warming?

Ans. An increase in the conc. of CO\textsubscript{2} in the atmosphere is found to increase the temperature of the earth. A subsequent rise in temperature is likely to disturb the earth’s delicate thermal balance which may cause several adverse changes in the climate. An increase in earth’s temperature would result in the melting of ice capes raising the sea level & causing flood in the coastal areas. There would be rapid water evaporation causing an increase in the conc. of water vapour in the atmosphere.
Q#1  Which method is commonly used for improving cattle breed & Why?
Ans. The method of cross breeding is commonly used for improving cattle breed because the animal gets the desired qualities of both the breded animals.

Q#2  Discuss the implication of following statement:-
“It is interesting to note that poultry is India’s most efficient converter of low fibre food stuff (which is unfit for human consumption) into highly nutritious animal protein food.”
Ans. Poultry birds are fed on agricultural wastes, brine, broken grains meshes & grit which are not fit for human consumption & in return they produce eggs & meat rich in proteins. So statement is very much true that poultry in India is converter of low fibre food stuff to highly nutritious food.

Q#3  What management practices are common in dairy poultry farming ?
Ans. The common management practices in dairy & poultry farming are :-
1. Food requirement
2. Shelter
3. Protection against diseases & pests.

Q#4  What are the differences between Broilers & layers & in their management?

<table>
<thead>
<tr>
<th></th>
<th>Broilers</th>
<th>Layers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>They have fast growth rate,</td>
<td>1. They need less proteins &amp;</td>
</tr>
<tr>
<td></td>
<td>they need protein rich food</td>
<td>they need protein rich food</td>
</tr>
</tbody>
</table>

Class: 9th  Term- II
with sufficient fat.  
2. They do not require much space & lighting.  
3. Vitamin A & K are provided in very large quantities.  
4. They should get good housing and environmental conditions for their fast growth and low death rate.  

<table>
<thead>
<tr>
<th>Fats in their food.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. They need much space &amp; lighting.</td>
</tr>
<tr>
<td>3. Sufficient nutrients, minerals &amp; vitamins have to be provided.</td>
</tr>
<tr>
<td>4. They require enough space and lighting effects for laying.</td>
</tr>
</tbody>
</table>

Q#5  How are fish obtained?  

Ans.  Fish are obtained by two ways:--  
1. Capture fishing: In this way they are obtained from natural resources.  
2. Culture fishery: In this way, they are obtained by fish farming.  

Q#6  What are advantages of composite fish culture ?  

Ans.  In this type of fish culture a combination of five or six fish species is used in a single fishpond with the result, they do not compete for food among themselves having different types of food habits. As a result, the food available in all the parts of the pond is used.  

Q#7  What are the desirable characters of bee varieties suitable for honey production ?  

Ans.  i) They stay in a given beehive for long periods & breed very well.  
1. They have high honey collection capacity.
2. They sting somewhat less.

Q#8 What is pasturage & how is it related to honey production?
Ans. The flowers available to the bees for the collection of nectar & pollen is called pasturage. The quality of honey depends upon the kind of flowers available.

Q#9 How do good animal husbandry practices benefit farmers?
Ans. Good animal husbandry practices benefit farmers in rearing cattle population, providing them proper food & preventing them from diseases.

Q#10 What are the benefits of cattle farming?
Ans. Milk production and use of cattle for agricultural activities are benefits of cattle farming.

Q#11 For increasing production, what is common in poultry, fisheries & bee keeping?
Ans. For increasing production in poultry, fisheries & bee keeping, scientific management is necessary. This includes scientific method of feeding, breeding & disease control.

Q#12 How do you differentiate between capture fishing, mariculture & aquaculture?
Ans. **Capture Fishing**: The way of obtaining fish from natural resources both fresh water & marine is called capture fishing.

**Mari culture**: Farming of marine fish in sea water is called mariculture.

**Aquaculture**: Culture of aquatic organisms in fresh water or marine conditions is called aquaculture.

**Additional Questions**

Q#1 Define Animal husbandry?
Ans. Each domesticated animal has its own needs of food, shelter & health care. The study of all these aspects is called animal husbandry. Animal husbandry has four important aspects.
i) Breeding  ii) Feeding  
iii) Weeding  iv) Heeding

Q#2 Define pisciculture & apiculture?

Ans. Rearing & management of fish for large scale production is called pisciculture.

Care & management of honey bees is known as apiculture.

**FOOD RESOURCES: PLANTS**

Q#1 What do we get from cereals, pulses, fruits & vegetables?

Ans. We get carbohydrate from cereals. Protein from pulses & vitamins & minerals from fruits & vegetables.

Q#2 How do biotic & abiotic factors affect crop production?

Ans. Biotic factors include rodents, birds, mites, bacteria and fungi.

Micro-organisms like fungi and bacteria cause various diseases in crop plants. Diseases affecting crops may be

i) Seed-borne  ii) Soil- borne  
iii) Air-borne  iv) water-borne.

1. These diseases are spread through seeds e.g “ergot of bajra, leaf spot of rice etc.

2. These are spread through the soil and mostly affect roots and stems of crop plants e.g. smut of bajra, tikka disease of groundnut etc.
3. These are transmitted by the air e.g. rust of wheat, blast of rice etc.

4. These are transmitted by the water e.g. bacterial blight of rice.

Birds like parrot, parakeet, pigeon, bulbul etc. damage the standing mature crop.

Abiotic factors:- Like draught salinity, water logging, heat, cold etc. also affect crop production severely.

Q#3 What are desirable agronomic characteristics for crop improvement?

Ans. Some of the desirable agronomic characteristics are tallness and profuse branching. They are desirable characters for fodder crops. Dwarfness is desired in cereals, so that less nutrients are consumed by these crops. These agronomic characters help give higher productivity.

Q#4 What are macro-nutrients & why are they called so?

Ans. Macronutrients are the components which are required in large amount & are essential for growth of plants. Macro-nutrients are carbon, nitrogen, hydrogen, phosphorous etc. They are called so because being used in large quantities.

Q#5 How do plants get nutrients?

Ans. Plants get nutrients from air, water and soil. They get carbon from carbon dioxide in air where as hydrogen & inorganic nutrients are absorbed through roots as water from soil.

Q#6 Compare the use of manures & fertilizers in maintaining soil fertility?

Ans. Manures are organic substances obtained from the decomposition of vegetable and animal wastes like cow dung, plant residues which supply essential elements and humus to the soil and make it fertile. It restores the soil texture for better retention of water and aeration and make for the general deficiency of nutrients in the soil. It also replenishes small part of the plant nutrients utilized by the crop. While as fertilizers supply those nutrients which are not supplied by the manures. Fertilizers contain more nutrients than manures. They supply inorganic materials to the soil.
Q#7 Which of the following conditions will give the more benefits? Why?

1. Farmers use high, quality seeds, do not adopt irrigation or use fertilizers.
2. Farmers use ordinary seeds, adopt irrigation and use fertilizer.
   c. Farmers used quality seeds, adopt irrigation, use fertilizer and use crop protection measures.

Ans. Farmers should use quality seeds, adopt irrigation methods, use fertilizer and crop protection measures because they are essential for ensuring high production of crop.

Q#8 Why should preventing measures & biological control methods be preferred for protecting crops?

Ans. Protective measures & biological control methods are preferred for protection of crops because they are safe methods & do not cause environmental pollution. They not only prevent the stored food materials from getting spoiled or infested by insects, bacteria & micro-organisms but also prevent crops from toxic effects of chemicals which are added to control the pests.

Q#9 What factors may be responsible for loss of grains during storage?

Ans. Following factors are responsible for loss of grains during storage:-

1. **Biotic factors**: Such as insects, rodents, birds, mites and bacteria damage stored food grains. A few insect pests of stored grains are:
   1. Grubs of pulse beetle or gram dhora damage stored grains.
   2. Larvae of rice moth damage rice and maize.

2. **Abiotic factors**: Some of the a biotic factors affecting stored grains are: moisture, humidity and temperature etc.
**Temperature**:- Micro-organisms become active at 30°C to 40°C. The food grains thus, should be stored below 30°C.

**Moisture**:- Food grains should be dried before storage. Moisture content of grains should not be above 14%.

**Humidity** :- Humidity in air promotes growth of moulds like mucor or penicillium over the grains.

**Q#10 Why are manures & fertilizers used in fields?**

**Ans.** Manures & fertilizers are the major sources of nutrients for plants. Therefore, the deficiency of plant nutrients & organic matter in the soil is made up by adding manures & fertilizers.

**Q#11 What are advantages of inter cropping & crop rotation?**

**Ans.**

**Advantages of Intercropping**:- It ensures maximum utilization of nutrients supplied & prevention of pests & diseases from spreading to all plants belonging to one crop in a field.

**Advantages of crop rotation**:- Using a planned crop rotation two or three crops can be grown on a piece of land in a year without decreasing fertility of soil.

**Additional Questions**

**Q#1 Define hybridization.**

**Ans.** It was Cotton Mather in 1716 who carried out hybridization in corn plants.
It is a process in which two genetically dissimilar plants having desired characters are cross bred to obtain a new variety having all the desired characters. This new breed having all the desired characteristics from both the parents is called “hybrid”.

**Q#2 Define various crop seasons.**

**Ans.** The various types of crops need different climatic conditions like temperature & duration of sunlight etc. On the basis of seasons crops are of three types:

1. **Kharif Crops** :- Like Rice, maize which are grown in June after the first rains of the rainy season from June to October.

2. **Rabi Crops** :-Like wheat pulses are grown from November to April

3. **Zaid Crops** : e.g. vegetables which are grown between March & June.

**Q#3 Crop Rotation:-** The practice of alternating crops to prevent the depletion of a specific nutrient in the soil & to retain its fertility is called crop rotation.

**Q#4 Weeds: -** Weeds are undesirable plants that grow along with the main crop plants. They are harmful to the main crop because they compete with it for water, sunlight, nutrients & space, thereby reducing the yield. Some common weeds are amaranthus, convolvulus & some weedicides are 2-4-D, simazine & metachlor. Some common diseases of various crops are given below:-

i) **Rice** :- Blast (boat-shaped lesions on leaves, stems & grains)

ii) **Wheat** :- Rust, (Grains develop black-powdery smut in them)

iii) **Groundnut** :- Tikka or leaf spot (light brown lesion on petiole & stem)

iv) **Chick Pea (Gram)** :- Wilt (Leaves become yellow & dry up)
Subject: History

PEASANTS AND FARMERS

Q.1: Explain briefly what the open field system meant to rural people in eighteenth century England?

Look at the system from the point of view of: A rich farmer, A labourer, A pleasant woman

Ans: A rich farmer and open system: A rich farmer would not benefit from the open field system rather he would be in favour of enclosures. In the 16th century, they began to enclose common land and build fences around their holdings to separate their property from others. As the price of wool raised up in International market in the 16th century.

The rich farmers wanted to expand wool production to earn profits. They were eager to improve their sheer for them. So they began dividing and enclosing common land and building hedges around their holdings to separate their property from that of others.

A labour and open – field system: As the fences came up, the enclosed lands became the exclusive property of a landowner. Now poor could no longer collect their firewood from the forest, or graze their cattle on the common lands. They could not hunt or gather fruits.

As a result the poor were displaced from the land. They found their customary rights gradually disappearing.

A Peasant woman and open – field system: The worst sufferers of the change in land pattern were peasant women. The open field system was replaced by an enclosure system. With this their collection of firewood, gathering of fruits were restricted which shed all their rights over land.

Q.2: Explain briefly the factors which led to the enclosures in England?

Ans. The factors which led to the enclosures in England are as under:-

1) The price of wool rose up in international market in the 16th century. As a result, the rich farmers wanted to expand wool production to earn more and more profit. They began to enclose common land and build fences around their holdings to separate their property from others.

2) The English population increased tremendously. This implied a great demand for food grains. The landlords were encouraged to produce more and more food grains. Slowly and gradually common lands were taken and enclosed.
3) During this period, Britain was industrializing very fast. There was a great migration of people from rural area to towns in search of jobs. As the urban population grew, the market of food grains expanded and the prices of food grains rocketed. Therefore, the peasants were encouraged to produce more and more.

4) France was at war with England during the end of 18th century. This slowed down the import of food grains in England. This led to soaring up of prices of food grains in England, thus the land owners were encouraged to enclose lands and enlarge the area under food grains cultivation.

**Q.3 : Why were threshing machine opposed by the poor in England ?**

Ans. The threshing machines were destroyed by poor peasants because it resulted in unemployment of thousand of laborers. Further, due to agricultural depression the landowners cut out the wages of workmen. The unemployed poor moved from one village to another place in search of job and lived in everlasting fear of loss of job.

**Q.4 : Who was captain Swing ? What did the name symbolize or represent?**

Ans. Captain Swing was no person but a mythic name used by the poor laborers, who were deprived of the common land, of their livelihood and even of their jobs. They could not openly face the influential landlords so they adopted this new method of threatening them. At night, they would attack the farm house of the landowners, burn their barn and haystacks and sometimes their entire farm houses.

Captain Swing’s name represented agrarian resistance and revolt by agricultural laborers against well-to-do farmers and landowners.

**Q.5 : What was the impact of the westward expansion of settlers in the USA ?**

Ans. The westward expansion is a great event in the history of America. The expansion from east to west by Whiteman was a slow and steady process, which ranged from late 18th century to 20th century. The settlers cut and burnt forests, cleared large area for cultivation and erected fences around their fields. In course of time, the great plain across the river Mississippi became major wheat producing areas of America. Consequently, the westward march of white Americans led to agricultural prosperity and they were able to gather vast natural and mineral resources of that country.

**Q.6 What are the advantages and disadvantages of the use of mechanical harvesting machines of the USA?**

Ans. The advantages and disadvantages of the use of mechanical harvesting machines of the USA are as under :-

**Advantages :-**

1) It saved the use of physical labor and increased agricultural output.
2) The new machines allowed big farmers to clear large forests, break up the soil, remove the grass and prepare the land for cultivation.

3) The USA became one of the largest producers and exporters of wheat in the world resulting in plenty and prosperity for America and their people.

Disadvantages:

1) Poor laborers had to face loss of jobs and starvation because single machine could do the work of scores of laborers.

2) For the poor farmers, machines brought misery. Many of them took bank loans to buy machines. They could not pay back their debt and deserted their farms.

3) The wheat boom of late 19th and early 20th century came to an end in 1920. There was a large surplus of food grains, wheat prices failed and export markets collapsed. All these led to the Great Agrarian Depression of the 1930’s.

4) The expression of wheat agriculture also led the conversion of USA from bread basket to a dust bowl.

Q.7: What lessons can we draw from the conversion of the countryside in the USA from bread basket to a dust bowl?

Ans. We must learn to appreciate the need for maintaining ecological balance. Man must respect the environment. When wheat cultivation had expanded in the 19th century, zealous farmers had recklessly uprooted all vegetation. They turned the soil cover and broken the soil into dust. The whole region had become a dust bowl. The American dream of a land of plenty had turned into nightmare. After the 1930’s, they realized that they had to respect the ecological conditions of each region. We draw lesson to conserve and protect the environment. We have to co-exist with nature.

Q.8: Write a paragraph on why the British insisted on farmers growing opium in India?

Ans. Chinese tea was much demanded in Europe that an imbalance of trade developed. English bullion went to China to import goods, but none returned back because there was no possibility of export. This was unacceptable to the British and they eagerly looked for a solution. The solution to Britain’s problem was opium. Portuguese were the first to sent opium to China but it was only used for medical purposes. The British started smuggling opium to China from 1825 and soon Chinese became addicted to drugs. In order to take out the expenditure on tea trade the British insisted farmers on growing opium in India.

Q.9: Why were Indian farmers reluctant to grow opium?

Ans. For many reasons the Indian farmers were unwilling to grow opium.

1) The crop had to be grown on the best available land, on fields that lay near villages and were well mannered. On this land, peasants usually produce pulses. If they planted opium on this land, then pulses could not be grown there.
2) The cultivation of opium was a difficult process. The plant was delicate and cultivator had to spend many hours nurturing it. So they did not have enough time to care for other crops.

3) The price the government paid to the cultivators for the opium was very low. It was unprofitable for cultivator to grow opium at that price.

**Q.10 : What was the attitude of the British to the opium cultivation outside the British territories?**

Ans. By the year 1820 opium production was rapidly declining within British territory, but outside the territory its production was increasing. Opium was being produced in Central India and Rajasthan. These were not under direct control of British as these were princely states. The opium from these regions was exported to China.

To the British this trade was also smuggling and it had to be stopped. British government therefore instructed its agents posted in the princely states to confiscate all opium and destroy the crops.

**Q.11 : How was opium trade conducted in China?**

Ans. Chinese tea was much demanded in Europe that an imbalance of trade developed. English bullion went to China to import goods, but none returned back because there was no possibility of export. This was unacceptable to the British and they eagerly looked for a solution. The solution to Britain’s problem was opium. Portuguese were the first to sent opium to China but it was only used for medical purposes. The British started smuggling opium to China from 1825 and soon Chinese became addicted to drugs. In order to take out the expenditure on tea trade the British insisted farmers on growing opium in India. In this way opium trade was conducted in China.

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**THE STORY OF CRICKET**

**Qno1** *Test Cricket is a unique game in many ways. Discuss some of the ways in which it is different from other team games. How are the peculiarities of Test cricket shaped by its historical beginnings as a village?*

**Ans:** No doubt that Test cricket is a unique game. Its uniqueness can be attributed in the socio-economic history of England in 18th and 19th century in the following ways:

1) Test cricket is a match which can be continued for five days and still end in a draw. No other game (hockey, soccer or tennis) takes so much time to complete.

2) Another characteristic of cricket is that the length of the pitch is specified to be 22 yards and width to be 10 feet.
3) Sports like hockey and soccer have five dimensions of playing area but cricket does not have. A cricket ground can be bigger or smaller, its shape can be oval or circular.

Peculiarities of Test cricket shaped by its historical beginnings as a village game:

1) Cricket connections with a rural past can be seen in the length of a test match. Originally, cricket matches had no time limit. The game went for a long.

2) Cricket’s vagueness about the size of a cricket ground is a result of its village origins. It was originally played on country commons, unfenced land that was public property.

3) Cricket’s most important tools are all made of natural pre-industrial materials. The bat, stumps and bails are to be made of wood and the ball is made of leather, twine and cork.

Qno 2) Describe one way in which in the 19th century, technology brought about a change in equipment and give one example where no change in equipment took place.

Ans: Only helmet is the equipment in which in the 19th century technology brought about a change. Except the helmet all other cricket equipments like bat, ball, stumps and bails showed no change. They are still handmade and not industrially manufactured.

Qno 3) Explain why cricket became popular in India and in West Indies. Can you give reasons why it did not become popular in countries in South America?

Ans: India and West Indies were colonies of England, where cricket was very popular. The British officials and sahibs in India and West Indies played cricket to pass off their leisure time. In both the countries initially, the game was adopted and prompted by the upper class to imitate the colonial masters. Thus, it became popular in both the countries.

Most of the countries of South America remained under the colonial rule of other European powers like Spain, Portugal and France but not England. That is why cricket was not popular in South America.

Qno 4) Give brief explanation for the following:

(i) The Parsis were the first Indian community to set up a cricket club in India.

Ans: The origin of Indian Cricket is to be found in Bombay and the first Indian community which started playing the game were the Parsis. This was because they were first to come into close contact with the British because of their trading interests. They were also the first Indian community to westernize.

(ii) Mahatma Gandhi condemned the Pentangular tournament.

Ans: The teams that played colonial India’s greatest first class cricket tournament were represented by different religious communities. The Pentangular tournament was played by five teams- the Europeans, the Parsis, the Hindus, the Muslims and the Rest (all other communities such as Indian Christians etc.).

Mahatma Gandhi condemned the Pentangular tournament as a communal divisive connection because it was played on communal basis. The Pentangular tournament was held at that time when nationalists were trying to unite India.

(iii) The name of the ICC was changed from Imperial Cricket Conference to the International Cricket Council.
Ans: Earlier the rules and regulations of the International cricket were in the hands of the Imperial Cricket Conference which was under the control of England and Australia. With the rise of new independent countries, the name of the Imperial Cricket Conference was changed to International Cricket Council in 1965. It was later in 1989, the privileged position of England and Australia was scrapped in favor of equal membership.

(iv) The shift of the ICC headquarter from London to Dubai.

Ans: India has the largest viewership of the cricket and the largest market in the cricket world. Therefore, the game centre of gravity shifted to South Asia. This showed that cricket was no longer under the domination of England and Australia.

Qno 5) How have advances in technology, especially television technology, affected the development of contemporary cricket?

Ans: Television coverage has changed the contemporary cricket. It expanded to audience for the game by playing cricket into small towns and villages. It also broadened cricket’s social base. Even children could now watch and learn by imitating their heroes. The technology of satellite television in the worldwide reach of multinational television companies created a global market for cricket.

WORKING OF INSTITUTIONS

Qno 1) How is a major policy decision taken?

Ans: To illustrate how a major policy decision is taken we have to study a Government Order. On August 13, 1990, the Government of India issued an Order. It was called an Office Memorandum. Like all government orders, it had a number and is known by that: O.M.No. 36012/31/90-Est (SCT), dated 13.8.1990. The Joint Secretary, an officer in the Department of Personnel and Training in the Ministry of Personnel, Public Grievances and Pensions, signed the Order.

The order said that 27% of the vacancies in civil posts and services under the Government of India are reserved for the Socially and Economically Backward Classes (SEBC). The benefit of job reservation was till then available only to Scheduled Castes and Scheduled Tribes. Now a new third category called SEBC was introduced. Only persons who belong to backward classes were eligible for this quota of 27% jobs. Others could not compete for this job.

This Office Memorandum was the culmination of a long chain of events. The Government of India had appointed the Second Backward Class Commission in 1979. It was headed by B.P. Mandal. Hence it was popularly called the Mandal Commission. This was the most hotly debated issue in the country. Newspapers and magazines were full of different views and opinions on this issue. It led to widespread protests, some of which were violent. People reacted strongly because this decision affected thousands of job opportunities.

The Supreme Court asked the government to modify its original order. It said that well-to-do persons among the backward classes should be excluded from getting the benefit of reservation. Accordingly, the Department of Personnel
and Training issued another Office Memorandum on September 8, 1993. The dispute thus came to be an end and this policy has been followed since then.

Qno2) How is the working of different institutions regulated?

Ans: Governing a country involves various activities e.g. the government is responsible for ensuring security to the citizens and providing facilities for education and health to all. It collects taxes and spends the money on administration, defence and developing programmes. It formulates and implements several welfare scheme.

So, to attend all these tasks, several welfare arrangements are made in all modern democracies. Such arrangements are called institutions. A democracy works well when these institutions perform functions assigned to them.

Qno3) Comment on the bicameral nature of the Indian Parliament.

Ans: The Indian Parliament is bicameral in nature as it has two Houses, the Lok Sabha and the Rajya Sabha. The members of the Lok Sabha are elected directly by the people. The maximum strength of the House is 552 members, out of which 530 members are represented from the States, 20 members from Union Territories and 02 members belong to the Anglo-Indian Community.

The members of the Rajya Sabha are elected by the members of the legislative assemblies of the States and Union Territories. Its total strength is 250 members, out of which 238 are elected by MLAs and 12 are nominated by the President who have earned distinctions in the fields of literature, art, science and social service. It is a permanent house where one-third of the strength is replaced after every 02 years.

Qno4) How is the President of India elected?

Ans: The President of India is not elected by the people. He is elected by the Electoral College composed of the elected members of both the Houses of the Parliament (MPs) and the elected members of the Legislative Assemblies of the States (MLAs) in accordance with the system of proportional representation by means a single transferable vote. Under this system no vote goes waste. A candidate standing for President’s post has to get a majority of votes to win the election.

Qno5) Write a note on Parliamentary form on government.

Ans: Parliamentary form of government means government by a body of cabinet ministers (i.e. Prime Minister and his Council of Ministers) who are chosen and responsible to the legislature. In such type of government, Parliament is the final authority for making laws in the country. It also controls over those who run the government. Parliament is the highest forum of discussion and debate on public issues and national policy in the country. Thus a parliamentary form of government is that type of government in which the Parliament exercises political authority on behalf of the people.

Qno6) How is the Prime Minister appointed?

Ans: The Prime Minister is the leader of majority group in the Parliament. This majority group selects one person as their leader, after due confirmation of the President, comes to be known as the Prime Minister.

Qno7) What do you mean by a Coalition Government?
Ans: Coalition government means alliances of several parties. This situation arises if no party on its own can achieve majority in the Parliament. To deal with such situation parties form coalition in order to form a government.

Qno8) Who appoints the judges of the Supreme Court?
Ans: The judges of the Supreme Court are appointed by the President on the advice of the Prime Minister and in consultation with the Chief Justice of the Supreme Court.

Qno9) Name the three organs of the government and what are their functions?
Ans: The three organs of the government and their functions are:

1. The Legislature:- The legislature is the law making body. It can amend the constitution. It also has a control over the executive.
2. The Executive:- The main function of the executive is to execute the laws created by the legislature. It also maintains law and order and formulates new policies.
3. The Judiciary:- The judiciary interprets the laws and also punishes the person who violates the laws. The judiciary of India also acts as the guardian of the Fundamental Rights.

Qno10) Who appoints various ministers of the Union Government?
Ans: The ministers of the Union Government are appointed by the President on the advice of the Prime Minister.

Qno11) Who appoints the Chief Justice of the Supreme Court?
Ans: The Chief Justice of the Supreme Court is appointed by the honorable President.

Qno12) Who elects the Vice-President of India?
Ans: The Vice-President of India is elected by an electoral college consisting of members of both the Houses of the Parliament.

Qno13) Who appoints the Lt. Governor of Union Territories?
Ans: The Lt. Governor of Union Territories is appointed by the honorable President.

CONSTITUTIONAL DESIGNS

Qno1) Write a note on South African Constitution.
Ans: After the emergence of the new democratic South Africa, black leaders specially Nelson Mandela appealed to fellow blacks to forgive the whites for the atrocities they had committed while in power. They said let us build a new South Africa based on equality of all races and men and women, on democratic values, social justice and human rights.

After two years of discussion and debate they came out with one of the finest constitutions the world has ever had. This constitution gave to its citizens the most extensive rights available in any country. The South African constitution inspires democracy all over the world. A state denounced by the entire world till recently as the most undemocratic one is
now seen as a model of democracy. What made this change possible was the determination of the people of South Africa to work together, to transform bitter experiences into the binding glue of a rainbow nation.

**Qno2) Write a note on the making of Indian Constitution.**

Ans) The drafting of the constitution was done by an assembly of elected representatives called the Constituent Assembly. The Constituent Assembly started its work of framing the Constitution of India on December 04, 1946. Due to the political turmoil and the problem of the partition of the country, it began its work after the independence of the country.

On 29th Aug 1947, the Constituent Assembly appointed a Drafting Committee under the chairmanship of Dr. Ambedkar. By Feb 1948, the committee prepared a Draft Constitution of India. The final shape to the Constitution was given on 26th Nov 1948. Thus it took 2 years, 11 months and 17 days to prepare the constitution of the India. But the Constitution came into effect on Jan 26th 1950 because it was on this day of Jan 26th 1930 when Complete Independence was declared as the ultimate goal of the national movement in the Lahore Session of the Indian National Congress. To mark this day we celebrate Jan 26th as Republic Day every year.

**Qno3) Comment on the role of DR. B.R. Ambedkar in the making of the Indian Constitution.**

Ans) Dr Bhimrao Ambedkar is popularly known as the chief architect of the Indian Constitution. His efforts to eradicate social evils were remarkable. He was appointed as the Chairman of the Constitution Drafting Committee. The text prepared by Ambedkar provided constitutional guarantees and protections for a wide range of civil liberties for individual citizens, including freedom of religion, the abolition of untouchability and outlawing all forms of discrimination. Ambedkar argued for extensive economic and social rights for women, and also won the Constituent Assembly’s support for introducing a system of reservations of jobs for members of the SC and ST. He provided an inspiring Preamble to the Constitution ensuring justice, liberty, equality and fraternity for one and all.

**Qno4) What pledge did Jawaharlal Nehru in his “Tryst with Destiny Speech” want makers of the Indian Constitution to take?**

Ans) In his speech “Tryst with Destiny” at the very stroke of mid night on Aug 15th 1947, Jawaharlal Nehru announce the happy news of the freedom of India to the entire country that when the world sleeps, India will awake to life and freedom.

Nehru asks the makers of the Indian Constitution to take the pledge of dedicating themselves to the service of India and to the service of the whole mankind. According to Nehru, they will collect their courage from the principles of the past. He asks the makers of the Indian Constitution to serve the future generations of India and to work hard for the
development of their nations. Doing service to India means doing service to million of the poor people who suffer all over the country. It means ending of poverty, ignorance, disease and inequality of opportunity.

**Qno5) What does the word Republic in the Preamble signify?**

Ans) Republic is a system of government which derives its power from the people that means a form of government in which the citizens choose their head. Therefore, the word Republic in the Preamble signifies that the head of the state is an elected person who does not acquire a hereditary position.

**Qno6) Why do we need a Constitution?**

Ans) We need a Constitution for the following reasons:

(i) It generates trust and coordination among different people to live together.

(ii) It specifies how the government will be constituted and who will have power to take decisions.

(iii) It lays down limits on the powers of the government and tells us what the rights of the citizens are.

(iv) It aims at the creation of a good society.

**Qno7) What are the guiding values of the Indian Constitution?**

Ans) The guiding values of the Indian Constitution is based upon the dreams and promises laid by the three personalities of India i.e. Mahatma Gandhi, B.R. Ambedkar and Jawaharlal Nehru. Besides this the Indian Constitution is also guided by its Preamble which lays emphasis on the Sovereign, Socialist, Secular, Democratic and Republic forms of government and on the ideals of Justice, Liberty, Equality and Fraternity.

**Qno8) What is a Constitutional Amendment?**

Ans) The Constitution of India is a very long and detailed document. Therefore it needs to be amended quite regularly to keep it updated. Those who drafted the Indian Constitution felt that it has to be in accordance with changes in the society. So, they made provisions to bring changes from time to time. These changes are called constitutional amendments.

**Qno9) Name the state of Indian Union which has its own Constitution?**

Ans) Unlike USA, in India, states do not have a separate Constitution to regulate their function however in this regard Jammu and Kashmir is an exception.

**Qno10) When was the Preamble of the Indian Constitution of India amended?**
Ans) The Preamble of the Constitution has been amended only once so far through 42nd constitutional Amendment Act 1976 by adding the words Socialist, Secular and Integrity of the Nation to it.

**Qno11) What are the words inserted in the Preamble to the Constitution of India?**

Ans) The words Socialist, Secular and Integrity of the Nation were inserted to the Constitution of India.

**Qno12) What is the importance of 26th January in India?**

Ans) The Constitution of India came into effect on Jan 26th 1950 because it was on this day of Jan 26th 1930 when Complete Independence was declared as the ultimate goal of the national movement in the Lahore Session of the Indian National Congress. To mark this day we celebrate Jan 26th as Republic Day every year.

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**POPULATION**

**Q#1** What is census?

Ans. Census is a count of population. It is the official enumeration of population along with certain economic and social statistics in a given territory, carried out on a specific day. It is an enquiry based on a questionnaire. The questions are related to various kinds of information about the members of the households.

**Q#2** Define sex-ratio.

Ans. Sex-ratio is defined as the number of females per thousand males in the population.

**Q#3** Explain birth rate and death rate.

Ans. The birth rate is the number of live births per thousand persons in a year. In the beginning of 20th century the birth rate was 49.2 per thousand which came down to 26.1 per thousand at the end of the century.

The death rate is the number of deaths per thousand persons in a year. The death rate has declined from 42.6 per thousand to 8.7 per thousand during the same period.

**Q#4** What is the significance of studying population?

Ans. The people are the most precious resource of a country. They give an identity to a country. They are important for the development of both the country as well as the individual. They act as producers as well as the consumers of
goods and services. They determine the economic condition of a society. The significance of studying population lies in estimating the total manpower available for production and total amount of goods and services required for their consumption. The science dealing with the study of population is called demography.

Q#5 Explain the concept of optimum population.

Ans. Optimum population refers to the size of population of a country, which produces maximum amount of goods and services with the help of its resources. It is the size of population which is balanced by available resources.

The concept of optimum population can best be explained from the fig. given below.

Output per head

\[ Y \]

Optimum population

\[ M \]

Resource

Population size

O under population P Over population X
In the fig. the population gradually increased up to point P, till point P the country is under populated as the available resources are more than the persons to consume then till the point M. After point M, the amount of goods and services for every person differs as the resources fall short and also get overused. The curve goes down after point M which means that per head availability of goods and facilities is declined due to overuse of resource. Hence, OP represents the optimum population of the country. The country is regarded as over populated beyond point P.

Q#6 Discuss one factor that causes growth of population in India.

Ans. In India, the important factor which is responsible for the growth of population is the widening gap between birth rate and death rate. Although both birth rate and death rate have declined from 49.2 to 26.1 (per thousand) and 42.6 to 8.7 (per thousand) respectively after independence yet the birth rate is still high as compared to death rate. It is due to lack of education, early marriages, ineffective birth control measures and agricultural economy etc. The increased public health measures and advancement in medical technology have resulted in the fall of death rate leading to increase in population.

Q#7 How does occupational structure reflect the levels of growth of a country?

Ans. Occupation structure is closely linked to the growth of a country. It includes three main activities – Primary, Secondary and tertiary. If majority of the population of a country is involved in primary activities (agriculture), it results in lower levels of income. Therefore, the country remains less developed. On the other hand, if the majority of the population is involved in secondary and tertiary activities, the higher is the level of income and consequently the country would be more developed. For example, in the U.S.A and the U.K only 2-7% of population is engaged in primary activities whereas in India around 67% population is involved in primary activities. It is the reason why the U.S.A and the U.K are much developed while India is still a developing country.

Q#8 Write short notes on:

1. Urbanisation in India

In India, urban population has increased from 17.29% (1951) to 25.72% (1991). The urbanisation in India is the result of expansion of industrial and service sectors in urban areas. People from rural areas migrate to urban areas due to rising population in rural areas and lack of demand for labour in agriculture. Besides the employment opportunities, better education and living standards also attract people towards towns and cities resulting in steady population growth. However, these opportunities are not found in all urban areas equally and, therefore, there are cluster of urban settlements around each core town or city which are linked to the economy of the city. These extensions of cities are called urban agglomerations and are not covered by the defined municipal limits.
However, the cities are growing faster than the capacity of the economy to support them. As a result, many problems have arisen like environmental pollution, inadequate power, water supply, transport, health problems and education etc.

2. **Age composition of population and dependency**

The population of a country is divided into three categories on the basis of age group these are: -

1. Children below working age (below 15 years)
2. Persons in the working age (15 to 59 years)
3. Old persons above the working age (above 59 years)

The people of age group 15 to 59 years are engaged in productive work and have the ability to do so and are said to be part of working population. Housewives, full time students and people working even after 60 years of age are not included in this group.

**Dependency**

The development of a country is dependent on the ratio of age group. In India, consumption is higher than production. About 58.7% of population is engaged in productive work and 41.3% of population is dependent. As a result a great proportion of country’s resources are diverted towards satisfying the needs of dependent population, which in turn affect the development of India. For a country to prosper, more population should be engaged in production.

4. **Adolescent population in India**: Adolescent population is the population belonging to age group of (10-19) years. The adolescents constitute about one fifth of the total population of India. They are the important resource for future. However, the problems of adolescents have so far not received adequate attention. The diet provided to adolescents is inadequate in all nutrients. A large number of adolescent girls suffer from anaemia. In order to ensure better development of adolescent boys and girls, they should be given proper balanced diet. They should be made aware of their problems through literacy and education. They should be guided properly so that they develop into healthy and responsible citizens of the country.

5. **National Population Policy**: Population policy is a set of policies and programmes launched by the govt. of India from time to time in order to tackle various problems related to population e.g. birth rate, death rate, literacy etc.

The population policy has been implemented in India since 1952 for the purpose of stabilisation of population. National population policy (2000) also aims at stabilizing population by 2045. However, the focus is not restricted to family planning and birth control measures only. It also aims at economic growth, social development and environmental protection. The measures mentioned by the policy to achieve the goal include raising the age of
marriage, free and compulsory school education upto 14 years and reducing dropouts at the primary policy aims at the development of the country and the improvement of the living standards of people.

6. **Female literacy and population growth**

There has been increase in the literacy rate from 5% (1901) to 65.35% (2001). The female literacy rate is still low as compared to male literacy rate. There are 75% literate males and 54% literate females. However, the improvement in the literacy level of females is encouraging.

There is a close relationship between literacy and population. If the people of a country are illiterate then the country is over populated. If the people are literate, the population is low. The female literacy helps in bringing down the population. The educated females understand the ill-effects of over population. They can also take effective birth control measures and also prevent early marriages (child marriages). It is quite evident from the fact that the states like Rajasthan, Bihar, Uttar Pradesh and Madhya Pradesh, which have high population have low literacy rate. Therefore, to control population we must educate females and increase literacy rate.

**ADDITIONAL QUESTIONS**

**Q#1 Give demographic information about India based on 2001 census.**

1. Total population – 102.70 crores.
2. Annual growth rate (%) – 1.93.
3. Male population – 53.1 crores.
   
   Percentage – 51.7%
4. Female population – 49.6 crores.
   
   Percentage – 48.2%
5. Average population density – 324 persons/Sq.Km
6. Birth rate – 26.1 (per 1000)
7. Death rate – 8.7 (per 1000)
8. Sex ratio – 933 (per 1000)
9. Age composition
1. 0 – 14 years – 34.33%
2. 15 – 59 years – 58.7%
3. above 59 years – 6.97%
4. Occupational structure (Based on 1991 census)
1. Population involved in Primary activities – 67%
2. Secondary activities – 13%
3. Tertiary activities
4. Literacy rate – 65.35%
   Male literacy – 75%
   Female literacy – 54%

Q#2 Name the states and the population aspect in which they rank first and last.
1. Literacy
   Kerala – 90.92% (Highest)
   Bihar – 47.53% (Lowest)
2. Sex ratio
   Kerala – 1058 (Highest)

Q#3 Define Demography
Ans. The Science which deals with the study of population is called as demography.

Q#4 Which year is called the year of great divide?
Ans. 1921
Q#5 Why have some places in India more population density than others?

Ans. India has varied relief features as well as climate. The topography and climate play an important role in the distribution of population. The plains have flat land, fertile soil, abundant rainfall and moderate climate, which are favourable for human settlements. So in India, Northern Plains, Tamil Nadu and Kerala have high population density. On the other hand, the hilly regions have rugged terrain and unfavourable climatic conditions, which are responsible for low population density. For example, the states of Jammu and Kashmir, Himachal Pradesh, Uttarakhand and North Eastern states are scarcely populated. The harsh climatic conditions of Rajasthan are responsible for low density of population there. Moderate density of population is found in most of peninsular is found in most Peninsular blocks and Assam.


Ans. The state of J&K ranks 19th in India in terms of its population.

1. Percentage share – 0.98%
2. Total population – 10069917
3. Highly populated area – Jammu (1571911)
   Least populated area – Kargil (115227)
   Area with highest population density – Srinagar (556)
   Area with lowest – Leh (03)
5. Sex ratio – 900 (per 1000 males)
   Area having highest sex-ratio – Pulwama (939)
   Area having lowest sex-ratio – Leh (805)
6. Literacy rate – 54.46%
   Male literacy rate – 65.75%
   Female literacy rate – 41.82%
Area with highest rate – Jammu (77.30%)
Area with lowest literacy – Budgam (39.54%)

Q#7 Name the states and union territories which have highest and lowest population in India.

Ans. Uttar Pradesh with 166052859 population ranks first and Sikkim with a population of 540493 has the lowest population in India.

Delhi ranks first among union territories with a population of 13782976 and Lakshadweep with 60595 is the least populated.

Q#8 What is the average per capita calorie – consumption for urban and rural areas?

Ans. Urban areas – 2100 calories.
Rural areas – 2400 calories.

Q#9 Define literacy.

Ans. Literacy refers to the total number of people who are literate. A person is said to be literate when he is seven years of age and is able to read and write with certain understanding.

Q#10 Name the problems caused by urbanisation.

Ans. The major problems caused by urbanisation are:

1. Environmental Pollution.
2. Inadequate water and power supply.
3. Lack of adequate transport and education facilities.
4. Overcrowding

Q#11 What do you mean by migration?

Ans. The movement of people from one place to another within a country or from one country to another is called migration. Migration within a country affects population density whereas migration from one country to another affects the size of the population. The main causes of migration are availability of employment opportunities, better health and education facilities, industrial expansion and better living standards in urban areas or other countries.
Q#12 What is Dependency Ratio?

Ans. “Dependency ratio” is the ratio between the percentages of dependent population to the working population. For example, in India the percentage of dependent population is 41% and working population is 59%.

Therefore, Dependency Ratio = \( \frac{41}{59} = 0.69 \), i.e. every 100 persons have to feed/support 69 persons.

اردو

نوٹ: شہر یار کا نوٹ کتاب سے یاد کریں

غزل 1

1. مطلع میں شاعر فرماتے ہیں کہ بھومی پرانے زخمون کو بهلاکر خوابون کے مطابق ایک نئی اور خوشحال زندگی گذارئی چاپیے۔

2. اس شعر میں شاعر فرماتے ہیں کہ ایک عمر سے مجبور جینے کا کوئی احساس نہیں رہا اس لیے میرا دل محبوب سے وہی ظلم وسمن، اور زیادتی کا تقصیا کرتا ہے تاکہ جینے کا احساس پھر سے بیدار بوجھا۔

3. ۔۔۔۔۔۔۔۔کہ اے میرے محبوب! میں پھر سے مجرم کی حیثیت سے چہرے میں کھڑا ہوں۔

4. ۔۔۔۔۔۔۔۔ کہ اے دیوانو! دیکھو ہم کس طرح اپنے بی بی سایی کی جنگریون میں جکڑے بونے بین اب تم بی کوئی تدبربتاو جس سے بن ان زنجیریون سے آزاد بوجھا۔

5. ۔۔۔۔۔۔۔۔۔ کہ دل بہلانے کے اب صرف یہ صورت پہی کے گھری بونی محبوب بھری باتیں پھر سے یا دکھیں۔

غزل 2
1. مطلع مین شہر یار فرماتے ہیں کہ زندگی کی جیسی امید تھی ویسی تو قعات پر نہیں آتی،
کیونکہ نہیں بر وقت کسی نے کسی چیز کی کمی کا احساس بوتا ہے。
2. شاعر اس شعر میں فرماتے ہیں کہ زندگی صرف خیالات میں بہتر بوسکتی ہے کیونکہ
ظاہری طور پر ایک بہتر اور کامیاب زندگی گذارنے کے اثر نہیں نظر آتے۔
3. جو لوگ ہم سے چھھڑ چکے ہیں ان سے ملنے کی امید تو یہ مگر یقین بہت کم ہے۔
4. اس دنیا میں بہتر انسان کی تمام تر امید پر پوری نہیں پوٹی بہت کم کسی کے پاس کچھ
زیادہ ہے تو کسی کے پاس پہت کم۔
5. میں کسی ایک کے پاس بہت کم۔
6. جواب 2. خوابوں کی دنیا آباد کرنے کے لیے بہت بہت احساس کر اگر اس کے بہت-
کی تعمیر کرنے پڑ گی۔
7. جواب 3. دل بہلانے کی صورت جب بہت احساس کر اگر بہت بہت- خوبصورت لمحات او-
یادوں کو نظر کریں۔
8. جواب 4. شاعر کی اداسی کا سبب اس کے محجبہ کی دوڑی ہے۔

عابد مناوری

عابد مناوری کا نوٹ کتاب لکھ کر یاد کی جیہے۔

غلزل نمبر 1.
1. شاعر فرماتے بین کہ مین دل کی گہر ائی سے اپنی سے اپنے بارے میں سوچتیا بون تو مجھے ایسا لگتا ہے جیسے مین ابهی اپنے آپ سے بھی نا آشنا بون۔

2. شاعر فرماتے بین کہ اس دنیا مین کوئی ابھی اپنے بارے میں جبہ پرکسی کی بھی امید کے پوری بون تو پھر بم کس کے سامنے باتھ پہیلے بین - یہان سے تو بر کوئی ہالی باتھ بہی لوٹا یہ۔

3. شاعر فرماتے بین میری مثال درخت کے اس سوکھے پتے کی طرح جو اپنے تبنی سے توٹ جکا بے اس کو بوا جواب جدھرے جانے میں بھی حالات کے سامنے ہو سے بی بی بے بس بون۔

4. شاعر فرماتے بین کہ مینی جیسا مجھے سادہ اور بیوقوف اس پوری دنیا مین کوئی نہبین بے جو اپنی تبابیوں پر خوش بوربا بون۔

5. شاعر غزل کے مقطع میں فرماتے بین کہ میرا سمجھانی کا طریقہ ثھیک بے یا غلط بے مگر مجھے جو کہننا تھا همہ مین نے کہ دیا ہے۔

غزل نمبر۔ ۱

1. شاعر فرماتے بین کہ میرے دل کے آنگن مین بھی خوشی کا سورج میرے دل کے آنگن سے نہیں گذرا کہبھی جبہ خوشی کا سورج میرے دل کے آنگن سے نہیں گذرا۔

2. شاعر اس شعر میں فرماتے بین کہ اگر کہبھی دن کا اجالا بھی ہو اور غم بھی ہو کہبھی بھی خوشی کا سورج میرے دل کے آنگن سے نہیں گذرا۔
3. کہ اے میرے محبوب ! میرى پر میرا دشمن بهي بنس ربا پيا کبھى مجبھى اپنا
didar گرادو تاکہ دشمن کو بنسنے کا موقعہ نہ ملے。

4. کہ اے میرے محبوب مجبھى تمبارے دیدار سے وھ خوشى ملئى پی جو پوری
کائنات ملئى سے بهى نبئى بوثى - جسطرح ایک سورج دن کو وھ اجالا عطا کرتا پی
جو پزارونستارے اور چاند بهى مل کر وھ روشنی نبئى دیتے。

5. شاعر مقطع مین فرماتے بین میرى غم بهری رات کي صبح بونا اس طرح ناممکن
بئ جسطرح مغرب سے سورج کا نکلا نا ممکن بئی۔

سوال 1. شاعر گب دل کي گھرانى سے اپنے بارہ مین سوجنٹا بئی تو وھ خود کو اپنے
آپ سے نا اشنا پاتا بئی۔

سوال 2. شاعر اپسے درپر دست سوال کے کر اگیا بئی جبان سے کسی بهى سائنل کي
کوئى مرادپورى نبئى بوثى بئی۔

سوال 3. شاعر اس قدر سادات لوح اور سیدھى سادات انسان بئی کى وھ لئى کر بهى اپنی تبابى
پر خوش نظر آرہا بئی۔

سوال 4. مہ وانجم رات کے شیدائى بئی۔

پرتپال سنگھ

نوت: پرتپال کا نوت کتاب سے لکھ کر یا د کیچیے۔

1. شاعر مطلع مین فرماتے بین کی مین عالیشان محلون کا طلبگى نبئى بون بلكہ
صرف ایک توئى پھوتا جھونپرًا بئى میرى لئى کافى بئی۔
اس شعر میں شاعر فرماتے بین کہ اگر میں صحیح راستہ پر چلد ربا بون تو مجھے مطمئن کرو رن میرے اصلاح کرو۔

کہ مجھے ہے تھر لمبے درختون کی طرح میں نہیں بناو بلکہ مجھے پھلدار بننے کی مانند بنادے۔

کہ اب تک پہر کی مانند بے بنز تھیا اب لے میری محبوب! مجھے ایک بننے سے انسان بنادے میری نس نس بے چین اور بے قرار اور میری نظرین منتظر بین اگر مجھے تونے صدف کی مانند بنایا بے تو میرے اندر گوہر بھی بیدا کریں تاکہ میں بیش قیمت بن جاؤں۔

غزل نمبر۔۲

۱. مطلع میں شاعر فرماتے بین کہ صحرا کی چہاری صرف اتنی بیے کہ وہان صرف پے شمار ریت بی ریت بی۔

۲. اس شعر میں شاعر فرماتے بین کہ اس دنیا مین بہت سے مکانات ایسے بیے کہ وہان بہنے والا کوئی نہیں بیے سب خالی پڑے بیے۔

۳. کہ لوگ! اس دنیا مین سب بدمست اور بھثکے بونے بیے بہت کیون بھیسکے بیسے راستے کی امید کرتے بیے۔
3. سے دنیا نیا ناپاندار اور بے نشانی کا پیچیدہ ہے یہ بات تو انسان اپنی قدموں کے نشان تک ملانے پا رہا ہے۔

5. سے دنیا تو اپنے پرہے شہبہ پرہے اور پرہے روان دو ڈو او اگر کچھ کمی ہے تو صرف یہ پا رہا ہے کہ اپنی جگہ ساکت جگ میں بنی۔

کشمیر

نوت: چکبست کا نوت کتاب لکھ کر یا کیجیے۔

بننمار 1. اس نظم میں چکبست وادی کشمیر کے تعریف کرتے ہوئے کہ کشمیر کا حسن سارے جہاں موجود ہے یہاں کیہر صبح سہانی اور دل کو تازہ کرتی ہے۔ پہاڑوں میں صبح کو پھول اپنے خوشبو سے بر شے کو معطر بنادی ہے۔ جھاڑیوں میں پرندے اپنی خوبصورتی بولیوں سے صبح کو خوشگوار بنادی ہے۔

بننمار 2. دوسرے بند میں بھی شاعر کشمیر کے تعریف کرتے ہوئے بہت کہ پہاڑوں کے پرندے اور موجود ہے کہ پہاڑوں پر ندیوں کا بسر اٹھ کر ہے تھم گئے اور میئر چشمے کے کنارے روح کو تازغی بخشیے والی بھون۔ اور ہے کے بادل کاموٹی برسان خوش نما رنگ کے لذیز میلے اور شادیوں میدان اور سرسرز چمن ایسے بہت کہ اگر یہ پس کوئی برسوں کا بیمار ہی بھی یہاں آئے تو فوراً صحت یاب ہوجاتی ہے میرے یہاں کے باغات ہے میرے یہاں کے باغات
جن کو خدا نے اپنی لاثانی خوبیوں سے بھر دیا بے پوری دنیا اسکی خوبصورتی اور
دلیوارہ منظر دیکھ کر دنگ بی۔

3. شاعر چکبست کے آباؤ اجادات در کشمیر سے ہجرت کر کے لکھنؤ چلے گئے تھے۔

وجه سے انسکو کشمیر سے خاص لگاؤ پے اسکا ذکر کرتے بونے فرماتے بین اگرچہ اس باغ کو چہورہ پھر کئی عرصے گذر چکا پے مگر میرے دل میں اب بھی اسکی محبت تازہ پے اس سے سرزمین سے پے شمار دانشور عالم اور بزرگ پیدا بونے پر اور اب وہ اسی پاک مئی مین آرام کر بھی پن بی بزرگ بستیون کا خون میری بر رگ مین دور زدیا پے کیونکہ مین بهی اسی خاک سے پیدا بی بیون۔

جواب 1. شاعر نے اس نظم میں کشمیر کی صبح کی خوبصورتی پر بیان کیا کہ یہاں از کی صبح کا منظر بہت خوبصورت سے پیش

جب 2. شاعر نے اس نظم کے ذریعہ کشمیر کی یاد اور اس کے چھوٹے ہوئے اسے ایک عرصہ گذرچکا ہے۔

جب 3. شیخ یعقوب صرفی

جب 4. لل عارفہ

جب 5. شیخ حمزہ مخدوم

جب 6. اور حبہ خاتون
انظر الیمان (قبر)

نظم قبر کا خلاصه

شاعر اختر الیمان کی یہ بہت ہی خوبصورت نظم ہے اس میں شاعر نے قبر کا ذکر کرکے انسان کے ضمیر کو جگایا ہے ایک غریب کے گھر اور قبر کے رشتے کو بڑی سادگی سے ظاہر کیا ہے کہ جب کسی کا قبری رشتہ دار یا عزیز اس دنیا سے چلا جاتا ہے تو اس کے قبر کے حالات اور وہاں کی دشواریوں کو بیان کرکے ماتم کرتے ہیں مگر ایک غریب کی جھونپڑی میں یہ سب کچھ اسکی زندگی میں پای جاتا ہے ایساہی ایک قصہ شاعر نے اس نظم میں بیان کیا ہے کہ ایران کے ایک شہر کا قصہ ہے قدرت کے اس کا رخانے میں کوئی پیدا ہوتا ہے تو کوئی مر جاتا ہے موت کے اس بہنور میں بر چیزتوہ جاتی ہے اس دنیا کا دستور بے سنا اس بہنور میں ایک قصہ ہے کہ ایک رینس اسیا مبتلا ہوا کہ کوئی چال کار گرنے کوئی اس نے بیش علاج و معالجہ کیا بلکہ ممکن تدبیر کی مگر کوئی بھی علاج مثبت نہ بوآ اس کار موت نے بہت سے اسکی پیارا پا بچھین لیا ہے تاہم آگ کی طرح بر چیزتوہ جاتی ہے کہ سُن بیش ہے کہ اس کی بھی اسیا سے جمع ہوگے اسی جنازہ میں ایک غریب آدمی بھی اپنے چھوٹے بچے کے ساتھ شامل بیش بھی کر کے بہت نے قبر کی دشواریوں کو ماتم کے طور پر لوگوں کے سامنے ظاہر کیا ہے غریب کے بچے کو چھوڑ کر اس اس مرد کے اس کے گھر لے جارہے ہیں کیونکہ اس کوہی بچے کی حالات ویسے بیش بچے لگ رہے تھے جسے اس نے قبر کے حالات سنے تھے۔
جواب 1. شاعر نے رئیس کے بیٹے کی زبانی قبر کی زندگی کی یہ تفصیل بیان کی ہے کہ قبر ایسی جگہ ہے جہاں نہ کوئی دوست بھوگا نہ کوئی ساتھی بھوگا نہ کوئی مددگار بھوگا اندھیری کو تھری ہے وہ بھوگا نہ روشنی وغیرہ ایک بهی کوئی انتظام نہیں ہے۔ وہاں کی تمام مصنفین خود بی بی رادشت کر ہی پڑتی ہیں۔

جواب 2. غریب کے بچے کی قبر کی باتیں سن کر اپنا گھر اس طرح یاد آیا کیونکہ اس کے گھر میں بھی وہ تمام مشکلات اور پریشانیاں موجود تھیں جن کاسامنا آئیں ہیں

جواب 3. آخری مصرعہ نکالنے سے یہ نظم صرف ایک قصہ پانی بنے چاہے۔

جواب 4. نظم معرا سے مراد یہ ہے کہ تمام مصرعے برابر بون مگر ان میں قافیہ ہیے کی پاہنڈی نہ ہوے۔

جواب 5. شاعر فرماتے ہیں کہ اس امیر آدمی کے جنازے میں ایک غریب بھی شامل تھا اور اپنے بچے کو بھی ساتھی لاتا تھا جب اس غریب کے بچے نے امیر کے بیٹے کی آہ و بکا اور قبر کی پریشانیاں سنی تو اسکو کچھ بھی سمجھ نہیں آیا اس نے پڑی ساداتی سے اپنے باب کی طرف دیکھا اور معصومیت کے ساتھ سوال کیا کہ کیا اس کو بماری گھر ہے لے جارہ ہے یہ بی بی ہیں۔ کیوں نکہ وہان نہیں ویسے بی بی پر پریشانیاں تھئیں۔