

Key to Navjeevan Term Book - IV

Standard
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Teacher's Copy

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English Balbharati

Unit - IV

Topic 4.1 : Under the Greenwood Tree

English Workshop :

Q.1. (1) unto (2) hither (3) doth

Q.2. (1) The poet invites the happy-go-lucky people, those who shun ambition, those who are pleased with life and are happy with whatever they have.

(2) That person should sing his song with a merry note and turn it towards the sweet bird's throat.

(3) The poem conveys the message that we must learn to be carefree and happy and be pleased with whatever God has given us.

Q.3. (1) And turn his merry note
Unto the sweet bird's throat

(2) Who loves to lie with me

(3) Who doth ambition shun

(4) Here shall he see

No enemy

But winter and rough weather

(5) Seeking the food he eats

And pleased with what he gets

Q.4. (1) Early 17th Century (2) 'As You Like It'

(3) Amiens a courtier sings this song

Q.5. free, tree, sleep, keep song, along. eat?
sweet play gay chop stop lead greed

Comprehension :

Extract - 1

Q.1. (1)-(c), (2)-(a), (3)-(d), (4)-(b).

Q.2. (1) Under the greenwood tree.

(2) The words are come hither, come hither, come hither.

(3) You will not see any enemy under the greenwood tree.

(4) You will find utter peace and happiness under the greenwood tree, where there will be no enemies except the cold and bitter winter and harsh weather.

Q.3. (1) The rhyme scheme is a a, b b, c a, a c.

(2) The words are shun - sun; eats - gets; hither - weather; see - enemy.

(3) (a) Repetition (b) Inversion (c) Personification

(2) The poet is happy lying under the greenwood tree, where there are no enemies except winter and rough weather.

The poet invites all those who are happy with whatever God has bestowed upon them. He invites all those who shun ambition and are not greedy and materialistic. Those who love to live in the sun and eat whatever is available are also invited. According to the poet, life under the greenwood tree is a pleasant and happy life.

Topic 4.2 : Unke Munke Timpetoo

English Workshop :

Q.1. (1) harmful / harmless (2) continuous (3) believable

(4) fearful / fearless (5) thoughtful / thoughtless

(6) wishful (7) questionable (8) courageous

Q.2. (1) a table-tennis set (2) to chant around the banyan tree

(3) eleven

(4) Mrs Groover

(5) kind and understanding

Q.3. (1) **Very funny** : Rohan and Muk went over to Principal Mrs. Groover's home on a regular basis to keep her company. One evening, they saw a piece of paper on the floor. They picked it up and Rohan was about to place it on the table when he saw that the piece of paper was a

receipt for a table tennis set. Rohan realised that it was Mrs. Groover who had gifted him the set and all along she was pretending that she too believed in the chant 'Unke, Munke, Timpetoo'.

- (2) **Full of horror and mystery** : It was believed by villagers that some goblins and imps came to play round the tree. These were killed by the people living there years ago. The spirits of these goblins and imps would satisfy the wishes of those they liked and punish those they did not like. People were scared to even look in the direction of the banyan tree.

Q.4. (1) midnight - mid, disbelieve - dis, unleash - un, indifferent - in, rejoiced - re.

- (2) (a) ship - friendship, fellowship, worship, companionship, statesmanship
(b) less - friendless, fearless, careless, powerless, breathless
(c) ness - stillness, godliness, calmness, goodness, cleanliness
(d) ly - ghostly, quickly, neatly, suddenly, impatiently, frequently
(e) ful - careful, tearful, powerful, frightful, delightful
(f) able - disable, wearable, unable, understandable, comfortable

Q.5. (1) (a) "Why seventeen times, and why at midnight?"

(b) "Why not try it? It would not do any harm."

(c) I thought it was all nonsense.

- (2) Their actions show that though they have plenty of doubts regarding the chanting around the banyan tree, Rohan was so desperate to get the table tennis set that he was willing to do what his friend Muk had suggested.

(3) My family members and I do not believe in these talks about charms and chants, but if I was really desperate, may be, I would try it.

(4) Yes, the author is brave. In spite of knowing how strict Mrs. Groover, his ex-principal was, he went into her garden at midnight just because he desperately wanted the table-tennis set.

(5) Muk climbed up the tree because he was frightened of the dog that was unleashed by Mrs. Groover.

(6) Mrs. Groover may have looked very strict and stern but she had feelings. She was ready to listen to what Rohan had to tell her. She was really kind and understanding and was ready to help where her help was needed. Mrs. Groover was a kind and understanding person.

(7) Yes, he did rejoice over his shoes and pullover. He was happy with the gifts given to him by his parents.

(8) The table tennis set was not new. It had been used, but it was in very good condition. It was not just any set but must have been a branded item and the person who had used it must have taken care to look after the set.

(9) Of course not. I do not believe in these mysterious charms and chants. It was Mrs. Groover who had sent the table-tennis set to Rohan.

(10) In my opinion, Mrs. Groover must have sent the gift.

(11) I personally feel, it's an act of friendliness.

Comprehension :

Extract - 1

Q.1. (1) The thought kept **haunting** me till the day before my **birthday**.

(2) I thought it was all **nonsense**.

(3) Its **aerial** roots were swaying in the **gentle breeze of the night**.

Q.2. (1) (1)-(c), (2)-(d), (3)-(a), (4)-(b).

(2) (a) remember (b) cruel (c) noisy (d) asleep

Q.3. (1) Mrs. Groover had been the principal in Rohan's school till the previous year.

(2) One look from Mrs. Groover's piercing pale green eyes was sufficient to silence bullies like Rinkoo.

(3) Rohan and Muk met at the back of old Mrs. Groover's garden at ten minutes to twelve.

(4) The banyan tree was in the garden, its aerial roots were swaying in the gentle breeze of the night.

Q.4. (1) nonsense - Abstract noun

(2) piercing, pale, green - Adjectives; Noun that is qualified - eyes.

(3) Mrs. Groover - Proper noun; garden - Common noun

(d) down, around, carefully

Q.5. There was a banyan tree in Mrs. Groover's garden, but Rohan dared not go there, especially at midnight. Rohan always felt that Mrs. Groover was very strict since she had been the principal of his school till the previous year. All were scared of her. One look from her piercing, pale, green eyes was enough to silence bullies like Rinkoo Lal.

Extract - 2

Q.1. (1) I went on listening **to the sounds of the night, a crackle have a swish** there.

(2) Suddenly a ferocious bark tore **the stillness of the night!**

(3) Mrs. Groover bent down **to unleash the dog.**

(4) I had never received such **a big parcel earlier.**

Q.2. (1)-(c), (2)-(d), (3)-(a), (4)-(b).

Q.3. (1) (a) disbelieve (b) closed (c) false (d) decreased

(2) (a) boundary, interruption, light, right
(b) cease, crackle, flashed, froze

Q.4. (1) six - Adjective of number.

(2) hard green - Descriptive adjective

(3) bit - Adjective of quantity

(4) Great - Adjective of quantity

Q.5. We know Muk was frightened because as soon he heard the dogs bark, and Mrs. Groover threatening to release the dog. He got scared and started climbing the tree.

Extract - 3

Q.1. (1) We all believed in **Unke, Munke, Timpetoo!**

(2) She replied **softly** but **seriously**.

(3) I felt my heart **sink**, and my courage **vanish**.

(4) It was not a **brand new** table tennis set, but it was a **fabulous** one.

Q.2. (1) True.

(2) False - We all believed in Unke, Munke, Timpetoo.

(3) False - I had gone over my lines a hundred times.

(4) True.

Q.3. (1) (1)-(b), (2)-(d), (3)-(a), (4)-(c).

(2) (a) because, believe, smiled, surprise
(b) continued, human, hundred, tennis

Q.4. (1) (a) disliked (b) discontinued

(c) old, used (d) irresponsible

(2) (a) softly, seriously - Adverbs of manner.

(b) felt, sink, vanish.

Q.5. Rohan gathered courage and went to meet Mrs. Groover. When he rang the bell, Mrs. Groover opened the door and looked at him with her pale, green eyes. Rohan's heart sank and his courage vanished. He started stammering. Mrs. Groover looked at Rohan with a strange look in her eyes and replied to his question that she did believe in Unke, Munke, Timpetoo because she had just wished for company, and there he was at her door. Mrs. Groover smiled and from that day onwards Rohan and Muk visited Mrs. Groover regularly.

Topic 4.3 : The Red-Headed League

Part - I : Mr. Wilson's Story

English Workshop :

- Q.1. (a)** **Mr. Wilson** was a pawn-broker. He was a red-headed man. Mr. Wilson was a diligent worker.
- (b)** **Vincent Spaulding** - Vincent was Mr. Wilson's assistant. He was smart and efficient and worked for only half the normal wages. Photography was his hobby. Vincent urged Mr. Wilson to apply for the job offered by the Red - Headed League.
- Physically, Vincent was small and stout, with no hair on his face and with a splash of acid on his forehead.
- (c)** **Mr. Duncan** - He was a red-haired man in the office of the Red-Haired League. He interviewed Mr. Wilson and gave him the job. He was there in the office to see that Mr. Wilson did his job properly.
- Q.2. (1)** Personally, I think Mr. Wilson's assistant is smarter. The assistant Spaulding showed Mr. Wilson the advertisement, advised and urged him to apply for the job and even went with him to the address given in the advertisement. There was a crowd of red-headed people waiting, but Spaulding pushed through the crowd and

took Mr. Wilson to the office. He assured Mr. Wilson that he would look after his business in his absence.

All this shows that the assistant knew how to play his cards well.

- (2)** **(a)** Fleet Street was full of red-headed people because they had seen the advertisement and had come to apply for the job.
- (b)** Mr. Wilson was well suited for the job.
- (c)** Mr. Wilson accepted the job because he would have to work only from ten to two and he would be paid four pounds a week. The most important thing was that Mr. Spaulding assured Mr. Wilson that he would look after his business in his absence.
- (d)** I would like to do such a job, because the timing is ten to two, hence I could use the rest of the day for other jobs or for studying. The salary for such few hours too is very good. Four pounds a week is great for just copying out the Encyclopedia.
- (3)** People in the publication business would want to copy an encyclopedia. After adding a few more words and changing the language, they can print a new encyclopedia under the name of a different publication house.
- (4)** Today, xerox copying is used to get copies. The entire book can be done automatically instead of being done page by page. The pages are automatically turned in the machine itself and then copied.
- (5)** A dictionary gives us the meanings of words and the different parts of speech. An encyclopedia is a book or set of books giving information on many aspects of one subject. It gives comprehensive knowledge or all-round education.

(6) I would advise Mr. Wilson to go to the police and tell them about the Red-Headed League and how people were using this League to cheat people.

Comprehension :

Extract - 1



- Q.2. (1) Photography was **Spaulding's** hobby.
 (2) **Mr. Ezekiah Hopkins** was the founder of the Red - Headed League.
 (3) **Fleet Street** was full of red-headed people.
 (4) **Mr. Duncan Ross** was a representative of the Red-Headed League.

- Q.3. (1) Mr. Wilson would have lost his job.
 (2) Spaulding pushed through the crowd and took Mr. Wilson to the office.
 (3) Mr. Ezekiah Hopkins had founded the Red-Headed League to help all red-heads like himself.
 (4) There was nothing in the office, but a couple of chairs and a table.

Q.4.

No.	Noun	Verb
(1)	explanation	explain
(2)	loss	lose
(3)	competition	compete
(4)	advertisement	advertise

Q.5. Mr. Wilson and Spaulding went to Fleet Street where the Red-Headed League office was. The street was full of red-headed people, but Spaulding pushed through the crowd and took

Wilson to the office. Mr. Duncan Ross, a representative of the League, announced that he was pleased to see Wilson and immediately told him that he was well-suited for the job. He shook hands with Mr. Wilson, congratulated him and told all the other candidates to go away. Mr. Wilson got the job without an interview.

Extract - 2

- Q.1. (1) False - Mr. Wilson continued to work for eight weeks.
 (2) True
 (3) False - Mr. Duncan Ross told Mr. Wilson to start with the letter 'A'.
 (4) False - Holmes found Mr. Wilson's story very unusual.

- Q.2. (1) It had been dissolved on October 9, 1880.
 (2) Mr. Wilson got his salary on Saturday every week.
 (3) Mr. Duncan Ross checked to see if Mr. Wilson did his job properly.
 (4) Mr. Wilson worked diligently for four hours every day.

- Q.3. (1) Mr. Ross bade, Mr. Wilson good-day at **two o'clock**.
 (2) Mr. Wilson began work the very next **day**.
 (3) The room had been rented under a **false** name.
 (4) Holmes found Wilson's story very **unusual**.

Q.4. (1) good, light (2) whole (3) false (4) unusual

Q.5. Mr. Wilson made inquiries at the nearby offices, but no one knew anything about the League. The rooms had been rented under a false name. Mr. Wilson went and asked his assistant Spaulding for advice, but he could not help in any way. Finally Mr. Wilson went to Mr. Sherlock Holmes to solve this mystery. He wanted to find out who the people were who had played that prank on him.

Part - II : What Happened Next - Dr. Watson's Account

English Workshop :

- Q.1. (3)** Ross closes the office of the 'Red-headed League'.
(5) Clay and Ross enter the cellar to steal the gold.
(1) Holmes and others go to the bank.
(7) Holmes visits the area around Mr Wilson's shop.
(6) The bank received a lot of gold from the Bank of France.
(4) Holmes catches the criminal Clay.
(2) Clay digs a tunnel.

Q.2. Adverb	Adjective	Adverb	Adjective		
frankly	-	frank	silently	-	silent
carefully	-	careful	finally	-	final
quickly	-	quick	suddenly	-	sudden
really	-	real			

Q.3. A family near our place had gone out to a resort for fun. They were returning home late at night when they heard some thieves talking among themselves from inside the locked doors. They wondered how these thieves could have got in when all the doors were locked. The father told the family to be absolutely quiet by putting his finger on his lips. All stayed quiet. The father unlocked the door and rushed in to confront the thieves. There was no one there. The sounds and talking were still going in. They rushed to the bedroom and saw that the T.V. was on and a detective serial was playing on a channel. The family members heaved a sigh of relief that things had not turned out bad for them.

- Q.4. (1)** This man was Mr. Wilson's assistant, Spaulding.
(2) Holmes wanted to see which important building or institution was near Wilson's shop or may be behind the shop.

- (3)** Merryweather took the others to the bank cellar, where the gold was kept.
(4) Mr. Merryweather was aware that the bank had borrowed a huge quantity of gold from the Bank of France and that the boxes filled with gold were in the cellar. Criminals would surely try to get this gold.
(5) He thought that way because now that Mr. Wilson was jobless, he would be back at the shop. They had planned it in that way. The robbery would have to take place that night or not at all.
(6) The criminals had dug a hole and a tunnel from Mr. Wilson's shop to the bank. This hole opened up in the cellar. It was a square hole covered with a broad stone.
(7) The two criminals were Wilson's assistant Spaulding, also known as criminal Clay and Mr. Duncan Ross, the red-haired man.
(8) Mr. Duncan Ross tried to get away. No, he was not able to escape, because there were three men waiting for him at the other end.
(9) The object of the strange advertisement and the peculiar job was to get Mr. Wilson away from the shop for some hours everyday. Mr. Wilson had red hair. The Red-Headed League employed Mr. Wilson, so he stayed away from his place. This was the clear idea of Clay and his red-headed friend. They wanted to dig an underground tunnel in order to enter the bank's cellar from Wilson's house and then escape via the same route.
(10) When Holmes heard that the assistant worked for half the wages, he became suspicious and when he was told that the assistant had formed a habit of going down to the cellar every now and then, Holmes felt sure there was something fishy.

- (11) Using Wilson's description of his assistant, Holmes made enquiries and found out that the assistant was the criminal named Clay.
- (12) Holmes rang the bell of Wilson's shop. Clay answered the bell, the knees of his trousers were wrinkled and stained. This confirmed Holmes' suspicion that the assistant had been digging.

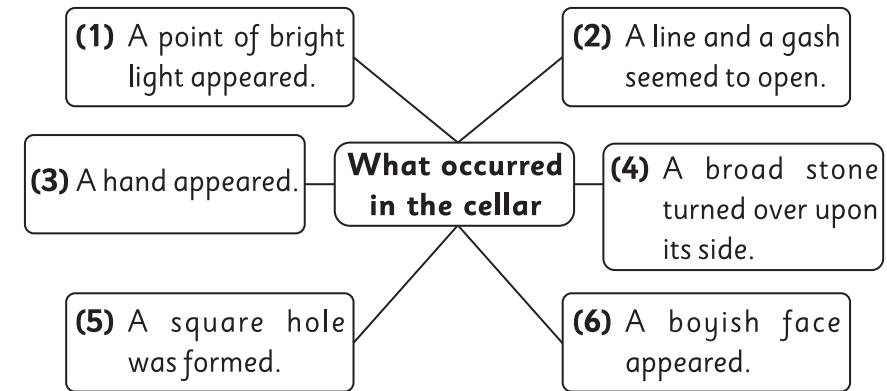
Comprehension :

Extract - 1

- Q.1.** (1) The **offices and banks** were closed for the weekend.
 (2) The **assistant** answered the question, and quickly **closed** the door.
 (3) This matter of Wilson's was **serious**.
 (4) Holmes **thumped** upon the **pavement** two or three times.
- Q.2.** (1) True
 (2) False - Watson was called to Baker Street at 10.00.
 (3) True
 (4) False - The assistant quickly closed the door.
- Q.3.** (1) Carefully (2) A bank
 (3) A crime (4) His revolver
- Q.4.** (1) assistance, assistant (2) opening
 (3) observation (4) invitation
- Q.5.** Holmes went to the square where Mr. Wilson had his shop. There were many shops and offices in the square and a bank just behind the shop. Mr. Holmes thumped upon the pavement in order to check if he could get some hollow sound from the ground. Holmes knocked on Wilson's door to see the assistant. When he saw the knees of his trousers dirty, Holmes became sure about the plan made by the assistant.

Extract - 2

Q.1.



- Q.2.** (1)-(c), (2)-(a), (3)-(d), (4)-(b).
- Q.3.** (1) Gold (2) Mr. Duncan Ross
 (3) Clay (4) criminal Clay
- Q.4.** (1) Square (2) Red
 (3) One, escape (4) Bright
- Q.5.** It was pitch dark in the cellar. Suddenly a bright light appeared on the cellar floor. This light changed from a dot to a line, and a gash on the floor opened up and a hand appeared. The two of them saw a broad stone turning over on its side. Then they saw a square hole. Suddenly, they saw a boyish face coming from the hole. The person came out of the hole. Behind this person was a man with red hair.

Extract - 3

- Q.1.** (1) I inferred that he must be **digging a tunnel** to some other building.
 (2) Holmes had reasoned it out **beautifully**.
 (3) Using the **tunnel** they entered the **cellar**.
 (4) **The assistant** was the criminal **Clay**.

- Q.2.** (1)-(c), (2)-(a), (3)-(d), (4)-(b).
- Q.3.** (1) The Red-Headed League (2) The assistant
(3) His stick (4) Clay's
- Q.4.** (1) You reasoned it out beautifully, didn't you?
(2) It confirmed my suspicion, didn't it?
(3) They entered the cellar, didn't they?
- Q.5.** The Red-Headed League was a brilliant idea by Clay - Wilson's assistant and his friend Ross. These two wanted to dig out a passage or a tunnel from Wilson's place to the bank where gold was stored. Wilson's place was the only place that could give them entry and escape. Since Wilson was a red-headed man, they put an advertisement about the Red-Headed League offering jobs for red-headed people. Wilson was given the job. The criminals wanted him to be out of his place, so that they could dig a tunnel and they would have succeeded, if it was not for Holmes.

Topic 4.4 : Home Sweet Home

English Workshop :

- Q.1. (1)** The poet says that there is no place like home. Although our the home may be a very humble place, we feel blessed over there. Our home is something holy and sacred. The peace that we find at home is impossible to find anywhere else.
- (2)** The poet does not want to ever leave his home. Splendour does not dazzle him. He is happy with his small thatched cottage because it is his home. He loves to hear the birds singing. They give him peace of mind and happiness. This he will not get anywhere else, except in his home.
- (3)** At home he thinks of his beloved mother, whose caress would soothe him and beguile him. Whenever the poet

comes face to face with problems in life, he never fails to think of his mother.

- (4)** The poet misses his family members, sitting beneath his fond father's smile and the loving caress of his mother that used to soothe him and help him forget his problems. The poet misses his home and his family members.
- (5)** The poet hopes for the pleasures of home. He hopes to return there when he is overburdened with care and when he needs solace. He does not care how humble his home is, he just wants to come back to his home.
- (6)** People in the army, navy, airforce cannot stay at home, they are forced to stay away from home. Perhaps the poet too is forced to stay away since he belongs to one of these professions.

- Q.2.** Firstly, I would miss my loving father and my caring mother. I would miss the fights with my siblings and of course my loving pet dog, Bubbles. I would miss the four walls of my house and the lovely and kind neighbours.

Comprehension :

Extract - 1

- Q.1.** (1)-(c), (2)-(a), (3)-(d), (4)-(b).
- Q.2.** The poet says that there is no place on earth like his home. He says that he may have seen splendours and moved through rich and charming places, but his small thatched cottage that is blessed and made holy, is something that he cannot get anywhere else on earth. His home is very dear to him, with the birds flying around and singing gayly. It is only at his home, that he will get peace of mind and solace.
- Q.3. (1)** The rhyme scheme is a a, b b, a a.
(2) roam - home; there - elsewhere; vain - again; call - all.
(3) (a) Alliteration **(b)** Repetition, Exclamation **(c)** Alliteration

Extract - 2

- Q.1. (a)** When he looks at the moon, the poet feels that his mother is thinking about him.
- (b)** The fragrance of the woodbine will cheer the poet.
- (c)** According to the poet, it is very sweet to sit beneath his fond father's smile and his mother's caress that soothes and beguiles him.
- (d)** The poet will return home when he feels overburdened and when he is in need of solace and peace.
- Q.2.** The poet loves his home and he refers to his loving home with the words 'home sweet home'. He gazes at the moon and feels that his mother is looking at the moon from their cottage and thinking about him. The poet loves to sit near his loving father and his beloved mother who would caress him to soothe and take care of him. Unfortunately, the poet is not at home but far away from home. He has sweet memories and says that if there are problems and if he is overburdened with care, he will return home, where he will get peace because there is no place like home.
- Q.3. (1)** Personification and Alliteration
- (2)** Alliteration
- (3)** smile - beguile; roam - home; care - there; wild - child; door - more.

Topic 4.5 : Seeing Eyes Helping Hands

English Workshop :

Q.1. (1)

20, Rose Villa,
Byculla,
Mumbai - 11.
26th August, 2017.

My dear Rachel,

I, Abdul, have heard so much of your kindness and generosity to everyone around you. I am in need of a job since I require money to buy books in which I am very interested.

How are things down there? How long will it be before you return to Mumbai? How is school there? Have you made many new friends? How are your new teachers, loving and caring like the teachers here? I know I am wasting your time with my foolish questions.

Lets hope you can come back next year.

This can happen only if your daddy gets a transfer back to Mumbai. I think we will all pray that this happens.

Now I am getting boring. All our friends have sent their love and affection. Give our regards to Uncle and Aunty.

Hope to see you soon. Please keep in touch.

Your loving friend,

Sarah.

(2)

20, Rose Villa,
Byculla,
Mumbai - 11.
26th August, 2017.

To,
The Caretaker
St. Xavier's Ground,
Parel.

Respected Sir,

We tried our level best to get a ground for our sports festival but since all the famous grounds and stadiums were already booked by schools and colleges, we were in a real fix.

Sir, we are very grateful to you for getting the ground ready for us. We know that you went out of your way to get the construction company to do the repairs even after closing hours just because you wanted the ground ready for our sports festival.

Sir, it was because of your kindness and generosity that we could conduct our sports festival.

Thank you sir, once again.

Yours Sincerely,
Minoshha Rodriques

Q.2. In the office of the Principal.

Principal : Yes sir, I heard that you wished to see me.

Parent : Sir, I am so thankful to you. I cannot thank you enough for saving my daughter at the cost of your shoulder and leg.

Principal : Oh! You are Ninny's father. You were out of India when that accident occurred.

Parent : Yes Sir, Tell me exactly what happened sir?

Principal : I was coming back from a meeting and I saw Ninny crossing the road. She was just two feet away from me. Suddenly a bike came rushing through the traffic. It was about to hit her. I was stunned, but I rushed forward and dragged her to safety.

Parent : Yes sir you dragged her to safety and got hit by a dumper. You broke your shoulder bone and hurt your knee. I can see for myself how badly you must have been hurt. Thank you sir. You are my daughter's saviour, I do not know how I can thank you. Words are not enough sir.

Principal : Look here my dear parent. I just did what I had to do. God be with you and your family.

Parent : Thank you sir, God will bless you. Thank you once again.

Topic 4.6 : Papa Panov's Special Christmas

English Workshop :

Q.1. (1) know **(2)** deer **(3)** hear **(4)** pare **(5)** sole
(6) new **(7)** threw **(8)** vent **(9)** hole

Q.2. (1) The best shoes that Papa Panov had made were a pair of child's shoes.

(2) Papa Panov gave coffee to the sweeper, a pair of baby shoes to the young mother and hot soup to the beggars.

(3) By afternoon, Papa Panov had not stopped looking out for Jesus.

(4) Papa Panov saw the sweeper, the young mother and the beggars he had helped once again when he woke from his sleep.

(5) Jesus had actually visited Papa Panov thrice on Christmas Day.

Q.3. Old Papa Panov missed his dead wife and his children who had gone away, especially during Christmas. He wished baby Jesus come to him, so he could make him warm and give him a special pair of shoes he had made specially for him. He was a kind and generous man. On Christmas Day, he saw a miserable, dirty sweeper and invited him in for coffee. Some time later he saw a girl with a child in her arms. The girl was too poor to afford a shawl and shoes for the baby. Papa invited her in, gave the baby some milk and the girl the pair of shoes that he had kept for Jesus.

Some time later, Papa saw some beggars. Again he felt sorry for them and gave them hot soup and a generous hunk of bread.

Papa Panov was waiting for Jesus and He did come to him in the forms of the sweeper, the girl with the child and the beggars.

Q.4. This is a story with a religious background. It is the festival of Christmas - the birth of Christ. We must all be kind, loving, helpful and generous if we wish to be rewarded. Here, Papa Panov proved that he was a very loving and generous man. Christ told him in his dream that He would visit him, and He did so. When Papa saw the miserable and dirty sweeper, he invited him home and gave him coffee to drink. Next, Papa invited a poor girl carrying a baby who was suffering from the cold weather, gave the child some milk and the mother the pair of shoes had kept for baby Jesus.

Then when Papa saw beggars on the road, he felt sorry for them and gave them hot soup and a generous hunk of bread.

Jesus told Papa that when He was hungry, he fed him, when He was naked, he clothed him and when He was cold he warmed him.

Q.5. I think the monsoon season is the most difficult to face in our locality because the poor and homeless have no shelter. They get wet and then fall sick. We must have some sort of shelter for such people. Free medicines and other treatments must be provided to them.

Q.6. (1) Though it was still afternoon, lights had begun to appear in the shops and houses. Excited children scurried indoors and sounds of chatter and laughter could be heard. There were sounds of happiness and bright lights everywhere and also faint but delicious smells of Christmas cooking.

(2) No, his shop was not away from his house.

(3) Yes, Papa Panov lived alone for the simple reason that his wife had died and his children had grown up and had gone away.

(4) The 'laughter wrinkles' tell us that Papa Panov is no longer young. He has seen a lot of life and now he has become old. It also tells us that by nature Papa was a cheerful man who laughed a lot.

(5) Papa says that if Mary and Joseph did not find a room at the inn, he would have given them his bed, he would have covered the baby with his patchwork quilt and kept him warm. This shows what a kind person Papa Panov was.

(6) The small box is dusty because Papa Panov has kept a pair of boots in the box and has not opened the box for, maybe, years.

(7) Papa Panov looked at the shoe box in which was a perfect pair of tiny leather shoes. Papa felt that since that pair was the best pair of shoes he had made, he should give it to baby Jesus.

- (8) Yes, they were related to his dream.
- (9) Yes, Papa believed that he would be visited by Christ, but he was not sure how he looked. He wondered if Jesus would come to him as a child or as an adult.
- (10) He expected Jesus to visit him as a grown up man, carpenter or a great king.
- (11) Yes, there are people who have to work on festivals. Let's start with the mother of the family. Others are the police and armed forces, the shopkeepers, sweepers, taxi, train and bus drivers, pilots, etc.
- (12) The sweeper looked as miserable and dirty as ever and he was working in the raw, cold and bitter freezing mist of the Christmas morning. Papa felt sorry for the sweeper and gave him hot coffee.
- (13) The sweeper noticed Papa Panov's eyes straying towards the window. He must have been expecting an important visitor. The sweeper asked him about it. This is the reason, Papa Panov told him about his dream.
- (14) The sweeper told Papa that he had given him a bit of Christmas cheer by giving him hot coffee. Such a kind and generous man deserves to have his dream come true. This good wish made the sweeper actually smile.
- (15) This suggests that the girl must have been unsteady on her feet. She must have been hungry, tired and weak. To add to it, she was carrying a baby. She was very poor and very weak, hence she had to walk slowly and quietly, hugging the walls of the shops and houses.
- (16) (a) Papa Panov saw the weak, shaky girl without warm clothing and the baby wrapped in thin shawl and knew that he had to invite her and the baby inside his house to let her warm herself and her child near the fireplace.

(b) The young lady must not have been able to believe her eyes and ears. She must have been very thankful to Papa Panov for inviting her in. To show her respect, she told him to lead the way.

- (17) Papa Panov could not bear to see the baby with no shoes on. He looked at its cold feet and decided to give the shoes he had kept for Jesus to the poor, cold baby.
- (18) When Papa Panov could not make out the passers-by in the dusk, he slowly walked back into the room, put up the shutters and sat down wearily in the armchair. He was feeling bad that it was just a dream and Jesus had not visited him as He had promised.
- (19) A great peace and happiness seemed to fill the room overflowing Papa's heart until he wanted to burst out singing and laughing and dancing with joy.

Comprehension :

Extract - 1

- Q.1. (1) Papa Panov was the village shoemaker.
 (2) Papa Panov heated up his coffee on the charcoal stove.
 (3) Mary's little baby was born in the cowshed.
 (4) The wise men who came to see baby Jesus bought splendid gifts.
- Q.2. (1) **Excited children** scurried indoors and now only **muffled sounds of** escaped.
 (2) Papa Panov went back indoors **with a firm step**.
 (3) That night papa Panov read how **Marry and Jospheh, tered by their journey** to Bethlehem.
 (4) With a sigh Papa Panov **settled in his big armchair**.
- Q.3. (1) (a) little (b) firm (c) excited (d) bright
 (2) (a) heated (b) laughable (c) excited (d) cheerful

- Q.4. (1)** wise, splendid - Adjectives; men, gifts - nouns
(2) He settled in his armchair, didn't he?

Q.5. Though it was still afternoon, lights had begun to appear in the shops and houses. Excited children scurried indoors and sounds of chatter and laughter could be heard. There were sounds of happiness and bright lights everywhere and also faint but delicious smells of Christmas cooking.

Extract - 2

- Q.1. (1)** Papa Panov watched him with **satisfaction**.
(2) Papa Panov put on **cabbage soup** for his dinner.
(3) The sweeper looked as **miserable** and **dirty** as ever.
(4) The street was **deserted**.
- Q.2. (1)** A thin stream of cold air entered the door.
(2) He offered the sweeper some hot coffee.
(3) The sweeper clasped both red hands round the comforting warm mug.
(4) Besides coffee, Papa had given the sweeper a bit of Christmas cheer.
- Q.3.** (1)-(c), (2)-(d), (3)-(a), (4)-(b).
- Q.4. (1)** Cabbage soup was put on by Papa for his supper.
(2) He saw no one, did he?
(3) **(a)** misery **(b)** dirt **(c)** bitterness **(d)** cheer
- Q.5.** When Papa Panov looked out of the window, he saw only the sweeper. There was no one stirring on the road. The sweeper looked terrible. He was as miserable and dirty as ever. There was a raw, cold and bitter freezing mist around that morning. Immediately, Papa Panov felt that he had to help the sweeper. He opened the shop door and called him in to have some hot coffee. The sweeper could not believe his ears. However, he was only too glad to get some shelter from the cold and have some

hot coffee. The sweeper got hot coffee as well as some Christmas cheer from Papa Panov.

Extract - 3

- Q.1. (1)** The baby **(2)** For Jesus
(3) Gurgled with pleasure **(4)** A thin shawl
- Q.2. (1)** felt very sorry **(2)** holding tight
(3) guide or lead **(4)** very small
- Q.3.** (1)-(c), (2)-(d), (3)-(a), (4)-(b).
- Q.4. (1)** **(a)** beauty **(b)** perfection **(c)** coldness **(d)** warmth
(b) **(a)** sadden **(b)** comfort **(c)** think
- Q.5.** When Papa Panov saw the girl, he was shocked to see her walking slowly and quietly, hugging the walls of the shops and houses. She was very tired and was carrying a small baby. The baby was wrapped in a thin shawl. Papa Panov could see sadness on the faces of the mother and the child. He invited them in the house and gave the baby some warm milk with help of a spoon and warmed her tiny feet by the stove. Papa Panov decided that since the baby needed shoes, and the mother could not afford to buy shoes, he would give her the pair he had specially made for Jesus. This is how Papa Panov helped the girl and her baby.

Extract - 4

- Q.1. (1)** Only the sound of the big clock **ticking could be heard**.
(2) "So he did come **after all!**" was all that he said.
(3) He strained his eyes, but he could **no longer make out the passers-by**.
(4) This was not a dream for **he was wide awake**.
- Q.2. (1)** True
(2) False - There were plenty of people on the street
(3) False - As they passed, each one whispered, "Didn't you see me Papa Panov?"

(4) True

- Q.3.** (1) A great peace and happiness filled the room.
(2) He wanted to burst out singing and laughing and dancing with joy.
(3) No, Papa Panov was wide awake.
(4) Papa Panov gave the beggars hot soup and a generous hunk of bread.

Q.4.

	Noun	Verb	Adjective
(1)	nakedness	×	naked
(2)	joy	enjoy	joyous
(3)	whisper	whisper	whispering
(4)	welcome	welcome	welcoming

Q.5. Papa Panov kept on looking out for Jesus, because Jesus had promised that He would come and He had not done so. He suddenly saw the old road sweeper, the young mother and her baby and the beggars he had fed. As they passed, each whispered, 'Didn't you see me Papa Panov?' Papa Panov was bewildered. Suddenly he heard the voice of Jesus. Jesus said, "I was hungry and you fed me. I was naked and you clothed me. I was cold and you warmed me." After this, everything become quiet and a great peace and happiness filled the room and Papa Panov wanted to sing and laugh and jump with joy.

Grammar

1 - Nouns

- (A) (1) emperor - common noun; prayers - abstract noun
(2) clouds, stars - uncountable common nouns
(3) Actress - common countable noun; Ritika - proper noun
Bouquet - collective noun;
Flowers - common noun (countable)
(4) Ambition, worry - abstract nouns.
(5) Geeta - proper noun; Milk - common noun (uncountable)
Mug - common noun (countable)

2 - Conjunctions and Interjections

- (A) (1) Release your head toward the floor **but**; don't force your chin to your chest.
(2) Raise the right leg **and** wrap it around the left leg.
(3) Try to remain in this pose **if** you can manage to do so.
(4) You **either** do your homework **or** get punished.
(5) I missed the train **because** I was late.
- (B) (1) and (2) if (3) because
(4) when (5) only if
- (C) (1) Alas! (2) Oh God! (3) Wow!
(4) Bravo! (5) Ouch!

3 - Verbs

- (A) (1) had - Transitive - the harpoon.
(2) hunt - Intransitive.
(3) went out - Intransitive.
(4) shot Transitive - the monster.
(5) lurking - Transitive - a whale.
(6) waiting - Intransitive.

4 - Subject and Predicate

- (A) (1) Faraday's - Subject ; started with difficulty - Predicate
(2) Faraday's - Subject ;
succeeded Davy as head of the laboratory - Predicate
(3) Destiny - Subject ; had a strange plan - Predicate
(4) The monster - Subject ; seemed motionless - Predicate
(5) The electric lights - Subject ; suddenly went out - Predicate
(6) His arm - Subject ; shot forward, all at once - Predicate

5 - Object - Direct and Indirect

- (A) (1) the ball - direct object.
to Amit - indirect object.
(2) a bone - direct object.
to her pet Bubbles - indirect object.
(3) good food - direct object.
(4) a letter - direct object.
me - indirect object.
(5) Prize distribution - direct object.

6 - Complements

- (A) (1) well - object complement.
(2) angry - subject complement.
(3) the Prime Minister - object complement.
(4) kind - object complement.
(5) very thirsty - subject complement.

7 - An Adverbials

- (A) (1) where no one had gone before.
(2) to think before speaking. (3) easily written.
(4) in a colourful manner. (5) very fast.

8 - Prefix and Suffix

- (A) (1) un (2) un (3) re (4) dis
(5) de (6) de (7) de
(B) (1) ness (2) less (3) ship (4) liness
(5) able (6) less (7) able (8) ly

9 - Modal Auxiliary

- (A) (1) May (2) shall (3) would (4) might
(5) may (6) should (7) must (8) dare
(9) used to (10) can

स्वाध्याय

- प्र.१. (अ) वैष्णवीच्या शाळेत बालदिनाच्या निमित्ताने सांस्कृतिक कार्यक्रम घेण्यात आले. विद्यार्थ्यांची वेशभूषा स्पर्धा घेण्यात आली. कार्यक्रमप्रसंगी आलेल्या पाहुण्यांनी बालदिनानिमित्त विद्यार्थ्यांना शुभेच्छा दिल्या. कार्यक्रमाच्या शेवटी सर्वांना खाऊ देण्यात आला.
- (आ) शिवारामध्ये गेल्यावर मुलांनी ज्वारी, तुरी, भुईमूग आणि कपाशी ही पिके तर पेरू, सीताफळ, आवळा, चिंच, बोर ही फळझाडे पाहिली.
- प्र.२. (अ) वैष्णवीच्या रोजनिशीतील १६ नोव्हेंबर या दिवसाचे पान मला सर्वांत जास्त आवडले. या दिवशी मित्रमैत्रीणींबरोबर बर्थडे पार्टी करण्यापेक्षा वैष्णवीने तिचा वाढदिवस आदिवासी दुर्गम भागातील वसतिगृहातील मुलांबरोबर साजरा केला.

प्र.३.

१७ नोव्हेंबर -
आजपासून आमची दिवाळीची सुट्टी सुरू झाली. सुट्टी असूनही मी लवकर उठली. आज आईची जरा घाई होती. तिने जवळजवळ सर्वच फराळाचे डबे बनवून तयार ठेवले होते. आई, बाबा आणि मी 'आपले घर' या अनाथाश्रमात गेलो. आम्ही तिथल्या मुलांना दिवाळीचा फराळ व कपडे दिले. ते पाहून मुलांना खूप आनंद झाला. मी थोडा वेळ त्यांच्याबरोबर खेळले, गप्पा मारल्या, त्यांनी काढलेली सुंदर सुंदर चित्रे पाहिली. त्यांनी तयार केलेल्या पणत्या, भेटकार्ड व कंदील आम्ही विकत घेतले. संध्याकाळी आम्ही घरी आलो. पण माझ्या मनात त्या अनाथाश्रमातील मुलांचेच सारखे विचार येत होते.

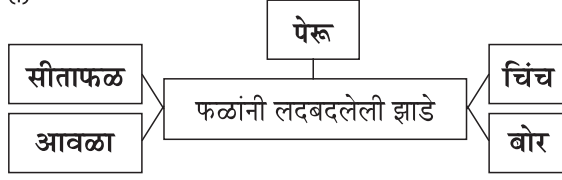
उतारा क्र. १

- प्र.१. (अ) (१) (i) बालदिन
(ii) क्रांतिज्योती सावित्रीबाई फुले
- (२) (i) डॉ. रमेश कोठावळे
(ii) असत्य
- (३) (i) पारंपरिक
(ii) (अ) सान, लहान (आ) सुरुवातीला, प्रारंभी
- (४) रोजनिशी म्हणजे रोजच्या घडामोडींची नोंद ठेवणे. रोजनिशी लिहावी कारण आपल्याला आपल्या कामांचा त्यांच्या आवश्यकतेप्रमाणे योग्य क्रम ठरवता येतो. लहान मोठ्या गोष्टींची नोंद ठेवल्याने कोणत्याही गोष्टीची गरज लागली तर त्याचा फायदा होतो. रोजनिशी लिहिल्याने स्वतःशी संवाद साधता येतो. दिवसभरात आपण ज्या गोष्टी करतो त्यातून अनेक गोष्टी शिकता येतात. स्वतःला समजून घेता येते. दिवसभरात आपल्याला भेटलेल्या व्यक्तींनाही समजून घेण्यास मदत होते. आपली आकलनशक्ती व स्मरणशक्ती वाढते. लिखाणामध्ये सुधारणा होऊन भाषेवर प्रभुत्व प्राप्त होते. आपण केलेल्या चुका सुधारण्याची संधी मिळते. रोजनिशी आपला चांगला मित्र/मैत्रीण होऊन आपण एकटे आहोत असे वाटत नाही. मनावरील ताण/चिंता कमी होतात. आपल्यातील सकारात्मकता वाढून अडचणींवर मात करण्याचे बळ मिळते. एखादी गोष्ट पूर्ण करण्यासाठी लागणाऱ्या कृती करण्याचा आपण विचार करू लागतो त्यामुळे आपला आत्मविश्वास वाढतो. असे रोजनिशी लिहिल्याचे अनेक फायदे आहेत. रोजनिशी लिहिणे ही एक चांगली सवय आहे.

कृतिपत्रिका - २

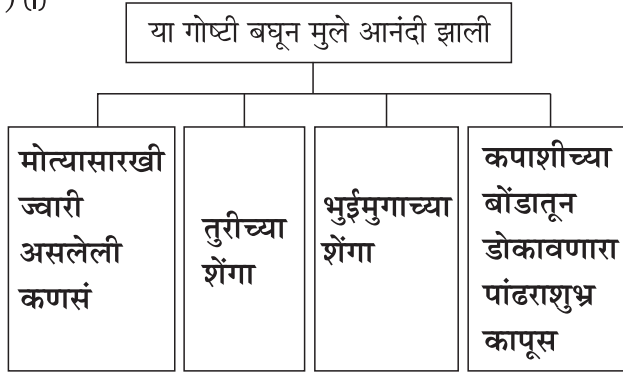
उतारा क्र. २

प्र.१. (अ) (१) (i)



(ii) श्री. पाटील सर

(२) (i)



(ii) दगडांच्या मारानं भरपूर बोरं खाली पडली.

(३) सुगीचे दिवस, तीव्र इच्छा, भरपूर बोरं, विविध चवी

(४) मे महिन्याच्या सुट्टीत मी माझ्या कोकणातील गावी गेलो होतो. मे महिन्यात कोकणात खूप मजा असते कारण या हंगामात आंबे, फणस, काजू, करवंदे, जांभळे, रातांबे अशी खूप फळे असतात. एकदा संध्याकाळी मी, माझा भाऊ व गावातील बरीचशी मुले शेतात गेलो होतो. खाली घरे व उंचावर गेल्यावर गावातील बऱ्याच लोकांची शेते आहेत. आजूबाजूला दाट झाडी होती. शेतात पेरणी, नांगरणीची कामे चालू होती. अनेक लोक वर गुरांना चरण्यासाठी घेऊन आले होते. शेताच्या बाजूला

असलेल्या झाडांमध्ये विविध आंब्यांची झाडे होती. हापूस, पायरी, रायवळ तसेच वावडिंग, निर्गुंडी, कडुनिंब, रुईची छोटी झाडे होती. त्या बऱ्याच औषधी झाडांची माहिती भावाने आम्हाला दिली. नागवेल दाखवली ज्यापासून विडा बनवतात. विविध रंगांची फुले बघून तर खूप प्रसन्न वाटत होते. झाडांवर अनेक पक्षी होते जे मुंबईत बघायला देखील मिळत नाहीत. आम्ही तेथे करवंदे, जांभळे खूप खाल्ली आणि काळोख पडण्यापूर्वी घरी यायला निघालो.

कृतिपत्रिका - ३

उतारा क्र. ३

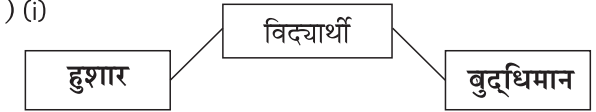
प्र.१. (अ) (१) (i) खाऊ

(ii) १६ नोव्हेंबर

(२) (i) समाज कल्याण विभागाच्या वसतिगृहात असणारी मुले आदिवासी दुर्गम भागातील होती.

(ii) (अ) असत्य (ब) सत्य

(३) (i)



(ii) (१) दूर × जवळ (२) नवीन × जुना

(३) दुर्गम × सुगम

(४) वैष्णवीचा वाढदिवस १६ नोव्हेंबर या दिवशी होता. घरातील अनेक नातेवाईकांनी, मित्रमैत्रिणींनी सकाळपासूनच वैष्णवीला वाढदिवसाच्या शुभेच्छा दिल्या. वैष्णवी व वैष्णवीचे आईबाबा वैष्णवीचा वाढदिवस म्हणून आदिवासी समाज कल्याण विभागाच्या एका वसतिगृहात गेले. आदिवासी भागातील मुलेमुली शिक्षण घेण्यासाठी तेथे राहतात. त्या सर्व मुलांना

वैष्णवीने खारु वाटला. आईवडिलांपासून, आपल्या घरापासून लांब रहाणाऱ्या मुलांना पाहून वैष्णवीला वाईट वाटले. वैष्णवीच्या आईबाबांनी तिला समजावले. त्या सर्व मुलांना भेटून वैष्णवीला शिकण्याची नवी उमेद मिळाली.

अतिरिक्त कृती

- (१)

मित्र-मैत्रिणींनी	वैष्णवीला वाढदिवसाच्या शुभेच्छा दिल्या	घरातील अनेक नातेवाईकांनी
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- (२) वसतिगृहातील आदिवासी दुर्गम भागातील मुलंमुली शिक्षणासाठी आईवडिलांपासून दूर राहतात हे पाहून वैष्णवीला गहिवरून आले.
- (३) या सर्व मुलांकडे बघून मला शिकण्याची नवी उमेद मिळाली.
- (४) त्या, आम्ही, माझ्या

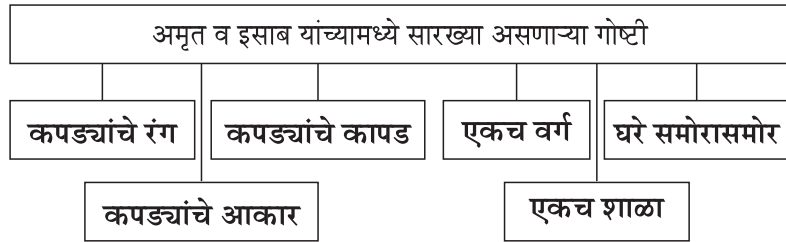
खेळ खेळूया

- (अ) गर्वाचे घर खाली. (आ) कामापुरता मामा.
- (इ) पळसाला पाने तीनच (ई) थेंबे थेंबे तळे साचे
- (उ) आगीतून उठून फुफाट्यात पडणे (ऊ) अति तेथे माती
- (ए) नावडतीचे मीठ अळणी

१३. अदलाबदल

स्वाध्याय

प्र.१.

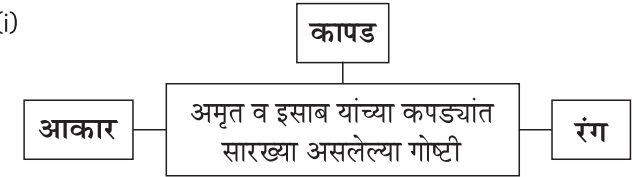


- प्र.२. (इ) गावातील काही मुले निंबाच्या झाडाखाली जमली होती.
 (अ) एका ब्राह्मण मुलाला एक खोडकर कल्पना सुचली.
 (आ) अमृत व इसाबने शर्टांची अदलाबदल केली.
 (उ) हसनभाई काय सांगत आहेत ते ऐकायला शेजारपाजारच्या बायकाही तेथे जमल्या.
 (ई) अमृत व इसाबच्या परस्परांवरील प्रेमाची गोष्ट ऐकून सर्वजण हेलावून गेले.
- प्र.३. (अ) घरी आलेल्या पाहुण्यांना बाबांनी राहण्यासाठी गळ घातली.
 (आ) बाळू नवीन छत्री कोठेतरी विसरून आला. हे पाहून आईचा पारा चढला.
 (इ) रस्त्यावर भांडणाऱ्या कुत्र्यांच्या आवाजाने नीताच्या पोटात गोळा आला.
 (ई) त्याची करुण कहाणी ऐकून सर्वांची मने हेलावून गेली.

कृतिपत्रिका - १

उतारा क्र. १

प्र.१. (१) (i)



- (ii) (अ) होळी
- (२) (i) गावातील मुले निंबाच्या झाडाखाली जमली.
 (ii) (अ) सत्य (ब) असत्य
- (३) (i) (अ) स्त्रीलिंग (ब) पुल्लिंग
 (ii) (अ) इसाबने अमृतकडे पाहिले, तो घाबरलेला दिसत होता.
 (ब) होळीला आम्ही खूप मजा केली.

सूचना : Term Book मध्ये कंसामध्ये शब्द दिलेले नाहीत ते (आम्ही, तो) आहेत.

(४) तेजस हा माझा सर्वात आवडता मित्र आहे. तो माझ्याच वर्गात शिकतो. आम्ही एकाच सोसायटीत राहतो. त्यामुळे जवळजवळ दिवसभर आम्ही एकत्रच असतो. एकत्र विविध खेळ खेळतो. तेजस अभ्यासातही हुशार आहे. गणित हा त्याचा आवडता विषय. त्यात तो पैकीच्या पैकी गुण मिळवतो. कोडी सोडवण्याचीही त्याला आवड आहे. तो नेहमी सर्वांना मदत करतो. अभ्यासात कुणाला काही शंका असेल तर तो ती पटकन दूर करतो. शिक्षकांचाही तो आवडता विद्यार्थी आहे. त्याने कुठे काही वाचले, नवीन गोष्ट पाहिली की त्याविषयी तो मला माहिती सांगतो आणि मीही त्याला सांगतो. प्रत्येक गोष्ट करताना आम्ही एकमेकांना सांगून करतो. अशी आमची अतूट मैत्री आहे.

अतिरिक्त कृती

प्र.१. अमृतला आईची भीती वाटत होती.

प्र.२. (अ) पाशी (ब) सोबत

सूचना : प्रश्नामध्ये अमृत च्या ऐवजी अमृता असे Type झाले आहे.

कृतिपत्रिका - २

उतारा क्र. २

- प्र.१. (१) (i) (अ) इसाबच्या (ब) अमृतला
(ii) सत्य
- (२) (i) (अ) अमृतला जमिनीवर केशवने ढकलले.
(ब) शर्टासाठी इसाबच्या वडिलांनी सावकाराकडून पैसे कर्जाऊ घेतले होते.
(ii) केशवला
- (३) (i) बाकीची पोरे गमतीने ओरडली, “अमृत हरला, केशव जिंकला! केशव जिंकला! हुयें हुयें!”
(ii) सावकाश
- (४) सुट्टीच्या दिवशी मी मित्रांबरोबर क्रिकेट, फुटबॉल, बॅडमिंटन, लगेरी इत्यादी मैदानी खेळ खेळतो. तर दुपारच्या वेळी घरात बसून कॅरम, बुद्धिबळ इत्यादी बैठे खेळ खेळतो.

कृतिपत्रिका - ३

उतारा क्र. ३

- प्र.१. (१) (i) ‘महत्त्व कशाला आहे’ हे हसनभाईना अमृतने शिकवले.
(ii) हसनभाईनी
- (२) (i) (अ) अमृतची आई (ब) शेजारपजारच्या बायका
(ii) हसनभाई
- (३) (i) (अ) आज विकास शाळेत आला नाही.
(ब) मोर आपला राष्ट्रीय पक्षी आहे.
(ii) (अ) भूतकाळ (ब) भविष्यकाळ
- (४) माझ्या मित्राचे दुसऱ्याला मदत करणे, कोणती गोष्ट चांगली व कोणती गोष्ट वाईट हे सांगून वेळीच आपल्या मित्राला सावध करणे हे दोन गुण सर्वात जास्त आवडतात.

व्याकरण

- प्र.१. (१) उत्सव (२) खोडकर (३) मजा
(४) सखा (५) हळू (६) आग्रह

- प्र.२. (१) जिंकणे (२) आत

सूचना : Term Book मध्ये हरणे ऐवजी हरण शब्द Type झाला आहे.

- (३) जुने (४) साम्य, समानता

- प्र.३. (१) कपडे (२) बटणे (३) दोरे
(४) मुले (५) रंग (६) पोरे, पोरी

खेळूया शब्दांशी

- (अ) (१) नवा - शर्ट (२) सुई - दोरा
(३) होळी - सण (४) कुस्ती - खेळ

(आ) (अ) ब्रात्य (आ) कल्पना (इ) गोष्ट

(इ) करी
→ शेतकरी
→ कष्टकरी
→ वारकरी
→ कातकरी

खेळ खेळूया

* १ *
२ डो ३
के र
ज ५
४ नी र
य
६ त न या

* १ *
आ
ळ
२ शी त ल ३
हा ५
४ न वी न
का
६ र ड णे

- * (१) माझ्या मित्राने / मैत्रिणीने आज डबा आणला नाही तर मी त्याला माझ्या डब्यातील पोळी भाजी देईन.
- (२) शाळेत पिण्याच्या पाण्याचा नळ कोणीतरी विनाकारण सुरू ठेवला तर आम्ही तो बंद करू आणि वाहणारे पाणी वाचवू.
- (३) वर्गातील एका विद्यार्थ्याने वर्गात कचरा केला आहे व तो आम्ही पाहिला तर त्या विद्यार्थ्याला कचरा न करण्याविषयी समजावू आणि त्याला कचरा एकत्र करून कचरापेटीत टाकायला सांगू. त्याने आमचे म्हणणे ऐकले नाही तर आम्ही स्वतः कचरा कचरापेटीत टाकू आणि वर्ग स्वच्छ ठेवू.
- (४) सहलीत आमचा मित्र किल्ल्याच्या भिंतीवर नावे लिहित आहे तर आम्ही त्याला किल्ल्यांचे महत्त्व सांगून भिंतीवर नावे लिहिण्याची कृती करू नकोस असे समजावून सांगू.

१४. संतवाणी

* विद्यार्थ्यांनी स्वतः कृती करा.

आम्ही कथा लिहितो.

एकदा जंगलात भटकता भटकता एक हरिण जंगलातून बाहेर आले. जंगलाच्या बाहेरून जाणारी एक प्रवासी रेल्वे त्याला दिसली. हे सापासारखे लांब काय बरं पळत आहे असा विचार करता करता हरिणही त्या प्रवासी रेल्वेबरोबर धावू लागले.

पुढे एका स्टेशनवर प्रवासी रेल्वे थांबली. हरिण मात्र पुढे धावतच राहिले. मागे वळून पाहते तर काय रेल्वे थांबलेली. हरणाला वाटले, ती प्रवासी रेल्वे दमली म्हणून थांबली व आपणच जिंकलो. ते हरिण विजयी झाल्याच्या थाटात जंगलात परतले. इतर सर्व प्राण्यांबरोबर ते फुशारक्या मारू लागले. घडलेला सर्व प्रसंग त्याने इतरांना सांगितला. 'आपण रेल्वेला हरवले. केवढे मोठे काम केले. आपणच सर्वांत चपळ' अशा आविर्भावात ते फिरू लागले.

कोल्हा हुशार होता. त्याला शंका आली. तो हरणाला म्हणाला, “तू जिंकल्याचे कुणीही पाहिले नाही. चल पुन्हा धावून दाखव.” ते दोघेजण पुन्हा जंगलाबाहेर आले. हरिण मोठ्या दिमाखातच येणाऱ्या एका रेल्वेबरोबर धावू लागले. कोल्हासुद्धा त्या दोघांच्या मागे धावायला लागला.

हरणाच्या दुदैवाने ती रेल्वेगाडी मालगाडी होती. त्यामुळे ती कुठेही न थांबता पुढे पुढे वेगाने निघून गेली. बिचारे हरिण मात्र तिच्यामागे धावून धावून दमले आणि मटकन खाली बसले. त्याच्यात पुढे धावण्याचे त्राणच उरले नव्हते. त्याने कोल्ह्याकडे आपण शर्यत हरल्याचे कबूल केले व म्हणाले, “खरोखरच तंत्रज्ञानाचा वापर करून मानवाने आपल्यापेक्षा वेगवान वस्तू बनवली आहे”.

शीर्षक - गर्वाचे घर खाली

(२) सोनपूर गावातील धनराज शेठने एक हत्ती पाळला होता. त्याचा माहूत रोज हत्तीला नदीवर घेऊन जायचा. हत्ती नदीत स्नान करायचा, पाणी प्यायचा.

नदीकडे जाणारी वाट बाजारातून जाणारी होती. या बाजारात एका शिंप्याचे दुकान होते. शिंपी आणि माहूत दोघे मित्र होते. हत्तीला घेऊन जाताना-येताना माहूत शिंप्याशी बोलायचा. शिंपी हत्तीच्या सोंडेत कधी पेरू, कधी केळे द्यायचा. हत्तीसुद्धा ती फळे खायचा. एके दिवशी शिंपीदादाला वाटले, आपण हत्तीची गंमत करावी. हत्ती त्याच्याजवळ आला, फळे घेण्यासाठी त्याने आपली सोंड पुढे केली. शिंपीदादाने त्याला फळ न देता हळूच सुई त्याच्या सोंडेला टोचली. हत्ती कळवळला. त्याला राग आला, पण तो मुकाट्याने नदीवर निघून गेला.

हत्तीने नदीवर आंघोळ केली, घरी जायला निघाला तेव्हा येताना त्याने आपल्या सोंडेत गढूळ पाणी भरून घेतले. वाटेत शिंपीदादाचे दुकान होतेच. शिंपीदादा सदरा शिवत होते. हत्तीने हळूच ‘फुस्स’ करून सोंडेतली पाणी दुकानात कारंज्याप्रमाणे उडविले. दुकानात पाण्याचे तुषार सर्वत्र उडाले. सर्व कपडे भिजून त्यावर गढूळ पाण्याचे डाग पडले. ही मजा पाहून लोक पोटभर हसले. अश्यारितीने हत्तीने शिंप्याला योग्य धडा शिकवला.

शीर्षक - करावे तसे भरावे

(३) अनिकेत अभ्यासात सामान्य असा मुलगा होता. आईला तिच्या कामात तो नेहमी मदत करित असल्यामुळे त्याला अभ्यास करावयास फारसा वेळ मिळत नसे. अखेर व्हायचे तेच झाले. अनिकेत आठवीत नापास झाला. त्याच्या आईला खूप मोठा धक्का बसला. तिने अनिकेतची समजूत काढली. परंतु अनिकेत मात्र अस्वस्थ होता. नापासाचा कलंक घेऊन जगण्यापेक्षा आत्महत्येचा मार्ग त्याला अधिक योग्य वाटत होता. आईला आणखी त्रास नको या भावनेनं तलावात उडी मारून स्वतःला संपवण्याचा त्याचा विचार पक्का झाला.

अनिकेत गावाबाहेर असलेल्या तळ्याकाठी आला. पोहता येत नसल्यामुळे पूर्ण भरलेल्या तलावाकडे बघून त्याला क्षणभर भीती वाटली. तेवढ्यात एक घटना घडली. तलावाच्या काठावर असणाऱ्या झाडांवर बरीच माकडे होती. त्या माकडांमधील एक माकडाचे लहान पिल्लू झाडावरून खाली पडले. पिल्लाने झाडाच्या खोडाजवळ जाऊन वर चढण्याचा प्रयत्न केला. पुन्हा ते खाली पडले. प्रत्येक वेळेस झाडावर जाण्याचा ते प्रयत्न करत होते. अनिकेत एकटक नजरेनं पिल्लाचा झाडावर जाण्याचा प्रयत्न पाहत होता. अनेक वेळा प्रयत्न केल्यावर अखेरीस ते माकडाचे पिल्लू झाडावर चढले व इतर माकडात पुन्हा खेळू लागले. अनिकेतला आनंद झाला. माकडाच्या पिल्लाप्रमाणे आपणही पुन्हा प्रयत्न करू. चांगल्या मार्कांनी पास होऊ अशी नवी आशा त्याच्या मनात निर्माण झाली.

आत्महत्या करण्यासाठी तलावाकाठी आलेला अनिकेत घराकडे निघाला. अभ्यासाचा जोरदार प्रयत्न करून आपणही माकडाच्या पिल्लाप्रमाणे वरच्या वर्गात जाऊ असे त्याने ठरवले.

शीर्षक - प्रयत्नांती परमेश्वर

General Science

Topic 16 : Natural Resources

- Q.1. (A)**
- (1) The earth's **lithosphere** is made up of land and hard crust beneath it.
 - (2) The rocks on the earth are mainly made of **minerals**.
 - (3) Minerals that contain a high proportion of metal are called **ores**.
 - (4) Impurities of sand and soil in an ore are called **gangue**.
 - (5) Magnetite is a ore of **iron**.
 - (6) Coal is store-house of **carbon**.
 - (7) **Anthracite** is a type of coal of the highest grade.
 - (8) Coal, mineral oil, natural gas are classified as **energy** minerals.
 - (9) **Bauxite** is the most important ore of aluminium.
- (B)**
- (1) **Metals** are obtained from their ore by extraction and purification.
 - (2) The **silver** is classified in metal minerals which is a good conductor of electricity.
 - (3) The main component of natural gas is **methane**.
 - (4) About **30%** of the total land of the world is covered by forest.
 - (5) Medicinal plant **cinchona** is used for treatment of malaria.
 - (6) Micro-organisms like **fungi** is used for production of antibiotics.
 - (7) Shark and cod fish are used for producing edible oil rich in vitamin **A, D, E**.

- (C)**
- (1) (1)-(d), (2)-(c), (3)-(b), (4)-(a).
 - (2) (1)-(d), (2)-(c), (3)-(b), (4)-(a).
- (D)**
- (1) Bauxite (others are non-metal minerals)
 - (2) Diamond (others are metals)
 - (3) Diamond (others are energy minerals)
 - (4) Platinum (remaining are gems)
 - (5) Mica (others are good conductors of electricity)
 - (6) Methane (others are mineral oils)
 - (7) Sulphide (others are ores of manganese)
 - (8) Bauxite (others are types of coal)
 - (9) Gypsum (others are oil sands)
 - (10) Bauxite (others are ores of iron)
- (E)**
- | | | |
|--------------|--|------------------------------------|
| (1) bauxite | (2) Coal | (3) C ₄ H ₁₀ |
| (4) Cinchona | (5) Coal or mineral oil or natural gas | |
- (F)**
- | | | |
|-----------|----------|----------|
| (1) True | (2) True | (3) True |
| (4) False | (5) True | |
- (G)**
- | | | |
|-----------------|--------------|-------------|
| (1) Mineral oil | (2) Gangue | (3) Bauxite |
| (4) Methane | (5) Cinchona | |

- Q.2. (A)**
- (1) **Minerals** : The naturally occurring compounds of metals along with other impurities are known as minerals.
 - (2) **Ores** : The minerals from which metals are extracted profitably and conveniently are called as ores.
 - (3) **Gangue** : Impurities of sand, soil, rocky material in an ore are called 'Gangue'.
 - *(4) **Forest** : An extensive area of land covered by a variety of plants is called a forest.
 - *(5) **Lithosphere** : It is made up of land and the rigid outer part of the earth, consisting of the hard crust and upper mantle.

*** (6) Metallic minerals :** Metallic minerals are minerals which contain one or more metallic elements. Metallic minerals occur in rare, naturally formed concentrations known as mineral deposits. E.g., gold, tin, iron, etc.

*** (7) Non-metallic minerals :** These mineral reserves consist of stone quarries, clay and sand pits. They also contain mineral deposits, salt deposits, quartz, gypsum, natural gemstones, etc.

(B) (1) Millions of years ago, remains of plants and animals got buried into the earth. They were converted into fossil fuels due to the tremendous pressure of the earth's layers above them and the heat inside. As this process takes lakhs or millions of years to take place, the deposits of fossil fuels are limited.

(2) The natural materials on the earth in which metal or its compounds occur are called minerals. The minerals from which metals may be extracted profitably are called ores. Hence all ores are minerals but all minerals are not ores.

(3) Natural gas can be easily transported from its main sources using pipes over long distances. It lights up quickly and its burning can be easily controlled, on burning it does not leave any solid waste behind. Other pollutants are also not produced when natural gas is used. Hence natural gas is an eco-friendly fuel.

(4) Millions of years ago, forests got buried underground as a result of certain natural events. Layers of soil kept getting deposited over them. The very high pressure from above and the heat from the earth's interior, slowly transformed the buried plants into fuel. Coal was thus formed from the remains of those plants. Hence coal is said to be a fossil fuel.

(C) (1)

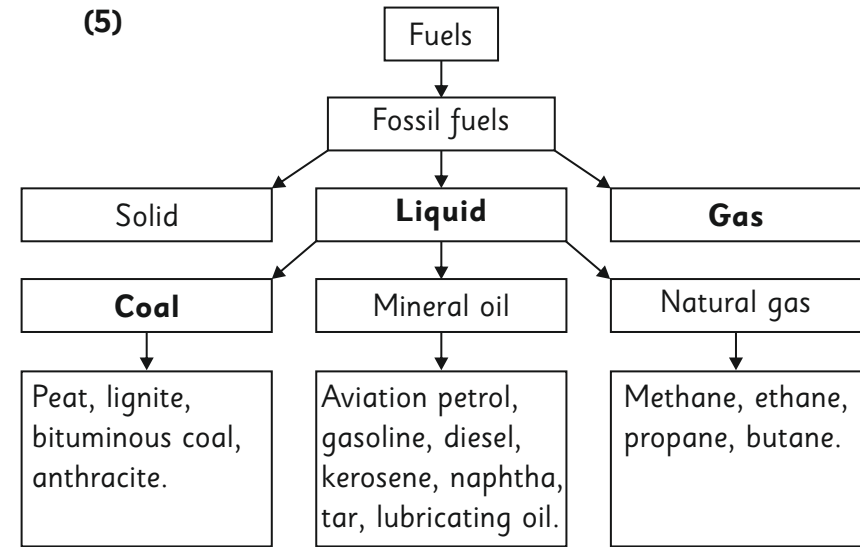
	Minerals		Ores
(i)	Naturally occurring substances of metal present in the earth's crust are called minerals.	(i)	Minerals that contain a high proportion of metal are called ores.
(ii)	All minerals are not ores.	(ii)	All ores are essentially minerals.
(iii)	E.g., clay is the mineral of aluminium.	(iii)	E.g., bauxite is the main ore of aluminium.

(2)

	Compressed Natural Gas (CNG)		Liquified Petroleum Gas
(i)	Major component of CNG is methane.	(i)	It is composed of propane or butane and isobutane.
(ii)	It is lighter than air.	(ii)	It is heavier than air.
(iii)	It serves as an alternative to gasoline in automobiles.	(iii)	It is used for cooking and heating purpose in home, industrial and even as automobile fuel.
(iv)	It releases minimal greenhouse gas.	(iv)	It releases greenhouse gases like CO ₂ .
(v)	It easily gets dispersed, causing minimal risk of ignition.	(v)	It is difficult to get dispersed, therefore causing risk of fire.

(D) (1) (i) Minerals are formed from the magma in the earth's crust and the lava from the eruption of volcanoes, when they cool and get transferred into crystals. E.g., magnetite, mica.

- (ii) Minerals are also formed when solid crystals remain behind after the process of evaporation. E.g., halite and gypsum.
 - (iii) Some minerals get transformed from one form into another due to large changes in temperature and pressure. E.g., diamond, graphite.
 - (iv) There are living organisms which produce inorganic minerals. E.g., conches, shells, etc.
- (2)**
- (i) Minerals are classified into non-metal minerals, metal minerals, energy minerals and gems and gem like minerals.
 - (ii) **Non-metal minerals** e.g., Mica, sulphur, gypsum, potash, etc.
 - (iii) **Metal minerals** e.g., iron, gold, silver, tin, bauxite, etc.
 - (iv) **Energy minerals** e.g., coal, mineral oil, natural gas.
 - (v) **Gems and gem-like minerals** e.g., diamond, ruby, sapphire, emerald, etc.
- (3)** A fuel is a substance that produces or generates energy on burning. The natural resources we use as fuel are coal, mineral oil and natural gas.
- (4)**
- (i) It catches fire easily.
 - (ii) No solid waste remains after combustion.
 - (iii) Carbon dioxide and water are formed in small quantities.
 - (iv) Other pollutants are not produced.
 - (v) It can be transported easily.
 - (vi) Combustion can be controlled easily.



- (6)** Mineral oil is the liquid fuel formed by the decomposition of organic substances buried underground. Millions of years ago bodies of dead sea organisms sank to the bottom of the sea. Layers of soil and sand collected on them. Due to high pressure and temperature, the remains of the dead organisms were transformed into mineral oil.
- (7)** Large scale cutting of trees can lead to deforestation.
- (i) Plants create oxygen and absorb greenhouse gases, the destruction of trees may lead to global warming.
 - (ii) Cutting trees can result in the loss of habitat for animal species which can harm the ecosystem.
 - (iii) Clearing of forests loosens the soil cover or loosens the ground and causes landslide or flood.
 - (iv) Cutting down the trees will affect the rainfall and will also create an unstable atmosphere.
 - (v) The loss of trees and other vegetation can cause climate change, desertification, soil erosion, fewer crops, flooding, increased greenhouse gases in the atmosphere.

- (8) The different types of coal are peat, lignite (brown coal), bituminous coal and anthracite (highest grade).

Uses of Coal :

- (i) Coal is used as fuel.
 - (ii) It is used in thermal power plants as well as to run boilers and railway engines.
 - (iii) It is used as fuel for cooking and for baking bricks in kilns on a large scale.
 - (iv) The gaseous fuels, producer gas and water gas, are obtained from coal.
 - (v) Coal as an energy resource, contributes greatly to industrial development.
- (9) Non-edible seeds such as of Jatropha, Karanj and Castor are used to produce bio-diesel. Ethanol produced from bagasse and other starch material can be mixed with petrol and used as auto fuel. Ethanol and bio diesel are bio fuels. Hydrogen, methanol or wood alcohol, ethanol or green alcohol are sources of the alternative fuels.
- (10) Petroleum or mineral oil is called liquid gold because of its high price and value and its economic need by all the countries worldwide. Petroleum is present in abundant quantity in some regions. The people over there are engaged in petroleum factories and industries and it is mainly the source of income for most of the people. Hence petroleum provides most of the economic wealth to the people of some regions. So it is considered as liquid gold.
- (11) Coal is called 'black gold' because of its large number of applications in different fields, especially in the generation of electricity and moreover it is also used as fuel. Hence because of its high price and value, and its economic need by all the countries worldwide, coal is called 'black gold'.

- (12) The reserves of fossil fuels namely mineral resources are limited and the demand is increasing. There is a definite amount of fossil fuels i.e. minerals available on the earth. Owing to the tremendous increase in the consumption of these mineral resources, it is feared that they would be depleted in the near future causing an energy crisis.

Q.3. (1) (a) Mineral resources : Mineral resources are elements, chemical compounds, minerals or rocks, concentrated in such a form which can be extracted to obtain a usable commodity.

There are many types of mineral resources depending on their nature, uses, processing and production.

(I) They can be classified according to their properties.

- (i) Metallic minerals
- (ii) Non-metallic minerals
- (iii) Energy minerals.

(i) **Metallic minerals :** The minerals which contain one or more metallic elements. They occur in rare, naturally formed concentrations known as mineral deposits. E.g., Iron, gold, silver, bauxite, manganese, platinum, etc.

(ii) **Non-metallic minerals :** The mineral reserves consist of stone quarries and clay and sand pits. They occur in the form of chemical and fertilizer mineral deposits, salt deposits, natural gemstones, etc. E.g., Mica, diamonds, graphite, feldspar, sapphire, gypsum, etc.

(iii) **Energy minerals :** It includes coal, mineral oil, natural gas that are used to produce electricity, fuel for transportation heating for homes and offices and in the manufacture of plastics.

(II) Minerals on the basis of use.

- (i) **Iron** : The most commonly used iron bearing minerals contain iron compound such as hematite, magnetite, limonite and siderite. Iron ore is used to make variety of articles from pins to heavy machinery. E.g., farming implements, rails of railway track.
- (ii) **Manganese** : Occurs in the form of carbonate, silicate and oxide. Compounds of manganese are used in the preparation of medicines and for giving a pink tinge to glass. It is also used in electrical appliances.
- (iii) **Aluminium** : It is the most abundant metallic mineral in the earth's crust. Bauxite ore is the main source of aluminium. Aluminium is a very good conductor of electricity and heat. It is used in aeroplanes, transport vehicles and to make electric wires.
- (iv) **Copper** : It is a metallic mineral found in impure state in the vicinity of iron and other minerals. Uses : It is a very good conductor of electricity and hence used to make electric wires as well as in radios, telephones, vehicles and for making kitchen utensils and statues.
- (v) **Mica** : They are silicate minerals known as sheet silicates because they form in distinct layers. It is used in ayurvedic medicines, dyes, electric machines and equipments, etc.

(III) Miscellaneous uses of minerals :

Some important minerals like diamond, ruby, sapphire, emerald, jade, zircon are used as gems. Gems have a great demand.

(b) Forest resources :

“Forest resources” means the various types of vegetation normally growing on forest land, regions, the associated harvested products and the associated residue, including but not limited to bush, grass, logs, saplings, seedlings and trees.

Protective functions of forest :

- (i) It reduces the velocity of water flowing over the land.
- (ii) To prevent soil erosion.
- (iii) To help percolation of water into the ground.
- (iv) To control flood.
- (v) To reduce the rate of evaporation.
- (vi) To protect wild life.
- (vii) To maintain the balance of atmospheric gases.

Productive functions of forest : Many products are extracted from forests. Medicinal plants for treatment of various diseases, wood for timber and fuel wood to cook food, etc. Forest wealth includes fibres, paper, rubber, gum and aromatic substances.

Medicinal plants : Medicinal plants include, aduśa, bel, neem, periwinkle, cinnamon, cinchona, ashwagandha, shatavari. They are used in the treatment of cough-cold, diarrhoea, fever, nausea, malaria and cancer.

Wood : Firewood trees like teak, mahogany, neem, acacia, subabul are strong and durable. Wood is used for making furniture, farming implements and various articles used in construction work.

Forest wealth : We get essential oil from lemon grass, vanilla, kewada, vetiver (Khus) and

eucalyptus. Sandal wood oil and eucalyptus oil are used for making soaps, cosmetics and incense sticks. In addition we get various fruits, bulbs and roots, honey, sealing wax, catechu, dyes, etc., from forest.

(c) Ocean resources :

It is one of the earth's most valuable natural resources, it provides a treasured source of recreation of humans. It is mined for minerals. (e.g. sodium, potassium, thorium, etc.) and drilled for crude oil, such as mineral oil and natural gas. We get many types of gems such as gems, conches, shells and pearls. Fishes like pomfret, shrimps and prawns are used as sea food.

(I) Mineral resources from ocean :

- (i) Thorium - used in the production of atomic energy.
- (ii) Magnesium - used in the flash bulb of camera.
- (iii) Potassium - The main ingredient in production of soap, glass, fertilizer.
- (iv) Sodium - used in the production of cloth and paper.
- (v) Sulphate - used in making artificial silk.

(II) Bio-resources in ocean :

- (i) Fishes like pomfret, starfish, shrimps, prawns are sources of proteins and vitamins mainly used as sea food.
- (ii) Dried shrimp, bombay duck powder - used as poultry food and as a good manure.
- (iii) Shells - used in the preparation of medicines, ornaments and decorative articles.
- (iv) Fungi - used for the production of antibiotics.
- (v) Shark and cod fish - used for producing edible oil rich in vitamins A, D and E.

(vi) Sea cucumbers - used as medicine for treating cancer and tumours.

(2) Fossil fuels are sources of energy that are formed from the accumulated or preserved remains of living organisms that were buried millions or billions of years ago. Pressure, heat, and time allow the organic matter to transform into one of the three major types of fossil fuel.

The major types of fossil fuels are coal, mineral oil and natural gas.

(3) Aviation petrol, gasoline, diesel, kerosene, naphtha, lubricating oil, tar, motor oil, asphalt etc. are the components we obtain from mineral oil.

(4) (i) Fruits, vegetables, bulbs, roots, honey, sealing wax, catechu, dyes, etc.

(ii) Timber and firewood from trees like teak, mahogany, neem, acacia, subabul (wood for making furniture and other articles in construction work).

(iii) Turpentine, latex (used in manufacturing of rubber).

(iv) Spices, resin and gum, fibres, paper and aromatic substances.

(v) Essential oils from lemon grass, vanilla, kewada, vetiver (khus) and eucalyptus. Sandal wood and oil of eucalyptus used for making soaps, cosmetics and incense sticks.

(vi) Medicinal plants like adulsa, bel, neem, periwinkle, cinnamon, cinchona - used for treatment of cough, cold, diarrhoea, fever, nausea, malaria and cancer.

(5) (i) Iron

Magnetite, hematite, limonite and siderite are ores of iron which form the source of mineral iron. It is used to make a variety of articles from pins to heavy

industry. For e.g., farming implements, rails of railway tracks, etc.

(ii) **Manganese**

It occurs in the form of carbonate, silicate and oxide. Compounds of manganese are used in the preparation of medicines and giving a pink tinge to glass.

(iii) **Bauxite**

It is an important ore of aluminium. It contains 55% aluminium. It is used mainly in aeroplanes, transport vehicles and to make electric wires.

(iv) **Copper**

It is found in the impure state in the vicinity of iron and other minerals. It is used to make electric wires as well as in radios, telephones, vehicles and for making kitchen utensils and statues.

(v) **Mica**

Mica is found in the form of silicate available in the thickness of its layers. It is used in ayurvedic medicines, dyes, electric machines and equipment, wireless communication equipments, etc.

- (6) The natural resources of a country or nation can contribute significantly to its economic development through increasing the production and manufacturing, securing energy supply, increasing export avenues and reducing the cost of local business and households. The principal factors affecting the development of an economy are the natural resources. Among the natural resources, the land area and the quantity of soil, forest wealth, minerals and oil resources, ocean resources, mineral and bio resources from ocean, climate are included. The efficient utilization of natural resources

depends on skills and abilities of human resources, technology used and availability of funds.

Forests are important renewable natural resources that contribute substantially to economic development. They provide raw material to a number of important industries like paper, match box, newsprint, rayon, furniture, construction, tanning, etc.

A nation with large deposits of minerals is provided with a sound base for the development of a large number of industries like iron, steel, petrochemicals, cement, pottery etc. The discovery of varied mineral deposits provides employment to a large number of people living in that area. Hence, the economic condition of the country can be improved.

Minerals and bio-resources from ocean have a tremendous impact on the nation's economy. Industries include fishing and boating, tourism and recreation, ocean transport etc. The ocean is also valued for the natural resources that lie beneath the ocean floor. These are large scale reserves of mineral oil and natural gas at the bottom of sea.

- (7) The explosive rate at which population of our country is growing is the main reason for the decline in the biodiversity. Due to the changes in climate, the temperature of the earth is rising. This rising temperature of the earth is dangerous for some rare and endangered species of plants and animals. Global warming produces large scale changes in the natural habitat of the forest. Environmental pollution increases the temperature of the earth. As a result there is decline in the diversity of plants and animals. When deforestation occurs, it causes animals to lose their habitat due to which they have to adapt to new environment. If they cannot adapt, they

become extinct. The housing and industrial development has caused more and more demand for land. This has resulted in clearing of the forests. Some animals are hunted and therefore this diversity is dwindling. All these factors cause decline in diversity of plants and animals in the forest.

- (8) We use fuels such as petrol, diesel, gasoline, in running vehicles. These fuels are called fossil fuels. It takes millions of years for the formation of fossil fuels. There is a danger that excessive usage of fuel will lead to their early depletion. There is likelihood of these reserves getting exhausted leading to energy crisis. Usage of fuel in vehicles such as gasoline or diesel also contributes to the number of the environmental problems such as air pollution, global climate changes, etc. Hence we should prevent the wastage of fuel used for vehicles.

Topic 17 : Effects of Light

- Q.1. (A) (1) When sunrays pass through a glass prism, a band of **seven** colours are seen on the other side of the prism.
- (2) A band of seven colours of a light beam is called **spectrum**.
- *(3) When the beams from the headlights of a car fall on an object in the night, the shadows called **umbra** and **penumbra** can be seen.
- (4) Earth appears to be **bluish** in colour from space.
- (5) **Blue** colour in the sun is scattered the most by fine particles.
- (6) **Eclipse** occurs when the sun, the moon and the earth come in a straight line.
- (7) The day on which the sun reaches exactly overhead is called the **zero shadow** day.

*(8) During a lunar eclipse the shadow of the **earth** falls on the **moon**.

*(9) During a solar eclipse the shadow of the **moon** falls on the **earth**.

*(10) Various shades of the colour are seen in the sky at sunrise and sunset due to **scattering of light**.

- (B) (1) Zero shadow day occurs in **summer**.
- (2) If the shadow of earth falls on the entire moon it is called **total lunar** eclipse.
- (3) The sky appears blue in colour **the blue light is scattered the most**.
- (4) During solar eclipse **the moon comes between the sun and the earth**.

(C) (1) False (2) False (3) False

Q.2. (1) The colours in the band of light seen on the other side of the prism when sunrays pass through it violet, indigo, blue, green, yellow, orange and red.

(2) When a ray of light is incident on extremely small particles like dust particles and other tiny particles in the air, the particles deflect the light in different directions. This phenomenon is called scattering of light.

(3) Yes. At noon on zero shadow day, the sun reaches exactly overhead. So the shadow completely disappears on that day.

(4) If there was no atmosphere, the sky would have appeared dark during the day and the sun would be directly seen.

(5) Eclipses are examples of formation of shadow in nature. The moon revolves around the earth and the earth along with the moon revolves around the sun. When the sun, the moon and the earth come in a straight line, the light from the sun is obstructed by the moon or the earth and they cast their shadow. These shadows form eclipses.

- Q.3. (1)**
- (i) Sunlight is scattered by the molecules of gases like nitrogen, oxygen in the atmosphere.
 - (ii) The blue colour in the sunlight is scattered the most, therefore the sky appears to be blue when observed from the earth.
- (2)**
- (i) There is no atmosphere in space.
 - (ii) So scattering of light does not take place there.
 - (iii) Hence, space beyond the earth's atmosphere appears dark.
- (3)**
- (i) Sunlight reaches us through the layer of the atmosphere.
 - (ii) At sunset, the light reaching us travels a greater distance through the atmosphere.
 - (iii) Due to the greater distance, there is more scattering of blue colour and the red light is scattered less than blue light.
 - (iv) As a result, the red-yellow light reaches us directly and thus the sun appears red at sunset.
- (4)**
- (i) When a shadow is cast by an extended source of light two parts of the shadow are seen.
 - (ii) The dark part is called the Umbra and the fainter part is called the Penumbra.
 - (iii) Sun is an extended source of light.
 - (iv) When we sit under the shade, the shade obstructs the light coming from the sun and forms a dark part called the Umbra.
 - (v) But the Penumbra region of the shadow receives some amount of light from the sun.
 - (vi) Hence we are able to read while sitting in the shade.
- (5)**
- (i) During a solar eclipse, ultraviolet rays which are harmful to us reach the earth.

- (ii) Also, the direct rays of the sun are very strong and they can cause damage to our eyes.
- (iii) Hence, solar eclipse should never be watched with the naked eye.

Q.4. (1)

	Point sources of light		Extended sources of light
(i)	It is a source of light in which the rays of light emerge from a very small hole or a very small portion of the body.	(i)	It is a source of light in which the rays of light come out from all the points on the surface of the source and not through a fine point.
(ii)	The shadow obtained by a point source of light has only umbra, the dark part of the shadow.	(ii)	The shadow obtained by an extended source will have two parts, the dark part called the umbra and also the faint part called the penumbra.
(iii)	For example : If light from torch, bulb or sunlight is allowed to pass through a slit or tiny hole in a cardboard it acts as a point source of light.	(iii)	For example : Sunlight, light from a bulb or from a torch act as extended sources of light.

(2)

	Umbra		Penumbra
(i)	Umbra is the dark part of the shadow which is formed by an object because the light is totally blocked by it.	(i)	Penumbra is the faint part of the shadow which receives some light since the object only partially blocks the light falling on it.

(ii)	Umbra can be obtained by a point source as well as an extended source of light, incident on an opaque object.	(ii)	Penumbra can be obtained only when an opaque object is placed in the path of an extended source of light.
(iii)	Umbra becomes smaller in size as the screen moves away from the object.	(iii)	Penumbra increases in size and becomes fainter as the screen moves away from the object.

(3)

	Solar eclipse		Lunar eclipse
(i)	During solar eclipse, the moon comes between the sun and the earth.	(i)	During lunar eclipse, the earth comes between the sun and the moon.
(ii)	A shadow of the moon is cast on the earth and the sun cannot be seen from the part in the shadow, during solar eclipse.	(ii)	In lunar eclipse, a shadow of the earth is cast on the moon and a part of the moon is covered.
(iii)	It takes place on a new moon day.	(iii)	It takes place on a full moon day.
(iv)	A solar eclipse should not be watched with the naked eye, as it can damage our eyes.	(iv)	A lunar eclipse can be watched with the naked eye.

Q.5. (A) (1) Examples of scattering of light are :

- (i) Headlight beams are visible when we drive through a thick fog.
- (ii) The dust particles are seen in a beam of sunlight entering the house through a small window.

- (iii) We see a variety of shades of colours in the early morning and evening sky.
 - (iv) Sky appears to be blue during the day.
- (2)**
- (i) If an opaque object is placed in the path of a light source, light does not reach the space behind the opaque object. This part remains dark and this dark part is called the shadow of the object.
 - (ii) The shadow of an object is formed only when light does not pass through the object.
- (3)**
- (i) The nature of the shadow formed by an extended source is that it will have two parts.
 - (ii) The faint part is called the penumbra and the dark part is called the umbra.
- (4)**
- (i) The laser beam will be scattered by the tiny particles of the gases released by the lighted incense stick.
 - (ii) These scattered rays enter our eyes and hence the laser beam will be seen if it passes through a glass box which contains a lighted incense stick.
- (5)**
- (i) When a small object is placed between an extended source of light and screen, its shadow is cast on the screen, having umbra and penumbra.
 - (ii) But as the screen moves away from the object, the umbra become smaller and smaller and at a certain point it disappears.
 - (iii) When a bird flies high in the sky, the sun acts as an extended source of light, the earth as the screen, which is very far away from the object, that is the bird. So, the umbra region of the shadow becomes so small that it disappears.

- (iv) Therefore, the shadow of a bird flying high is not seen on the earth.
- (6)** (i) Light emerging from a fine point, such as a tiny hole, acts as a point source.
- (ii) When light from a point source falls on an opaque object, it is completely obstructed by the object to form a dark shadow or the umbra.
- (iii) Since no amount of light passes above or below the opaque object, the fainter part of the shadow, the penumbra, is not obtained from a point source.
- (7)** An eclipse is a natural phenomenon and many superstitions are connected to eclipses which are still prevalent in the society. In order to remove misconceptions about eclipses, following measures can be taken :
- (i) Making people aware of the fact that eclipses are natural phenomena, by explaining the science behind the occurrence of the eclipses.
- (ii) Making people actually observe the eclipse, by giving them proper instructions or precautions to be taken while observing eclipses, especially the solar eclipse.
- (8)** (i) The day on which the sun reaches exactly overhead is called the zero shadow day.
- (ii) On this day, at noon, the shadows completely disappear.
- (iii) This event can only be seen in the region between the Tropic of Cancer (23.5° N) and Tropic of Capricorn (23.5° S).

- (iv) It occurs in summer on different days in different places between the Tropic of Cancer and Tropic of Capricorn.

- (B)** Sun is an important source of energy for all living things. Plants prepare their own food in the presence of sunlight by a process called photosynthesis. If the sun did not rise, plants will not be able to carry out photosynthesis, which in turn will affect all the living things on earth, as all living things depend directly or indirectly on plants for food. We are able to see things around us during the daytime because of sunlight. If sun did not rise, there will be total darkness everywhere and it will become very difficult for us to carry out any of the activities and life will become miserable without sunlight.
- (C)** The moon revolves around the earth, and the earth along with the moon, revolves around the sun. When the sun, the moon and the earth come in a straight line, an eclipse is said to have taken place. There are two kinds of eclipses, solar eclipse and lunar eclipse.

(i) Solar eclipse :

When the moon comes between the sun and the earth, a shadow of the moon is cast on the earth and the sun cannot be seen from the part in the shadow. This is called a solar eclipse. A solar eclipse is seen only on a new moon day. Sometimes, the solar disc is completely covered by the moon. This is called the total solar eclipse. When the solar disc is not covered fully by the moon, then it is called partial solar eclipse. During a solar eclipse, ultraviolet rays which are harmful to us, reach the earth. A solar eclipse should never be watched with the naked eyes as it can damage our eyes. A special type of goggles with dark glasses should be used for this purpose.

(ii) Lunar eclipse :

When the earth comes between the sun and the moon, a

shadow of the earth is cast on the moon and a part of the moon is covered. This is called the lunar eclipse. A lunar eclipse is seen only on a full moon night. If the whole moon comes in the shadow of the earth, it is a total lunar eclipse. When the shadow of the earth is cast only on a part of the moon, it is a partial lunar eclipse. Lunar eclipse can be observed with the naked eye. A lunar eclipse can be seen over a period of a few hours.

Topic 18 : Sound : Production of Sound

- Q.1. (A)** *(1) Sound is generated by the rhythmic **vibration** of any object.
- (2) Sound needs some **medium** to travel.
- (3) Sound from an object can be heard as long as it **vibrates**.
- * (4) The frequency of sound is measured in **Hertz**.
- (5) **Frequency** is the number of oscillations occurring in one second.
- * (6) If **intensity** of sound is decreased, its loudness also decreases.
- * (7) A medium is necessary for **propagation** of sound.
- (8) Frequency of infrasonic sound is less than **20 Hz**.
- (9) The **decibel** is the unit for measuring sound level.
- (10) SONAR stands for **Sound Navigation And Ranging**.
- (B)** (1) Sound can travel through **all of these**.
- (2) The maximum distance that an oscillator moves from its original position is called **amplitude**.
- (3) The time period of oscillations depends on the **length** of the pendulum.

- (4) The frequency **remains the same** if amplitude decreases.
- (5) The intensity of the sound is proportional to the square of the **amplitude** of vibration.
- (6) If the amplitude is doubled, the intensity of sound **becomes four times**.
- (7) When the intensity of sound becomes ten times the original, the sound level increases by **10 dB**.
- (8) Hearing is temporarily affected by sound of frequency greater than **1000 Hz**.

- (C)** (1) False (2) True
- (D)** (1) Infrasonic sound (2) Hz (3) 13 dB
- (4) sec. (5) 70 dB
- (E)** (a)-(3), (b)-(4), (c)-(5), (d)-(2), (e)-(1).
- (F)** (1) Oscillatory motion (2) An oscillator
- (3) Ultrasonic sound (4) Hertz

- Q.2. (A)** (1) **Time period of oscillation** : The time required by an oscillator to complete one oscillation is called the time period of oscillation.
- (2) **Frequency** : The number of oscillations occurring in one second is called frequency.
- (3) **Frequency of oscillation** : The number of oscillations completed by an oscillation in one second is called the frequency of (n) oscillation.
- (4) **Periodic motion** : Motion that is repeated again and again at fixed intervals of time is called periodic motion.
- (5) **Oscillatory motion** : The back and forth motion of an object on either side of the central position is called oscillatory motion.

Q.3. (1)

	Audible sound		Ultrasonic sound
(i)	Frequency of the audible sound is between 20 Hz and 20,000 Hz.	(i)	Frequency of ultrasonic sound is higher than 20,000 Hz.
(ii)	Human beings can only hear sound in the frequency range of audible sound.	(ii)	Human beings cannot hear ultrasonic sound.

(2)

	Infrasonic sound		Ultrasonic sound
(i)	A sound with a frequency less than 20 Hz is called infrasonic sound.	(i)	Frequency of ultrasonic sound is higher than 20,000 Hz.
(ii)	Animals like elephants, rhinoceros, whales can hear such sounds.	(ii)	Ultrasonic sounds are heard by animals like bat, dolphin and dogs.

(3)

	Amplitude		Frequency
(i)	The maximum displacement of a vibrating body or an oscillating body from its mean position, on either side of the mean position is called its amplitude.	(i)	The number of oscillations occurring in one second is called frequency.
(ii)	Amplitude is measured in cm or m.	(ii)	Frequency is measured in Hertz.

Q.4.

	Musical instruments	Part of the instrument which vibrates and produces the sound
(1)	Tabla, Mridangam	Diaphragm or membrane.
(2)	Sitar, Veena, Violin	Stretched strings.
(3)	Shehnai, Nadaswaram, Flute	Vibrating columns of air inside the instrument.
(4)	Jal-tarang	The frequency in each cup is adjusted by using appropriate amount of water.

- Q.5. (1)**
- (i) Sound travels faster in solid than in gas and metal is an efficient conductor of sound.
 - (ii) By putting the ear to the rail of the track, sound of the train at a distance could be heard much before it was heard through the air.
 - (iii) Hence in earlier times, people used to listen for the arrival of a distant train by putting their ear to the rail.
- (2)**
- (i) Sound is produced by the vibration of an object.
 - (ii) Different objects vibrate with different frequencies and produce different types of sounds.
 - (iii) Sound in a tabla is produced due to the vibration of its diaphragm, whereas in sitar sound is produced by the vibrating strings.
 - (iv) Since the diaphragm of the tabla and the strings of the sitar vibrate with different frequencies, sounds generated by the tabla and the sitar are different.
- (3)**
- (i) Sound requires a material medium for its propagation.
 - (ii) It cannot travel through vacuum.

(iii) On moon as there is no air, your friend will not be able to hear you call, if you were both on the moon.

(4) (i) If the frequency of vibration of an object is less than 20 per second, no sound is heard.

(ii) The movement of a mosquito's wings is so fast that its frequency of vibration is more than 20 per second, whereas that of the movement of our hands is much less than 20 per second.

(iii) So, we can hear the movement of a mosquito's wings but we cannot hear the movement of our hands.

(5) (i) Bats produce ultrasonic sound while flying in the dark.

(ii) This sound strikes the obstacles in their path and is reflected.

(iii) From the reflected sound, the bat comes to know about the obstacles in its surroundings and avoids collision with them.

(iv) Thus bats can find their way in the dark.

(6) (i) A radar system sends ultrasonic sound.

(ii) When this sound strikes objects, it is reflected by the objects, and is collected by the radar.

(iii) So the object is detected by the radar system.

(iv) Hence, a radar system is used for detecting flying objects.

Q.6. (1) Sound is produced by the rhythmic vibration of an object.

(2) Intensity of the sound depends upon the amplitude of vibration. It is proportional to the square of the amplitude of vibration.

For example, if the amplitude of vibration is doubled, the intensity of sound becomes four times.

(3) Roaring of a lion has low pitch whereas the hum of a mosquito has higher pitch.

(4) (i) The frequency of oscillation is the number of oscillations completed by an oscillator in one second and amplitude is the maximum displacement of a vibrating object from its mean position, on either side of the mean position.

(ii) When the length of the pendulum increases, the frequency of oscillation decreases, as the time period of oscillation of the pendulum increases with increase in the length of the pendulum.

(iii) But if the amplitude of the oscillations made by the pendulum is increased or decreased, keeping its length constant, the frequency of the oscillating pendulum remains the same.

(5) The uses of ultrasonic sound are :

(i) To clean delicate ornaments and tiny parts of a watch.

(ii) To observe internal organs of the body.

(iii) To detect tumors in the brain.

(iv) To detect faults in a metal.

(v) In RADAR system.

(vi) To kill certain microbes and insects.

(vii) SONAR (Sound Navigation And Ranging) is used to locate the seabed or the position of a ship.

(6) The following are the characteristics of sound :

(i) **Frequency** : It is the number of vibrations per second.

(ii) **Pitch** : It enables us to distinguish between different types of sounds, such as shrill voice, dull sounds, etc. Pitch of a sound depend upon its frequency.

- (iii) **Intensity of sound** : Loudness or softness of sound is indicated by two terms, namely, intensity of sound and sound level. Sound level is the intensity of sound as perceived by our ears.
- (7) (i) When tension in the stretched string is increased, the frequency of vibrations of the string increases, so a shrill sound or a high pitch sound is produced.
- (ii) When the tension in the stretched string is reduced, the frequency of vibrations of the string reduces and a less shrill sound or a low pitch sound is produced.
- (iii) So, the pitch of the sound generated by a stretched string can be changed by either increasing or reducing the tension in the string.
- (8) The acronym SONAR stands for Sound Navigation And Ranging. SONAR is used to locate the seabed or the position of a ship. SONAR consists of a transmitter and a detector which are installed in a boat or a ship. The transmitter produces and transmits ultrasonic sound. These sound waves travel through water and after striking the object on the seabed, get reflected back and are sensed by the detector. The detector converts the ultrasonic sound waves into electrical signals which are appropriately interpreted.

Topic 19 : Properties of a magnetic field

- Q.1. (A) (1) A freely suspended magnet comes to rest in **north-south** direction.
- * (2) The alloys called **nipermag** and **alnico** are used for making industrial magnets.
- (3) **Nipermag** is an alloy of iron, nickel, aluminium and titanium.
- (4) Magnets are made from the alloys of **iron, nickle** and **cobalt**.

- (5) Working of metal detectors is based on **electromagnets**.
- * (6) A magnetic field can pass through **solids** and **liquids**.
- * (7) The intensity of a magnetic field is indicated by the lines of **force**.
- (8) Like poles **repel** and unlike poles **attract** each other.
- * (9) The real test of a magnetism is **repulsion**.
- (B) (1) Alnico is a magnetic alloy of **aluminium, nickel and cobalt**.
- (2) **Aluminium** is not a magnetic substance.
- (3) The scientist **William Gilbert** showed that earth itself is a gigantic magnet.
- (4) Magnetic lines of forces **repel** each other.
- (5) Magnetic lines of force **do not intersect each other**.
- (C) (1) (1)-(d), (2)-(c), (3)-(b), (4)-(a).
- (2) (1)-(b), (2)-(d), (3)-(e), (4)-(f), (5)-(a).
- (D) (1) False (2) True (3) False (4) True

- Q.2. (A) (1) **Magnetic field** : The region around a magnet where the magnetic force acts on an object is called a magnetic field.
- (2) **Magnetic lines of force** : Imaginary connecting lines that run from the north pole to the south pole of a magnet and show the magnetic field around a magnet are called magnetic lines of force.

(B) (1)

	Single touch method		Double touch method
(i)	In this method only one bar magnet is used to generate magnetism in a magnetic substance like a steel bar.	(i)	In this method two bar magnets are used to magnetise a steel bar.
(ii)	In single touch method the bar magnet is dragged over the steel bar from one end to the other end a number of times.	(ii)	In double touch method the two bar magnets are dragged over the steel bar from the centre to either ends of the steel bar.
(iii)	The magnetism created by this method is of low strength and lasts for a short	(iii)	The magnetism generated by this method lasts longer compared to that generated by the

(2)

	Gravitational force		Magnetic force
(i)	The force with which earth attracts objects towards itself is called the gravitational force.	(i)	The force with which a magnet attracts objects made up of iron, nickel and cobalt is called magnetic force.
(ii)	Gravitational force is always attractive.	(ii)	Magnetic force is attractive as well as repulsive.

(3)

	Permanent magnet		Electromagnet
(i)	Magnetic properties are retained permanently in a permanent magnet.	(i)	Magnetic properties are retained in an electromagnet only as long as the current passes, so electromagnet is a temporary magnet.

(ii)	It is comparatively a weak magnet.	(ii)	It is a stronger magnet.
(iii)	The north pole and the south pole of a permanent magnet are fixed.	(iii)	The positions of south and north poles can be changed by changing the direction of flow of current.

- (C) (1)**
- A magnetic needle is mounted in a compass in such a way that it can rotate freely in the horizontal plane and it comes to rest in the north-south direction.
 - The north pole of the magnet points geographic north direction, whereas the south pole points to the geographic south direction.
 - Thus, a magnetic needle helps to find the direction.
 - Hence a magnetic needle is used in a compass.
- (2)**
- When a substance is brought near a magnet and if it gets attracted by the magnet, then either the substance is a magnetic substance or the unlike pole of another magnet.
 - So, by attraction it cannot be decided whether the substance is a magnet or a magnetic substance.
 - But when a substance brought near a magnet is repelled, it is certainly a magnet because a magnetic substance is not repelled by a magnet, only the like poles of magnets repel each other.
 - Thus, only by repulsion and not by attraction, it can be said that the substance is a magnet.
 - Hence repulsion is the real test for identifying a magnet.
- (3)**
- A freely suspended magnet comes to rest in the north-south direction, because the earth behaves like a huge magnet.

- (ii) The south pole of the magnet settles towards the geographic north pole of the earth while the magnetic north pole settles towards the geographic south pole.
- (iii) Thus, any magnet sets itself in the north-south direction under the influence of the earth's magnetic field.
- (iv) Hence the earth itself is a gigantic magnet.

- Q.3. (A)**
- (1)** The materials to which objects made from iron, nickel and cobalt get attracted are called magnets.
 - (2)** Metals like iron, nickel and cobalt are used for making magnets.
 - (3)** A freely suspended magnet comes to rest in the north-south direction.
 - (4)** Magnetic force is a vector quantity.
 - (5)** The force with which a magnet attracts objects made up of iron, nickel and cobalt is called magnetic force.
 - (6)** The magnetic needle will show the north direction on the geographic north pole.
 - (7)** Substances used for making electromagnets are soft iron (e.g. iron nail) and insulated copper wire.

(B) (1) Magnets are used in our houses and our surroundings in the following ways :

- (i) Magnets are used in pin holders, magnetic door closers, refrigerators.
- (ii) In a pin holder, a thin round magnet is fitted in its mouth. When the pinholder is turned, the pins at its bottom stick to the inside of the mouth of the holder and the pins are easily picked out.

- (iii) Magnetic door closers, fitted in the shutters of cupboards, click shut tightly as they are brought close to the frame because the bottom of the shutter is fitted with a magnet and the point exactly opposite to it on the frame is fitted with an iron strip.
- (iv) Doors of the refrigerators are fitted with magnet, which gets attracted to the metal on the refrigerators.
- (v) Magnets are also used for separating magnetic and non-magnetic substances from the scrap.
- (vi) A freely pivoted magnetic needle is used in magnetic compass to find geographical directions.

(2) The characteristics of magnets are as follows :

- (i) A freely suspended magnet comes to rest in the north-south direction.
 - (ii) The magnetic force is concentrated at the two ends or poles of a magnet.
 - (iii) The two poles of the magnet cannot be separated.
 - (iv) A magnet can induce magnetism in a magnetic material.
 - (v) Like poles of magnets repel each other and unlike poles of the magnets attract each other.
- (3)**
- (i) The earth itself is a gigantic magnet.
 - (ii) The magnetic south pole of the earth is situated near its geographic north pole, and its magnetic north pole is situated near its geographic south pole.

- (iii) As unlike poles attract each other, when a magnet is freely suspended, the north pole of the magnet is attracted towards the earth's magnetic south pole and the south pole of the magnet get attracted towards the earth's magnetic north pole.
 - (iv) Therefore, a freely suspended magnet always settles in the north-south direction when it is freely suspended.
- (4)**
- (i) The earth itself is a gigantic magnet.
 - (ii) The shape of the earth's magnetic field resembles that of a bar magnet.
 - (iii) But the axis of earth's magnetic pole and geographical axis do not coincide.
 - (iv) The axis of the earth's magnetic field is inclined at an angle of about 15° with the geographical axis.
 - (v) Due to this a freely suspended magnet makes an angle of about 15° with the geographical axis and points only approximately in the north-south direction at a place and does not settle parallel to the ground.
- (5)**
- (i) Magnetic force is effective around a magnet upto a certain distance.
 - (ii) The region around the magnet where the magnetic force acts on an object is called the magnetic field.
 - (iii) Due to the magnetic field of the magnet, the magnetic force acts on objects without direct contact.
- (6)**
- (i) Take a iron nail (10 cm long). Wind an insulated copper wire of 1 metre length over the iron nail.

- (ii) Connect the two ends of the wire to a source of electricity, that is, a cell or battery through a key.
- (iii) When the key is pressed, current flows through the wire and the system starts behaving like a magnet.
- (iv) Here, the iron nail behaves like a magnet. If pins are brought near the iron nail, they get attracted to it.
- (v) When the key is opened, the flow of current stops through the coil and the iron nail loses its magnetism and the pins get detached from the iron nail.

(7) The strength of an electromagnet depends on :

- (i) The number of turns in its coil: A stronger electromagnet can be obtained if the number of turns in the coils of an electromagnet is increased.
- (ii) The amount of current passed through the coil: If the amount of current in the coil is increased, a stronger electromagnet can be obtained.

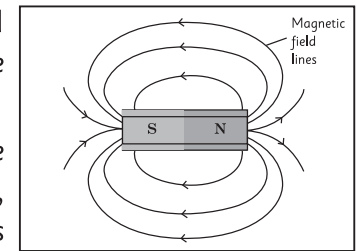
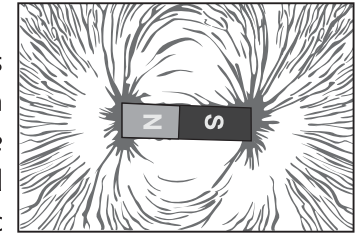
(8) Electromagnets are used at different places :

- (i) In electrical appliances such as electric bell, electric fan, electric motors etc.
- (ii) In lifting heavy loads of iron scrap, i.e. in a crane.
- (iii) To remove tiny particles of iron from wound.
- (iv) In the separation of iron ores (magnetic substances) from impurities (non-magnetic substances).
- (v) Electromagnets are also used in medical science to cure certain ailments.

- (vi) They are used for making strong permanent magnets.
- (9) (i) When the property of the magnet of coming to rest in the north-south direction was discovered, a magnet came to be used in the compass to find the directions.
- (ii) Chinese and Greek sailors were the first to make a mariner's compass using a magnet.
- (iii) At that time, a magnetic needle supported on a wooden block would be floated on water.
- (iv) As the needle was free to turn, it would come to rest in the north-south direction.
- (10)(i) Place articles like iron, pins near the given articles. If they get attracted to any of the given articles, then that article will be a magnet.
- (ii) We can also identify a magnet among the various articles by bringing a magnet near the given articles, if any of the given articles shows repulsion then that article will surely be a magnet as, only like poles of magnets show repulsion.

(C) Magnetic field : The region around a magnet where the magnetic force acts on an object is called magnetic field. The magnetic field around a magnet can be shown by means of magnetic lines of force. It was named by the British researcher, Michael Faraday. The intensity of magnetic field at a place can be determined by the number of lines of force that pass through a unit area at the place, perpendicular to that area. The intensity of a magnetic field is low where the lines of force are sparse, and the intensity is high where the lines of force are concentrated.

- Q.4.** (i) Take a small cardboard. Place a bar magnet at its centre.
- (ii) Sprinkle iron filings on the cardboard around the magnet.
- (iii) Gently tap the cardboard.
- (iv) When the cardboard is gently tapped, the iron filings arrange around the magnet in definite curved lines forming a symmetric pattern, going from one end of the bar magnet to the other.
- (v) These curved lines are close to each other near the poles, whereas they are less crowded in the middle region around the magnet.
- (vi) These lines are called the magnetic lines of force.
- (vii) The magnetic field around a magnet can be shown by means of these magnetic lines of force.
- (viii) The magnetic lines of force run from the north pole to the south pole, so the tangent at any point on a magnetic line of force gives the direction of the magnetic field at that point.
- (ix) The intensity of the magnetic field at a place can be gauged by the number of lines of force that pass through a unit area at that place, perpendicular to that area.
- (x) So, the intensity of a magnetic field will be low where the lines of force are sparse and the intensity will be high where the lines of force are concentrated.
- (xi) Thus with the help of magnetic lines of force, we can determine the direction and the strength of the magnetic field of a bar magnet.



Magnetic field

Topic 20 : In the World of Stars

- Q.1. (A)**
- (1) Stars are born out of **nebulae**.
 - (2) Nebulae are clouds made up mainly of **hydrogen** gas and dirt particles.
 - (3) Solar system is a tiny part of a galaxy called the **MilkyWay**.
 - (4) The continuous empty space between the spheres in the sky is called **space**.
 - (5) The line at which sky meet is called the **horizon**.
 - (6) The point on the celestial sphere exactly above the head **Zenith**.
 - (7) The point on the celestial sphere exactly below the feet is called the **Nadir**.
 - (8) The portion traversed by the moon in one day is called the **Nakshatra**.
- (B)**
- ***(a)** When seen from a great distance, the sky seems to be touching the ground along a circle. This circle is called the **horizon**.
 - ***(b)** The **ecliptic** is used while defining the zodiac signs.
 - ***(c)** Classified according to seasons, one season will have **nine** nakshatras.
 - ***(d)** The rising of the sun in the east and its setting in the west is the **apparent** motion of the sun.
 - (e)** Sharmishtha is made up of **five** stars.
 - (f)** Mruga nakshatra rises at **eight** p.m.
 - (g)** The circle which passes through both the celestial poles and the observer's zenith and nadir is called **meridian**.
 - (h)** The moon completes one revolution around the earth in approximately **27.3** days.
 - ***(i)** One zodiac sign is equal to **2^{1/4}** nakshatras.

- (j)** Vrushchik or Scorpio is a constellation with **twelve** stars.
- (C)** (1)-(c), (2)-(d), (3)-(b), (4)-(a).
- (D)** (1) False (2) True (3) False (4) True
- (E)** (1) Binoculars and telescope
(2) Saptarshi and Sharmishtha (3) Capricorn
(4) Sirius (5) Saptarshi
- Q.2. (1)** **Constellation** : A group of stars occupying a small portion of the celestial sphere is called a constellation.
- (2)** **Meridian** : In astronomy, the great circle which passes through both the celestial poles and the observer's zenith and nadir is called a meridian.
- (3)** **Nakshatra** : The moon completes one revolution around the Earth in approximately 27.3 days. The portion transversed by the moon in one day is called a nakshatra.
- (4)** **Raashi or Zodiac sign** : The ecliptic has been imagined to be divided into 12 equal parts. Thus each part substends 30 degrees angle at the centre of the celestial sphere. Each of these parts is called a raashi or zodiac sign.
- (5)** **Space** : The continuous empty space between the spheres (planets, stars etc.) in the sky is called space.
- (6)** **Sky** : The portion of the earth's atmosphere and the portion beyond that which can be seen in the form of a roof by our eyes while standing on the earth is called sky.
- Q.3. (1)** The earth rotates about its axis from west to east. Hence the sun, the moon and the stars are seen to rise in the east and set in the west.
- (2)** The Pole star is nearest to the north celestial pole of the sky and practically stationary from the earth. It lies almost along the axis of rotation of the earth. It can be used to find the direction. Identifying the Pole star in the

north makes the sky watch easier. Hence Pole star should be used as reference point for sky watch.

- (3) In reality, the sun does not move, but we perceive it as moving due to the motion of the earth around it. This motion of the sun is called its apparent motion. Thus the rising of the sun in the east and its setting in the west is called apparent motion.

- Q.4. (1)** On a clear, moonless night we can see thousands of stars in the sky. Some of these stars form beautiful patterns. A group of stars occupying a small portion of the celestial sphere is called constellation. Some of these stars appear to form certain figures of animals, humans or objects. These figures have been named after certain events or beliefs of the times when the constellations were identified.
- (2) The line at which the sky apparently meets the ground is called horizon. The horizon will be seen in the form of circle and on looking up, the sky will appear to be a sphere based on this circle. The stars and planets moving in the sky appear to be moving on this sphere. This virtual sphere is called celestial sphere. The circular sphere divides this sphere into two halves. The zenith, the nadir, the celestial poles, the meridian, the celestial equator, and the ecliptic are the points which should be considered before a sky watch.
- (3) Yes, it is wrong to say that the planets, stars and nakshatras affect human life, because astrology is not accepted by science. Science has proved that constituents of the solar system. e.g. planets, satellites and comets as also distant stars and constellations do not have any influence on human life. Man stepped on the moon in the twentieth (20th) century. He is expected to conquer Mars in the twenty first century. Hence, in this age of science,

holding on to beliefs which are superstitious, has been proved to be wrong through numerous scientific tests. It is an unnecessary waste of one's time, energy and money. Hence such issues should be approached with a scientific frame of mind.

- (4) As observed from the northern hemisphere, the pole star is nearest to the north celestial pole of the sky and appears practically stationary from the earth. It lies almost along the axis of rotation of the earth. It can be used to find the direction. Hence, pole star should be used as reference point for sky watch.
- (5) The constellations of Saptarshi and Sharmishtha are useful in locating the Pole star. Sharmishtha is made up of five bright stars which are distributed along the figure of letter M. The perpendicular bisector of the line joining the third and fourth stars goes towards the Pole star. The Pole star has Saptarshi on one side and Sharmishtha on the other. As Sharmishtha sets, Saptarshi rises. Thus we can always use either one or the other as reference point on any given night.
- (6) A galaxy is a huge collection of gas, dust and billions of stars and their solar systems. A galaxy is held together by gravity. Our galaxy, the Milky Way, also has a super-massive black hole in the middle.
- It also includes many other celestial (heavenly) bodies such as clusters of stars, nebulae, clouds of gases, clouds of dust, dead stars, new born stars, etc.
- (7) The different type of stars are - (i) Sun-like Stars e.g., stars like Alpha Centauri, Sirius (ii) Red Giant star (iii) Super Nova (iv) Binary (Twin Stars) (v) Variable Stars e.g., Polaris (Pole Star).

Q.5. (1) The sun, the moon and the stars are seen to rise in the east and set in the west because the earth rotates from west to east. The stars rise and set 4 minutes earlier every day. That is, if a star rises at 8 p.m. tonight, it will rise at 7.56 pm tomorrow. In one month the earth revolves $1/12^{\text{th}}$ of the way around the sun. The same star will rise at 8 pm at the same time each year. The rotational period of the earth is 23 hours 56 minutes (approximately 24 hours). $1/12^{\text{th}}$ of 24 is 2. Therefore, the star will rise 2 hours earlier after one month. The star will rise at 6 pm.

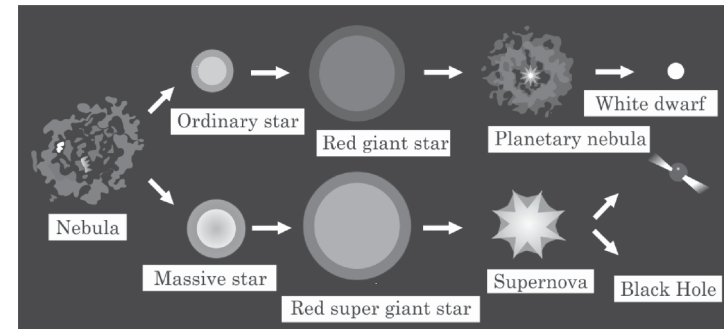
(2) A group of stars occupying a small portion of the celestial sphere called a constellation. The constellation cannot be seen in bright sunlight but it is present behind the sun. As the earth changes its position, a different constellation or zodiac sign or raashi appears behind the sun. A nakshatra is known from the brightest star that it contains. This is what we express or mean, when we say that sun enters a particular zodiac sign or nakshatra. For example, on Makarsankranti we say that the sun enters Makar Raashi (Capricorn zodiac sign or Nakshatra).

According to Rigveda, Ruphus means clouds. It is said that in the rainy season, the sun enters the Mrug nakshatra means “awakening of clouds” i.e. clouds began rainy season. When sun enters Mrug nakshatra, rain starts in India. When sun enters Canis Major or (Mrug nakshatra) it means that it’s the beginning of the rainy season or the Mrug nakshatra.

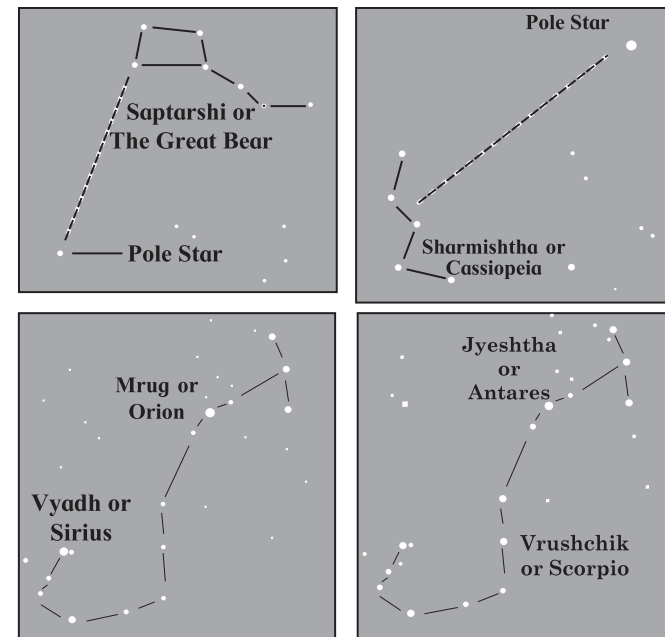
(3) Stars are born out of nebulae. Nebulae are clouds made up mainly of hydrogen gas, helium and dust particles. The particles in these clouds are attracted towards one another due to the force of gravity. As a result, the clouds contract and become dense and spherical in shape. At the same time, the pressure of the gas at the core of the cloud

increases causing the temperature to rise tremendously and energy generation. Such a spherical cloud of hydrogen is called a ‘star’.

Later, processes such as contraction, expansion, rise in temperature, etc., bring about changes in the nature of the star. These changes occur over a very long period of time and constitute the life-cycle of stars. The different forms of the stars at various stages during the life-cycle are identified as different types of stars.



Q.6.



History : Part 1

Unit - I

Topic 11 : Marathas - The Protectors of the Nation

- Q.1. (A)** (1) Tipu (2) Hyder Ali (3) Ayodhya
(4) Ahmadshah Abdali (5) Attock
(6) Madhavrao (7) Mahadji (8) Third
(9) Pakistan (10) Delhi
- (B)** (1) At Buradi Ghat (on the banks of the river Yamuna)
(2) Marathas
(3) Balaji Bajirao (alias Nanasahab Peshwa)
(4) Ahmadshah Abdali
(5) Chauthai
- (C)** (1) Najibkhan (2) Ahmadshah Abdali
(3) Sadashivraobhau (4) Rohilkhand
(5) Raghunathrao
(6) Surajmal Jat and Rani Kishori
(7) Rohillas (8) Pathans
(9) Madhavrao (10) Rohillas
(11) Surajmal
- (D)** (1)-(b), (2)-(a), (3)-(e), (4)-(c), (5)-(d).
- (E)** (1) Mavlas (2) Goa (3) Pakistan
(4) Nawab (5) Raghunatharo
- (F)** (1) False (2) False (3) True (4) False (5) True
(6) False (7) True (8) False (9) True
- (G)** (I) (1) The battle of Rakshasbhuvan 5
(2) The death of Tipu Sultan 4
(3) The death of Madhavrao Peshwa 1
(4) The battle of Panipat 3
(5) The battle of Buradi Ghat 2

- (II)** (1) The battle of Panipat between Marathas and Abdali. 4
(2) Death of Madhavrao. 3
(3) The Maratha standard on Attock. 1
(4) Abdali conquered Punjab. 2

- (H)** (1) Nanasaheb (2) Dattaji (3) Najibkhan
(4) Madhavrao (5) Abdali

- Q.2. (1)** The Pathans who had migrated from Afghanistan and settled at the foothills of the Himalayas, were known as the Rohillas.
- (2)** The Rohillas, the Jats, the Rajputs and the Afghans were the enemies of the Mughal power.
- (3)** Abdali posed a challenge to the Marathas at Panipat.
- (4)** The Marathas got the right to collect chauthai from the territories of the Punjab, Multan, Rajputana, Sind and Rohilkhand.
- (5)** Abdali captured Delhi and returned to Afghanistan with a huge booty.
- (6)** The Marathas fought at Panipat with the perspective that "India is for Indians".
- (7)** The region to the north-west of the Ayodhya province at the foothills of the Himalayas was called Rohilkhand.
- (8)** Ahmadshah Abdali was attracted by the riches of India.
- (9)** The Peshwa sent the Shinde-Holkar armies for the protection of Delhi on behalf of the Chhatrapati.
- (10)** The subhas included for Chauthai were Kabul, Kandahar and Peshawar.
- Q.3. (1)** To get a firm hold over the Punjab and to crush Najibkhan, the Peshwa sent Dattaji Shinde and Janakoji Shinde to the North.

- (2) The Marathas believed that an outsider like Abdali had no moral right to rule India. The Marathas fought at Panipat with the broad perspective that “India is for Indians.”
- (3) The Rohillas had created a havoc in the Doab region of the Ganga and Yamuna rivers. To subdue the Rohillas, Nawab of Ayodhya invited the Marathas to Ayodhya.
- (4) Najibkhan was a chief of the Rohillas. He found it hard to tolerate the Maratha supremacy in the North, so he invited Ahmadshah Abdali to India.
- (5) To increase the prestige of the Marathas, Peshwa Madhavrao sent Mahadji Shinde, Tukoji Holkar, Ramchandra Kanade and Visajipant Biniwale. They were sent to re-establish the Maratha rule in the North.

Q.4. (1) The orthodox sects in the North saw the Marathas as people belonging to another religion. With a view to reducing the Maratha might in the North, some orthodox sects persuaded Abdali to invade India.

- (2) In this battle of Panipat, Vishwasrao, the eldest son of Nana Saheb, fell victim to an enemy bullet. When Sadashivraobhau learnt this, he fiercely attacked the enemy in a frenzy. He disappeared in the battle fray. Seeing that their leader had disappeared, the Maratha soldiers lost courage. At that very moment, the reserve contingents of Abdali launched an attack on the Marathas with fresh vigour and so the Marathas were defeated in the battle of Panipat.
- (3) As per the treaty, the Emperor gave the Marathas the chauthai rights of the subhas of Kabul, Kandahar and Peshawar. These subhas were under the Emperor previously but now they were a part of Abdali's Afghanistan. If the Marathas had to collect chauthai from those subhas, they had to annex them to the Mughal

empire. Abdali wanted those subhas under the Afghan control. So, a conflict between the Marathas and Abdali was imminent and inevitable.

Q.5. (1) After capturing Delhi, Abdali returned to Afghanistan with a huge booty. By the time, Raghunathrao and Malharrao Holkar captured Delhi and drove out Abdali's officers. They also captured Punjab and pursued Abdali's soldiers right upto Attock in 1758 C.E. This raised the Maratha standard at Attock.

(2) The Afghans had created havoc in the Doab region of the Ganga and Yamuna rivers. The region belonged to the Nawab of Ayodhya. The chief of Afghans was Ahmadshah Abdali. He had heard about the riches of India. So there was a threat of his invasion to the Mughal Emperor. Both the Nawab and the Mughal Emperor sought the help of the Marathas to protect them and subdue the Afghans. The Marathas took the responsibility of the protection of the Nawab and the Mughals in return of chauthai from their subhas. This way, the Nawab, the Emperor and the Marathas had a common enemy and that was Abdali. The Marathas had strength and integrity. The Sardars like Raghunathrao, Malharrao Holkar, Sadashivraobhau, Vishwasrao, Janakoji Shinde, Dattaji Shinde, etc., had shown their courage to defeat Abdali. But unfortunately, in the battle of Panipat the Marathas were defeated and had to suffer a great loss. The Afghans also suffered huge losses. After this battle, the descendents of Afghans gave all the responsibility of North politics to the Marathas as it was not possible for them to look after those territories.

(3) The battle of Panipat was fought between the Marathas and the Afghan chief Abdali in 1761 C.E. It was the third battle of Panipat.

The effects of the battle of Panipat were as follows :

- (i) A whole generation of young men in Maharashtra were killed.
- (ii) Many brave Sardars fell on the battlefield.
- (iii) Due to the war, the Maratha treasury became empty.
- (iv) Taking advantage of the Maratha defeat, the Nizam once again started his anti-Maratha activities but he was defeated at Rakshasbhuvan near Paithan. Secondly, Hyder Ali attacked the Maratha territory in Karnataka, but he was also defeated at Moti Talav near Srirangapattan.

Topic 12 : Progression of the Empire

- Q.1. (A)** (1) Vadodara (2) Umabai (3) Malharrao
(4) Phadnavis (5) Bajirao II (6) 1818
(7) Ahilyabai (8) Chauthai
(9) Ranoji Shinde (10) Wanawadi
(11) Yashwantrao (12) Odisha (13) Delhi
(14) British (15) Ahilyabai
- (B)** (1) Ahilyabai Holkar (2) Raghuji Bhosale
(3) Mahadji Shinde (4) Nana Phadnavis
(5) Vakil - i - Mutlak (6) Mahadji Shinde
(7) Parasoji (8) Peshwa Madhavrao
(9) Trimbakrao (10) Khanderao Holkar
- (C)** (1) Rajputana (2) Raghuji (3) British
(4) Nana Phadnavis (5) Parasoji (6) Pawars
(7) Ghulam Kadir
- (D)** (1)-(c), (2)-(d), (3)-(a), (4)-(b).

- (E)** (1) The battle of Ashti. 2
(2) Maratha dominance over Odisha. 1
(3) The British flew the Union Jack in Pune. 3
- (F)** (1) True (2) False (3) False
(4) True (5) True (6) True

- Q.2. (1)** Emperor honoured Mahadji with the title of Vakil - i - Mutlak (Chief agent of the Emperor).
- (2)** Raghuji brought the area surrounding Tirucherapalli and Arcot in the South under the Maratha dominance.
- (3)** Malharrao showed his valour under the rule of Bajirao, Nana Saheb Peshwa and Madhavrao Peshwa.
- (4)** The Jagir of Varhad and Gondawan was given to Parasoji during the reign of Shahu Maharaj.
- (5)** Peshwa Madhavrao conferred the family title on Mahadji Shinde.
- (6)** Shahu Maharaj assigned the chauthai rights of Bihar, Bengal and Odisha to Raghuji Bhosale.
- (7)** The Maratha Sardars were valorous and capable. They had leadership qualities.
- (8)** In 1818 C.E. the British defeated the Marathas in the battle of Ashti.
- (9)** The Maratha power came to an end in the year 1818 C.E.
- Q.3. (1)** The areas surrounding Tirucherapalli and Arcot in the South, Bengal, Bihar and Odisha were the areas Raghuji Bhosale brought under his control. He had been assigned the rights to collect chauthai from Bengal, Bihar and Odisha by Shahu Maharaj.
- (2)** After the death of Peshwa Madhavrao, the Maratha state was in disarray. Nana Phadnavis was a famous administrator and statesman. With the help of Mahadji Shinde, he set up the affairs of the state. Nana managed

the affairs of the South. He was helped by the Patwardhans, Haripant Phadke, the Rastes and other Sardars. He established supremacy in the South.

- Q.4. (1)** Ghulam Kadir, the grandson of Najib Khan, captured the Red fort and tortured the Emperor and his begums for their wealth. He gouged out the Emperor's eyes and took hold of the Royal Treasury. In these circumstances, Mahadji fought against Ghulam Kadir to resist him in the North.
- (2)** Malharrao Holkar served the Maratha state for a very long time. He was well-versed in guerilla warfare. He proved his valour in the Northern campaign of the Marathas at the time of Bajirao I and Nana Saheb. He was very instrumental in reviving the prestige in the North. After that, he was instrumental in establishing the Maratha supremacy in Malwa and Rajputana. He proved to be a great help to Peshwa Madhavrao in reviving the Maratha prestige in the North.
- (3)** Mahadji Shinde was a brave general and an astute statesman. Mahadji was instrumental in re-establishing the Maratha supremacy and prestige in North India after the Maratha defeat in Panipat. He trained and modernised his army under the French military expert de Boigne. So Peshwa Madhavrao conferred the family title on Mahadji Shinde.
- (4)** The Maratha Sardars established the influence of the Maratha power in North and South India. After the death of Mahadji Shinde and Nana Phadnavis, the Maratha power began to wane, because at that time Bajirao II, the son of Raghunathrao did not have leadership qualities and had many vices. He was unable to unite the Maratha Sardars. The internal strife between the Sardars weakened their powers.

Q.5. (1) Punyashloka Ahilyabai was the wife of Khanderao Holkar. After the death of Malharrao Holkar, (the father-in-law of Ahilyabai) she assumed the reins of the Indore administration. Her work was as follows :

- (i) She strove to bring more land under cultivation, digging wells for farmers, promoting trade and industry, building lakes and tanks.
 - (ii) She built temples, Ghats, Maths, Dharamshalas, drinking water facilities at all important places of pilgrimage.
 - (iii) She looked into judicial matters personally and dispensed justice.
 - (iv) She made laws for agricultural cess and revenue collection.
- She ruled ably for twenty-eight years and enhanced the Maratha prestige in the North.
- (2)** Mahadji was a brave General and astute statesman. He gave modernised training to the Maratha army. For this he appointed a French military expert de Boigne. He subdued the Rohillas, the Jats, the Rajputs and the Bundelas. He defeated the British when they tried to capture the Emperor of Delhi. He even saved the Emperor from Ghulam Kadir, when he had looted the treasure of Delhi. He confiscated the wealth from Ghulam Kadir and reinstated the Emperor. The Maratha army defeated the British at Wadgaon under the leadership of Mahadji Shinde. The Marathas used guerilla tactics and blocked the supply of foodgrains to the British. Mahadji restored the Maratha supremacy in the North. After the death of Mahadji Shinde and Nana Phadnavis, the Maratha power began to wane.
- (3)** Khanderao Dabhade and his son Trimbakrao Dabhade laid the foundation of the Maratha power in Gujarat.

After the death of Khanderao Dabhade, his wife Umabai Dabhade routed the Mughal Sardar of Ahmedabad. She conquered the fort there. Later, the Gaikwads made Vadodara in Gujarat a seat of their power.

- (4) The reasons behind the end of the Maratha power were as follows.
- Bajirao II, the son of Raghunathrao was the Peshwa. He did not have leadership qualities.
 - There were many vices in his rule.
 - He was unable to unite the Maratha Sardars.
 - There were internal conflicts between the Sardars.

Topic 13 : Life of the People in Maharashtra

- Q.1. (A)**
- | | | |
|---------------------------------|-------------------|--------------|
| (1) Chhatrapati Shivaji Maharaj | (3) Patil | (4) Joint |
| (2) Maratha | (6) 150 | (7) Dasara |
| (5) revenue | (9) salt | (10) Barter |
| (8) village | (12) Modi | (13) liberal |
| (11) Tamasha | (15) Jin Charitra | |
- (B)**
- God Ganesha
 - Apta
 - Wrestling bouts
 - Ganeshostava
 - The Bhavani Devi temple at Pratapgad and Saptkoteswar temple at Goa
 - Chess, ganjifa and dice
 - Hututu, Kho-Kho, Atyapatya
 - Veer mata Jijabai, Maharani Tarabai, Ahilyabai Holkar
- (C)**
- Land
 - Kali and Pandhari
 - Balipratipada and Bhau-beej
 - Messengers and camel riders

(5) 1630 CE to 1810 CE (6) Hiroji Indulkar

(7) At Diveghat in Hadapsar near Pune

(D) (I) (1)-(c), (2)-(f), (3)-(a), (4)-(e), (5)-(d).

(II) (1)-(d), (2)-(c), (3)-(a).

(E) (1) Dandpatta (2) Potato (3) Eid

(4) Blouse (5) Tomato (6) Painting

(7) Drama

(F) (1) False (2) False (3) False (4) True

(5) False (6) True (7) False (8) False

Q.2. (1) Agriculture and occupations based on agriculture were the major sources of production at the village level.

(2) The farmers grew jowar, bajra, wheat, ragi, maize, rice and other grains in their fields.

(3) The daily diet of the village people consisted of bhakari, onion, chutney and an accompaniment.

(4) The daily diet of the rich people in the cities was rice, dal, chapati, vegetables, salads, milk and dahi products.

(5) The people performed anusthans to avoid the wrath of Gods and the planets.

(6) The goods were transported on the backs of bullocks, and small boats.

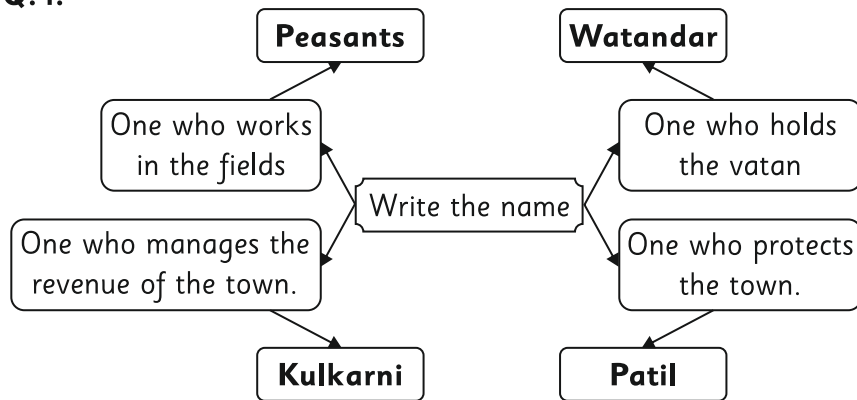
(7) Songs, music and dance were the prominent parts of the plays.

Q.3. (1) The village occupations were divided into Kali and Pandhari. Peasants who worked in their fields in the Kali (soil, earth or land) while others in Pandhari means other occupations within the village precinct.

(2) Men wore dhoti, kurta, angarakha and mundase. Women wore nine-yard sarees and blouses.

- (3) Chhatrapati Shivaji Maharaj formed the Hindawi Swaraj with the noble intention of the welfare of common people, removal of oppression and the protection of Maharashtra Dharma.
- (4) The themes of those paintings were Dashavatara, Ganapati, Shankar, Rampanchayatana, mythological stories, Ramayana, Mahabharata, festivals and so on.
- (5) Baked and unbaked bricks, wooden columns, raft, boards, dressed stones, arches, finely prepared lime, round tiles for roof, mud and bamboo were all used in the construction.
- (6) The important forms of literature includes the composition of Sants, mythological narratives, 'teeka' literature, owi, abhanga, treatises, narrative poems, biographies, aaratis of deities, powadas, bakhars, historical letters, etc.
- (7) The important painters of the Peshwa period were Ragho, Tanaji, Anuprao, Shivram, Mankoji among others.

Q.4.



Q.5.

Sr. No.	Points	At the time of Chhatrapati Shivaji Maharaj	Today
(1)	Transactions	in kind - in the form of objects, foodgrains, etc. Barter system was used.	(1) Cash - (Rupees and Paise) (2) Cheques - (3) Demand draft
(2)	Houses	Simple mud and brick construction in villages. Wadas with one or two storeys in cities, made with baked, unbaked bricks, tiles, etc. Permanent.	Permanent well constructed, cement concrete multi-storied houses.
(3)	Transportation	By road, by water, bullocks, camels, donkeys, boats.	Bus, Railway, Aeroplane.
(4)	Entertainment	Plays, Songs, Music, Dance, Tamasha, Bhajan, Bharud, Powadas, Games, Indoor and Outdoor sports.	Cinema, dramas, orchestra, T.V., radio, mobile, songs, dance, music, games, wrestling, swimming, etc.
(5)	Script	Modi script	Devnagari, Urdu, English

Q.6. The undesirable customs prevalent in today's society are :

- (1) Negligence of the girls
- (2) Dowry system
- (3) Black magic
- (4) Denying rights to widows
- (5) Child labour.

Measures.

- (1) Measures for the girl's safety should be given importance. They should be educated and made self-dependent. They should be treated equal to boys.
- (2) Dowry system has already been eradicated by law. Even then many people still harass their daughters-in-law and victimise them. In this case people should take the help of the police, social institutions, NGO's, etc.
- (3) Many people believe in black magic in our country. We should educate the people to develop a scientific attitude. To believe in reasoning and rationalism.
- (4) Widows should get the right to education, wealth and live with dignity in society. They should be made independent by giving education, training in some work. Awareness of widow remarriages should be allowed as per the law. People in the society should be aware of this.
- (5) Children below the age of fourteen years should be sent to school and they should not be employed in factories or hotels or in household work as a servant. If anybody finds such children, the child should be rescued with the help of NGO's, police and social institutions, etc.

In this way, we should bring awareness in the society and develop a scientific attitude to avoid the undesirable things in the society.

Q.7. The festivals celebrated in our area are Gudhi Padwa, Dasara and Ganeshostava. Flag hoisting on Independence Day and on Republic Day are also celebrated as the National Festivals of India.

On the day of Gudi Padwa with a saffron coloured flag, people organise a big procession. Men are dressed in kurta, pajama and pheta (turban). Women wear nine-yard sarees and blouses. They wear ornaments and ride on two-wheelers in the procession.

Dasara is celebrated by starting new things. People give 'apta' leaves to each other and greet each other. It is one of the auspicious 'Muhurtas' or the day among the three and half muhurta.

Diwali is celebrated by bursting the crackers and offering sweets and gifts to the relatives, friends and neighbours.

In many areas, Ganeshotsava is celebrated publicly. A very huge idol of Ganesha is worshipped by the people. People from different areas come to take 'Darshana' and give offerings in the form of cash, gold ornaments, gold, silver, etc. Many families also bring the Ganesh idol at their home and the family, friends, relatives, neighbours visit their homes. People go for Aarati in the evening and morning to them.

By hoisting the flag people from the areas celebrate Independence Day and Republic day. They organise some programmes. People sing patriotic songs, which shows devotion to the nation, pray for long life of the soldiers. i.e., for the army, navy and airforce.

Civics

Topic 5 : Fundamental Rights - Part II

- Q.1. (A)** (1) court (2) Religious (3) Judicial
(4) taxes (5) language (6) duties
(7) secular (8) cultural (9) courts
(10) writs
- (B)** (1) Habeas Corpus (2) Quo Warranto
(3) Mandamus (4) Prohibition
(5) Certiorari (6) Writs
- (C)** (1) False (2) True (3) False (4) True
- Q.2. (1)** The Constitutional duty of the court is to protect the rights of the people.
- (2)** In case of infringement, the court gives appropriate verdict.
- (3)** Protection of the fundamental rights given by the Constitution allows the citizens to exercise their rights.
- (4)** The citizens have to fulfill their roles as alert, responsible and active citizens.
- Q.3. (1)** The State cannot impose any religious taxes that might be used to encourage a particular religion. Therefore the Constitution prevents (forbids) the imposition of religious taxes.
- (2)** Right to Constitutional Remedies means the Constitution itself has provided for legal remedies incase people's rights are violated.
- (3)** Right to Freedom of Religion means each Indian citizen is free to practise any religion and to establish institutions for religious reasons.
- (4)** In order to widen the scope of the Right to Freedom of Religion, two things are not permitted by the Indian Constitution.

(i) Religious education cannot be made compulsory in educational institutions that receive aid from the State.

(ii) The State cannot impose religious taxes that might be used to encourage a particular religion.

- Q.4. (1)** All citizens are conferred upon with the Right to Freedom of Religion. According to it, each Indian is free to practice any religion or can establish a religious institution. Celebration of festivals is also included in the Right to Freedom of Religion.
- (2)** According to the Right to Education, each citizen has the right to preserve and propagate his /her language, its script and literature.
- (3)** The imposition of religious taxes might be used to encourage a particular religion. Therefore, our Constitution forbids religious taxes.
- (4)** Incase people's rights get violated, it becomes a Constitutional duty of the courts to protect the rights of the people. This is because the Constitution itself has provided for legal remedies.

Topic 6 : Directive Principles of State Policy and Fundamental Duties

- Q.1. (A)** (1) Government (2) equality (3) life
(4) religious (5) instructions (6) livelihood
(7) equal (8) Fundamental
- (B)** (1) Yes (2) No (3) No (4) Yes (5) No
(6) Yes (7) Yes (8) Yes (9) No (10) Yes
(11) Yes
- (C)** **(1) Right, (2) Right, (3) Wrong** : It is a duty of each citizen to protect all monuments of historic interest and national importance. So, it is our duty to protect the

historic places and not carve or paint our names on their walls. **(4) Wrong** : The State has secured adequate means of livelihood to both men and women. It has also secured equal pay for equal work. Accordingly, the women should get equal wages as the men for the same work. **(5) Right**.

- (D)** **(1)** Fundamental Rights **(2)** Religious taxes
(3) Poverty, Backwardness and Illiteracy
(4) The State **(5)** Liberty

Q.2. (I) Fundamental rights put restrictions on the power of the Government. The restrictions are as follows :

- (a) State shall not discriminate between and among citizens on the basis of caste, religion, race, language or sex.
- (b) State shall not deny anybody equality before the law and equal protection of the law.
- (c) No person shall be deprived of his life.
- (d) State shall not impose any religious taxes.

(II) The Constitution has given express instructions to the State about what policies it should undertake. This is in the nature of given directives or guidelines about how to achieve the goals expressed in the Preamble. Hence, they are called as Directive Principles of the State Policy.

(III) When India won Independence, it faced a great challenge of establishing order and carrying out smooth administration. Eradication of poverty, backwardness and illiteracy, class and caste discrimination, etc., were some of the other challenges India faced after getting independence.

Q.3. (1) The Directive Principles of the Constitution enumerated (in the text book) are as follows :

- (a) The State should secure adequate means of livelihood to all citizens without any gender discrimination.
- (b) The State should secure equal pay for equal work for both men and women.
- (c) The State should secure the improvement of public health.
- (d) The State shall endeavour to protect and improve the environment and safeguard the forests and wild life of the country.
- (e) The State shall protect all monuments of historic interest and national importance.
- (f) The State shall promote with special care the educational and economic interests of the weaker sections of the people, especially the Scheduled Castes and Tribes.
- (g) The State shall offer public assistance to citizens in cases of employment, old age, sickness, etc.
- (h) The State shall secure a uniform civil code applicable to the entire country.

(2) The Directive Principles of the Indian Constitution have provided for a uniform civil code for the citizen's welfare and development. Through this provision, the State secures gender equality, equal pay for equal work for both men and women. Uniform civil code also provides educational rights to all. The State promotes this with special care; the educational and economic interests of weaker sections of the people, especially the Scheduled Castes and Tribes. It also offers public assistance for the problem of unemployment.

(3) Due to Fundamental Rights, citizens get the most needed liberty, while Directive Principles of State Policy create an

atmosphere conducive to the growth of democracy. Even though we cannot go to the court if a Directive is not implemented by the Government, we can put pressure on the Government in various ways to make a policy in order to meet these goals. Therefore it is said that the Directive Principles and Fundamental Rights are two sides of the same coin.

Q.4. Citizens can conserve the environment by the following ways :

- (i) Wild Life :** (1) It can be given protection by setting up the National Parks and Sanctuaries with the assistance of the Government.
- (2) Hunting must be restricted and prohibited in the forest.
- (3) Rehabilitation of endangered and threatened species should be done with the help of NGO's.
- (4) Deforestation should be checked and afforestation of non-forest areas should be encouraged.
- (5) Cultivation of tea, coffee, rubber, medicinal plants, etc., in non-forest areas can be conducted. It will maintain maximum balance in ecology.
- (ii) Prevention of Water Pollution :** (1) Keep the surroundings of the water bodies i.e., rivers, streams, wells, oceans, seas clean.
- (2) Prohibit and restrict the location of industries near the settlements. They should be shifted away from the cities.
- (3) Precaution should be taken in case of waste water from industries. It should not be allowed to pollute water of the streams, rivers or seas.
- (4) Pet animals, utensils or clothes should not be washed in the streams or on the banks of the rivers or near the wells.
- (5) People should not throw their waste or garbage in the water bodies, or even around its surrounding areas.

(iii) Prevention of Air Pollution :

- (1) We must stop air pollution to preserve the quality of the air. The presence of certain liquid and gaseous substances in the atmosphere is injurious and harmful to the environment, animals, plants and human beings.
- (2) To stop and reduce the air pollution; chimneys, ducts or any other outlets in the premises should be inspected regularly for the analysis of the pollution.
- (3) Industries should be set up away from the human settlements and cities.
- (4) Automobile or vehicle companies should be asked for the standard emission of the smoke, otherwise they should be fined along with imprisonment. Even those who are emitting smoke and polluting air should be fined.
- (5) People should make maximum use of bicycles.
- (6) Avoid throwing garbage on the road which emits foul smell.

Q.5. (1) All monuments of historic interest are of national importance. They preserve the rich heritage of our composite culture. So the State shall protect all monuments of historic interest.

(2) Pension scheme enables the old people to live an independent and happy life. They can manage their expenses in that pension.

(3) Free and compulsory education promotes the educational and economical interest of the weaker sections of the people, especially the Scheduled Castes and Tribes. Children cannot be employed or made to work in factories and mines. The whole society will thus become literate.

Geography

Unit - II

Topic 10 : Human Settlements

- Q.1. (A)** (1) metropolitan cities (2) human settlements
 (3) tribal hamlets (4) stability
 (5) facilities, services (6) pollution
 (7) social services (8) linear settlements

(B) (1)-(c), (2)-(a), (3)-(d), (4)-(b).

- Q.2. (1)** The various types of human settlements are :
 (a) Scattered settlements (b) Nucleated settlements and
 (c) Linear settlements.

(a) Scattered Settlements :

- (i) Houses are found in areas of high-relief, dense forests, grasslands, hot deserts, etc.
- (ii) Houses are far apart with limited population.
- (iii) Since these settlements are closer to nature, they are free from pollution.
- (iv) Facilities and services are not available here.

(b) Nucleated Settlements :

- (i) Close to water resources.
- (ii) Fertile plains, transport hubs, mining and commercial centres help in the development of these settlements.
- (iii) Social services are available here.
- (iv) People of different castes, religions, races and ideologies live together, so they have better social life.

(c) Linear Settlements :

- (i) Developed along rivers, seacoasts, etc.
- (ii) Houses in a single line growing into multiple lines.
- (iii) Roads are parallel to each other.

(2)

	Nucleated settlements		Scattered settlements
(i)	Houses are close to each other.	(i)	Few houses and far from each other.
(ii)	Close to water bodies like brooks, rivulets, lakes, etc.	(ii)	Found in areas of high relief, dense forests, grasslands, hot deserts, etc.
(iii)	Social services are available here.	(iii)	Facilities and services are not adequate.
(iv)	There is some pollution found here due to transport hubs, mining centres, etc.	(iv)	Closer to nature, so free from pollution.

- (3)** In order to flourish, human settlements need favourable geographical conditions such as availability of water, conducive climate, fertile land, etc. People along the sea coast are engaged in fishing. Their settlements become fishing hamlets. Forest dwellers or tribal people use forest produce for their livelihood, they live in 'tribal hamlets'.

Where the land is fertile and rainfall is good, cultivation of crops can be done. On dry arid land, houses are situated very far from each other and here people have to be occupied with occupations such as mining.

- (4)** (i) Using resources from the surroundings, man started his settlements. Human settlements flourished in places with favourable conditions such as availability of water, fertile land, etc.
- (ii) In the early settlements, the occupations of the people were dependent on the locally available natural resources. This gave rise to separate settlements of people engaged in a particular occupation e.g., people living near the sea coasts became fishermen.

- (iii) Agriculture is practiced in fertile areas. Here settlements sprang up near the fields and slowly grew. Agriculture, fishery, etc., are some of the occupations of people in rural settlements.
- (iv) With the passage of time other associated occupations developed gradually. As a result, people from surrounding areas migrated and settled in these areas leading to increase in rural population.
- (v) Importance of secondary and tertiary occupations led to the transformation of rural settlements into urban settlements.

(5)

	Hamlet		Village
(i)	People who are engaged in a particular occupation live in hamlets. Eg., people along the seacoast engaged in fishing will live in their fishing hamlets while forest dwellers will live in forest areas in tribal hamlets (Adivasi Padas).	(i)	Villages are much bigger than hamlets. People with different occupations live in the village.
(ii)	Hamlets are small and have people following the same occupation.	(ii)	People of other associated occupations settle down and the size of the village grows.

- Q.3.** (1) Farmers in scattered settlements.
 (2) Nucleated settlements. (3) Linear settlements.
 (4) Linear settlements. (5) Scattered settlement.
 (6) Nucleated settlements. (7) Scattered settlement.
 (8) Nucleated settlements.
- Q.4.** (A) Scattered settlement (B) Nucleated settlement

(C) Linear settlements (D) Linear settlements

- ★ This is an example of linear settlement. Such settlements are near roads, rivers, sea coasts, railways. One reason is transport facilities will be available quickly. Another reason is such settlements can quickly grow into villages with shops and road or railway or river facilities.

Intext Question

Can you tell ?

1. (1) We can see a school, skyscrapers, monorail train, lonely cottage, busy street with traffic and a vendor.
 (2) The familiar features are skyscrapers, traffic on the roads, vendors.
 (3) Fig. 10.2 c (4) Fig. 10.2 a
 (5) Fig. 10.2 d (6) Fig. 10.2 b
 (7) Tribal settlement or hamlet – 10.2 c
 Rural settlement – 10.2 a
 Town – 10.2 d City – 10.2 b
 (8) Sequence in which the pictures need to be arranged as per their level of development is as follows : (c), (a), (d), (b)
2. (1) 'A' is nucleated settlement near water reserve.
 'B' is linear settlement along the road.
 (2) 'B' is linear settlement with houses in line along the road.
 'C' is a scattered settlement. Houses are far away from each other.
 (3) In 'C' - scattered settlement.
 (4) Nucleated settlement that has turned into a well-developed city.
3. (1) Settlements shown here are (a) Linear (b) Nucleated (c) Scattered
 (2) Pukran, Dumba
 (3) In a linear way. On either side of the road.

- (4) In nucleated settlements as well as linear settlements the houses are close together.

In nucleated settlements it is so to carry on in an effective manner since, this settlement has transport hubs, commercial centres, mining centres, markets, etc.

Linear settlements are together but not in a crowd in a line parallel to roadways, railways, etc., for quick transport.

- (5) (a) Faraway houses - Scattered settlements.
(b) Along roads, railways or rivers - Linear settlements.
(c) In groups, close to each other near water resources - Nucleated settlements.
- (6) The factors influencing the location of human settlements are as follows :
- (a) Physical - Physiography, soil, climate, water supply and river banks.
(b) Cultural - Defence, health, education, tourism and historical significance.
(c) Economic - Irrigation, Occupation, Transport and communication, Industries, Trade and Government offices.

Topic 11 : Contour Maps and Landforms

- Q.1. (1)** Distribution of the heights and landforms in a region can be shown by contours. The lines determine the slope and the intervisibility between any two points on the map.
- (2)** These maps are of immense use to trekkers, mountaineers, soldiers, defence officers, etc.
- (3)** Contour lines are drawn by joining places of equal altitudes or heights. Contour lines help us to understand the landform, determine the amount of slope and observe the distance between two points on the map.

- (4) In agricultural work, contour maps are useful as guide lines in planning land improvement projects. The tile drainage system can be conveniently planned with a contour map.

- Q.2. (1)** steep **(2)** heights **(3)** contour **(4)** slope

Intext Question

- Q.1 (1)** Hills.
(2) Royal blue, sea blue, yellow, brown and red are the colours used on them.
(3) Hills with their peaks and hill ranges, rivers, settlements.
(4) The general direction of the ranges shown in the map is from east to west.
(5) The flat land is located towards the east.
(6) Maximum - 800m and minimum - 600m.
(7) They indicate the heights of the peaks of hills.
(8) The extra shadow shows where the lines are coming close to each other. Where there is no shadow we find the land quite even. Lines coming close to each other show the depth or height of the area.
(9) The Text book figure 11.1 (b) gives us more information, that is the height of the peaks, the direction of the ranges, the way the ranges are moving.
(10) Yes, the lines that move near each other show steep slope, the lines that are a little distant from each other show gentle slope.

- Q.2 (1)** In the south. **(2)** From west to east.
(3) In the Eastern part.
(4) The Karha river basin and the direction of flow of the river, shown in the map are not seen in the model. The model shows only landforms of different heights and not about water bodies.
(5) In the Eastern direction. **(6)** In the Southern direction.

हिंदी सुलभभारती

5. बसंत गीत

प्र.1. (1)

	पद्यांश में उल्लेखित पंछी	वसंत के आगमन का परिणाम
(1)	कोयल	गीत गाती है।
(2)	मोर	नृत्य करता है।

- (2) (i) (1) बन-बागों में हर तरफ क्या छाया है?
(2) कविता में किस ऋतु की बात हो रही है?

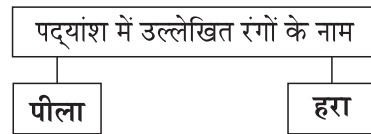
(ii) (1) मधुप (2) मकरंद

- (3) फूलों की कलियाँ खिल गई हैं जिन्हें देखकर लगता है कि फूलों का मन अपनी मुस्कान बिखेर रहा है। भौरों की गुनगुनाहट कानों को बड़ी मधुर लग रही है। इन भौरों ने खिले हुए फूलों का मधुर रस चुराया है।

सज-धजकर बसंत ऋतु आई है, उसकी खुशी में हम बसंत गीत गाएँ। वन-बागों में हर तरफ प्यारी सी महक छाई है। मोर नृत्य कर रहा है, कोयल मीठे गीत गा रही है।

कृतिपत्रिका

प्र.2. (अ) (1) (i)



(ii) पद्यांश में उल्लेखित अनाज के नाम



- (2) (i) (1) आम पर बौर छाया है।
(2) खेतों में पीले रंग की सरसों खिली है।

(ii) (1) अमवा (2) अरु

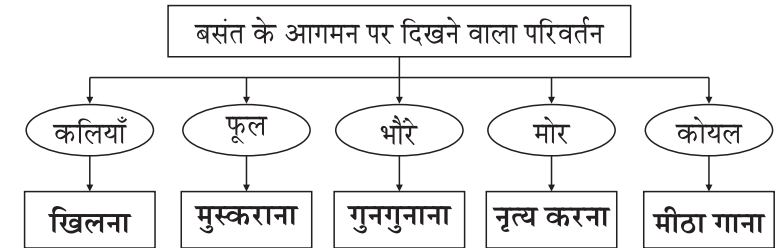
- (3) सज-धजकर वसंत ऋतु आई है। उसकी खुशी में बसंत गीत गाएँ। खेतों में पीले रंग की सरसों खिली है और आम पर बौर आया है। हरी-हरी धरती के बिछौने पर प्रकृति ने अनंत रंग बरसाए हैं। इस वसंत के गीत गाओ।

प्र.3. (1) चंद्रप्रकाश 'चंद्र' (2) गीत

- (3) कलि-कलि करत कलोल कुसुम मन, मंद-मंद मुस्कायो।
गुन-गुन-गुन-गुन गूँजे मधुप गन मधु मकरंद चुरायो।।
- (4) कलिया खिल गई हैं। फूलों का मन अपनी मुस्कान बिखेर रहा है ऐसे लगता है। भौरों ने गुन-गुन करते मधुर गुनगुनाहट शुरू की और वे फूलों का मधुर रस चुराने लगे। गुन-गुन-गुन-गुन, मंद-मंद जैसे लयात्मक और ध्वन्यात्मक शब्दों के कारण और इन पंक्तियों द्वारा कविने बसंत ऋतु में प्रकृति में होने वाले परिवर्तन को दर्शाया है इसलिए यह पंक्तियाँ मुझे पसंद है।
- (5) वसंत ऋतु वृक्ष, फूल, पशु, पक्षी, मनुष्य सभी को मुग्ध कर देता है। बसंत ऋतु में मेरा मन खुशी से झूम उठता है। बसंती हवा मन में नई स्फूर्ति और नई उमंग संचार करती है। बसंत ऋतु में ही होली का त्योहार आता है। हम धूमधाम से यह त्योहार मनाते हैं। इसी ऋतु में मीठे आम खाने मिलते हैं। बसंत ऋतु अपने साथ सुंदरता, उमंग, सुगंध लेकर आती है जिससे मेरा मन प्रसन्न होता है।

स्वाध्याय

प्र.1.



- प्र.2. प्रकृति की गोद में बसे भारत देश में छह ऋतुएँ हैं और प्रत्येक ऋतु दो-दो महीने अपना जादु बिखेरते हुए देश की जलवायु में परिवर्तन लाती है। ग्रीष्म में

देशवासियों को झुलसा देनेवाली गर्मी होती है तो वर्षा ऋतु की फुहार देश की धरती को हरी-भरी, मनमोहक बना देती है। शरद ऋतु आती है तो मौसम को खुशनुमा बना देती है। हेमंत ऋतु आती है तो उत्तर भारत में ठंड बढ़ने लगती है और पहाड़ियों पर बर्फ छा जाती है। शिशिर ऋतु में श्वेत वस्त्र पहनी पर्वत शृंखलाएँ अपनी सुंदरता बिखेरती हैं। फिर बसंत के आगमन पर धरती श्वेत वस्त्र फेंक देती है और अनेक रंग बिखेरती है। फूल और नए पत्तों के विविध रंग बहार ले आते हैं। इस प्रकार ऋतुओं का यह चक्र मौसम में परिवर्तन लाता है, साथ ही हमारे जीवन पर भी अपना प्रभाव डालता है।

व्याकरण

- प्र.1. (1) (i) फूल, पुष्प (ii) भ्रमर, भौरा
 (2) (i) ऋतु (ii) कलियाँ
 (3) (i) मकरंद (ii) ऋतु
 (4) (i) मुस्कायो - चुरायो (ii) उड़ायो - गायो
 (5) (i) नीचे (ii) मुरझाना
 (6) (i) अमित (ii) बौर

प्र.2. सरसों - एक प्रकार के बीज जो छोंक लगाने में या आचार के मसाले में डाले जाते हैं। बसंत - एक ऋतु, मधुमास, कलोल - क्रीड़ा, आमोद - प्रमोद, मधुप - भौरा, मधुमक्खी, मकरंद - फूलों का रस, शहद, ठुमकि - उछलकूद करना, बौर - आम्रमंजरी।

लेखन कौशल (Writing Skill)

★ बसंत ऋतु
 पीत-पीत हुए पात
 सिकुड़ी-सिकुड़ी सी रात
 ठिटुरन का अंत आ गया
 देखो बसंत आ गया।'

साहित्य में बसंत ऋतु ने अपनी ऐसी जगह बना ली है कि उसे 'ऋतुराज'

संबोधित किया गया है। सभी बसंत के प्रशंसक रहे हैं। इसके पीछे कारण भी हैं। प्रकृति अपना मादक मोहक रूप चारों ओर बिखेरती है। खेतों में सरसों के फूलों की शोभा, तो जंगलों में पलाश के फूल अपनी शोभा बिखेरते हैं। पेड़-पौधों पर हरितिमा छाने लगती है। सुप्त कलियाँ खिल उठती हैं। फूल अपने विविध रंगों की छटाएँ बिखेरते हैं। शीतल, मंद पवन अपने साथ उनकी सुगंध लुटाता है। आम के वृक्ष पर बौर सुशोभित होता है।

विविध रंगों के इन फूलों पर भौरें गुनगुनाते हैं। तितलियाँ इन फूलों की गोद में बैठकर उनको और भी मोहक बना देती हैं। आम के वृक्ष पर बैठकर कोयल अपनी मधुर तान सुनाती है। मोर वन-उपवन में थिरकते हैं।

इस तरह प्रकृति अपने पूरे शवाब पर जादू बिखेरती है। मनुष्य, पशु-पक्षी सभी स्वस्थ, सुखी और सक्रिय दिखाई देते हैं। वसंत प्रकृति का एक अनोखा उपहार है, जो मनुष्य को हँसाता है, खिलाता है, प्रफुल्लित करता है। इसके स्वागत में कवि कहते हैं,

‘जय बसंत रसवंत सकल सुख सदन सुहावन
 मुनि मन मोहन भुवन जिय प्रेम गुहावन।’

6. चंदा मामा की जय

- प्र.1. (1)

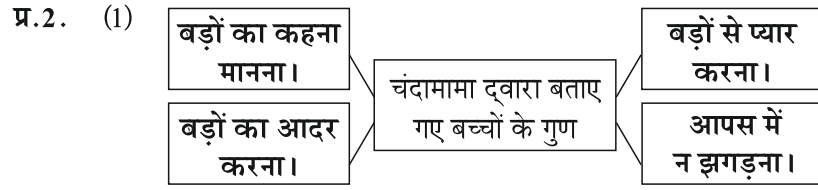
माँ का कहना न मानना।
समय पर काम न करना।

नींदपरी द्वारा सुनील पर लगाए गए आरोप

बड़ों का आदर न करना।
दूसरों को पीटना।
- (2) (i) (1) असत्य (2) सत्य
 (ii) (1) हम तुम्हें कड़ी से कड़ी सजा देंगे।
 (2) सजा दी जाएगी।
- (3) (i) (1) बचपन (2) बड़प्पन
 (ii) (1) माफी (2) निरादर

(4) जीवन का एक-एक पल कीमती होता है। खोया हुआ धन हम फिर-से पा सकते हैं लेकिन बिता हुआ समय लौटकर नहीं आता। दुनिया में ऐसी घड़ी बनी ही नहीं जो बीते हुए समय को फिर-से दिखा दे। अतः समय के सामने घूटने टेक देने चाहिए और उसका सदुपयोग करना चाहिए। समय पर पढ़ाई-लिखाई करनेवाला छात्र सफलता प्राप्त करता है। रोगी को समय पर इलाज मिले तो वह जल्दी स्वस्थ हो जाता है। समय पर बीज बोने पर किसान को अच्छी फसल मिलती है। इन सब बातों से स्पष्ट है कि समय बड़ा महत्त्वपूर्ण है। संत कबीर के शब्दों में,

कल करे सो आज कर, आज करे सो अब। पल में परलै होएगी, बहुरी करेगा कब।।



(2) (i) (1) क्योंकि बच्चों ने छोटी-बड़ी सभी बुरी आदतें छोड़ देने की प्रतिज्ञा की।

(2) क्योंकि उन्होंने बच्चों के गुण नहीं देखे और सजा देने से पहले रातरानी को बच्चों की अच्छाइयाँ भी ढूँढनी चाहिए ऐसा चंदा मामा का मानना था।

(ii) (1) बच्चे प्रतिज्ञा करते हैं कि हम छोटी-बड़ी सभी बुरी आदतें छोड़ देंगे।

(2) नींदपरी ने बच्चों के गुण नहीं बताए।

(3) (i) (1) छोटी × बड़ी (2) बुराई × अच्छाई

(ii) (1) आदत (2) ताली

(4) बच्चे तो शरारती ही होते हैं लेकिन वह कभी कभी हद पार कर देते हैं। माँ-बाप के दुलार का फायदा उठाते हैं। उनकी छोटी गलतियाँ तो सब भूल

जाते हैं। बच्चों को प्यार से उनकी गलतियाँ बतानी चाहिए ताकि वो दोबारा उन गलतियों को दोहराए नहीं। बच्चों की बुरी आदतें छोड़ने के लिए, उनके बुरे बर्ताव के लिए उन्हें समय पर ही डाँटना-फटकारना बहुत जरूरी होता है नहीं तो वह गलत रास्ते पर चले जाएँगे। बच्चों को बात-बात पर मारना-पीटना भी अच्छा नहीं क्योंकि वे सजा के आदी हो जाते हैं। उनपर किसी बात का असर नहीं होता। इसके दुष्परिणाम भी हो सकते हैं इस बात का ख्याल रखना चाहिए।

स्वाध्याय

प्र.1. (अ) (1) यह वाक्य रातरानी ने सुनील से कहा क्योंकि नींदपरी ने सुनील पर कई आरोप लगाए थे और रातरानी को भी ऐसा लगा कि सुनील बड़ों का मजाक उड़ाता है, उनका आदर नहीं करता।

(2) यह वाक्य रातरानी ने सभी बच्चों से कहा क्योंकि बच्चों में बुराई के साथ-साथ अच्छाई भी थी। और बच्चों ने प्रतिज्ञा भी की कि वे छोटी-बड़ी सभी बुरी आदतें छोड़ देंगे।

(आ) (1) कप-प्लेटें (2) बताशे (3) शैतानी

(4) अन्याय (5) गुणवाले

प्र.2. यह एकांकी रातरानी की अदालत का दृश्य प्रस्तुत करती है। एकांकी में नींदपरी द्वारा रोने वाले बच्चों पर मुकदमा चलाया गया है। सुनील, अनिल और अन्य चार बच्चों को अदालत में पेश किया गया। अनिल हमेशा रोता रहता है और सुनील बहुत शैतानियाँ करता है। आज उसने घर में चाय की कप-प्लेटें तोड़कर माँ को परेशान कर दिया था। वह अपनी माँ का कहना नहीं मानता था। कोई भी काम समय पर नहीं करता था। मतलब खाने के समय खाना नहीं खाता था, खेलने के समय खेलता नहीं था और पढ़ने के समय पढ़ता नहीं था। वह बड़ों का आदर नहीं करता था और उनको 'तू' कहकर पुकारता था और दूसरों को पीटता भी था।

उसके इतने सारे अपराध सुनकर रातरानी क्रोधित हुई और सुनील ने जब 'नींदपरी झूठ-मूठ कहती है' कहा तो रातरानी को लगा कि सुनील तो बड़ों का मजाक भी उड़ाता है। इसलिए वह उसे कड़ी-से-कड़ी सजा देना चाहती थी। परंतु सारे बच्चे गला फाड़कर रोने लगे और सुनील को सजा न देने की विनति करने लगे। बच्चों के रोने का कारण यह भी था कि रोने पर उन्हें लड्डू और बताशे मिलते थे इसलिए वे रोते थे। सुनील भी रातरानी से माफी माँगकर शैतानी न करने की बात कहता है। सभी बच्चे भी कभी न रोने की बात कहते हैं।

तभी चंदामामा आते हैं। चंदामामा ने बच्चों के अच्छे गुण रातरानी को बताए और सुनील को सजा देकर अन्याय करने से रोका। उन्होंने बताया कि सुनील उससे छोटे बच्चों को कभी नहीं मारता, उनसे प्यार करता है। रोनेवाले सभी बच्चे बड़ों का कहना मानते हैं, उन्हें प्यार करते हैं, उनका आदर करते हैं, और आपस में कभी नहीं झगड़ते। ऐसे गुणी बच्चों को सजा नहीं दी जाती। रातरानी ने बच्चों को बुरी आदतें छोड़ने पर सजा नहीं देने का वचन दिया। बच्चों ने भी छोटी-बड़ी सभी बुरी आदतें छोड़ने की प्रतिज्ञा की। इसलिए रातरानी ने सभी बच्चों को माफ कर दिया।

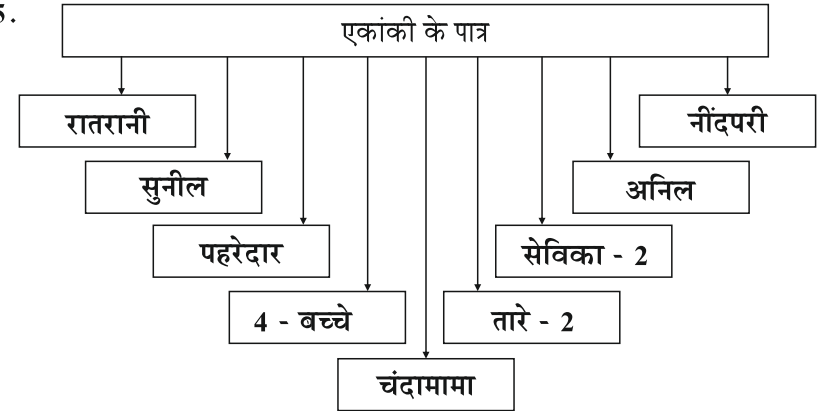
इस तरह एकांकी द्वारा लेखक ने बुरी आदतों का त्याग करने की सलाह दी है। साथ ही बड़ों को सम्मान देने और छोटों से प्यार करने के लिए प्रेरित किया है। लेखक ने शांति-प्रियता के लिए भी प्रोत्साहित किया है।

प्र.3. इस एकांकी का पसंदीदा पात्र सुनील है। भले ही नींदपरी ने उसे रातरानी के सामने पेश किया है और उसपर कई आरोप भी लगाए गए हैं। फिर भी छोटे बच्चों ने रातरानी को सजा देने से रोकने की कोशिश की। ये सभी बच्चे रोते थे क्योंकि रातरानी को सजा देने से रोकने की कोशिश की। ये सभी बच्चे रोते थे क्योंकि रोने पर उन्हें लड्डू और बताशे मिलते थे। लेकिन सुनील के लिए वे मिठाई को समर्पित करने के लिए तैयार हो गए थे। क्योंकि सुनील उनसे बहुत प्यार करता था। उन्हें कभी नहीं पीटता था। वह उन बच्चों का चहेता था। छोटे बच्चों से जो प्यार करता है, बच्चे उन्हें अपना मानते हैं। सुनील को बच्चे अपना भाई मानते थे। इतना अपनापन और प्यार पानेवाला सुनील मेरी नजर में बहुत ऊँचा है। इसलिए मुझे भी सुनील पसंद है।

प्र.4. हमारे जीवन में नैतिक मूल्यों का बहुत महत्त्व है। हमारे समाज और राष्ट्र की उन्नति इन्हीं मूल्यों पर निर्भर है। पाठशाला में पढ़ने वाले बच्चे देश का कल है। अतः उन्हें नैतिक मूल्यों की जानकारी और उनपर अमल करना नितांत जरूरी है। ये नैतिक मूल्य निम्नलिखित हैं।

(1) ईमानदारी (2) सत्यता (3) विवेक (4) शिष्टाचार (5) सदाचार (6) अनुशासन (7) त्याग (8) कृतज्ञता आदि। इनपर अमल करने के लिए मैं कभी झूठ नहीं बोलूँगा। अपनों से बड़ों के प्रति सम्मान की भावना रखूँगा। उम्र में जो मुझसे छोटे हैं उनके प्रति स्नेह की भावना रखूँगा। मेरे माता-पिता का कहना मानूँगा। अपने सभी काम समय पर करूँगा। सार्वजनिक जगहों पर शांति बनाए रखूँगा और शिष्टाचार का पालन करूँगा। घर हो या पाठशाला अनुशासन का पालन करूँगा। कोई शैतानी नहीं करूँगा।

प्र.5.



व्याकरण

(1)

समुच्चयबोधक अव्यय	विस्मयादिबोधक अव्यय
(1) हालाँकि	अच्छा!
(2) पर	हाँ!
(3) लेकिन	सचमुच!
(4) कि	शाबाश!
(5) ताकि	अरे!

- (2) (1) अकड़ना - ठंड के कारण हाथों की उंगलियाँ अकड़ गईं।
 (2) डाँटना - गलती करने पर पिताजी ने मुझे डाँटा।
 (3) चौकना - अचानक आकर बरसात ने हमें चौंका दिया।
 (4) शरमाना - गलती पकड़ी जाने पर सीमा शरमा गईं।
- (3) (1) में, (2) पर, (3) के, (4) की, (5) से,
 (6) का, (7) को, (8) ने, (9) री, (10) रे।
- (4) गला फाड़कर रोना - अर्थ : जोर-जोर से रोना
 वाक्य : खिलौना टूट जाने के कारण बालक गला फाड़कर रो रहा था।

लेखन कौशल (Writing Skill)

- ★ मंगल ग्रह की विज्ञान कथा को संचार माध्यमों द्वारा चित्रित किया गया है। उड़न तश्तरी से एलियनों के आने की खबरें भी कई बार अखबारों में आती हैं और ये एलियन मनुष्य से भी तेज दिमाग के होते हैं। अगर मेरा घर मंगल ग्रह पर होता तो इन एलियनों से मेरी दोस्ती होती और हम मनुष्य जो नहीं कर सकते ऐसे कारनामे मैं अपने दोस्तों की सहायता से करता। क्रिश नाम की एक फिल्म में मैं इनके चमत्कार देख चुका हूँ।

यहाँ मुझे दो-दो चंदा मामा मिलते । एक का नाम फोबोस और दूसरे का डिमोज। ये चंदामामा भी धरती के चंदामामा से बिल्कुल अलग। फोबोस तो पश्चिम में उदित होता है और हर 11 घंटे बाद उदित होता है और पूर्व में अस्त होता है। और डिमोज पूर्व में ही उदित होता है लेकिन इसका दोबार उदित होने का कालावधि लगभग 2 दिन सात घंटे हैं।

हमारा दिन 24 घंटे का होता है लेकिन मंगल का दिन पृथ्वी से थोड़ा बड़ा होता है। लगभग 40 मिनट बड़ा अर्थात् सोने खेलने के लिए 40 मिनट अधिक मिल जाते। यहाँ का वर्ष भी बहुत बड़ा होता है। 687 दिनों में एक वर्ष पूरा होता है। मतलब अगर मेरा घर मंगल पर होता तो मेरी उम्र लगभग आधी ही रहती।

ब्रहमांड का सबसे ऊँचा पर्वत अलिंप मोंस मंगल पर है जो लगभग 24 कि.मी.ऊँचा है जिसे मैं अपनी आँखों से देख पाता। मैं खाने का और खास कर

मीठा खाने का शौकीन हूँ, इसलिए मेरा वजन भी थोड़ा ज्यादा है। मुझे मिठाई खाने के लिए हरदम टोका जाता है। पर मंगल ग्रह पर मेरा वजन बहुत कम होता और मुझे मिठाई खाने से कोई नहीं टोकता। पृथ्वी पर 100 किलो वजन हो तो मंगल पर 37 किलो ही दिखाई देता है। है न मजे की बात!

छुट्टियों में मैं अपने दोस्तों को अपने घर बुलाता। उन्हें वहाँ ले आने के लिए उड़न तश्तरी भेजता। फिर जब मेरे मित्र मेरे घर आ जाते तो मैं उन्हें अपने घर के आस-पास की सैर कराता। हम बर्फ से खूब खेलते। और छुट्टियाँ खत्म होते ही मैं अपने दोस्तों को फिर से उड़न खटोले पर बिठाकर धरती पर छोड़ देता।

स्वयं अध्ययन

- (1) सौर मंडल में सूर्य, ग्रह, उपग्रह, क्षुद्रग्रह, उल्का, धूमकेतु और खगोलिय धूल से बना है। सौर मंडल में आठ ग्रह, उनके 166 उपग्रह (चंद्रमा) पाँच बौने ग्रह और अरबों छोटे पिंड शामिल हैं। इन छोटे पिंडों में क्षुद्र ग्रह, धूमकेतु, उल्काएँ आदि हैं।

सौर मंडल के चार छोटे आंतरिक ग्रह हैं बुध, शुक, पृथ्वी और मंगल। फिर बृहस्पति, शनि, अरुण या युरेनस और वरुण या नेपच्यून। आंतरिक ग्रह और बाह्य ग्रहों के बीच यानि मंगल और बृहस्पति के बीच क्षुद्रग्रहों का घेरा है जिसमें सीरीस नामक एक बौना ग्रह भी है। सौरमंडल के छोर पर बहुत ही छोटे-छोटे अरबों पिंड विद्यमान हैं, जो धूमकेतु या पुच्छल तारे कहलाते हैं।

सौर मंडल के ये सभी आकाशीय पिंड स्वयं की और सूर्य की परिक्रमा करते हैं। पृथ्वी स्वयं की परिक्रमा 24 घंटे में पूरा करती है। इसके लिए उसे 23 घंटे, 56 मिनट और 4 सेकंड लगते हैं। पृथ्वी की यह दैनिक गति है जिसकी वजह से पृथ्वी पर दिन और रात होते हैं। पृथ्वी की वार्षिक गति भी है। पृथ्वी को सूर्य की परिक्रमा पूरी करने के लिए 365 दिन, 6 घंटे, 48 मिनट और 45 सेकंड लगते हैं। पृथ्वी की इस गति की वजह से पृथ्वी पर अलग-अलग ऋतुएँ होती हैं।

- (2) 'बिन माँगे मोती मिले माँगे मिले न भीख' यह एक लोकोक्ति है जिसका अर्थ है कि कई बार माँगने पर साधारण वस्तु भी नहीं मिलती लेकिन बिना माँगे ऐसी वस्तु मिल जाती है जिसकी हमने कल्पना भी न की हो। मेरे जीवन की एक घटना इसी

लोकोक्ति को चरितार्थ करती है। गर्मी की छुट्टियों में मेरे सभी मित्र अपने रिश्तेदारों के साथ घूमने चले गए थे। बहुत अकेला हो गया था। लेकिन पिता जी को छुट्टी न मिल पाने के कारण मैं कहीं जा भी नहीं सकता था। और अचानक मेरे विदेश में रहने वाले मामाजी आ गए। दो दिन में अपना काम खत्म कर वे वापस जा रहे थे तब मेरी छुट्टियाँ होने के कारण मुझे दुबई अपने साथ चलने के लिए कह रहे थे। भूखा रोटी चाहता है यहाँ तो मिठाई मिल रही थी। और छुट्टियों में मैं आठ दिनों के लिए दुबई चला गया। यह हुई न 'बिन माँगे मोती मिले' वाली बात। विपरीत परिस्थिति में मन को धीरज रखना चाहिए, क्योंकि उसमें से भी कुछ अच्छा हो जाता है।

- (3) कहते हैं कि विद्यार्थी का सबसे बड़ा गुण होता है विनम्रता क्योंकि जो व्यक्ति जितना अधिक विनम्र होगा उतना ही अधिक सीख पाएगा। यह सीख ही हमें जीवन में प्रगति के मार्ग पर ले जाती है। विनम्र व्यक्ति सबके प्रेम का पात्र बनता है। यदि विनम्र व्यक्ति को कोई बुरा भला कह भी दे तो वह दुखी नहीं होता बल्कि अपनी गलती को सुधारने की कोशिश करता है। वह तो यही सोचता है, 'निंदक नियरे राखिए'। दूसरों से कुछ सीखना हो या अपना कोई काम करवाना हो तो विनम्रता रूपी अस्त्र अचूक बैठता है। विनम्र व्यक्ति समाज के हर अवरोध को बड़ी सरलता से पार कर जाता है।

जिस प्रकार कठोर धातु से सुंदर, गहने बनाने के लिए उसे पिघलाकर नरम (नम्र) करना पड़ता है उसी प्रकार हमारे व्यक्तित्व के सर्वांगीण विकास के लिए विनम्रता जरूरी है। लोगों के दिलों में जगह पानी हो तो विनम्रता आवश्यक है। विद्यार्थी जीवन में भी अध्यापक का प्यार पाना है तो विनम्रता होनी चाहिए। आँधी और बाढ़ में बड़े-बड़े वृक्ष ढह जाते हैं पर छोटे-छोटे पौधे तर जाते हैं। इसीलिए हमें भी कठोरता को त्यागकर विनम्रता को अपनाना चाहिए।

- (4) सुनीता विलियम अंतरिक्ष में जाने वाली भारतीय मूल की दूसरी महिला है। अंतरिक्ष में वे सात बार जा चुकी हैं और 50 घंटे 40मिनट स्पेसवाक करने वाली पहली महिला हैं। इनका जन्म 19सितंबर 1965 में युक्लिड (ओहियो राज्य) में हुआ। विवाह पूर्व इनका नाम सुनीता दीपक पांड्या था। इनके पति का नाम माइकल विलियम है। उनके पिता डॉ. दीपक पांड्या एम.डी. हैं। उनके पति माइकल विलियम नौसेना पोत चालक, हेलिकॉप्टर पायलट, पेशेवर नौसैनिक एवं गोताखोर हैं।

सुनीता को कई देश-विदेश के पुरस्कारों से सम्मानित किया गया है। जैसे - भारत सरकार द्वारा पद्मभूषण, नासा स्पेसफ्लाइट मेडल, रशिया द्वारा स्पेस अभियान दल में मेरिट आने के लिए, नेवी एंड मैरिन क्रॉप अचिवमेंट मेडल आदि। सुनीता 'महिला एक व्यक्तित्व अनेक' की सच्ची कहानी है। वे एक ऐसी असाधारण महिला हैं जिनके नाम अनेक रिकॉर्ड दर्ज हुए हैं। उन्होंने अंतरिक्ष में 194 दिन, 18घंटे रहकर विश्व रिकॉर्ड बनाया है। सुनीता में असाधारण इच्छाशक्ति, दृढ़ता, उत्साह और आत्मविश्वास जैसे गुण होने के कारण ही वे इस तरह प्रतिमान बना पाईं। वे समुद्रों में तैराकी कर चुकी हैं, महासागरों में गोताखोरी कर चुकी हैं, युद्ध और मानव कल्याण के कार्य के लिए उड़ानें भर चुकी हैं, अंतरिक्ष तक पहुँच चुकी हैं और अब अंतरिक्ष से धरती पर आ चुकी हैं। सचमुच वे एक प्रेरणा बन चुकी हैं।

अंतरिक्ष यात्रियों के नाम :

- (1) पहला अंतरिक्ष यात्री - यूरी गागरिन
- (2) पहली महिला अंतरिक्ष यात्री - वेलेन्टिना तरेश्कावा
- (3) पहला भारतीय अंतरिक्ष यात्री - राकेश शर्मा
- (4) चाँद पर कदम रखनेवाला - नील आर्मस्ट्रांग
- (5) सबसे अधिक उम्र का यात्री - कार्ल जी हैनिजे
- (6) सबसे कम उम्र का अंतरिक्ष यात्री - गेरेमान तितोब

अन्य - शेरिन क्रिस्टा मेकोलिफ, सैली राइड, श्वेतलाना सेवित्स्काया, कल्पना चावला, वलोरी पोल्याकोव, कर्नल ब्लादीमीर कोमारोव, एलैक्सी लियोनाव, चार्ल्स ड्यूक, जीम लोवेल, डेनिस टिटो, डेविड स्कॉट, मागरिट रिआ सेडॉन, शेख मुजफर एस्., रविश मल्होत्रा आदि।

और अब तो हम लोग भी अंतरिक्ष में उड़ान भर सकते हैं। लेकिन ढाई लाख डॉलर खर्च करने पर महज चाँद तक ही पहुँच पाएँगे। और वेटिंग लिस्ट भी बहुत लंबी है। वर्जिन गैलेक्टिक नाम की कंपनी बुकिंग ले रही है।

मेरी कलम से

- ★ माँ - (अपने-आप से) आज कुँजड़िन आएगी तो हरी सब्जी के लिए जरूर पूछूँगी।
- पड़ोसन - भाभी जी कुँजड़िन आएगी तो मुझे भी आवाज देना।
- माँ - हाँ, जरूर।
- कुँजड़िन - सब्जी लेलो, सब्जी।
- माँ - आ जा, तुम्हारी ही राह देख रही थी। (पड़ोसन से) ये लो, आ गई कुँजड़िन।
- कुँजड़िन - आज सब्जी बहुत बढ़िया लाई हूँ और बहनजी मुझे आपके हाथ की बोहनी चाहिए।
- माँ - देख, ये पालक की एक गड्डी दे दें, थोड़ा-सा हरा धनिया और पुदिना भी चाहिए।
- कुँजड़िन - साथ में अदरक और हरी मिर्च दूँ क्या?
- माँ - हाँ, एक-दो नींबू भी देना, पर दाम सही लगाना।
- कुँजड़िन - बहन जी आप से मैंने कभी दाम ज्यादा लिया है क्या?
- माँ - अब मेरा मुँह मत खुलवाओ। मीठा-मीठा बोलकर मुझ से अच्छे खासे रुपए ऐंठ लेती हो।
- कुँजड़िन - अरे, अरे, ऐसी नाराज मत हो बहन। आप लोग मोलभाव करते हों, इसलिए थोड़ा बोलना ही पड़ता है।
- माँ - चल बहाने मत बना। इनका मोल क्या हुआ।
- कुँजड़िन - 50 रुपए बहनजी।
- माँ - अच्छा ले, अब थोड़ा कढ़ी पत्ता भी डाल दें।
- कुँजड़िन - कल क्या लाऊँ आपके लिए?
- माँ - कल मुझे गलके और करेले ले आना। आलू और प्याज अभी पड़े हैं।

कुँजड़िन - जी बहन जी (पैसे टोकरी की सब्जी को लगाकर बटवे में रखते हुए उठती है।) बहन जी थोड़ा हाथ लगाओ, उठाने में। (टोकरी सिर पर रखकर) सब्जी ले लो सब्जी, ताजी-ताजी सब्जी।

उपक्रम (Activity)

- (1) विद्यार्थी उपक्रम स्वयं करें।
- (2) विद्यार्थी उपक्रम स्वयं करें।

7. रहस्य

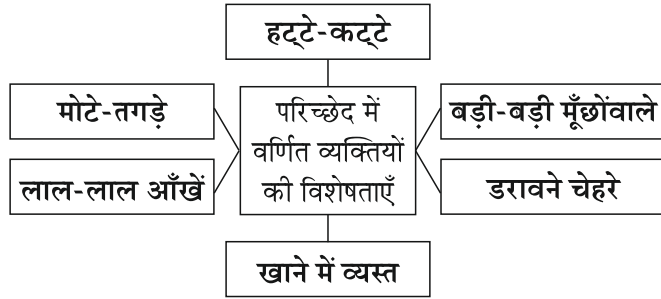
कृतिपत्रिका

- प्र.1. (1) (iv) अगली सुबह उसने मामा जी से कैमरा माँग लिया।
(iii) मामी जी को साथ बैठाकर मामा जी का फोटो लिया।
(i) कनिष्का ने मामा-मामी के साथ आर्यन के भी फोटो खींचे।
(ii) आर्यन ने कैमरा अपने पास रख लिया।
- (2) (I)

आर्यन	कैमरा पाकर खुश होने वाले व्यक्ति	कनिष्का
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- (ii) (1) रात में मामूली रोशनी में यह तसवीर खींच लेता है।
(2) रहस्य का पता लगाने का यह अच्छा अवसर था।
- (3) (i) (1) प्रतिक्षा (2) निशा
(ii) (1) अँधेरा (2) उदास
- (4) मेरा जन्मदिन 19 अगस्त को आता है। पिछले साल मैं ग्यारह साल का हुआ। उस वर्ष मेरे माता-पिता ने मेरा जन्मदिन बहुत धूमधाम से मनाया। सुबह हम सब मंदिर गए। माँ ने खाने में मेरी मनपसंद चीजें बनायी थी। शाम को पूरा घर गुब्बारों और रंगीन परदों से सजाया। घर में बड़ी चहल-पहल और प्रसन्न वातावरण था। नजदीक के रिश्तेदार, मेरे दोस्त और हमारे

पड़ोसी जन्मदिन की शुभकामनाएँ देने आये थे। घर में खुशी का माहौल था। अभी केक काटने का समय आया और उसी वक्त गाँव से मेरी दादी और बुआ जो पिछले कई साल मुंबई में नहीं आए थे वे मेरे जन्मदिन के अवसर पर घर आए। उन्हें देखकर मेरी खुशी का तो ठिकाना ही नहीं रहा। दादी माँ ने दौड़कर मुझे गले लगाया। खुशी से मेरे आँखों के आँसू रुक ही नहीं रहे थे। इसके बाद मैंने केक काटा। सभी ने मेरे दीर्घायु होने की कामना की। मेरी दादी और बुआ ने मुझे बहुत स्नेह से आशिर्वाद दिया। मेरी दादी और बुआ का मेरे जन्मदिन पर आना मेरे लिए 'सरप्राइज़ गिफ्ट' था। यह प्रसंग मैं मेरे जीवन में कभी नहीं भूलूँगा।

प्र.2. (1)

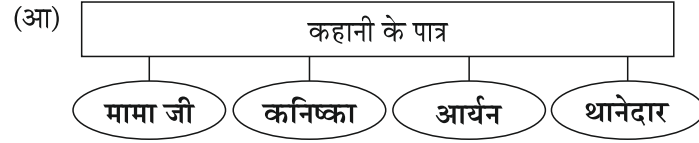


- (2) (i) (1) नारायणपुर (2) सवेरे-सवेरे, शाम
(ii) (1) कैमरा निकाला (2) वे घर की ओर चल पड़े।
- (3) (i) **आँख** - आँखों का तारा होना।
चेहरा - चेहरे पर हवाइयाँ उड़ना।
(ii) (1) बत्ती (2) दुकानें
- (4) लक्ष्य प्राप्त करने की मन में इच्छा हो तो साहस अपने आप आता है। साहस हो तो रास्ते में आनेवाली सारी कठिनाईयाँ सहज दूर हो जाती हैं। दृढ़ निश्चय और साहस हो तो कोई भी कार्य नामुमकीन नहीं है। निश्चय अगर दृढ़ हो तो प्रतिकूल परिस्थितियाँ भी अनुकूल बनाने का साहस मन में आता है। दृढ़ निश्चय साहस करने के लिए प्रेरित करता है और सबकुछ संभव

कराता है। मन में दृढ़ निश्चय हो तो साहस के बल पर हम संघर्ष करके सफलता प्राप्त कर सकते हैं। दृढ़ निश्चय हो तो व्यक्ति अथक परिश्रम से सारी बाधाओं का सामना करते हुए लक्ष्य प्राप्त करने की कोशिश करते हैं। जिसके पास दृढ़ निश्चय, आत्मविश्वास और साहस है उसे जीवन में आगे बढ़ने से कोई रोक नहीं सकता। दृढ़ निश्चयी व्यक्ति को निराश होने की जरूरत ही नहीं पड़ती। अपने साहस से वह उज्ज्वल भविष्य को निश्चित करता है।

स्वाध्याय

- प्र.1. (अ) (1) सन्नाटा (2) वैज्ञानिक
(3) कारतूसों (4) सावधानी
(5) क्रिया-कलाप (6) उत्पात
- (आ) (क) - नारायणपुर, (ख) - कपोल कल्पना, (ग) - कहकहों की आवाज
- प्र.2. (1) आर्यन को मामा जी ने बताया था कि हवेली भूतों का डेरा है। आर्यन जानता था कि भूत-वूत केवल कपोल कल्पना है। कक्षा में विज्ञान के शिक्षक ने वैज्ञानिक दृष्टिकोण अच्छी तरह समझाया था। इसलिए आर्यन ने हवेली के रहस्य का पता लगाने के लिए मन में ठान लिया।
- (2) आर्यन और कनिष्का ने हवेली में जाकर तथाकथित भूतों के कई फोटो खींचे थे। नारायणपुर में फोटोग्राफर की एक दुकान थी। कैमरे द्वारा लिए गए फोटो तैयार करवाने के लिए आर्यन नारायणपुर गया।
- (3) हवेली के आश्रय में डाकुओं का गिरोह रहता था। कोई हवेली की तरफ न जाए और उनका रहस्य न खुले इसलिए उन्होंने हवेली में भूत होने की अफवाह फैलाई थी। लोगों का आना-जाना रहता तो ये डाकू अपना क्रिया-कलाप नहीं कर पाते।
- प्र.3. (अ) (4) अब जमींदार का परिवार खत्म हो गया है।
(3) आर्यन ने कनिष्का से कुछ सलाह-मशविरा किया।
(1) आर्यन और कनिष्का दबे पाँव हवेली में चले गए।
(2) सभी डाकुओं के आतंक से मुक्त हो गए।



प्र.4. विवेकशून्यता और भाग्यवादिता द्वारा पोषण पाकर अंधश्रद्धा फूलती-फलती रही है। जहाँ मूर्खता का साम्राज्य होता है वहाँ अंधश्रद्धा की तानाशाही खूब चलती है। यह वैज्ञानिक युग है। फिर भी कुछ महत्त्वपूर्ण कार्य आरंभ करने से पहले हम शकुन-अपशकुन, ग्रह-नक्षत्रों पर विचार करते हैं।

घर में - मुझे याद है चलते समय किसी ने जुकाम के कारण भी छींक दिया तो मेरे दादाजी जाना स्थगित कर देते थे। क्योंकि उनका मानना था कि छींक के कारण उनके काम सिद्ध होने में बाधा आएगी। मैंने दादाजी को बहुत बार बताया कि छींक का हमारे कार्य सिद्धि से कोई लेना देना नहीं होता। परंतु वे नहीं माने। फिर जब मेरी परीक्षा थी तब चलते समय उन्हें छींक आ गई। वे मुझे रोकने से तो रहे परंतु मन ही मन सोच रहे थे कि परीक्षा में कुछ तो गड़बड़ी होनी ही होनी है। मैं जब पर्चा देकर लौटा तो पर्चा बहुत अच्छा होने की बात कही और जब परीक्षाफल आया तो दादाजी के मन में जो शंका थी उसका पूरी तरह से निर्मूलन हो गया। क्योंकि मेरे अंक भी बहुत ही बढ़िया आए थे। अब वे छींक को अपशकुन नहीं मानते।

विद्यालय में - विद्यालय में प्रतिभा प्रदर्शन प्रतियोगिता थी। तब मैंने जादू के छोटे-मोटे खेल किए। नारियल से फूल निकालकर मैंने सबको चौंका दिया। फिर सभी को बता भी दिया कि नारियल में छेद करके मैंने फूलों की कलियाँ कल ही नारियल में डाल दी थीं। आज वे कलियाँ नारियल में स्थित पानी के कारण खिल गई थीं। सबके सामने नारियल तोड़ने पर उसमें फूल इसलिए निकले। यह जादू नहीं बल्कि हाथ की सफाई है। जादू-टोना कुछ होता ही नहीं। मंत्र-तंत्र बोलकर कोई कार्य सिद्ध नहीं होता यह प्रयोग द्वारा बताकर अंधश्रद्धा दूर करने का मैंने छोटा सा प्रयास किया।

परिवेश में - अपने परिवेश में मैंने अपने साथियों के साथ मिलकर एक संघटना बनाई है। गणेश विसर्जन के समय पानी में मूर्तियाँ और निर्माल्य का विसर्जन होने

से जल प्रदूषण होता है। पहले लोगों ने गणेश विसर्जन पानी में न करने की हमारी बात को ईश्वर का प्रकोप जानबूझकर अपने सर लेने जैसा कहा। 'आ बैल मुझे मार' ऐसा थोड़े ही करेंगे। लेकिन जब जल प्रदूषण की बात लोगों को समझी तो अब गणेश विसर्जन टंकियों में करना उन्होंने स्वीकार किया और इस तरह का कार्य करके हम बच्चों ने अपने परिवेश में भी अंधश्रद्धा निर्मूलन का कार्य शुरू किया जिसे हमारे अभिभावक तथा गुरुजनों ने भी खूब सराहा।

- प्र.5.** (1) आर्यन और कनिष्का हवेली का रहस्य जानने रात के अँधेरे में हवेली पहुँचे। हवेली में बीचोंबीच एक बड़ा कमरा था जिसका दरवाजा अंदर से बंद था। कमरे की खिड़कियाँ नीचे से बंद थीं लेकिन ऊपर से खुली थीं। खिड़की से अंदर झाँककर देखा तो हट्टे-कट्टे, मोटे-तगड़े, बड़ी-बड़ी मूँछोंवाले कई लोग पगड़ी बाँधे बैठे थे। कुछ लोगों ने कमीज़ और पैट भी पहनी थी। सब खाने में मस्त थे लेकिन सबके चेहरे डरावने थे। उनके पास बंदूकें, तलवारें और कारतूस थे। अंदर गैस बत्ती की तेज रोशनी थी।
- (2) जिस हवेली में भूतों का डेरा होने की बात गाँव में सब लोग कहते थे उस हवेली का रहस्य जानने के लिए आर्यन और कनिष्का मामा जी का कैमरा लेकर रात के अँधेरे में गए थे। उन्होंने हवेली में मौजूद लोगों के कई फोटो खींचे। फिर आर्यन ने नारायणपुर जाकर सारे फोटो तैयार करवाए और मामा जी को दिखाए। फिर मामा जी को साथ लेकर वे थानेदार के पास गए। थानेदार ने फोटो देखते ही पहचान लिया कि ये वही लोग हैं जिनकी तलाश पुलिस को थी। हवेली में जो डाकू थे उनकी तलाश पिछले कई वर्षों से पुलिस कर रही थी। डाकुओं के इस गिरोह ने कई वर्षों से उत्पात मचा रखा था। डकैती और राहजनी इनका पेशा था। ऐसे खतरनाक लोगों का ठिकाना ढूँढ़कर आर्यन और कनिष्का ने बहादुरी का काम किया था। पुलिस की मदद से उन्हें पकड़वाकर दोनों ने गाँववालों को डाकुओं के आतंक से मुक्त किया था। क्योंकि पुलिस के छापे में कुछ डाकू पकड़े गए थे और कुछ मारे गए थे।

इसी बहादुरी के लिए आर्यन और कनिष्का को 'वीरता पुरस्कार' घोषित हुआ।

व्याकरण

प्र.1.



- (1) मछुआरे ने जाल फेंका।
- (2) पायल ने मछलियों को चारा दिया।
- (3) नाविक ने पतवार से नाव चलाई।
- (4) रामू ने माला को नारियल तोड़कर दिए।
- (5) रामू ने पेड़ से नारियल तोड़े।
- (6) राजू का घर नदी के किनारे है।
- (7) रामू नारियल के पेड़ पर चढ़ा।
- (8) पानी में मछलियाँ तैर रही हैं।

प्र.2. (1) खाट पकड़ना - अर्थ : बीमार होना।

वाक्य : बारिश में भीगकर राहुल ने खाट पकड़ ली।

(2) करवटें बदलना - अर्थ : बेचैन रहना।

वाक्य : गरमी के कारण मैं रातभर करवटें बदलती रही।

(3) कमर कसना - अर्थ : दृढ़ संकल्प करना।

वाक्य : परीक्षा में अच्छे अंक पाने के लिए सभी छात्रों ने कमर कस ली है।

(4) तारीफ के पुल बाँधना - अर्थ : प्रशंसा करना।

वाक्य : राज तारीफ के पुल बाँधते हुए अपनी विदेश यात्रा का वर्णन कर रहा था।

(5) खून पसीना एक करना - अर्थ : ऋड़ी मेहनत करना।

वाक्य : पिता अपनी खून पसीना एक करके कमाई हुई दौलत को बेटे को बरबाद नहीं करने देंगे।

प्र.3. सामान्य भूतकाल - ठिकाना मैंने बताया।

सामान्य भविष्यत्काल - ठिकाना मैं बताऊँगा।

अपूर्ण वर्तमानकाल - ठिकाना मैं बता रहा हूँ।

अपूर्ण भूतकाल - ठिकाना मैं बता रहा था।

पूर्ण वर्तमानकाल - ठिकाना मैंने बताया है।

पूर्ण भूतकाल - ठिकाना मैंने बताया था।

प्र.4. स्वयं अध्ययन

★

हिंदी

मराठी

- | | |
|---------------------------------------|------------------------------------|
| (1) बंदर क्या जाने अदरक का स्वाद | गाढवाला गुळाची चव काय? |
| (2) एक पंथ दो काज | एका दगडात दोन पक्षी मारणे. |
| (3) जो गरजते हैं वे बरसते नहीं | गरजेल तो बरसेल काय? |
| (4) दूर के ढोल सुहावने | दुरून डोंगर साजरे. |
| (5) बगल में छोरा शहर में ढिंढोरा | काखेत कळसा नि गावाला वळसा. |
| (6) बूँद बूँद से घट भरता है | थेंबे थेंबे तळे साचे. |
| (7) साँच को आँच नहीं | सत्याला मरण नाही. |
| (8) डूबते को तिनके का सहारा | बुडत्याला काडीचा आधार. |
| (9) खोदा पहाड़ निकली चुहिया | डोंगर पोखरून उंदीर काढणे. |
| (10) ढाक के तीन पात | पळसाला पाने तीनच. |
| (11) नाच न आए आँगन टेढ़ा | नाचता येईना अंगण वाकडे. |
| (12) चोर की दाढ़ी में तिनका | चोराच्या मनात चांदणे. |
| (13) हाथ कंगन को आरसी क्या | हातच्या कांकणाला आरसा कशाला? |
| (14) होनहार बिरबान के होत चिकने पात | बाळाचे पाय पाळण्यात दिसतात. |
| (15) वक्त पर गधे को बाप बनाना | अडला हरी गाढवाचे पाय धरी. |
| (16) जाको राखे साइयाँ मार सके न कोए | देव तारी त्याला कोण मारी. |
| (17) गेहूँ के साथ घुन भी पीसा जाता है | गव्हाबरोबर किडेही रगडले जातात. |
| (18) आसमान से गिरा खजूर पर अटका | आगीतून उडून फुफाट्यात पडणे. |
| (19) जल में रहे मगर से बैर | पाण्यात राहून माश्यांशी वैर कशाला? |
| (20) जैसा देश वैसा भेष | देश तसा वेश. |
| (21) आगे कुआँ पीछे खाई | इकडे आड तिकडे विहीर. |
| (22) छोटा मुँह बड़ी बात | लहान तोंडी मोठा घास घेणे. |

- | | |
|---|--|
| (23) जिसकी जूती उसी का सिर | आपलेच ओठ नि आपलेच दात. |
| (24) ते ते पाँव पसारिये जेती लंबी ठौर | अंथरूण पाहून पाय पसरावे. |
| (25) भैंस के आगे बीन बजाए भैंस बैठ पगुराय | गाढवापुढे वाचली गीता कालचा गोंधळ बरा होता. |
| (26) सुनिए सबकी करिए मन की | ऐकावे जनाचे करावे मनाचे. |

लेखन कौशल (Writing Skill)

विचार मंथन

- ★ श्रद्धा और विज्ञान एक दूसरे के विपरीत दिखाई देते हैं क्योंकि जहाँ श्रद्धा की बात आ जाती है, वहाँ विज्ञान की आवश्यकता कम हो जाती है और जहाँ विज्ञान आ जाता है श्रद्धा पीछे हट जाती है। तो क्या ये दोनों परस्पर विरोधी हैं? बिलकुल नहीं। तार्किक दृष्टि से देखें तो दोनों अन्योन्याश्रित हैं।

जिस तरह धागा पिरोई हुई सुई हाथ से गिर जाने पर भी गुम नहीं होती वैसे ही ज्ञान के धागे में पिरोई हुई श्रद्धा, अंधश्रद्धा नहीं होती। धर्म जगत में श्रद्धा पर इतना बल दिया जाता है कि वह अपनी शुद्धता खोकर अंधश्रद्धा में बदल जाती है। अतः श्रद्धा की शुद्धता के लिए उसे ज्ञान के साथ जुड़ना जरूरी है। श्रद्धा के बिना ज्ञान भी संशय बन जाता है। वह हमें किसी भी निर्णय तक नहीं पहुँचाता। ज्ञान के बगैर श्रद्धा अंधी हो जाती है। इसलिए ज्ञान के साथ श्रद्धा और श्रद्धा के साथ ज्ञान का होना जरूरी है।

आज विज्ञान की प्रगति इतनी हो गई है कि चाँद पे कदम रखने वाला इनसान मंगल ग्रह पर बस्ती बनाने के सपने संजो रहा है। धरती की दूरी सिमट रही है। लेकिन संवेदनाशून्य विज्ञान के विकास के कारण आदमी की आदमी से दूरी बढ़ती जा रही है। मनुष्य का दिमाग बढ़ रहा है और हृदय सिकुड़ता जा रहा है। जहाँ वैज्ञानिक प्रगति के कारण मानव क्रूर, विनाशक होते जा रहा है वहीं रेड क्रॉस जैसी संस्थाएँ पीड़ित मानवता को सुख शांति से रहने के लिए उनके इलाज करती हैं। श्रद्धा और विज्ञान के ताल मेल से विज्ञान की विनाश लीला को रोका जा सकेगा और विज्ञान को मानवोनुकूल बनाया जा सकेगा। विज्ञान को अच्छे-बुरे से कोई लेना देना भले ही न हो लेकिन श्रद्धा मनुष्य को धैर्यवान और संतोषी रहने में मदद कर सकती है। कुमार्ग पर भटकने से रोक सकती है। इसलिए दोनों जीवन में महत्त्वपूर्ण हैं।

सदैव ध्यान में रखो।

- ★ हम बचपन से सुनते और मानते आ रहे हैं कि अपने से बड़ों की आज्ञाओं का पालन करना चाहिए। ऐसा इसलिए कहा जाता है क्योंकि उनके अनुभव और ज्ञान से हमारा मार्गदर्शन होता है। उनका आशीर्वाद भी हमारा मनोबल बढ़ाने में मदद करता है। यह एक मनोवैज्ञानिक तथ्य है।

फिर भी बिना कोई सवाल किए आज्ञा मानना समाज और संस्कृति को पतन की ओर ले जाता है। आज्ञाकारी होने का मतलब है कि जो कुछ बड़ों ने कहा वह सत्य है। अगर उस सत्य को हम मान लेंगे तो हमारी बुद्धि नष्ट हो जाएगी। सत्य का प्रभुत्व होना ही चाहिए लेकिन वह विज्ञाननिष्ठ और तर्कसंगत हो। यह बंदिश नहीं होनी चाहिए कि चीजों को पुराने रीति रिवाजों के अनुसार ही करना है। हमें हर चीज को अपनी बुद्धि की कसौटी पर परखना चाहिए और बेहतर से बेहतर समाधान खोजना चाहिए। इस पाठ के आर्यन और कनिष्का ने बड़ों की आज्ञा का पालन नहीं किया क्योंकि भूत-वूत केवल काल्पनिक बातें हैं यह उनकी बुद्धि ने उन्हें बताया और तभी वे गाँव वालों को डाकुओं के आंतक से मुक्त कर पाए।

उपक्रम (Activity)

- ★ **पात्र** : आर्यन, कनिष्का, थानेदार, मामा जी
- आर्यन** : कनिष्का मैं सारे फोटो बनवाकर ले आया हूँ।
- कनिष्का** : आर्यन ये तसवीरें तो भूतों की नहीं लगती। चलो हम मामा जी को दिखाते हैं।
- कनिष्का** : (फोटो दिखाते हुए) आप कहते हो भूतों के पैर उलटे होते हैं, उनकी छाया नहीं होती, उनके फोटो नहीं ले सकते। देखिए ये भूतों के फोटो हमने कल रात हवेली जाकर लिए हैं।
- मामा जी** : (परेशान होकर) तो क्या भूत इनसानों जैसे होते हैं?
- आर्यन** : इनसानों जैसे नहीं, मामा जी इनसान ही भूत हैं। देखिए न, इनके पैर भी सीधे हैं, इनकी छाया भी है और इनके फोटो भी लिए गए हैं। असल में यह अफवाह मात्र है कि हवेली में भूत हैं।
- कनिष्का** : और नहीं तो क्या! इन लोगों का रहस्य न खुले इसलिए इन्होंने ही हवेली में भूत होने ही अफवाह फैलाई ताकि लोग उधर न जाएँ और ये अपने काम बिना रोक-टोक के करते रहें।

आर्यन : मुझे तो यह मामला गड़बड़ लगता है। मामा जी क्या आप मेरे साथ थाने चलेगें?

मामा जी : तुम सही हो बच्चों, चलो ये तसवीरें थानेदार को दिखाएँगे। (मामा जी आर्यन और कनिष्का के साथ थाने जाते हैं।)

थानेदार : (तसवीरें देखकर) अरे ये तो बहुत बड़ा डाकुओं का गिरोह है। कई वर्षों से ये डकैती और राहजनी कर उत्पात मचा रहे हैं। पुलिस ने इनको पकड़ने के लिए खून-पसीना एक कर दिया था। शाबाश! तुम दोनों ने बहुत बहादुरी का काम किया है। कहाँ हैं ये लोग?

आर्यन : आप तैयारी कीजिए, ठिकाना मैं बताता हूँ। (और उसी रात पुलिस ने भूतों के डरे पर छापा मारकर गाँववालों को डाकुओं के आंतक से मुक्त कराया।)

सुनो तो जरा

★ हर पाठ जीवन मूल्यों से युक्त है। जैसे -

- (1) हमें शूल नहीं फूल बनना चाहिए।
- (2) प्रत्येक परिस्थिति का सामना हँसते हुए करना चाहिए।
- (3) संकट के समय शांति, एकाग्रता, धैर्य और एकता से कार्य करना चाहिए।
- (4) संगठन में ही शक्ति है इसे जीवन में उतारना चाहिए।
- (5) गाँव की समृद्धि में ही शहर की खुशहाली है।
- (6) सहकारिता का महत्त्व समझना जरूरी है।
- (7) छोटा परिवार सुखी परिवार होता है।
- (8) पेड़-पौधों के औषधि महत्त्व को ध्यान में रखते हुए उनका संरक्षण एवं संवर्धन करना जरूरी है।
- (9) श्रद्धा और विज्ञान जीवन की दो महत्त्वपूर्ण बातें हैं।
- (10) दृढ़ संकल्पों से ही सपने साकार होते हैं।
- (11) परिश्रम सफलता की कुंजी है।
- (12) जीवन चलता ही रहता है और कालचक्र निरंतर गतिमान है।
- (13) अस्पताल में शांति बनाए रखना हमारा कर्तव्य है।

(14) बेटियों को शिक्षित करना प्रगति को सही दिशा देना है।

(15) बेटा और बेटी में फर्क नहीं करना चाहिए।

(16) स्वयं बदलेंगे तो समाज बदलेगा।

(17) निर्णय से पहले पक्ष-विपक्ष दोनों का विचार करना चाहिए।

(18) शब्दों का प्रयोग सावधानी से करना चाहिए।

(19) हमारी वाणी मीठी होनी चाहिए।

(20) हमेशा बड़ों का आदर करना चाहिए और छोटों को प्यार देना चाहिए।

(21) निवेदन सदैव विनम्र शब्दों में करना चाहिए।

(22) बड़ों की आज्ञा का पालन करना चाहिए।

(23) मानव सेवा ही सच्ची सेवा है।

(24) हमें अपने देश के प्रति प्रेम की भावना रखनी चाहिए।

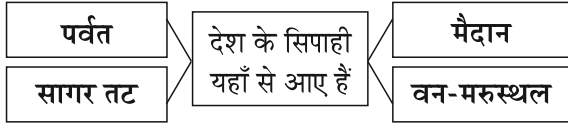
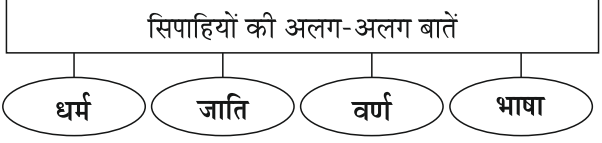
(25) हमें शहीदों की शहादत को कभी नहीं भूलना चाहिए।

वाचन जगत से

★ विद्यार्थी स्वयं करें।

8. हम चलते सीना तान के

कृतिपत्रिका

- प्र.1. (1) 
- (2) 
- (3) देश के सिपाही अलग-अलग धर्म के हों या अलग-अलग जाति के हों, उनका वर्ण, उनकी भाषा चाहे अलग हो, लेकिन सबसे पहले वे हिंदुस्तानी हैं। भले ही वे देश के किसी भी कोने से क्यों न आए हों, जैसे कि पर्वतीय

प्रदेश हो या सागर तट, हरे-भरे वन हों या उजड़ा रेगिस्तान या फिर मैदान, फौजी वर्दी पहनकर वे सबसे पहले बने हैं हिंदुस्तान के और बेटे बने हैं भारत माता के जो सीना तान कर गर्व से चले हैं।

प्र.2. (1) (i)

वीरत्व	युद्ध में सैनिक दिखलाएँगे	विवेक
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(ii)

सैनिकों की वीर-गाथाएँ गाएँगे		
गाँव	घर	नगर

- (2) (i) (1) हम सबसे आगे रहते अवसर पर बलिदान के।
(2) अनगिन कंटों में गूँजेंगे बोल हमारे गान के।
- (ii) (1) युद्ध - समर (2) झंडा - निशान
- (3) युद्ध में हम अपनी वीरता और विवेक का ऐसा परिचय देंगे कि उसकी कहानियाँ देश के गाँव, नगर और घर-घर में परिचित हो जाएँगी। हमारी वीर गाथाएँ गीत बनकर अनगिनत देशवासियों के कंटों से फूट पड़ेंगी। समर्पण के ये गीत गाते हुए हम सीना तानकर आगे बढ़ते हैं।

- प्र.3. (1) डॉ. हरिवंशराय बच्चन
- (2) हम गिर जाएँ किंतु न गिरने देंगे देश निशान को, हम मिट जाएँ किंतु न मिटने देंगे हिंदुस्तान को, हम सबसे आगे रहते अवसर पर बलिदान के। भारतमाता के बेटे हम चलते सीना तान के।
- (3) भले ही हम गिर जाएँ लेकिन देश के झंडे को गिरने नहीं देंगे। हमेशा उसका सम्मान बनाए रखेंगे। देश का नाम हमें दुनिया में रोशन करना है। देश के लिए अपना तन-मन-धन न्योछावर करने के लिए और देश के लिए बलिदान करने में पीछे नहीं हटेंगे। देश की सेवा, देश का रक्षण करने के लिए यह पंक्तियाँ प्रेरित करती है और उसका सम्मान करने की सीख देती है।
- (4) हिंदुस्तान के कण-कण में समता, ममत्व और अपनापन है। देश की रक्षा करने के लिए और देश की मिट्टी का कर्ज उतारने के लिए समर्पण और त्याग करना चाहिए। आज के बालकों को देश के रक्षक, सिपाही बनकर

आगे बढ़ना है। समता, बंधुत्व का पाठ हमें यह कविता सीखाती है। देश के झंडे का सम्मान करना चाहिए। देश में रहनेवाले लोग अलग जाति, अलग धर्म और अलग वर्ण के हो लेकिन सबसे पहले वह हिंदुस्तानी है यह बात हमेशा याद रखनी चाहिए।

स्वाध्याय

- प्र.1. (अ) (1) वन- मरुस्थल (2) रजकण (3) श्रम
(4) निशान (5) वीरत्व-विवेक

- प्र.2. (अ) (1) इस देश की मिट्टी में हम खेले हैं, खा-पीकर बड़े हुए हैं। देश की मिट्टी के कण-कण से हमें ममता और स्नेह मिला है। इस मिट्टी ने कभी हमारे बीच भेदभाव नहीं किया। इस मिट्टी के कण-कण का हम पर कर्ज है जो हमें चुकाना है। हम भारत माता की संतानें हैं और सीना तानकर आगे बढ़ते हैं।
- (2) देश पर अगर शत्रुओं का आक्रमण हुआ तो हम अपनी वीरता और विवेक का ऐसा परिचय देंगे कि उसकी कहानियाँ भारत के गाँव, नगर और घर-घर में गाई-सुनाई जाएँगी। हमारी वीर गाथाएँ गीत बनकर अगणित देशवासियों के कंटों से फूट पड़ेंगी। समर्पण के ये गीत गाते हुए हम सीना तानकर आगे बढ़ते हैं।
- (3) देश के सिपाही अलग-अलग धर्म के हों या अलग-अलग जाति के हों, उनका वर्ण अलग हो, चाहे भाषा अलग हो, लेकिन सबसे पहले वे हिंदुस्तानी हैं। वे देश के किसी भी कोने से क्यूँ न आए हों, पर्वतीय प्रदेश, सागर तट, हरे-भरे वन, उजड़ा हुआ रेगिस्तान या मैदान, चाहे जहाँ से भी आए हों, लेकिन फौजी वर्दी पहनकर वे सबसे पहले हिंदुस्तानी हैं। भारत माँ के ये बेटे सीना तान कर आगे बढ़े हैं।

(आ) प्रस्तुत कविता हरिवंशराय बच्चन द्वारा लिखा एक अभियान गीत है। इस रचना के माध्यम से कवि ने समता एवं बंधुता का महत्त्व प्रतिपादित किया

है। प्रकृति ने भारत को भले ही मैदानों और पर्वतों में बाँट दिया हो परंतु स्थानभिन्नता से फर्क नहीं पड़ता, ना ही धर्म, जाति-पाँति या भाषा देशवासियों को बाँट सकती है। इस देश के कण-कण में समता, ममत्व, अपनापन है। देश की रक्षा करने के लिए और देश की मिट्टी का कर्ज उतारने के लिए समर्पण और त्याग हमारा इतिहास रहा है। हम बच्चे भी उन्हीं के वंशज हैं। बलिदान का अवसर मिलने पर पीछे नहीं हटेंगे। मिट जाँगे लेकिन देश के झंडे को गिरने नहीं देंगे। इतना उत्कट देशप्रेम देश के हर बालक में है। यही इस कविता का केंद्रीय भाव है।

(इ) राष्ट्रीय ध्वज - तिरंगा	राष्ट्रीय पुष्प - कमल
राष्ट्रीय पक्षी - मोर	राष्ट्र गान - जन-गण-मन
राष्ट्रीय नदी - गंगा	राष्ट्रीय जलचर - डॉलफिन
राष्ट्रीय प्रतीक - अशोकस्तंभ	राष्ट्रीय पशु - बाघ
राष्ट्रीय गीत - वंदे मातरम्	राष्ट्रीय फल - आम
राष्ट्रीय मुद्रा - रुपया	राष्ट्रीय पेड़ - बरगद

प्र.3.

राज्य	भाषा	राज्य	भाषा
जम्मू एवं कश्मीर	कश्मीरी	हिमाचल प्रदेश	हिंदी
पंजाब	पंजाबी	उत्तराखंड	हिंदी
उत्तर प्रदेश	हिंदी	राजस्थान	हिंदी
प. बंगाल	बंगाली	छत्तीसगढ़	छत्तीसगढ़ी
झारखंड	हिंदी	सिक्किम	नेपाली
नागालैंड	बंगाली	मिजोरम	बंगाली
असम	असमिया	त्रिपुरा	बंगाली
ओडिशा	ओरिया	महाराष्ट्र	मराठी
कर्नाटक	कन्नड	दमन और दीव	गुजराती
गोवा	कोंकणी	आंध्र प्रदेश	तेलुगु
लक्षद्वीप	मल्यालम	तमिलनाडु	तमिल

राज्य	भाषा	राज्य	भाषा
अंदमान निकोबार	बंगाली	तेलंगणा	तेलुगु
हरियाणा	हिंदी	मेघालय	बंगाली
दिल्ली	हिंदी	गुजरात	गुजराती
मध्य प्रदेश	हिंदी	दादरा और	गुजराती
बिहार	हिंदी	नगर हवेली	
अरुणाचल प्रदेश	बंगाली	केरल	मल्यालम
मणिपुर	मणिपुरी	पुडुचेरी	तमिल

विचार मंथन

प्र.4.

‘विविधता में एकता
भारत की है विशेषता’

हमारे देश में अनेक धर्म और जाति के लोग प्रेमभाव से मिल-जुलकर रहते हैं। हमारा खान-पान, रहन-सहन एक-दूसरे से भिन्न है। हमारी खुशियाँ, हमारे त्योहार, उत्सव, पर्व सब अलग-अलग हैं। हमारी वेश-भूषा भी एक-दूसरे से मेल नहीं खाती परंतु हमारी आत्मा एक है।

हम भले ही अलग-अलग भाषा बोलते हैं परंतु एक-दूसरे के सुख-दुख साझा करते हैं। हमारे पुरखों ने हमें मानवता का पाठ पढ़ाया है। हम सबका देश एक है। हम सब सबसे पहले भारतवासी हैं।

किसी ने खूब कहा है कि भारत एक उपवन है और हम सबके विविध धर्म, जाति, भाषाएँ उस उपवन में खिले फूलों की तरह उसकी शोभा बढ़ाते हैं। हाथों की पाँचों उंगलियाँ जब मुट्ठी बन जाती हैं तो उसमें ताकत आ जाती है; ठीक वैसे ही एकता हमारी शक्ति है। युधिष्ठिर ने ठीक ही कहा था,

‘जब तक है आपस की आँच, वे हैं सौ और हम हैं पाँच।’

अगर करे कोई दूसरा जाँच, तब हैं मिलकर एक सौ पाँच।।’

देश की एकता भी बिलकुल ऐसी ही है। इतिहास गवाह है कि युद्ध स्थिति में हम सब एक होकर शत्रु को लोहे के चने चबाते हैं। इसी एकात्मता को हमें आगे भी बरकरार रखना है।

प्र.5. विचार लो कि मर्त्य हो, न मृत्यु से डरो कभी,

मरो, परंतु यों मरो कि याद जो करें सभी।'

मैथिली शरण जी की ये काव्यपंक्तियाँ हमें सदैव सेवाधर्म निभाकर लोगों के दिलों में जगह बनाने के लिए प्रेरित करती हैं। किसी अपाहिज की सड़क पार करने में मदद कर दी तो वह भी मानव सेवा है। अपने बुजुर्गों की सेवा भी मानव सेवा है जो हम आसानी से कर सकते हैं।

मैंने इस विषय में विचार किया तो ये दोनों विकल्प तो मैं करूँगा ही। साथ में मैंने यह भी सोचा कि बीमार साथी को पढ़ाई में मदद करना भी मेरे लिए मानव सेवा ही होगी। बीमार साथी की सेवा-शुश्रूषा करने में मुझे आनंद मिलेगा। भविष्य में डॉक्टर बनकर जनता जनार्दन की सेवा करूँगा। मैंने कहीं पढ़ा है कि सच्ची निष्ठा के साथ जो भी कार्य किया जाता है वह मानव सेवा ही होती है। और मैं जो भी कार्य करूँगा सच्ची लगन से, पूरी निष्ठा के साथ करूँगा।

व्याकरण

- ★ (1) विस्मयार्थक वाक्य – वाह! क्या बनावट है ताजमहल की !
(2) विधानार्थक वाक्य – बच्चे हँसते-हँसते खेल रहे थे।
(3) निषेधार्थक वाक्य – माला घर नहीं जाएगी।
(4) इच्छार्थक वाक्य – खूब पढ़ो, खूब बढ़ो।
(5) संकेतार्थक वाक्य – यदि बिजली आएगी तो रोशनी होगी।
(6) प्रश्नार्थक वाक्य – इसे हिमालय क्यों कहते हैं?
(7) आज्ञार्थक वाक्य – सदैव सत्य के पथ पर चलो।
(8) संभावनार्थक वाक्य – कश्मीर का सौंदर्य देखकर तुम्हें आश्चर्य होगा।

अध्ययन कौशल

★ मुहावरे –

- (1) अक्ल का पत्ता खोलना = तरकीब बताना।
(2) अनाप-शनाप बोलना = निरर्थक बातें करना।
(3) आँखें खुली की खुली रहना = चकित रह जाना।

- (4) कमर कसना = दृढ़ संकल्प करना।
(5) करवटें बदलना = बेचैन रहना।
(6) खाट पकड़ना = बीमार होना।
(7) खून-पसीना एक करना = कड़ी मेहनत करना।
(8) गला फाड़कर रोना = जोर जोर से रोना।
(9) गले लगाना = प्यार से मिलना।
(10) चार चाँद लगाना = शोभा बढ़ाना।
(11) जी की कली खिलना = खुश होना।
(12) ठगा सा रह जाना = चकित होना।
(13) ठान लेना = निश्चय करना।
(14) तारीफ के पुल बाँधना = प्रशंसा करना।
(15) तुनककर बोलना = चिढ़कर बोलना।
(16) दरार पड़ना = दूरी बढ़ना।
(17) दाब पर लगाना = कुछ पाने के लिए बदले में कुछ लगाना।
(18) दिन दूनी-रात चौगुनी उन्नति = तेज गति से विकास।
(19) दुखड़ा रोना = दुख सुनाना।
(20) मात देना = पराजित करना।
(21) मुँह लटकाना = उदास होना।
(22) सिर आँखों पर रखना = स्वीकार करना।
(23) सीना तानकर चलना = गर्व से चलना।
(24) हथियार डालना = आत्मसमर्पण करना।

कहावतें -

- (1) अंत भला तो सब भला = परिणाम अच्छा तो सब अच्छा।
(2) एक और एक ग्यारह = एकता में बल।
(3) चिराग तले अँधेरा = योग्य व्यक्ति के आसपास ही अयोग्यता।
(4) जहाँ चाह, वहाँ राह = इच्छा होने पर मार्ग मिलता है।
(5) दूध का दूध पानी का पानी करना = सही न्याय करना।

लेखन कौशल (Writing Skill)



यदि तुम सैनिक होते तो

जब जब मैं किसी सैनिक को वर्दी पहने और उस वर्दी में स्टार लगे देखता हूँ तो मेरे मन में सैनिक बनने की इच्छा जागृत होती है। और ये कविता की पंक्तियाँ याद आती हैं,

“बढ़ जाता है मान वीर का, रण में बलि होने से ” या
“सरफरोशी की तमन्ना अब हमारे दिल में है,
देखना है जोर कितना बाजुए कातिल में है।”

यदि मैं सैनिक होता तो देश की आन, बान और शान की खातिर जीता और आन, बान और शान की खातिर मरता। यदि मैं सैनिक होता तो महाराणा प्रताप की तरह घास की रोटी खाना पसंद करता परंतु किसी की अधीनता स्वीकार न करता। मैं शत्रु सेना के प्रमुख ठिकानों पर अचूक प्रहार करता। सीमा पर तैनात होता तो घुसपैठियों को चुन-चुनकर निशाना बनाता। तप्त रेगिस्तान हो या बर्फाली चोटियाँ, प्रतिकूल परिस्थितियाँ मेरा कुछ नहीं बिगाड़ पातीं। अपने साथी सैनिकों के साथ परिवार से दूर होने के बावजूद भी हँसते-हँसाते, देश की रक्षा करते दिन बिताता। जब कभी गाँव लौटता तो अपने मित्र-परिवार वालों के साथ सैनिक जीवन की मधुर यादें बाँटता।

सैनिक सेवा से मुक्त होने के बाद मैं अपने गाँव के उत्थान और विकास के लिए कार्य करता। एक सैनिक के रूप में मुझे वीरता, साहस को प्रदर्शित करने का मौका मिलता और अगर मैं शहीद होता तो देश का सच्चा सपूत कहलाता। मेरे माता-पिता, गुरुजन, साथी सबको मुझ पर गर्व होता। आनेवाली पीढ़ी के लिए मैं एक आदर्श होता। मैं मरकर भी अमर हो जाता। क्योंकि,

‘शहीदों की चिताओं पर लगेगे हर बरस मेले,
वतन पर पिटने वालों का यही बाकी निशाँ होगा।’

मेरी कलम से

★ विद्यार्थी स्वयं कृती करें।

सुनो तो जरा

(1) 26/11 के आतंकी हमले को मुंबईवासी ही नहीं बल्कि दुनिया भी भुला नहीं सकती। इसी आतंकी हमले में शहीद हुए ब्लैक कमांडो के मेजर संदीप

उन्नीकृष्णन। अपनी छोटी सी जिंदगी में उन्होंने ऐसी वीरता का परिचय दिया कि देशवासियों के दिलों में बस गए।

इनका जन्म 15 मार्च 1977 को बैंगलोर में स्थित नायर परिवार में हुआ। इनका मूल गाँव चेरुवनूर, केरल में स्थित है। परंतु इनके पिताजी सेवानिवृत्त होने के बाद बैंगलोर में बस गए। आई.एस.आर.ओ. अधिकारी के. उन्नीकृष्णन और धनलक्ष्मी उन्नीकृष्णन के संदीप इकलौते पुत्र थे।

इनकी शिक्षा फ्रेंक एंथोनी पब्लिक स्कूल, बैंगलोर में हुई। 1995 में उन्होंने विज्ञान की स्नातक उपाधि प्राप्त की और फिर वे एन्.डी.ए. में शामिल हो गए। 12 जुलाई 1999 को उन्हें बिहार रेजिमेंट में लेफ्टिनेंट के पद पर नियुक्त किया गया। हमले और चुनौतियों का सफर वहाँ से शुरू हो गया। वे एक ऐसे लोकप्रिय अधिकारी थे जिन्हें उनके वरिष्ठ और कनिष्ठ दोनों पसंद करते थे। सेना के सबसे कठिन कोर्स ‘घातक कोर्स’ में वे अव्वल रहे। बहादुरी के उनके जजबे को देखकर ही उन्हें एन.एस.जी. कमांडो सेवा के लिए चुना गया। जुलाई 1999 में ऑपरेशन विजय के दौरान उन्होंने अपनी वीरता का परिचय दिया।

26 नवंबर 2008 की रात ताज होटल के ऑपरेशन में वे टीम कमांडर थे। 10 कमांडो के एक समूह के साथ उन्होंने होटल में प्रवेश किया और होटल की छठी मंजिल पर पहुँचे। तीसरी मंजिल पर आतंकवादियों को पाकर उन्होंने उनसे कड़ा मुकाबला किया। उनके प्रमुख सहयोगी सुनील यादव इस मुठभेड़ में घायल हुए। आतंकवादियों से भयंकर मुठभेड़ करते हुए उन्होंने सुनील यादव को इलाज के लिए बाहर निकालने की व्यवस्था की। अपनी सुरक्षा को ताक पर रखकर आतंकवादियों का पीछा किया। आतंकवादियों की एक गोली पीछे से लगी और वे गंभीर रूप से घायल हुए। अंत में 28 नवंबर 2008 को उनकी मृत्यु हो गई। पूरे सैनिक सम्मान के साथ बैंगलोर में उनके अंतिम संस्कार किए गए। उनकी बहादुरी के लिए 26 जनवरी 2009 को उन्हें मरणोपरांत ‘अशोक चक्र’ से सम्मानित किया गया।

(2) विद्यार्थी स्वयं करें।