

**Assignment: IA1**

**SUBJECT: ENGLISH**

**CHAPTER NO. 1: "HOW TEACHERS LEARN"**

**Q1. Who was Nora? How did she become a friend of the teacher?**

Ans. Nora was five years old girl. The teacher often visited her family over a weekend. Nora would come to him with a book and he would help her read it. It was through these visits, they became friends.

**Q2. How did the teacher observe Nora while learning?**

Ans. The teacher observed Nora silently. Only when Nora seemed badly stuck, he said anything. Even then he didn't tell her the word, only suggested how she might figure it out. If she still couldn't get the word, he told her to skip it and go ahead.

**Q3. What odd thing happened with Nora? Why was the teacher puzzled?**

Ans. While Nora was reading, an odd thing happened to her. She misread a word that previously she had read correctly. This made the teacher annoyed and puzzled because she had read the same word correctly earlier.

**Q4. Was Nora a careless child? How do you know?**

Ans. No, Nora was not a careless child because she was very motivated to learn as she came voluntarily to the teacher to help her in learning.

**Q5. How should a teacher understand the problems of the children?**

Ans. To understand the learning problems of the children, we must try to see things through their eyes. For a child who has just only seen the word for the first time, it is not easy but difficult to remember the word. A teacher should give them a plenty of time to learn and should not be surprised or upset by what looks like slowness, or stupid mistakes.

**Q6. What experience popped into the teacher's mind after Nora's learning problem?**

Ans. One day the teacher took a sheet of printing written in some Indian language. He tried to find the words that occurred most often on the page. At first the page looked like a jumble of strange shapes. It took him a long time before he could recognize some short, common words as he would go right by it without noticing it.

**Q7. Why are children of unlettered homes at a disadvantage?**

Ans. Children of unlettered homes do not have the familiarity with the shapes of words and letters from the beginning of their learning. Since there is no one to watch and observe them, they are at a disadvantage.

**Q8. How did the teacher learn from Nora?**

Ans. By observing Nora, the teacher learned about the learning problems faced by the children. From that experience, he learned that a teacher should not get annoyed with a child if he/she could not understand anything. He should give the child a plenty of time to learn and understand.

## POEM

### “A NATION’S STRENGTH”

**SUMMARY:** This beautiful poem has been written by an American poet, ‘Ralph Waldo Emerson’. In this poem, the poet has revealed the secret that how we can make a nation strong and defy the enemies that surround it from all sides. The poet is of the view that it is the people of a nation and not its wealth or military prowess that make a nation strong. A nation that depends on an army to keep it strong goes to dogs one day. Its empire becomes a thing of past. The blood of its soldiers turns its stone to rust and its glory decays.

The poet believes that wealth can’t make a nation strong. Men who can stand fast for the sake of truth and honour, and who can suffer hardship for their nation, can make their nation strong and great.

In the last stanza, the poet describes the characteristics of brave people. He says that the secret of a nation’s greatness are indeed those heroes who work hard while others waste their time in enjoying comfortable sleep. They face all the challenges of life bravely and courageously. Only these brave men can build their nation on fast and sure foundations of virtue and take it to the highest point of greatness and glory.

### ANSWER THE FOLLOWING QUESTIONS:

**Q1. In the first stanza, the poet wonders about certain things. What are they?**

Ans. In the first stanza, the poet wonders about what makes a nation’s pillars high and its foundation strong, what makes it strong enough to defy the enemies that surround it from all sides.

**Q2. What are the foundations of a strong kingdom built on?**

Ans. The foundations of a strong kingdom are built on the greatness and toughness of its people who can work hard for their nation. It is built on their honesty, courage and truthfulness.

**Q3. What happens to a nation which depends on an army to keep it strong?**

Ans. The nation that depends on an army to keep it strong goes to dogs one day. Its empire becomes a thing of past. The blood of soldiers turns its stones to rust and its glory decays.

**Q4. When a nation becomes proud, what does God do?**

Ans. When a nation becomes proud, God diminishes the luster of its crown and turns it into ashes with one stroke.

**Q5. Do you think that wealth can make a nation great and strong? Why?**

Ans. Wealth certainly cannot make a nation great and strong. It is only men who can make a nation great and strong. Men who can stand fast for the sake of truth and honour, and who can suffer hardships for their nation can make their nation prosperous and strong.

**Q7. What can the brave men do?**

Ans. Brave men can work hard for their nation, while others sleep. They are daring people who face all the challenges and problems of life manfully. They lay the foundation of their nation very deep and lift the nation to the heights of skies.

**Q8. Explain the following lines:**

*‘they build a nation’s pillars deep  
And lift them to the sky.’*

Ans. In these lines, the poet describes the characteristics of brave people. He says that the secret of a nation’s greatness are indeed those heroes who work hard while others waste their

time in enjoying comfortable sleep. They face all the challenges of life bravely and courageously. Only these brave men can build their nation on fast and sure foundations of virtue and take it to the highest point of greatness and glory.

## **SHORT STORY**

### **THE UNTHANKFUL MAN**

**Q1. What was Raman's wife fed up with?**

Ans. Raman's wife was fed up with their poverty.

**Q2. What did Raman see when he peeped into the well?**

Ans. Raman saw a tiger, a monkey, a snake and a goldsmith in the well.

**Q3. Why was Raman scared of the snake?**

Ans. Raman was scared of the snake because he feared that if he pulled the snake out of the well, the snake might bite him and he would die.

**Q4. What did the monkey do when Raman was hungry?**

Ans. The monkey brought sweet and juicy mangoes from the tree and gave them to Raman.

**Q5. What did the tiger gave him?**

Ans. The tiger gave Raman a necklace.

**Q6. What did the goldsmith do when Raman showed him the necklace?**

Ans. The goldsmith told Raman to wait for him at the shop and he himself went to the king to complain against Raman.

**Q7. How did Raman cure the queen?**

Ans. Raman cured the queen of the snake bite by touching her forehead.

**Q8. Why did the king send the goldsmith to jail?**

Ans. The goldsmith had framed wrong charges against innocent Raman who had once saved his life. So, the king sends the goldsmith to jail.

## **MESSAGE WRITING**

Messages are the small units of writing. They are used to give information to someone. They are normally written to people with whom we are in regular contact e.g; family members, neighbours, colleagues, etc.

### **FORMAT OF A MESSAGE:**

- ~Omit address.
- ~Write the time, day and date on the top
- ~use brief salutation (dear/ Mr.)
- ~Emphasize important parts by using capitals or underlining
- ~Complete sentences are not necessary
- ~Do mention from whom or when the message was received
- ~Do not include any additional information
- ~End with your name

**MESSAGE BASED ON THE TELEPHONIC CONVERSATION:**

- Given below is a telephonic conversation between Ahmed and his mother Mrs. Shabnum Khan. Write out a message of about 25 words based on the following telephonic conversation.

**Ahmed:** Hello! Mom, how are you doing?

**Mother:** Ahmed, I've to attend an important seminar at the Grand Hotel at 5p.m. in the evening. As it'll end only by 7:30 pm. I'll be late home, so I thought I should inform you all. Please tell Didi or else she will worry.

**Ahmed:** I will, Mom, but as I have my tuitions at 4p.m. I think I'll leave a message for her.

**Mother:** Do that, dear. Bye.

**Ahmed:** Bye, Mom.

Given below is the message which Ahmed left for his elder sister because he had to leave for his coaching classes.

You are Shayan and you had borrowed a book from your friend Sarah the previous week. You went to her house to return it, but she was not there. Write a message informing her that you are returning her book and that you thoroughly enjoyed reading it. You would also like to know if she has more books by the same author.

03 Nov, 2019            3:15 pm  
Wednesday

Message

Alia Di,

Mom called from the office to say she would be back only after 7:30 p.m. today as she has to attend a seminar at 5 p.m. Please inform Dad as well.

Ahmed

04 Nov, 2019            10:00 am  
Thursday

Message

Sarah,

I had come to your house to return your book which I had borrowed from you, but you were not there. I am leaving the book on your table. I enjoyed the book a lot. It was really an interesting book. If you have some titles of the same author, kindly let me know. I would really love to read them.

Shayan

**PARAGRAPH WRITING**

The word 'Paragraph' comes from two Greek words: "para" which means beside and "graphin" which means to write. It is an essay in a capsule form, a group of sentences, so arranged as to have unity of thought and it deals with a single idea. All the sentences deal with one topic and are linked with one another in such a way as to explain and amplify the

central theme.

In order to write a good paragraph, always:

- ~ Think about the topic or the given idea.
- ~ Start with a sentence which would straightaway express the main theme.
- ~ To avoid sameness and monotony, students should use a variety of expressions.
- ~ Make use of contrast to heighten the effect.
- ~ Do not subdivide the paragraph.
- ~ End the paragraph with a striking sentence so that the reader does not lose sight of the main theme of the topic.

### **PARAGRAPH ON “THE VALUE OF PUNCTUALITY”**

Punctuality and discipline are the surest qualities of the character, because our character is the result of our conduct. It is said that very few people observe punctuality in their day to day activities. This has become a part of our national culture. No function, no meeting and no office work ever starts in time. People have to wait for hours and decision-taking is put off again and again; files gather dust on the table. It has become a trend to keep others waiting. Punctuality means arriving at the appointed time. Whatever we do, time factor plays a significant role. Time is a tyrant. It does not wait for anybody. The hands of the clock move on steadily. Either we keep pace with it or are left behind to repent. Time is precious. We can't afford to lose it.

Punctuality is the matter of habit and training. It is essential for efficiency in any profession or in any business. Slackness is the thief of time and also of our happiness. If you are to post a letter or to keep an engagement, or reach your school or office, your punctuality will bring rich rewards. You will command respect and good will. You will never be in a mad haste which often results in accidents. One who keeps time is never short of time. He alone has ample leisure to do extra work. Only the idlers invent the excuse that they couldn't find time to do a thing.

## **SUBJECT: SOCIAL SCIENCE**

### **(History)**

#### **HOW, WHEN & WHERE**

##### **Q1 State whether true or false**

- a) James Mill divided Indian history into three periods- Hindu, Muslim, and Christian. *False*
- b) Official documents help us to understand what the people of the country think. *False*
- c) The British thought surveys were important for effective administration. *True*

#### **ANSWER THE FOLLOWING QUESTIONS.**

##### **Q2. What is the problem with the periodization of Indian history that James Mill offers?**

Ans. James Mill divided the period of Indian history on communal lines i.e. Hindu, Muslim and British. According to Mill, before the British came to India, Hindu and Muslim “despots” ruled the country. Religious intolerance, caste taboos and superstitious practices dominated social life. He thought that Asian societies were at a lower level of civilization than Europe. He wanted to give all the credit to the Europeans for development and progress made by the Indians only to the colonial rule. To refer to any period as “Hindu” or “Muslim” does not seem sound as a variety of faiths existed simultaneously in these periods.

##### **Q3. Why did the British preserve the official documents?**

Ans. Official documents are one of the important sources of the British period. The British believed that the act of writing was important. Every instruction, plan, policy decision, agreement, investigation had to be clearly written up, because with a written document, things could be properly studied and debated. That’s why they set up record rooms attached to all administrative institutions. Archives and museums were established to preserve important records.

##### **Q4. How will the information historians get from old newspapers be different from that found in police reports?**

Ans. The information historians get from old newspapers can be different from the police reports because of the following reasons:

1. Police reports reflect the thoughts, interests and wishes of the government whereas the newspapers reflect the thoughts, interests and wishes of the public.
2. Police reports can be filled with bias whereas newspapers being more public oriented give more coverage to the people.

#### **FROM TRADE TO TERRITORY**

##### **Q. European trade companies came to India. Why?**

**OR**

##### **What attracted European trading companies to India?**

**Answer:** There was a great demand of Indian fine quality silk and cotton in European countries. Indian spices like Pepper, Clovis, Cardamom and Cinnamon too were in great demand. These things were easily available in India at low prices. European traders could sell it at higher prices in Europe. Thus, the European traders came to India to gain profit.

**Q. What were the areas of conflict between Bengal Nawabs and East India Company?**

**Answer:** The conflict between the Bengal Nawabs and East India Company intensified in the early 18<sup>th</sup> century. The Nawabs of Bengal (Murshid Quali Khan, Alivardi Khan and Siraj-udaulah) were string rulers.

- They refused to grant the company concessions and demanded large tributes to the company's right to trade.
- They denied the company any right to mint coins and stopped the company from extended its fortifications.
- Accusing the company of deceit, they claimed that the company was depriving the Bengal Government of huge amounts of revenue and undermining the authority of the Nawabs.
- The company on its part, that the unjust demands of the local officials were ruining their trade. To expand their trade, they had to rebuild their forts.

**Q. Explain the system of Subsidiary alliance.**

**Answer:** As per this alliance, Indian rulers were not allowed to have their independent armed forces. They were to be protected by the company. They had to pay for the subsidiary forces that the company was supposed to maintain for the purpose of protection. If the Indian rulers failed to make the payment, then the part of their territory was taken away as penalty. Some territories of Awadh and Hyderabad were taken as they failed to pay for the Subsidiary forces.

**Q. How did the assumption of Diwani benefit the East Indian Company?**

**Answer:** In 1765, the Mughal Emperor appointed the East India Company as the Diwani of Bengal. The Diwani allowed the company to use the vast revenue resources of Bengal. This solved a major problem of the company. From the early 18<sup>th</sup> century, the trade with India has expanded. But it has to buy most of the goods in India with gold and silver imported from Britain. This was because at that time Britain had no goods to sell in India.

The outflow of gold from Britain slowed after the Battle of Plessey and entirely stopped after the assumption of Diwani. Now, revenue could be used to purchase cotton and silk textiles in India. Maintain company troops and meet the cost of building the company fort and offices in Calcutta.

**Q. In what way was the administration of the company different from that of Indian rulers?**

**Answer:** The administration the country was different from that of Indian rulers in the following ways:

- Indian rulers divided its administrative units as district paragons and tehsils. It also divides its units as presidencies. There were three presidencies Bengal, Madras and Bombay.
- Each presidency was ruled by a Governor. Districts were ruled by the Collectors.
- The supreme head of the administration of the company was Governor-General. In India, the head of the administration was king.
- The main role of Collector in Indian district was to collect revenue & taxes and maintain law and order in his districts with the help of Judges, Police officers and Darogas. He became the new centre of power during the British Raj.

**Q. Describe the changes that occurred in the composition of the Company's army.**

**Answer:** The changes that occurred in the composition of the Company's army are as follows:

- Before Colonisation, the Mughal army was mainly composed of Cavalry i.e. trained soldiers on horsebacks or sawars and the infantry and pedal (foot) soldiers.
- In the early 19<sup>th</sup> century, the British began to develop a uniform military culture. The soldiers were given a European – style training. Drill and discipline were introduced which regulated their life more than before.
- After the battles with the Marathas and the Mysore rulers, the company released the importance of strengthening its cavalry force.

**Q. After the British conquest of Bengal, Calcutta grew from a small village to a big city. Find out about the culture, architecture and the life of Europeans and Indians of the city during the Colonial period.**

**Answer:** Calcutta was a Colonial city developed by the British East India Company and then by British Empire. It was the capital of British Indian Empire until the capital was relocated to Delhi. It grew rapidly in the 19<sup>th</sup> century to become the second city of the British Empire. In 1772, Calcutta became the capital of British India, the decision made by Governor-General **Warren Hastings**. Calcutta underwent rapid industrial from the 1850's. Many architecturally famous buildings or monuments were built by the British.

Calcutta became the "**Cultural Capital of India**". The contribution of Bengal Renaissance on the national moment of independence was immense. Surendranath Banerji, Womish Chunder Banerji, Sri Aurobindo, Bipin Chandra Pal, Swami Vivekananda, Bakin Chandra Chattopadhyay, Rabndernath Tagore were some prominent figures of Bengal.

### **MULTIPLE CHOICE QUESTIONS**

1. Who discovered the sea route to India in 1498?

- a) Robert Clive                      b) Vasco da Gama                      c) Columbus                      d) None

**Answer:** **Vasco da Gama**

2. Nawab Siraju-daullah was the ruler of:

- a) Bihar                      b) Bengal                      c) Awadh                      d) Mysore

**Answer:** **Bengal**

3. The first English factory was set up in the year

- a) 1651                      b) 1600                      c) 1630                      d) 1665

**Answer:** **1651**

4. Tipu Sultan stopped trade through its kingdom in

- a) 1764                      b) 1785                      c) 1740                      d) 1786

**Answer:** **1785**

5. Name of the ruler who gave permission to the East Indian Company to establish trade relations with the East.

- a) Henry                      b) Henry VI  
c) Queen Elizabeth II                      d) Queen Elizabeth I

**Answer:** **Queen Elizabeth I**



6. Rani Channamma was the ruler of

- a) Bengal    b) Kitoor    c) Agra    d) Delhi

**Answer: Kitoor**

7. Which of the following was not the presidency

- a) Bengal    b) Madras    c) Pune    d) Bombay

**Answer: Pune**

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**(Geography)**  
**RESOURCES**

**Q. Why are resources distributed unequally over the earth?**

Ans: Resources are distributed unequally over the earth due to uneven distribution of various physical and cultural factors like

- Variation in climate, terrain, altitude from region to region.
- Variation in level of technology for exploration and development of different resources.

**Q. What is resource conservation?**

Ans: Wise and judicious use of resources is called resource conservation. Resource conservation ensures proper utilization of resources for our development and reduces wastage of resources.

**Q. Why are human resources important?**

Ans: Human resources refer to quantity and quality of people. Human resources are important because it is the efficiency skill, technique and knowledge of humans which help in creating various cultural resources, technology and modify various natural resources to meet our needs and demands. The value and quality of certain commodities is enhanced by humans so, humans as resources are very important.

**Q. What is sustainable development?**

Ans: Sustainable development can be defined as the “development that meets the needs of the present generation without neglecting the prospectus of future generation and quality of environment. The main focus of sustainable development is on,

- a) Satisfying the demands of present generation.
- b) Preserving resource for future generations.
- c) Maintaining the quality of environment.

**Differentiate between:**

a) Actual resources and Potential resources

Actual resources

Potential resources

1. Those resources whose quantity is known to us.
2. These resources are being used at present.
3. They fulfill needs of present generation. Example, petrol, coal.

b) Ubiquitous and Localized resources

b) Ubiquitous

Localized

1. There are found everywhere on earth is more or less quantity, example, air, soil.
1. They are not found everywhere on earth, copper, gold.

**Q. Define resource:-**

Ans: Anything which fulfills our needs and demands is called resource.

**Q. What are important features of resources?**

- Resources have utility
- They have value
- They are important for our development.
- They are unevenly distributed.
- They are limited in nature.

**Q. What are important factors which turn a commodity into resource?**

Ans: **Time:-** Time is an important factor which turns a particular commodity into resource e.g. nuclear elements were not resources 500 years ago, but today they are important sources of energy, so it varies from time to time.

**Technology: -** Technology increases the use and exploration of any commodity. Increase in technology can reduce wastage of resources. So with the help of technology we can create more and more resources.

**ADDITIONAL QUESTIONS**

**Define the following:-**

- Natural Resources:** - The gifts of nature are called natural resources. They are vital for our development, e.g. air, mountain, land etc.
- Man-Made Resources:** - The resources created by man are called man-made resources. They are created with the help of natural resources, e.g. bus, chair, aeroplanes, etc.
- Biotic Resources:-** Those resources whose origin lies in living things., e.g. coal, petroleum, etc.
- Abiotic Resources:** - Those resources whose origin lies in non-living things, e.g. gold, copper.
- Renewable Resources:** - Those resources which can be replenished back in nature e.g. water, plastic.
- Non-Renewable Resources:** - Those resources which cannot be used again and again.

**Q#2 What are the important factors which turn a commodity into a resource?**

Ans. The different factors which turn a commodity into a resource are:-

- |                      |                                      |
|----------------------|--------------------------------------|
| 1. Time              | 2. Technology                        |
| 3. Needs and demands | 4. Location of a particular resource |

**Q#3 What are important steps of resource conservation?**

Ans. The steps to conserve resources are:-

- |                            |                        |
|----------------------------|------------------------|
| i) By recycling            | ii) Using alternatives |
| iii) Increasing technology | iv) Awareness          |

**Q#4 What is human resource development?**

Ans. Improving the quality and skill of people so that they are able to create more resources is known as human resource development.

**Q#5 What are the different factors on the basis of which resources are classified?**

Ans. The factors on the basis of which resources are classified are:-

- Nature i.e. cultural or man-made resources.
- Origin i.e. biotic or abiotic resources.



- iii) Utility i.e. actual or potential resources.
- iv) Renewability i.e. renewable or non-renewable resources.
- v) Distribution i.e. ubiquitous or localized.

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**(Civics)**

**THE INDIAN CONSTITUTION**

**EXERCISES**

**Q1. Why does a democratic country need a constitution?**

**Ans.** Most of the democratic countries have a constitution. The constitution serves several purposes.

- 1) A constitution helps to serve as a set of rules and principles that all persons in a country can agree upon as the basis of the way in which they want the country to be governed.
- 2) The important purpose of the constitution is to define the political system of a country. It also defines the powers and functions of the government.
- 3) It lays down limits on the powers of the government and tells us what the rights of the citizen are; and expresses the aspirations of the people about creating a good society.
- 4) The constitution ensures a dominant group does not misuse its power against minorities or less powerful groups.

**Q2. Look at the wordings of the two documents given below. The first column is from the 1990 Nepal constitution. The second column is from the more recent constitution of Nepal.**

| <b>1990: Constitution of Nepal</b>   | <b>2015: Constitution of Nepal</b>  |
|--|---|
| <b>Part 7: Executive</b>   | <b>Part 7: Federal Executive</b>  |
| <b>Article 35: Executive Power: The executive power of the kingdom of Nepal shall be vested in His Majesty and the council of Ministers.</b> | <b>Article 75: Executive Power: The executive power of Nepal shall, pursuant to this constitution and laws be vested in the council of Ministers.</b> |

**What is the difference in who exercises ‘Executive Power’ in the above two constitutions of Nepal?**

**Ans:** The constitution of 1990 reflected the fact that the final authority rests with the king and his council of ministers; while the constitution of 2015 emphasizes rule of law and supremacy of the constitution. It reflects that Nepal has moved from monarchy to democracy.

**Q3. What would happen if there were no restrictions on the power of elected representatives?**

**Ans:** In a democracy, we choose our leaders so that they can exercise power responsibly on our behalf. However, there is always the possibility that these elected representatives might misuse their authority and it can result in gross injustice. The elected representatives may resort to favouritism, indulge in corrupt practices and will promote vote bank politics and discrimination of people on the basis of caste, colour or religion.

**Q4. In each of the following situations, identify the minority. Write one reason why you think it is important to respect the views of the minority in each of these situations.**

a) In a school with 30 teachers, 20 of them are male.

Ans. Females are in minority. It is important to take the views of female teachers into consideration, as it will lead to the overall improvement in the teaching learning process.

b) In a city, 5 percent of the population is Buddhists.

Ans: Buddhists are in minority. Their voice needs to be heard, so far as their issues related to religious places and festivals are concerned.

c) In a factory mess for all employees, 80 percent are vegetarians.

Ans: Non vegetarians are in minority. They need to be heard, so that their issues related to the menu are sorted out.

d) In a class of 50 students, 40 belong to more well-off families.

Ans: Poor students are in minority. Their views should be taken seriously so that they don't face discrimination or other problems in the school.

**Q5. The column on the left lists some of the key features of the Indian constitution. In the other column write two sentences, in your own words, on why you think this feature is important.**

| Key Feature                      | Significance  |
|----------------------------------|---|
| Federalism                       | It leads to the balance of power between centre and the states and helps in accommodating diversities.  |
| Separation of powers             | Through this, each organ i.e. Executive, Legislature and Judiciary acts as a check on the other organs of government and it ensures the balance of power.       |
| Fundamental Rights               | They are an important basic feature of India's constitution, as they guarantee the rights of individual against the state as well as against other individuals. |
| Parliamentary form of government | This means that the people of India have a direct role in electing their representatives and these representatives are accountable to the people.               |

**Q6. Write down the names of the Indian states which share borders with the following neighbouring nations.**

|               |  |
|---------------|--|
| a) Bangladesh | West Bengal, Assam, Meghalaya, Tripura, Mizoram        |
| b) Bhutan     | Arunachal Pradesh, Assam, West Bengal, Sikkim          |
| c) Nepal      | Uttar Pradesh, Uttarakhand, Sikkim, West Bengal, Bihar |

### **UNDERSTANDING SECULARISM**

**Q2. Will the government intervene if some religious group says that their religion allows them to practise infanticide? Give reasons for your answer.**

**Ans:** The government in any democratic nation would intervene if some religious group says that their religion allows them to practice infanticide because this tradition goes against the Fundamental Right to Life. It involves the killing of an innocent and is, hence, unacceptable. The government, in this case, interferes by coercion. However, sometimes, the government may also intervene via support. For example, Sikhs in Delhi are excused from wearing helmets on two-wheelers because their religion demands them to wear a turban-a sacred tradition for them.

**Q3. Complete the following table:**

| Objective  | Why is this important? | Example of a violation of this objective |
|--|------------------------|--|
| One religious community does not dominate another.   |                        |  |
| The State does not enforce any particular religion nor take away the religious freedom of individuals. |                        |  |
| That some members do not dominate other members of the same religious community.                       |                        |  |

**Ans:**

(a) This is important to protect the Fundamental Right to Freedom of Religion. Example of violation: the demolition of the Babri Masjid in Ayodhya on 6th December, 1992 by Hindu nationalists.

This is important to uphold the ideals of a democratic nation which allows its citizens freedom to choose whichever religion they wish to follow.

Example: France, in February 2004, banned headscarves and turbans in public places, thereby hurting the sentiments of Muslim and Sikh minorities.

(b) This is necessary to uphold individual freedom in the light of pressure from a group or religious community that one belongs to.

Example, the Christian community is divided into Protestants and Catholics; Irish Catholics are looked down upon and troubled by the officials of the Church of England who are predominantly Protestants.

**Q4. Look up the annual calendar of holidays of your school. How many of them pertain to different religions? What does this indicate?**

**Ans:** Many holidays on a school's annual calendar pertain to different religions. This indicates that India is a secular country where religious freedom is granted to its citizens and all religions are equally respected.

**Q5. Find out some examples of different views within the same religion.**

**Ans:** Among Muslims, many people believe in 'Parda system', whereas many do not approve of it & see it as interference in the freedom of women.

**Q6. The Indian State both keeps away from religion as well as intervenes in religion. This idea can be quite confusing. Discuss this once again in class using examples from the chapter as well as those that you might have come up with.**

**Ans:**

- The Indian State distances itself from the religion and it is not ruled by a religious group & nor does it support any one religion.
- Equal respect is given to all the religions. In order to prevent domination by one particular community, the state may interfere in the religion.
- State may interfere in the religion to ensure that all the religions are treated equally.
- Sometimes, the State may have to intervene in the religion based on 'personal laws' of the communities to ensure that laws relating to equal inheritance are protected.

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**Q7. This poster alongside highlights the need for 'Peace'. It says, "Peace is a never-ending process... It cannot ignore our differences or overlook our common interests." Write in your own words what you think the above sentences are trying to convey? How does it relate to the need for religious tolerance?**

**This chapter had three drawings on religious tolerance made by students of our age. Design your own poster on religious tolerance for your peers.**

**Ans:** 'Peace is a never-ending process. It cannot ignore our differences or overlook our common interests.'

The above sentences say that for all the communities to stay together, it is very important that each religious community should respect the other, their interests & their religious practices. We should not feel bound by any law that we need to respect the other religion, whereas, we should work towards decreasing the differences amongst religious communities & work towards bringing peace in the society as a civilized society. Only then, we will be able to enjoy the co-existence of different religions in the society.

## **SUBJECT: SCIENCE**

### **CHAPTER: MICROORGANISMS - FRIEND & FOE**

#### **Introduction:**

The term micro means extremely small. A living organism that is very minute to be seen by the naked eye, especially a single celled organism such as bacterium is called micro-organism.

Micro-organisms are found in air ,soil, and water bodies (ponds, lakes, rivers ,etc.) and can survive in almost all kinds of environment (ice-cold water ; saline water ; hot springs , etc.) they also occur in dead and decomposed organic matter (plant and animals) and are present even inside the human body and other animals (living as parasites or individually)

#### **Types of micro-organisms**

These are classified into *five* major groups. These groups are:

##### **Bacteria: (sing: bacterium)**

These are very small, single celled micro-organisms which have cell wall but don't possess organized nucleus and other structures.

Bacteria are found in large numbers in air, soil and water.(even inside or outside human or animal body). Bacteria feed, move, respire as well as reproduce on their own.

The *three* main groups of bacteria on the basis of shape are:

Spherical bacteria, rod shaped bacteria and spiral bacteria.

Examples of some important Bacteria are:

- Lactobacillus bacteria (help in curd formation)
- Rhizobium bacteria (help in nitrogen fixation)

Human diseases caused by bacteria are:

- ❖ tuberculosis
- ❖ cholera
- ❖ typhoid

#### **VIRUS**

These are smallest micro-organisms which can develop only inside the cells of host (plant, animal or bacterium). Viruses don't show most of the characteristics of living things. (i.e. don't feed; grow or excrete) on their own.

Viruses being smaller than bacteria can reproduce and multiply only inside the host cell i.e.as long as viruses are outside the body they act as nonliving things, but as they enter into living cells of host ,they behave as living beings and begin process of reproduction .

Viruses are agents of various diseases like

- polio
- chicken pox
- small pox

Diseases caused by viruses can't be treated by antibiotics.

##### **Protozoa (sing: protozoan)**

These are group of single celled micro-organisms which are classified as animals.

They are found in dirty water drains, damp soil, lakes, etc. The common examples include: amoeba; paramecium; plasmodium; etc. . . Entamoeba is a protozoan which causes amoebic

dysentery and plasmodium (malarial parasite ) causes malaria in humans.

### **Algae (sing: alga)**

Algae is a group of simple, plant like organisms, containing chlorophyll for process of photosynthesis. These however differ from plants as they don't have proper stem, roots or leaves.

Examples of algae:

- chlamydomonas, and
- Diatoms are single celled algae.

Spirogyra and blue green algae (having ability to fix nitrogen) are multicellular algae.

### **Fungi: (sing. Fungus)**

These are large group of organisms which don't contain chlorophyll.

They need moist and warm conditions to grow. Most of the fungi are saprophytes which feed on dead plants and animals. Some fungi act as parasites & cause diseases.

The common examples of fungi include:

- Rhizopus (bread mould ) ,
- Pencillium
- Mushrooms

All fungi (except yeast) are made of fine threads called hyphae.

Human diseases caused by fungi are:

- Ringworm
- Athlete's foot

### **Beneficial micro-organisms:**

Some of the valuable uses of micro-organisms are listed as under:

#### ***Making of curd:***

Milk is turned into curd by bacteria. Milk contains a sugar called lactose. Lactobacillus bacteria convert lactose sugar into lactic acid .This lactic acid then converts milk into curd.

#### ***Making of bread:***

When yeast is mixed in dough for making bread, the yeast reproduces rapidly and gives out CO<sub>2</sub> gas during respiration. The bubbles of CO<sub>2</sub> gas fill the dough & increase its volume, thereby making bread light, soft & spongy. Yeast is also used in making pastries & cakes.

#### ***Production of wine, vinegar etc.***

Yeast is used for large scale production of alcohol which is then used as active ingredient in wine, beer, whisky etc.

Yeast is also capable of converting sugar into alcohol and CO<sub>2</sub>. The sugar for making alcohol comes from substances such as cane juice; rice ; maize ; etc. This process of conversion of sugar into alcohol by yeast is called fermentation.

#### ***Increase in soil fertility:***

Some bacteria and blue green algae are able to fix nitrogen gas from atmosphere to enrich the soil with nitrogen compounds to increase soil fertility. These microbes are commonly called biological nitrogen fixers.

Microorganisms also help in the decomposition of waste, converting it into manure and thereby help in keeping environment clean.

### **Medicinal uses of bacteria:**

- ***Antibiotics:***

A medicine which kills or stops the growth of pathogens is called antibiotic, synthesized from micro-organisms.

Antibiotics are effective in curing diseases caused by bacteria and fungi, though not effective

in case of viruses.

Some of the common antibiotics made from bacteria and fungi are:

- ❖ Penicillin
- ❖ Erythromycin
- ❖ Tetracycline

The first antibiotic *penicillin* is discovered by *Alexander Fleming* was extracted from a tiny fungus called *Penicillium* to control bacterial and fungal infections.

- **VACCINES**

Microorganisms are also used to make Vaccines.

The process of giving vaccines orally or by injection to provide protection against specific diseases is called **vaccination**.

A vaccine contains the dead or attenuated Micro-organisms, which are introduced in the healthy body, against which Antibodies ( in Blood) are produced for elimination.

This helps body's immune system to develop memory against the pathogen and thereby will develop strong immunity.

The diseases which can be prevented by Vaccination are:

- Hepatitis
- Polio
- TB
- Small pox

### **HARMFUL MICRO-ORGANISMS**

The disease causing micro-organisms such as bacteria, viruses or fungi are called as **Pathogens**. Pathogens enter our body through air, water, food or physical contact with infected person.

The Microbial diseases which can spread from an infected person to healthy person are called as Communicable diseases.

Some examples of communicable diseases are:

- ❖ Chicken pox
- ❖ TB
- ❖ Cholera
- ❖ AIDS

The communicable disease spread through following ways:

- By Breathing of air containing microbes.
- By taking contaminated food or water(e.g. *Cholera* )
- Through insect bites.(e.g. *Malaria* )
- By sharing infected injection needles. (e.g; *AIDS*)
- By physical contact with infected person.(or by using articles or utensils of infected person )

### **Prevention of communicable diseases:**

Following steps should be taken into consideration for preventing spread of communicable diseases:

- We should make sure that only disposable syringes and needles are used to give injections



- We should avoid physical contact with infected persons and his/her articles should be washed properly.
- We should protect ourselves from mosquito bites by using mosquito repellent creams, fine wire mesh on doors and windows, by using mosquito nets etc.
- We should keep our food covered to protect it from getting infected by flies.
- Clean food and water must be consumed.

### **AGENTS OR CARRIERS OF DISEASES**

The insect or animal which transmits pathogens to humans is called a Carrier.

The two most common carriers of disease causing micro-organisms are:

House fly and Mosquito

#### ***Housefly:***

The housefly feed on animal excreta, dead organic matter and exposed human food, laying eggs on filth & refuse. The body and legs of housefly bear fine hair. When housefly sits on garbage dumps, many pathogens stick to hairy body and legs. These pathogens are transferred to food, thereby contaminating food. On consuming this food these pathogens enter into human body and cause various diseases such as Tuberculosis; cholera, typhoid, etc.

#### ***Preventive Measures:***

- The garbage should be disposed off in garbage bins which should be covered.
- The flies should be killed by using insecticides and baits.
- We should avoid consumption of contaminated food and water.
- The food should always be kept covered.

#### ***Mosquitoes***

Mosquito acts as a carrier of pathogens by carrying them inside its body & spreads diseases from one person to another. Mosquitoes breed in stagnant water, dirty drains, ditches etc.

The most common disease spread by a female mosquito (anopheles) is malaria. It acts as a parasite, living on blood of host organism. When female Anopheles mosquito bites a person suffering from malaria diseases, it sucks the blood of that person which contains a malarial parasite –plasmodium.

When the infected Anopheles mosquito bites a healthy person to suck his blood, it transfers plasmodium into his blood stream along with saliva and as a result the healthy person also gets infected.

#### ***Preventive measures:***

- Oil should be sprayed on the surface of water in dirty water drains to kill larvae of mosquitoes.
- Insecticides should be sprayed in houses periodically to kill mosquitoes.
- The windows and doors of houses should have fine wire mesh to prevent entry of mosquitoes.
- Pools of stagnant water around houses should be drained so that mosquitoes get no place for breeding.

### **PATHOGENS IN ANIMALS**

Pathogens cause diseases in animals e.g. cow, sheep, buffalo etc.

Some of the examples of diseases caused in animals are:

**ANTHRAX:** it is a dangerous disease of cattle caused by bacterium called Bacillus anthracis.

**ASPERGILLOSIS:** it is a dangerous disease of poultry birds caused by fungus called Aspergillus including sinusitis & keratitis in birds.

Foot & mouth diseases in cattles are caused by a virus called picorina virus. The cattle suffering from this disease get blisters on feet and mouth.

### **PATHOGENS IN PLANTS**

Pathogens also cause disease in plants like wheat; rice; apple; sugar cane etc.

Some examples of plant disease include:

**RUST OF WHEAT:** The plant disease called ‘Rust of Wheat’- a fungal disease caused by *Puccinia rust* fungus. In this small brown pustules develop on leaf blades.

**CITRUS CANKER:** The plant disease called Citrus Canker- a bacterial disease caused by bacterium *Xanthomonas*. Infection causes lesions on leaves stems and fruits of citrus trees.

The plant disease caused by pathogens result in reduction in quality and yield of crops.

### **NITROGEN FIXATION:**

The process of converting atmospheric Nitrogen gas into compounds of Nitrogen which then can be used by plants is called nitrogen fixation.

The nitrogen gas is free nitrogen where nitrogen compounds (Nitrates) are said to be fixed Nitrogen. The nitrogen gas of air can be fixed:

- By Rhizobium bacteria- a nitrogen fixing bacteria, present in the root nodules of leguminous plants.
- By blue-green algae
- By lightning

During lightening in thunderstorm, high temperature is produced in atmosphere, because of which nitrogen gas of air combines with oxygen gas of air to form nitrogen compounds. These nitrogen compounds, dissolve in rain water, fall to earth with rain water and go into the soil.

### **NITROGEN CYCLE:**

The circulation of nitrogen element through living beings (plants and animals) and non-living environment (air, soil, water) is called Nitrogen cycle in nature. Nitrogen is the essential component of proteins and is required both by plants and animals for their growth and development. The main steps in the nitrogen cycle are enlisted as under:

- The nitrogen fixing bacteria, blue-green algae and lightening in sky fix nitrogen gas from atmosphere and convert it into compounds of nitrogen, which go into soil.
- The plants take these compounds of nitrogen from soil through their roots for growth and convert it into plant proteins which make up plant body.
- The plants are eaten up by animals where they convert plant protein into animal protein. Some animals also eat other animals for nitrogen compounds. Thus animals obtain nitrogen from plants as well as animals.
- When plants and animals die, the complex nitrogen compounds present in dead bodies are decomposed and converted by certain bacteria & fungi present in soil into simple compounds of nitrogen. From soil these nitrogen compounds are again absorbed by new plants and this cycle is repeated endlessly.
- Some compounds of nitrogen are decomposed by denitrifying bacteria present in soil, into nitrogen gas. This nitrogen gas escapes into atmosphere.

In this way, nitrogen gas which was removed from atmosphere during fixation is restricted back in atmosphere.

### **FOOD POISONING:**

The disease caused due to presence of a large number of micro-organisms in the food or due to the presence of the toxic substances in food formed by the action of micro-organisms is

called food poisoning.

Food poisoning thereby occurs due to consumption of spoiled food leading to serious illness and even death.

The major symptoms of food poisoning are:

- Pain in abdomen
- Vomiting
- Diarrhea
- Headache
- Fever

Micro-organisms causing food poisoning comes into food from air, dirty hands , unclean food containers , flies , cockroaches, etc. .The two most common examples of bacteria which cause food poisoning are:

- Salmonella
- Clostridium botulinum etc.

### **PRESERVATION OF FOOD**

The process in which the food materials are given a suitable physical or chemical treatment to prevent their spoilage is called food preservation.

Micro-organisms spoil our food. Spoiled food emits bad smell and has bad taste and changed color.

In order to prevent the spoilage and contamination of food materials, following techniques of food preservation are employed.

#### ***Preservation of food by pasteurization:***

The method of pasteurization is used for preservation of milk in big milk diaries. It involves the process of heating followed by cooling. Milk is heated to about 70<sup>0</sup>C for 15 to 30 seconds to kill bacteria present in it. This hot milk is then cooled to low temperature to prevent any remaining bacteria from growing further. This milk is then stored in cold (refrigerators)

#### ***Preservation by using chemicals:***

The three special chemicals used as preservatives are:

- Citric acid – is used as preservative in confectionary ( sweets )
- Sodium metabisulphite and sodium benzoate – are used to preserve foods such as jams; jellies; juice and squashes.

#### ***Using mustard oil and vinegar:***

Mustard oil and vinegar are used as preservatives for preservation of fruits (raw mangoes) and the vegetables (in the form of achar) as food sporting bacteria can't survive in such environment.

#### ***Preservation by heating:***

Heating kills many micro-organisms and prevent the food from spoilage. e.g.; boiled milk remains good for a longer time as it does not get sour quickly after being boiled.

#### ***Preservation by cooling:***

Low temperature inhibits growth of micro-organisms and as such the food materials like kneaded flour (dough) ; cooked food ; fruits ; vegetables are kept in a cool place like refrigerator in order to prevent spoilage.

#### ***Preservation by common salt:***

Common salt prevents the growth of food – spoiling micro-organisms. Common salt has been used to preserve fruits such as raw mango and tamarind.

#### ***Canning:***

It is done to package or preserve food by storing it in sealed air – tight containers.



### Precautions for antibiotics:

Following precautions should be taken into consideration:

- ❖ Antibiotics should be taken only on advice of qualified doctors.
- ❖ A person must complete the full course of antibiotics prescribed by doctor should take proper doses has been advised.
- ❖ Antibiotics should not be taken unnecessarily. Antibiotics taken unnecessarily may kill the useful bacteria in body and harm us.

### **Textual Questions**

1. Fill in the blanks

- (a) microscope
- (b) nitrogen
- (c) yeast
- (d) bacteria

2. tick the correct answer:

- (a) alcohol
- (b) streptomycin
- (c) female Anopheles mosquito
- (d) housefly
- (e) growth of yeast cells
- (f) fermentation

3. match the column I with column II

- (i) causing cholera
- (ii) fixing nitrogen
- (iii) setting of curd
- (iv) baking of bread
- (v) causing malaria
- (vi) causing aids

**Q4. Can microorganisms be seen with the naked eye? If not, how can they be seen?**

Ans. Micro-organisms are too small so they can't be seen with naked eye. They can be seen with the help of magnifying glass or microscope.

**Q5. What are major groups of microorganisms?**

There are five major groups of micro-organisms:

- Bacteria: they are single celled organisms causing diseases. They can be spiral or rod shaped.
- Protozoa: they mainly include organisms such as amoeba, plasmodium, etc. they can be unicellular or multi-cellular.
- Fungi: they are mostly multi-cellular disease causing microbes. Bread moulds are common examples of fungi.
- Virus: these are disease causing microbes that reproduce only inside the host organism.
- Algae: they include multi-cellular photosynthetic organisms such as spirogyra, chlamydomonas, etc.

**Q6. Name the microorganisms which can fix atmospheric nitrogen in the soil.**

Ans. Bacteria such as rhizobium and certain blue green algae can fix atmospheric nitrogen in the soil.

**Q7. Write 10 lines on the usefulness of microorganisms in our lives.**

Ans. Micro-organisms are too small to be seen through naked eyes. However they are vital to plants and the environment.

- Lactobacillus is used to form curd from milk.
- Rhizobium present in the roots of pulse plants fixes nitrogen from air & supply nitrogen compounds to the pulse plants.
- Micro-organisms are also used in wine making, baking, pickling & other food making processes.
- Alcoholic fermentation by yeast is widely used in the preparation of wine & bread.
- Microbes are used to reduce pollution. For example decomposers such as bacteria & fungi break down dead bodies & excreta to form inorganic compounds which can be absorbed by plants.
- Microbes also play an important role in the preparation of medicines. Antibiotics are chemicals produced by micro-organisms to kill bacteria. Penicillin is an antibiotic made from penicillium.
- Bacteria present in our intestine helps in proper digestion & release vitamin B, which is absorbed by intestines.
- Many vaccines are prepared from micro-organisms. These vaccines are given to children to protect them from diseases.
- Certain microbes are also used in the biological treatment of sewage & industrial effluents.
- Yeast is used in making idlis, bhaturas, bread, pastries & cakes.

**Q8. Write a short paragraph on the harms caused by microorganisms.**

Micro-organisms cause diseases in animals. For example, in humans bacteria cause diseases such as TB, cholera, typhoid, etc. in cattle the foot & mouth disease is caused by a virus. Also several microbes cause diseases in plants. For example, the productivity of wheat, orange, apple etc. is reduced due to microbial diseases in plants. Certain microbes on entering into our body produce toxic substances, this leads to food poisoning. Some micro-organisms such as fungus spoil our food. for example, bread when left unused under moist conditions gets spoiled by fungus, producing a white cotton like growth on the bread.

**Q9. What are antibiotics? What precautions must be taken while taking antibiotics?**

Ans. Antibiotics are medicines produced by certain micro-organisms to kill other disease-causing micro-organisms.

Precautions to be taken while using antibiotics:

- Antibiotics should be taken under the supervision of a well-qualified doctor.
- Course (intake) of antibiotics should be completed as per the prescription given by the doctor.
- Antibiotics should be taken in the right amount & at the right time. A wrong dose of antibiotics make the drug ineffective. Also, excessive consumption of drugs may kill the useful bacteria present in our body.

## **CHAPTER: STARS AND THE SOLAR SYSTEM**

### **Introduction:**

- There are eight planets in our solar system, which revolve around the sun but don't twinkle.
- The Earth is the third planet which sustains life because of biosphere.
- Bodies such as the earth, moon, planets, sun, stars, meteors, comets, etc. are called heavenly bodies.
- Groups of stars which appear to be in clusters are called constellations.
- The vast unimaginable space which encompasses most distinct stars, planet, and anything else, which exists is called universe.
- The branch of science which deals with the study of universe is called Astronomy.
- We can see about 3000 stars with the unaided eye in the night sky.
- Stars appear twinkling due to atmospheric refraction.
- The size of the moon changes every night & has different phases. There are also comets & meteor in the sky as well.
- Stars are not visible to us during day time due to strong light of sun, which suppresses the light coming from stars.
- Stars are made up of gases especially hydrogen gas.
- Stars emit light due to nuclear fusion.
- In nuclear fusion, the hydrogen gas fuses within the core of stars to form helium, with the liberation of a large amount of heat and light.

### **THE SUN**

- It is the nearest star from the earth.
- It is a medium order star.
- It is only 150 million kilometers from the sun that is why it appears bigger from other stars.
- The diameter of the sun is 14, 00,000 Km, which is 109 times the diameter of earth.
- It is approx. 300,000 times heavier than the earth.
- The light of the sun travel at a speed of  $3 \times 10^8$  m/s.

### **Light year**

The distance travelled by the light at a speed of 300,000 Km/s in one year (365 days) is called light year.

One light year is equal to  $9.46 \times 10^{12}$  Km.

### **Light minute**

The distance travelled by the light at a speed of 300,000 Km/s in one minute is called a light year.

One light minute is equal to  $18 \times 10^6$  Km

### **Star**

- It is a giant, self-luminous, heavenly body made up of gaseous matter, in the core of which nuclear fusion takes place which is responsible for the tremendous heat & light.
- The sun is one the youngest star which is very close to us that is why it looks a bit bigger than other stars.

- The Alpha centauri one of the nearest star is at a distance of 4.3 light years or  $40.678 \times 10^{12}$  Km from the earth.
- The stars appear to us like point objects because they are very far away from the earth.
- When stars are viewed from the earth, the distance between them doesn't seem to be changed, because they are very far away from us.
- The stars appear to move from east to west because the earth rotates from its north-south axis from west to east.
- The pole star (Polaris or Dhruva Tara) doesn't change its position in the sky because the pole star is situated in the direction, which is directly above the geographical north-pole of the earth's axis. Thus its relative position doesn't change & hence, it appears stationary.

### Constellations

- A group of stars which form a recognizable pattern or shape is called a constellation.
- Astronomers have divided the whole sky into 88 constellations.
- Each constellation is assigned a name of the object to which it closely resembles.

### Some important constellations are:

#### 1. *Ursa major or Big dipper or Vrihat saptarishi*

- ❖ It Consists of 7 bright stars & resembles the shape of a big bear as shown below:  
(refer to the text book page no 188 fig 16.3)
- ❖ It resembles a kite having a long tail.
- ❖ It is clearly visible in the northern part of the sky in the summer months, between April to September.

#### 2. *Ursa minor or Laghu Saptarishi or Dhruva Matsaya*

- ❖ It is also a group of seven stars.
- ❖ The stars are closer and dimmer as shown below:  
(Refer text book page no 188, fig 15.4)
- ❖ It is clearly seen northern sky in July in summer.
- ❖ At the tail of ursa minor is a star called pole star or Polaris.

#### 3. *Orion or hunter or Mriga or Vyadha*

- It is also constellation of seven stars.
- It looks like a hunter with his shield and club upraised as shown in fig:  
(refer to textbook page no 189, fig 15.5)

### THE MOON

- It is the only natural satellite of the earth.
- Its surface is rugged.
- It is made of very large craters & very high mountains.
- It has no atmosphere, and hence, no life on it.
- Its gravitational pull is one sixth than the earth.
- Its temperature varies from  $110^{\circ}\text{C}$  to  $-150^{\circ}\text{C}$ .

### Phases of the moon:

The waxing & the waning of the disc of the moon, as the moon revolves around the earth are called phases of the moon, as shown diagrammatically below:

(For diagram refer textbook page no 189, fig 15.6)

The different phases of moon are discussed below:

1. **New moon** : when the moon is between the sun and the earth & thus the reflected light from the moon doesn't reach the earth & hence it is not visible.
2. **Crescent Moon**: It is the moon which is seen just after the new moon day & is because only the reflected light from the crescent part reaches the earth.  
**Full Moon**: As the crescent goes on increasing every day, till on the fifteenth day the full bright face of the moon is visible. On this day the earth is between the sun and the moon. This is called full moon day.
3. **Waxing of the Moon**: the gradual increase in the bright disc of the moon is called waxing of the moon.
4. **Waning of the Moon**: the decrease in the bright side of the moon is called is called waning of the moon.

It should be noted that the moon completes one revolution around the earth in  $27^{1/3}$  days.

Also note that **lunar calendars** commonly used by astrologers are based on the fact that the moon completes one revolution around the earth in  $29^{1/2}$  days.

### PLANETS or GRAHA

- A solid heavenly body which revolves around the Sun in a well-defined orbit is called planet.
- There are eight planets in all namely Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, and Neptune.
- They have no light of their own.
- All planets except Venus rotate from west to east.

These eight planets are discussed individually below:

#### 1. Mercury (Budha)

- ❖ It is the first planet in the solar system & is closest to the sun.
- ❖ It is one of the hottest planets in the solar system.
- ❖ Its surface features are similar to that of moon.
- ❖ There is no life on mercury.
- ❖ It appears like a bright star in the sky and is commonly called **Morning Star** or **Evening Star**.
- ❖ It is visible for eight weeks just before sunset in the western sky, and then for another 8 week in the eastern sky just before sunrise.

#### 2. Venus (Shukra)

- It is the second planet from the sun.
- It outshines all heavenly bodies.
- It is the brightest and hottest planet.
- It appears as an evening star just above the western horizon for 292 days.
- After this it appears as a morning star for another 292 days in the eastern horizon.
- The mass of Venus is 0.8 times the mass of the earth.
- Its size is similar to that of the earth.



- It revolves around the sun in 225 days & rotates around its own axis in 243 days.
- Its temperature varies from  $150^{\circ}\text{C}$  to  $170^{\circ}\text{C}$ .
- It rotates from east to west.
- It has a thick atmosphere of carbon dioxide.
- There is no life on Venus.

### 3. Earth (Pritvi)

- ❖ It is the third planet from the sun.
- ❖ It has one natural satellite, the moon.
- ❖ It is the only planet where life exists.
- ❖ It is not a perfect sphere.
- ❖ The average diameter of the earth is 12,800 Km.
- ❖ The mass of the earth is approx.  $5.98 \times 10^{24}$  Kg.
- ❖ The circumference of the earth at the equator is 40,000 Km approx.
- ❖ Its atmosphere extends to a height of 200 Km from the surface of earth.
- ❖ The motion of the earth around the sun is called revolution.
- ❖ It revolves around the sun at a distance of 150,000,000 Km.
- ❖ It takes 365.25 days to complete one revolution around the sun.
- ❖ The earth spins about its own imaginary axis from west to east, called rotation.
- ❖ The earth completes one rotation in 24 hours.

The formation of days & nights on the earth is due to, at any time, only half of the earth faces the sun, whereas the other half is opposite to the sun. The half of the earth which receives light has day, whereas the half opposite to the sun has night.

The change of season on the earth takes place due to the following reasons:

- The axis of rotation of the earth is tilted at an angle of  $23\frac{1}{2}^{\circ}$
- The earth is not always at the same distance from the sun on account of its slightly elliptical orbit around the sun.

On June 21, the earth is farthest from the sun in the southern hemisphere, but nearest in the northern hemisphere. Thus on June 21, the northern hemisphere has the longest day, whereas the southern hemisphere has the shortest day. On December 22, the reverse happens.

It should be noted that on March 21 & September 23, the duration of the day & night are equal in both hemispheres.

### 4. Mars (Mangal)

- It is the fourth known planet.
- It is sometimes called as red planet.
- The distance of mars from the sun is  $228 \times 10^6$  Km.
- It has a diameter of 6794 Km.
- Its mass is  $\frac{1}{9}$ <sup>th</sup> the mass of the earth.
- It has very thin layer of atmosphere.
- It rotates about its axis in 1.026 days.
- It revolves around the sun in 687 days.
- It has two moons namely, phobos & deimos
- It is believed that mars have a large amount of water in the form of ice near its polar caps.
- There is no life on mars due to its cold temperature.

### 5. Jupiter (Brihaspati or Guru)

- It is the fifth planet.
- It is the largest planet in the solar system.
- Its distance from the sun is  $778.6 \times 10^6$  Km.
- It rotates about its axis in 0.41 days.
- It revolves around the sun in 11.8 years.
- Its atmosphere & core consists of hydrogen & helium.
- There is no life on Jupiter due to very low temperature & very high gravitational pull.

### 6. Saturn (Shani)

- It is the sixth planet.
- Its distance from the sun is  $143.5 \times 10^6$  Km.
- It rotates about its axis in 0.44 days.
- It revolves around the sun in 29.5 years.
- It is surrounded by three flat rings, which are made up of rocks.
- It has 30 known moons, the largest being Titan, which is also largest moon in the entire solar system.
- Life is not possible on Saturn because of very low temperature.

### 7. Uranus (India or Arun)

- It is the seventh planet.
- It is the third largest planet in the solar system.
- It was discovered by William Herschel, an English astronomer in 1781.
- Its distance from the sun is  $2872.5 \times 10^6$  Km.
- Its diameter is less than half of that of earth.
- It rotates about its axis in 0.71 days.
- It revolves around the sun in 84 years.
- Its atmosphere consists of hydrogen & methane.
- It has 21 moons or satellites.
- No life is possible on this planet on account of very low temperature.

### 8. Neptune (Varun)

- It is the eighth planet.
- It was discovered by Urbain Jean Joseph Leverrier, a French astronomer in 1846.
- Its distance from the sun is  $2872.5 \times 10^6$  Km.
- Its diameter is less than half of that of earth.
- It rotates about its axis in 0.71 days.
- It revolves around the sun in 84 days.
- Its atmosphere consists of hydrogen & methane.
- It has 21 satellites discovered so far.
- There is no life on this planet because of extremely low temperature.

The solar system:

- The sun along with the eight planets & their moons constitutes the solar system.
- Sun is the nearest star from us on the earth & was born 5 billion years ago.



- Sun emits a huge amount of heat & light.
- Other heavenly bodies (asteroids, comets & meteors) also revolve around the sun.

#### ***Asteroids:***

- These are small pieces of rocks or metals which revolve around the sun in between the orbits of Mars & Jupiter.
- They are not visible to the unaided eye.
- They are of varying sizes, the largest being Ceres, which is 33Km in diameter.
- It is estimated that there are around 100,000 asteroids.

#### **Comets:**

- These are bright star like objects with a long tail approaching the sun in a highly elliptical orbit.
- The bright star like objects is commonly called the head of the comet.
- It has a tail which is made up of frozen water & gaseous matter & points away from the sun.
- The tail of the comet could be as long as 800 million kilometers.
- The comets which appear after fixed interval of time are called periodic comets. Halley's Comet is one such periodic comet, which is visible once in 76 years.
- Comets don't last forever in the solar system.

#### **Meteors:**

- These are bright star like objects which appear suddenly in the sky & then for a few moments streaks in the form of brilliant flash towards the earth & finally disappear.
- These are the debris of comets floating in the sky.
- When a comet passes through the atmosphere, it becomes white hot due to friction of the atmosphere. Thus it catches fire & appears as a brilliant flash of light.
- These are commonly known as Shooting Stars, though they are not stars.

#### ***Meteorites:***

- These are unburnt pieces of meteor, which reach the surface of the earth.
- Meteorites which reach the surface of the earth can be of the size of small pebbles to several tones of rock or metal.
- The earth receives fewer meteorites than moon.

Difference between star and planet (refer textbook page no 199)

Difference between a star & a shooting star (refer textbook page no 199)

### **Textual Questions**

**Q1.**

- Universe.
- Meteorite
- Planets
- satellites
- Pluto
- Comet
- Core
- Constellation

**Q2. The correct statements are:**

- i. Halley's Comet visits our solar system after 76 years.
- ii. Hydrogen gas constitutes most of the atmosphere of the sun & the stars.
- iii. Sun is the nearest star to our solar system.
- iv. Astronomers have divided the sky into 88 constellations.
- v. Meteors on burning leave behind trails of meteorites.
- vi. The orbit of the Pluto is different from the orbit of the other planets in the solar system.
- vii. Venus is the second nearest star to the sun.
- viii. Moon revolves around the earth in  $27^{1/3}$  days.

**Q3. Answer the following questions:**

**I. what is universe? Name six different kinds of heavenly bodies found in universe.**

**Ans.** The vast unimaginable space which encompasses most distant stars, planets & anything else which exists is called universe.

Six different kinds of heavenly bodies found in the universe are sun, earth, stars, moon, planets, & comets.

**II. with the reference to the average distance from the sun, state:**

**a) The serial number of the planet earth.**

**b) The average distance of the earth from the sun.**

**c) The time in which the sunlight reaches the earth.**

- (a) The serial number of the planet earth is three.
- (b)  $1.44 \times 10^8$  Km
- (c) The time in which the sunlight reaches the earth is eight minute

**III.**

**a. Name the natural satellite of the earth.**

**b. In how many days does this satellite complete one revolution around the earth?**

**c. In how many days does this satellite rotate around its own axis?**

**d. How does the gravity of this satellite compare with the earth?**

**e. State the maximum temperature on the day side and minimum temperature on the night side of this satellite?**

- a. Moon is the natural satellite of the earth.
- b.  $27^{1/3}$  days.
- c.  $27^{1/3}$  days
- d. The gravitational pull of the satellite is  $1/6^{\text{th}}$  of that of the earth.
- e. The max. Temperature on day side of the moon is  $110^{\circ}\text{C}$  & the min. temperature on night side of the moon is  $-115^{\circ}\text{C}$ .

**IV. What do you understand by the following terms:**

**a) New moon**

**b) Full moon**

**Ans.** (a) When the moon is between the sun & the earth, thus the reflected light from the moon doesn't reach the earth & hence it is not visible, it is called new moon.

(b) As the crescent goes on increasing every day, till on the fifteenth day the full bright face of the moon is visible. On this day the earth is between the sun and the moon. This is called full moon day.



V.

a) Define solar system

b) Name all the planets in the solar system in the order of their distance from the sun?

(a) The sun along with the eight planets and their moons constitutes the solar system.

(b) The name of the planets in the solar system in order of their distance from the sun is: Mercury, Venus, earth, mars, Jupiter, Saturn, Uranus, Neptune.

VI. a) how many moons mars have?

b) write the name of these moons.

Ans. (a) Mars has two.

(b) Photos & deimos.

VII. What is comet? Why does a comet develop a tail while approaching the sun?

Ans. The bright star like object with a long tail , approaching the sun in a highly elliptical orbit is called comet.

As the comet is approaching the sun, the tail of the comet increases in length, this is because the gases, water vapours & dust particles in the nucleus of the comet are pushed away by the pressure of solar radiations. The tail of the comet always points away from the sun.

VIII. What is star? What makes the give about vast amount of energy?

Ans. Star is a giant, self-luminous, heavenly body made up of gaseous matter.

In the core of the star nuclear fusion takes place which is responsible for the tremendous amount of energy in the form heat & light.

IX. a) How are meteors different from stars?

b) How are meteors different from meteorites?

Ans. (a) refer textbook page no 199.

(b) **Meteors:** These are bright star like objects which appear suddenly in the sky & then for a few moments a streak in the form of brilliant flashes towards the earth & finally disappears. These are the debris of comets floating in the sky. When a comet passes through the atmosphere; it becomes white hot due to friction of the atmosphere. Thus it catches fire & appears as a brilliant flash of light.

These are commonly known as Shooting Stars, though they are not stars.

**Meteorites:** These are unburnt pieces of meteor, which reach the surface of the earth.

Meteorites which reach the surface of the earth can be of the size of small pebbles to several tons of rock or metal.

The earth receives fewer meteorites than moon.

جماعت: آٹھویں یونٹ: اول

سبق: حمد

- س ۱۔ شاعر خُدا سے کیا مانگتا ہے؟
- ج ۱) شاعر خُدا سے یہ دُعا مانگتا ہے کہ اُس کو سیدھے راستے پر چلا۔
- س ۲۔ خُدا کی نظر میں کون لوگ شان و شوکت والے ہیں؟
- ج ۲) خُدا کی نظر میں وہ لوگ شان و شوکت والے ہیں جو پرہیزگار اور مُتقی ہوتے ہیں۔ ایسے لوگوں پر اللہ کی رحمت و نعمت ہوتی ہے اور وہ پورے عالم میں بہت مشہور ہوتے ہیں۔
- س ۳۔ شاعر کس سے مدد مانگتا ہے؟
- ج ۳) شاعر اللہ تعالیٰ سے مدد مانگتا ہے۔
- س ۴۔ نظم کے آخری مصرعے میں شاعر نے کیا دُعا مانگی ہے؟
- ج ۴) نظم کے آخری مصرعے میں شاعر نے اپنی دعاؤں کی مقبولیت کے لیے دعا مانگی۔
- خالی جگہیں بھر لیجیے:

۱) سب آن بان

۲) سب کا سہارا

۳) نام۔۔۔ عالم

۴) یارب

سبق: کاہلی

- س ۱۔ سرسید احمد خان کے خیال میں سب سے بڑی کاہلی کیا ہے؟
- ج ۱) سرسید احمد خان کے خیال میں سب سے بڑی کاہلی دلی قوی کو بے کار چھوڑ دینا ہے۔
- س ۲۔ کون سے لوگ بہت کم کاہل ہوتے ہیں؟
- ج ۲) جو لوگ محنت مزدوری کر کے اپنی روزی روٹی کماتے ہیں وہ بہت کم کاہل ہوتے ہیں۔
- س ۳۔ انسان کس حالت میں کاہل اور بالکل حیوان صفت ہو جاتا ہے؟
- ج ۳) جب ایک انسان کو اس کی روزی روٹی کمانے کے لیے محنت نہیں کرنی پڑتی ہے اور بہ آسانی اُس کے اخراجات پورے ہوتے ہیں اس حالت میں اس کے شوق و حشیانہ ہو جاتے ہیں اور وہ بالکل

کاہل اور حیوان صفت ہو جاتا ہے۔

س ۴۔ اگر انسان اپنے دلی قوی کو بے کار ڈال دے تو اس کا کیا حال ہوگا؟

ج ۴) اگر انسان اپنے دلی قوی کو بے کار چھوڑ دے تو اس کے شوق و حشیا نہ ہو جاتے ہیں۔ شراب پینا،

قمار بازی، عیاشی اور مزے دار کھانا اس کی پسندیدہ عادتیں بن جاتی ہیں۔ جن کی بدولت

وہ پھوہڑ، بد سلیقہ اور وحشی ہو جاتا ہے۔

س ۵۔ ہماری قوم کی حالت کس طرح بہتر ہو سکتی ہے؟

ج ۵) ہماری قوم کی حالت تب تک بہتر نہیں ہو سکتی جب تک کہ ہم اپنے دلوں سے کاہلی

(یعنی دل کا بے کار پڑا رہنا) نہیں چھوڑیں گے۔

### متضاد الفاظ

|           |             |
|-----------|-------------|
| چستی      | ۱۔ سُستی    |
| بیرونی    | ۲۔ اندرونی  |
| نامناسب   | ۳۔ مناسب    |
| یقین      | ۴۔ شک       |
| ابتری     | ۵۔ بہتری    |
| سلیقہ مند | ۶۔ بد سلیقہ |
| مُستقل    | ۷۔ عارضی    |
| غیر ضروری | ۸۔ ضروری    |

### صفت بنائیے

|        |            |       |           |
|--------|------------|-------|-----------|
| انسانی | : ۲۔ انسان | عقلی  | : ۱۔ عقل  |
| حیوانی | : ۴۔ حیوان | محنتی | : ۳۔ محنت |
| قومی   | : ۶۔ قوم   | وطنی  | : ۵۔ وطن  |
| شخصی   | : ۸۔ شخص   | خیالی | : ۷۔ خیال |
| ذہنی   | : ۱۰۔ ذہن  | علمی  | : ۹۔ علم  |

## سبق: لیل دید

س ۱۔ لیل دید کس وجہ سے مشہور ہے؟

ج ۱) لیل دید ایک معتبر شاعرہ، پاکباز اور صابرا خاتون ہونے کے ساتھ ساتھ ایک روحانی شخصیت کی مالک تھیں۔ انہی خوبیوں کی وجہ سے وہ بہت مشہور تھیں۔

س ۲۔ لیل دید کے زمانے میں کون بزرگ حضرات گزرے ہیں؟

ج ۲) لیل دید کے زمانے میں دو بڑے بزرگ گزرے ہیں جو حضرت امیر کبیر سید علی ہمدانی اور شیخ نور الدین ولی کے ناموں سے جانے جاتے ہیں۔

س ۳ حضرت شیخ نور الدین کو دودھ پلاتے وقت لیل دید نے کیا کہا؟

ج ۳) جب شیخ نور الدین ولی بچپن میں دودھ پینے سے کترانے لگے تو لیل دید نے شیخ کو گود میں لیا اور کہا کہ اے ننھے تمہیں دنیا میں آتے وقت لاج نہیں آئی تو اب دودھ پیتے وقت کیوں شرماتے ہو۔ اور یہ سن کر شیخ نے پیٹ بھر کر دودھ پی لیا۔

س ۴۔ لیل دید کے واکھوں میں کن باتوں کی تلقین کی گئی ہے؟

ج ۴) لیل دید کے واکھوں میں نیکی، پرہیزگاری اور صبر و تحمل کی تلقین ہے۔ دنیا کی ناپائیداری، ذات پات، اونچ نیچ کے غیر فطری بندھنوں کو توڑنے کی تلقین کی گئی ہے۔

س ۵۔ لیل دید کو کن کن ناموں سے پکارا جاتا ہے؟

ج ۵) لیل دید کو لیل عارفہ اور لیل ایشوری کے ناموں سے یاد کرتے ہیں۔

جمائز: اوٹھم

سبق نمبر: ۱

عنوان: دُعا

س: سوالن ہندی جواب:

۱- شاعر کتھ بہار خاطر چھ دُعا منگان؟

ج: شاعر چھ تھ بہار خاطر دُعا منگان۔ یس ہمیشہ سر سبز تہ پھولون روز۔

۲- پونڈمس شعرس منز کتھ کردار خاطر دُعا منگنہ آمت؟

ج: پونڈمس شعرس منز چھ اکہ رتہ کردار خاطر دُعا منگنہ آمت۔

۳- دُعا منگن دول کپتھ سنہرتہ تھزر چھ منگان؟

ج: دُعا منگن دول چھ کوہ ہمالیہ کھوتہ زیاد تھزر تہ بحرہ قلم کھوتہ زیاد سنہر منگان۔

سبق نمبر: ۲

عنوان: دبدرانی

س: سوالن ہندی جواب:

۱- راز کھیم گپتس کس بوڈ عاب اوس؟

ج: راز کھیم گپتس اوس یہ بوڈ عاب ز سہ اوس پر تھ کانسہ ہزن کتھن پیٹھ سوچنہ سرنہ وراے عمل کران۔

۲- راز کھیم گپت کمرہ بہار ستر مؤد؟

ج: راز کھیم گپت مؤد ہولہ ہج بہار ستر۔

۳- دبدرانہ کیا پیو حکومت کام کار پانہ چلاون؟

ج: دبدرانہ پیو امہ مؤبؤب حکومت کام کار پانہ چلاون۔ تکیاز توہوند نیو اوس نابالغ۔ سہ ہیکہ ہانہ ناساز گار

ملکی حالات کاچہ رٹھ۔

۴- دبدرانہ کیا کور حکومت بچاونہ خاطر؟

ج: حکومت بچاونہ باپتھ کور تمہ سبٹھاہ بہودری تہ چالاکي ہند مظاہر۔ فساد کرن واکر دشمن یا تہ مارن تہ برن

چیل۔

۵۔ آخری ورنہ منز کم رٹ کلمہ کر دبرانہ؟

ج: آخری ورنہ منز اُس دبرانی عام لگن ہنز سہولت تہ بجائی خاطر کلمہ کران۔ اکھتے اوسس وونی مذہبی کامن گن تہ توجہ پھیورمت۔ تکر کرناؤد واریاہ مندر، ل، تہ مندور تعمیر۔ مسافرن ہنڈ خاطر بناوین رُوزن جاپہ تہ۔

۶۔ دبرانہ کس تہ کتھ گنژ ژور پُن ولی عہد؟

ج: دبرانہ ژور پُن اکھ باپوتھر سنگرام راج ولی عہد۔ امہ خاطر اُنی تمہ پنژ باپوتھر تہ چھکرن تمنن بروٹھ کنہ ژوٹھ۔ باقی باپوتھر لگو ژوٹھس پیٹھ پانہ وانی ژونہ ییلہ زن سنگرام راج ژونہ بجاپہ ژوٹھ سومبرانس گن لوگ۔ دبرانہ باسے اُس منز عقل تہ تمہ ژور سہ ولی عہد۔

س: تنھی جملہ بناوو یمن منز بونہ کنہ درج محاور ورتاونہ آسن آءتو، محاورن لکھو معنی تہ۔

| معنی          | محاور                |
|---------------|----------------------|
| پتہ پتہ پکن   | ۱۔ لور آسن           |
| ملا مال کرن   | ۲۔ سونہ ساؤد کرن     |
| اختلاف گروٹھن | ۳۔ کانزس گگر پھٹن    |
| پسراٹن        | ۴۔ ییل ان            |
| مخالفت کرنی   | ۵۔ کن برنی           |
| عداوت روژن    | ۶۔ کانہ کیل روژن     |
| شرارت کھسن    | ۷۔ کاڈن ہر ہر گروٹھن |

جملہ  
جاوید چھ کتابن سبٹھاہ لور۔  
کھیم گیت اوس تعریف کرن والبن سونہ ساؤد کران۔  
تمن اُس کانزس گگر پھٹن توے گے پریشان۔  
اسرارن اونی مول موج سبٹھاہ ییل۔  
طارق اوس جاویدس متعلق کن بران۔  
دبرانہ اوس مرنس تام امیک کانہ کیل۔  
اسلمس چھے ناھقہ کاڈن ہر ہر گروٹھان۔

۸۔ زسمہ بیہناونہ ناکار بناؤن  
۹۔ اچھ منز کٹر ناخوش گروٹھن  
مہ بیہناؤد تمس اکی تھاپر ستہ زسمہ۔  
اسم چھ اسلم ہمیشہ اچھ منز کٹر باسان۔

س: خاکو جاپہ برو بونہ کنہ دنہ آمتو شتر اشارہ ناتو ستہ۔

۱۔ تم

۲۔ ہم

۳۔ اسہ

س: خاکی جالیہ بڑو۔

۱۔ اتم روز

۲۔ میوند

۳۔ ژاس

۴۔ سلہ

۵۔ ایو

س: یونہ کنہ درج ناوتو منز ژا اړو ژرناوتی تہ مادِ ناوتی۔ ژرناوتس مقابلہ لیکھو مادِ ناوت تہ مادِ ناوتس مقابلہ لیکھونر ناوت۔

ژرناوت مادِ ناوت

۱۔ کراں کراں

۲۔ سال ساچو

۳۔ کانڈر کاندریتن

۴۔ زامتر کور

۵۔ جگر جگرانی

۶۔ بطح بطح

۷۔ گوگل گوگل

۸۔ کوگر کوگر

۹۔ لوگٹ لوگٹ

۱۰۔ پٹھان پٹھانی

۱۱۔ راز رازی

۱۲۔ سون سونین

۱۳۔ نون نون

۱۴۔ مہراز مہریتن

۱۵۔ نوکر نوکرانی

۱۶۔ گزیٹہ وول گزیٹہ واجین

|            |            |
|------------|------------|
| سکھیانی    | ۱۷- سکھ    |
| خاندارتی   | ۱۸- خاند   |
| پادشاہ باے | ۱۹- پادشاہ |
| موقدم باے  | ۲۰- موقدم  |
| ژھاوچ      | ۲۱- ژھاؤل  |
| گج         | ۲۲- گؤل    |
| مامز       | ۲۳- مام    |
| نائی       | ۲۴- بڈریب  |
| ماس        | ۲۵- ماسو   |
| پنژ        | ۲۶- پونژ   |

س: مثال وچھتھ گروہونہ کنہہ درج ناؤتی تیجہ پاٹھی جملن منز استعمال بیٹھ فکر تریز کس ناؤت چھ ماڈیہ کس  
چھ نر معنیس منز ورتاونہ یوان۔

|           |              |                                  |
|-----------|--------------|----------------------------------|
| ماڈی ناؤت | ۱- کیکل      | کیکل چھے گلکس پیٹھ               |
| نر ناؤت   | ۲- ٹھؤل      | ٹھؤل چھ بانس منز                 |
| نر ناؤت   | ۳- نوٹ       | نوٹ چھ گلکس پیٹھ                 |
| نر ناؤت   | ۴- ناگ       | یہ چھ نلہ ناگ                    |
| نر ناؤت   | ۵- ژوٹھ      | یہ ژوٹھ چھ ووژل                  |
| نر ناؤت   | ۶- آر        | آر چھ رسداری                     |
| نر ناؤت   | ۷- ووڈر      | ووڈر چھ منز آلس منز آسان         |
| نر ناؤت   | ۸- رؤد       | رؤد چھ پیوان                     |
| نر ناؤت   | ۹- ہاکھ      | ہاکھ چھ سبزی                     |
| نر ناؤت   | ۱۰- ون       | یہ ون چھ واریاہ اصل              |
| ماڈی ناؤت | ۱۱- ہولہ بیج | ہولہ بیج چھے واریاہ خطرناک بہاری |
| ماڈی ناؤت | ۱۲- کتاب     | یہ چھے اسلم سبزی کتاب            |
| نر ناؤت   | ۱۳- نؤل      | نؤل چھ آلس منز آسان              |

۱۴- وَاَر

اتھ وارِ منزِ جھے تریش

مادِناؤت

۱۵- ژونگ

ژونگ چُھ دزان

زناؤت