

Assignment: IA1

SUBJECT: ENGLISH

Prose01:- Footprints without feet (H.G. WELLS)

Question no. 1

How would you assess Griffin as a scientist?

There is no doubt that Griffin as a scientist was a man of brilliance, adventure and courage. He carried out experiment after experiment to prove that human body could be made invisible. He was courageous enough to perform a dangerous experiment on himself. He swallowed certain rare drugs by which his body became transparent like a sheet of glass. His discovery was remarkable.

Griffin was however, an unreasonable scientist. He could have used his discovery for the good of humanity, but he chose the other way. He misused his discovery and made others suffer at his hands. He used his discovery for personal gains rather than for common good.

Question no. 2

The two boys in London were surprised and fascinated. Why?

The two boys in London were surprised and fascinated because their eyes met a remarkable sight of fresh muddy imprints of a barefooted man who was not visible.

OR

The two boys in London were surprised and fascinated as they saw the muddy imprints of a barefoot but couldn't see the man who was leaving the fresh imprints.

Question no. 3

What did Griffin do inside the shop?

Inside the shop, Griffin gave himself the pleasure of clothing and feeding himself without regard to expense. He broke open boxes and wrappers and fitted himself out with warm clothes. He then put a pair of fine shoes and wore an overcoat and a hat. Then he had a meal of cold meat and coffee followed up by some sweets and wine. After feeding and clothing himself, he enjoyed a sound sleep on a pile of quilts.

Question no. 4

How did Griffin escape from the London store?

From the big London store, Griffin escaped by quickly taking off his newly found clothes that made him invisible, sufficient enough to run away easily and comfortably.

OR

Griffin did not wake up in time the next morning. He was still sleeping when the shop assistants arrived. When he saw a couple of them approaching towards him, he panicked and

began to run .The assistants followed him but he was able to escape only by quickly taking off his newly found clothes. So, once more Griffin found himself invisible.

Question no. 5

Griffin entered the shop of a theatrical company. What did he do there?

Griffin entered the shop of a theatrical company in order to have some garments to save him from cold. Inside the shop he wore bandages round his forehead. He also put up dark glasses, false nose, big-bushy side whiskers and a large hat. Later on, in order to escape without being seen, he callously attacked the shopkeeper from behind and robbed him off all the money he could find.

Question no. 6

Why was the arrival of the stranger in a village inn an unusual event? Give two reasons.

The arrival of the stranger in a village inn was an unusual event because, generally in the winters, almost nobody used to visit the village as it was a remote place away from the crowded London. His uncommon appearance was another reason of an unusual event as he was wearing false nose, big -bushy side whiskers and his face was covered with bandages. A stranger of such strange appearance set all tongues wagging.

Question no. 7

How did the scientist look when he came to the inn?

Griffin came to the inn in a strange and uncommon looks. He had worn bandages round his forehead , dark glasses, false nose big- bushy side whiskers and a large hat .Mrs. Hall ; the landlords wife, was surprised at his strange appearance , but, Griffin told her that an accident had affected his face .Due to his uncommon appearance, all the villagers began to gossip about him.

Question no. 8

The landlord's wife was convinced that Griffin was an 'eccentric scientist'. What made her think of Griffin in these terms?

The landlord's wife was convinced that Griffin was an ' eccentric scientist ' because he had paid all his rent in advance which was pretty bizarre .Also due to his unusual arrival , uncommon appearance , strange habits , irritable temper and the extraordinary behaviour , the landlord's wife reckoned that Griffin was elliptical . In spite of her friendly attitude, Griffin had no desire to talk. Her every effort brought no fruit of making friendship with him. He wanted loneliness and did not wish to be disturbed.

Question no. 9

What was 'the curious episode 'that took place in the clergyman's study?

The ' curious episode ' that occurred in the clergyman's study was that in the early morning ,clergyman and his wife were awakened by some noises as they heard the chink of

money being taken away from the desk. Without making any noise and with a poker grasped firmly in his hands, the clergyman flung open the door. To his amazement, he did not find any person there. Yet the desk had been opened and all the housekeeping money was missing.

Question no. 10

The landlord and his wife were surprised to see the scientist's door wide open. Why were they surprised? What three extraordinary things happened in the room?

The landlord and his wife were surprised to see the scientist's door wide open because it used to remain shut and locked most of the time.

As Mr. and Mrs Hall entered the scientist's room, extraordinary things started to happen. Firstly, Mrs Hall heard a sniff close to her ear. A moment later; the hat on the bed post leapt up and dashed itself onto her face. Then the bedroom chair became alive; springing into the air, it charged straight at her. As she and her husband turned away in terror, the extraordinary chair pushed them both out of the room and slammed the door shut.

Question no. 11

Mrs. Hall almost fell down the stairs in hysterics. Pick out an example of humour from what follows this incident.

Mr. and Mrs. Hall peeped through the scientist's door and on finding nobody, they decided to investigate. As they entered the room, Mrs. Hall heard a sniff close to her ear. A moment later, the hat on the bed post leapt up and dashed itself onto her face. Then the bedroom chair became alive; springing into the air, it charged straight at her. As she and her husband turned away in terror, the extraordinary chair pushed them out of the room and slammed the door shut. Mrs. Hall was so puzzled that she almost fell down the stairs in hysterics. She was convinced that the room was haunted by spirits and the scientist had caused the spirits to enter her furniture also.

Question no. 12

The scientist was furious. What did he do in anger? Why were the people in the bar horrified?

When the secret of the scientist's activities was disclosed, he became furious. In anger, he threw off his bandages, false nose, dark glasses, big-bushy side whiskers and a large hat.

The people in the bar were horrified as their eyes came across a scene of a headless man; who was becoming more and more invisible as he threw off one garment after another.

Question no. 13

What happened to the constable?

Mr. Jaffers was a village constable. He was called in by Mrs hall to arrest the scientist. But he was surprised to find that he had to arrest a headless man. He however decided to perform his duty. As he tried to get hold of the headless man, he had another surprise i.e, the man started throwing one garment after another and became invisible. The constable found himself

struggling with a person whom he could not see at all. Those ; who tried to help him, received blows from the invisible scientist .In the end , Jaffers made an attempt to catch the invisible scientist, but he was knocked down unconscious.

Question no. 14

The scientist was a man of 'irritable temper'. Give an account by taking reference from the text.

Griffin was a lawless person .His landlord disliked him because of his strange habits and tried to eject him from his house. In revenge, he set the house of his landlord on fire. In another incident, he callously attacked the shopkeeper and robbed him off all the money he could find.

When he reached the village inn, Mrs. Hall made every effort to be friendly with him .In spite of her friendly attitude; Griffin had no desire to talk and did not wish to be disturbed. Further, when the police constable tried to arrest him, he knocked him down unconscious .All such folly actions prove that the scientist was a man of 'irritable temper '.

Science fiction and fantasy:

These terms encompass novels and short stories that represent an imagined reality that is radically different in its nature and functioning from the world of our ordinary experience. Often the setting in another planet, or this earth projected into the future. The term 'Science Fiction ' is applied to those narratives in which explicit attempt is made to render/ provide, through fictional world, the known or imagined scientific principles , or to a projected advance in the technology or to a drastic change in the organisation of society .

'Star Ducks'

'The Invisible Man'

Prose 02:- "An Excellent Father" JANE AUSTEN

Question no. 1

What does Mrs. Bennet tell her husband?

Mrs. Bennet tells her husband that she came to learn from her neighbour; Mrs Long, that 'The Netherfield Park' which was vacant for a long time has been taken up by a young man named Mr. Bingley . Mr Bingley is a single gentleman of large fortune from the North of England and Mrs. Bennet thinks of him as a potential suitor for one of her daughters.

Question no. 2

Who takes over Netherfield Park? Why is Mrs. Bennet happy about it?

A wealthy gentleman; Mr. Charles Bingley, takes over the Netherfield Park. Mrs. Bennet is happy over it because she thinks of him as a potential suitor for one of her daughters.

OR

Netherfield Park is taken over by Mr. Charles Bingley; who is a single young man of large fortune from the North of England. Mrs. Bennet is happy about it because she thinks of him as a potential suitor for one of her daughters.

Question no. 3

Why does Mrs. Bennet insist her husband to meet Mr. Bingley?

Mrs. Bennet insists her husband to meet Mr Bingley so that she may develop acquaintance with them and may possibly select one of her daughters for marriage.

Question no. 4

“You take delight in vexing me .You have no compassion on my poor nerves” . Explain

When Mrs. Bennet insists her husband to meet Mr. Bingley and settle the marriage of one of their daughters with him, she gets poor response from him. Mr. Bennet shows no interest in visiting Mr Bingley and asks his wife that she should rather visit him herself .Mrs. Bennet feels distressed on her husband’s poor response. She feels that her husband has no regard for her feelings and feels happy to see her worried.

Question no. 5

Why does Mrs Bennet think that Mrs Long is selfish?

Mrs Bennet thinks that although Mrs Long has promised to introduce Mr Bingley to them, she will not do that. She knows that instead of introducing her daughters to Mr Bingley, she will think only of her two nieces. Thus, Mrs Bennet thinks her to be selfish.

OR

Mrs Bennet thinks Mrs Long is selfish because she has got her two nieces fulfilling the criteria for marriage. Instead of introducing her daughters to Mr Bingley, she will settle the marriage of one of her nieces with him.

Question no. 6

How does Mr Bennet react to the plan designed by his wife?

Mr Bennet is a humorous and fun-loving person with a responsible head. He likes to ridicule his wife but the plan designed by his wife is reacted by him the way she does not expect. She is worried about her daughters’ marriage and insists her husband to meet Mr Bingley in order to develop acquaintance. On the surface however, he doesn't show any willingness, though his wife insists him a lot which indicates that Mr Bennet has no regard for his daughters .But as a matter of fact , he has already called on him that astonishes and delights his wife .

Question no. 7

Why does Mrs. Bennet tell her girls that they have an excellent father?

When Mrs. Bennet comes to learn that her husband has already paid a visit to Mr Bingley early in the morning of which he himself admits, she gets surprised and feels very happy and therefore, tells her girls that they have an excellent father.

OR

When Mrs. Bennet broke the news of his husband having visited Mr. Bingley early in the morning, without telling them, Mrs. Bennet feels astonished and tells her daughters that they have an excellent father.

Draw a character sketch of Mrs. Bennet.

Mrs. Bennet is an interesting character in “An Excellent Father” extracted from Jane Austen’s novel “Pride and Prejudice”. Mrs. Bennet is the wife of Mr. Bennet and the mother of five daughters namely Jane, Elizabeth (Lizzy), Catherine (Kitty), Mary and Loida .

Mrs. Bennet is very much worried about her daughters’ marriage and her job is only to get her daughters married. She is a woman of mean understanding, little knowledge and uncertain temper. She insists her husband to meet Mr Bingley in order to develop acquaintance with him and then settle his marriage with one of their daughters. But her husband does not show any willingness to meet Mr Bingley and it seems that he has no regard for his wife’s feeling. As a matter of fact, he has already called on him who surprises and delights Mrs. Bennet . Thus, at last she feels satisfied with the plan designed by him.

Poem01:- “Prayer” G.A. MEHJOOR

The poem 'Prayer' has been composed by G.A.Mehjoor (Aug 1, 1887 - April 9, 1952) popularly known as 'Shair -e-Kashmir' (the poet of Kashmir). The poem has been translated from Kashmiri to Hindi by Professor G.R Malik. The poem is addressed to God. The poet makes certain wishes before the Almighty. He implores him to lead him to the path of truth and righteousness .He appeals him to dispel his ignorance and pour on him the nectar of knowledge. He wants his lord to be receptive to his wailings and pleas, and get him rid of all ills and pains .He implores him to be always kind to him so that he will never feel himself in want. He pathetically wishes before God to save him from sloth, infirmity and doubt and surcharge his heart with passion, zest and hope.

The poet begs his lord to spare him from chanting sleep inducing tales and instead let him sing such songs that will infuse life into dead. He wants to sing such songs which would inspire people with love and affection and remove bitterness, envy, jealousy and hatredness from their hearts .He is hopeful that God; who has brought him up like a flower with the earliest spring breeze, will not let him fade away by the burning heat of the sun. The poet prays to God to awaken him with the flowers in the first stroke of dawn. In physical appearance, he is a human being, but in reality he is far from being humane. He implores his lord not to put him to harsh tests ,lest his human form might get ashamed .The poet thinks that people may have deserted him and that is why he is being called 'Mehjoor - the abandoned'. He does not bother if people leave him but he implores his lord not to leave him because he cannot bear the separation from him.

Question no. 1

Which way does the poet implores his lord to lead him to?

The poet implores his lord to lead him to the way of truth and righteousness. He implores/ appeals him to dispel his ignorance and shower on him the nectar of knowledge.

Question no. 2

Name the blessings that the poet prays for?

The poet prays to God to lead him to the path of truth and righteousness, and pour on him the nectar of knowledge. He implores him to be always kind to him so that he may never feel himself in want. He prays to him to save him from sloth, infirmity and doubt, and surcharge his heart with passion, zest and hope. He implores his lord not to subject him to trials lest his human form might get ashamed.

Question no. 3

What is it that the poet wants to sing?

The poet wants to sing those songs which will infuse life into the dead. He wants to sing those songs which will inspire people with love and remove bitterness, envy, jealousy and hatredness from their hearts.

Question no. 4

The poem is in the form of a prayer. Call and write a poem that you recite often.

We often pray Dr Sir Mohammad Iqbal's "The Child's Prayer"

"The child's prayer"

My tender hopes arise to the lips I pray:
Kindly Candle light may my life be!
May through me world's darkness vanish away
And every corner fill with light of day!
May I adore my land, to me so dear.
Even as the blossoms make the garden fair! As the moth goes round the shining light in zest
So let me love the candle of knowledge best!
To love and serve the poor my mission is;
For the weak and those in pain my sympathy! Save me, my God from all snares of evil:
To walk the virtuous ways grant me the will!

Question no. 5

"Subject me not to trials, shame not my human form". Explain.

The poet shows his humble submission before lord. He prays to his Almighty not to put him to harsh tests, lest his human form might get ashamed. Though he is a human in physicality, but in reality, he is far from humanity.

Learning Literary Devices

Metaphor: - It is a figure of speech in which we make direct comparison between two unlike things or objects categorising them as identical. Here we don't use the words "like" and "as" as in case of a simile.

- He is a snake.
- His mind is an ocean

Simile: It is a figure of speech in which comparison is made between two dissimilar things or objects by using the words "like" and "as"

- She is as beautiful as moon.
- He is like a lion

Identify the similes and metaphors in the poem "Prayer".

Similes:-

- Like dew, how long shall i wait for the first flash of the sun ?
- Awaken me (like) with the flowers in the first stroke of the dawn .

Metaphors:-

- The way of truth.
- Dwell in ignorance.
- Nectar of knowledge.
- You are my hope and trust.
- You brought me to bloom.

Poem 02:- "Miracles" WALT WHITMAN

'Miracles' is a poem about marvellous acts composed by an American poet , essayist, journalist and humanist , Walter Whitman (May 31, 1819- March 26, 1892) . The poet presents to us a different point of view of miracles altogether. The poet expresses his great surprise as to why people get excited when they hear of a miracle or happen to see it .The poet draws his miracles from everyday life and says that miracles do not happen rarely and unexpectedly .To him, walking in the streets of Manhattan, looking at the sky high or multi storey building, walking through water along the seashore with naked feet are all miracles. He says that some miracles are from nature while others are connected with people and city-life .For him, standing under trees in the forest, talking to anyone whom you love, sitting for dinner with one's family and looking at the people travelling opposite to him in the subway are all miracles .

The poet, then moves to the other side of miracles. He says that, watching honey bees that are busy humming around the hive, animals feeding in the fields, charming sight of the sunset,

shining of the stars so quietly and brightly and splendid, wonderful sight of the new moon in spring are all miracles for him.

The poet says that all things which are mentioned and the rest are all miracles for him. Though they are closely connected with one another but at the same time each is different, separate and has its own individuality. Each moment of day and night, every cubic inch of space, every square yard of surface of each and every foot of the interior layer of the earth are all miracles for him. To him sea is a continual miracle as the fishes that swim, the rocks, the motion of waves, the ships with men in them are all connected with it and at the same time are all miracles at their respective places.

Question no. 1

The usual view of miracles is that it seldom happens. What does Walt Whitman think about the miracles?

Walt Whitman thinks that miracles do happen seldom, but are rampant and recurring in nature. To him, each and everything of the world that brings us joy and peace is a miracle. He says some miracles are from nature and others are connected with the people and the city- life .The creation and activities of honey bees, animals, fishes, waves, rocks, the sun and the moon are all miracles for him.

Question no. 2

When you read the poem, you notice that some ‘miracles’ are from nature, others are connected with people and city- life .Make list of these. Notice how Whitman moves from one to another.

Miracles connected with nature are as under:-

- Watching honey bees busy around the hive.
- Animals feeding in the fields
- The wonderful sight of the sunset
- Shining of stars so quiet and bright
- The splendid sight of the new moon in spring.
- Every hour of the day and night.
- Every cubic inch of space
- Every square yard of the surface of the earth .
- Every foot of the interior layers of the earth .
- The fishes that swim in the sea.

Miracles connected with people and city life are as under :-

- Walking the city of Manhattan
- Looking at the sky high buildings or multi storeyed houses.
- Wading along the sea - shore with naked feet



- Standing under trees in the forests.
- Talking to anyone whom he loves
- Sitting at the table for dinner with one's family
- Looking at the strangers travelling opposite to him in the subway cars.

Walt Whitman moves from nature to city life in a style that is his own. It is a typical Whitman style of a poem, well-written, well-modified and explanatory in its own sense.

Question no. 3

What do the lines about Manhattan and the subway car tells us about Whitman's feelings for the people.

Whitman gets excited to see the over-crowded streets of Manhattan .He is equally excited to see the people riding the subway cars, looking at one another and exchanging smiles .Whitman feels that people usually bypass the muses of the real miracles, and instead talks very high of supernatural miracles.

Learning about literary devices

Image: - A picture made out of words. It refers to the mental representation of an idea or conception expressed through certain words that have an 'undercurrent of meaning'

Imagery: - A word or a group of words that appeal to one or more of the senses. Imagery is of different kinds, such as auditory (hear), visual (see), tactile (touch), olfactory (smell), gustatory (taste) and kinaesthetic (sensations of movement)

What are the images used by the poet?

Walt Whitman has used different and clear images in his poem 'Miracles' which are as under:-

- Sky high buildings or multi - storey buildings.
- Wading along the sea shore with naked feet.
- Standing under trees in the forests.
- To sit for dinner at the table.
- To look at strangers travelling opposite to him in the subway car.
- To watch honey bees busy around the hive.
- Animals feeding in the fields.
- Stars shining so quiet and bright.
- The exquisite (splendid) thin curve of the new moon.
- The ships with men in them sailing in the sea.

Is there any rhyme scheme in the poem?

No, there is no rhyme scheme in the poem 'Miracles'. It has been written by Walt Whitman in free verse.

Short – Story 01:- “The Necklace” GUY DE MAUPASSANT

Question no. 1

The course of the Loisels’ life changes due to the Necklace. Comment.

The course of the Loisels’ life changes due to the necklace because before it, Loisels appear to lead a peaceful and affectionate life except for the psychological sadness of Matilda. They seem to manage their life smoothly even at low wages. But due to the unsatisfied feeling of Matilda towards her life, she borrows necklace from her friend to give herself a temporary and fake happiness. Finally, after losing the borrowed necklace, she along with her poor husband, spends ten long and miserable years in restoring the cost of the necklace. They change their lodgings and rent some room in an attic. They send away the maid and Matilda does all the household work herself. She loses the comfort and happiness of her remaining young age because of the happiness and enjoyment of that night.

Question no. 2

What was the cause of Matilda’s ruin? How could she have avoided it?

Matilda’s outlook towards her simple life distressed her. She was never satisfied with her life of low standard. She considered herself to be liable for only luxuries and pleasures of life .So, naturally she wished for such things which were above her standard and made her prone to such things which would give her temporary fame and flattery but permanent dissatisfaction and disappointment. It was because of her myopic thinking that she did not go to the ball in her real getup of a middle class lady. Instead, she fitted herself up as a rich lady with beautiful dress and jewellery. Soon after losing the borrowed necklace, there started a terrible phase of her life in which her beauty and fineness gave way to shabby looks and crude natured poor woman.

She could have easily avoided it by contending herself with what she had. Had she not been an envious and foolish lady, she would have preferred to join the ball in her real appearance. She could have led a happy and satisfied life with her loving husband; who was ever ready to sacrifice his wishes for his beautiful spouse, but because of her wit, she ruined her life.

Question no. 3

What would have happened to Matilda if she would have confessed to her friend that she had lost her necklace?

The situation would have been entirely different if Matilda would have confessed to her friend that she had lost the necklace. Her friend would have forgiven her for the folly and would have disclosed about the fakeness of the necklace. Since the lost necklace was of meagre 500 Francs, Matilda could have easily bought another one to replace it. This would not have ruined her life and she would not have struggled against the challenges of life.

Question no. 4

If you are caught in a situation like this, how will you deal with it?

If I am being caught in a situation as Matilda was in, I will probably deal with it the same way as Matilda did. I will try to restore the cost of the necklace but on the other side I will accept the reality of life. I will also pledge never to be dissatisfied with my life. I would probably disclose the whole story to my friend eventually after clearing my debts.

OR

If I am caught in a situation like this, I would not act blindly . I would like to be very honest and straight forward to my friend. I would disclose my mistake before him and would seek his advice about how to pay back the amount.

Character sketch of Matilda

Matilda is a pretty lady who is married to a petty clerk. She considers herself to be a lady of great fortune .She is a blend of ambitions, adventures, day dreaming and visions. She thinks that it is because of the mistake of fate that she has been married to a petty clerk. She is easily carried away by wishes and seems to be a foolish kind of lady who always thinks of a luxurious life for herself without considering the reality. She keeps her wishes before her poor husband, who strives hard to make their both ends meet. She joins a ball by dressing herself in a very elegant way, not knowing about the reality of her future life. Then, after losing the necklace, she struggles with the circumstances put forth by her unsatisfied nature, and finally ruins her youth and beauty because of the envious and discontented psychology.

SUBJECT: SCIENCE

(Physics)

Light: Reflection, Refraction

THEORIES OF LIGHT:

NEWTON'S CORPUSCULAR THEORY:

According to this theory, light consists of particles called corpuscles, that travel with very high speed (3×10^8 m/s in vacuum). This theory cannot explain diffraction, interference and polarization.

HUYGEN'S WAVE THEORY:

The Dutch astronomer Huygens (1629-1695) proposed a wave theory of light. He believed that light was a longitudinal wave, and that this wave was propagated through a material called the 'ether'. Its draw back was that it fails to explain polarization, photoelectric effect and Compton Effect.

MAXWELL'S ELECTROMAGNETIC WAVE THEORY:

According to this theory, light is an electromagnetic wave consisting of electric and magnetic fields. The electric and magnetic fields in an electromagnetic wave are continuously varying with respect to time and space. At any instant electric and magnetic fields are perpendicular to each other and also perpendicular to the direction of light. The electromagnetic wave is a transverse wave.

PLANK'S QUANTUM THEORY:

According to this theory, light energy is released from source discretely in the form of energy packets of specific frequencies called photons or quanta. Photons are propagated as waves and if necessary interact with matter as particles. This phenomenon could explain Compton Effect, photoelectric effect and black body radiation.

What is light?

Light is an electromagnetic wave that causes the sensation of vision. It travels with a speed of 3×10^8 m/s in vacuum. It has dual nature i.e. particle as well as wave nature.

Some important terms:

- 1. Ray of Light:** A line drawn in the direction of propagation of light is called a ray of light.
- 2. Beam of Light:** A group of rays of light emitted by a source of light is called a beam of light. A light beam is of three types.
 - (i) Parallel beam:** A group of light rays parallel to each other is known as parallel beam of light.
 - (ii) Divergent beam:** A group of light rays spreading out from a source of light is called divergent beam of light.
 - (iii) Convergent beam:** A group of light rays meeting at a point is called convergent beam.
- 3. Image:** When light rays meet or appear to meet after reflection from a mirror, then it is called an image.

Real Image: It is a kind of image which is formed by actual intersection of light rays after reflection.

Virtual Image: It is a kind of image which is formed by producing the reflected rays backward after reflection.

REFLECTION

The phenomenon of sending back the light in the same medium by a surface is called reflection. It is of two types viz, Regular and Diffused reflection.

Reflection is said to be regular if parallel beam of incident rays reflect parallelly after striking obstacle whereas reflection is said to be diffused or irregular if parallel beam of incident rays don't reflect parallelly.

LAWS OF REFLECTION: There are two laws of reflection.

- (i) The incident ray, the reflected ray and the normal at the point of incidence, all lie in a same plane.
- (ii) The angle of incidence is always equal to the angle of reflection, $\angle i = \angle r$.

PLANE MIRROR: Plane mirror is a piece of glass whose one side is polished by using silver paint, which is covered by a coating of red paint to protect the silver layer.

SPHERICAL MIRRORS:

Spherical mirror is a part of hollow glass sphere whose one surface is polished.

There are two types of spherical mirror.

- (i) Concave Mirror: It is a spherical mirror whose outer surface is polished and inner or concave side is reflecting surface.
- (ii) Convex Mirror: It is a spherical mirror whose inner is polished and outer side or convex side is the reflecting surface.

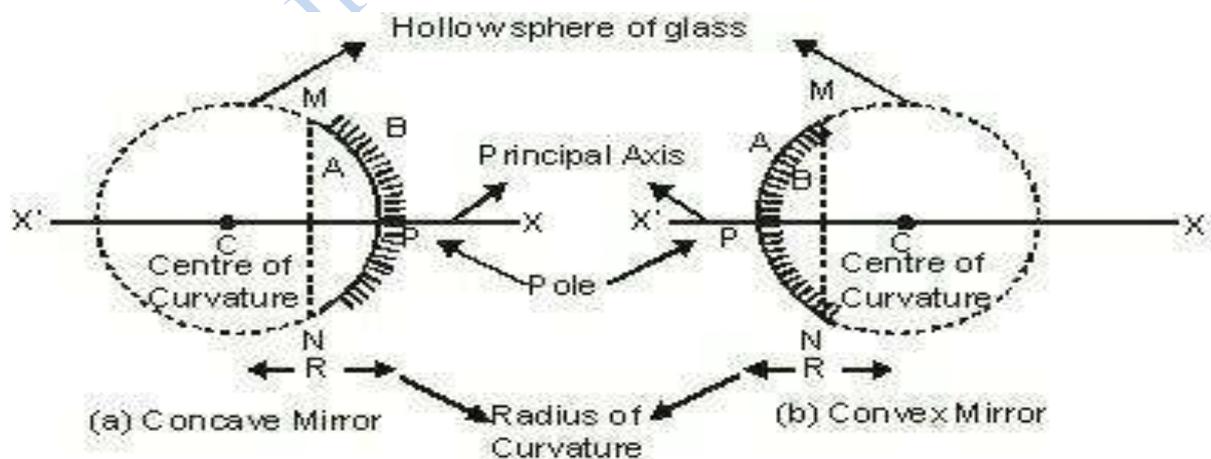
Some important terms related to spherical mirrors

Centre of curvature: The centre of curvature of a spherical mirror is the centre of the imaginary hollow sphere of glass, of which the spherical mirror is a part. The centre of curvature is usually denoted by the letter C.

Pole: The centre of the reflecting surface of a spherical mirror is called its pole. It is usually denoted by the letter 'P' in each concave and convex mirror.

Principal Axis: The principal axis of a spherical mirror is the straight line passing through the centre of curvature C and pole P of a spherical mirror, produced on both sides.

Aperture: The portion of a mirror from which the reflection of light actually takes place is called the aperture of the mirror. The aperture of a spherical mirror is denoted by the diameter of its reflecting surface.

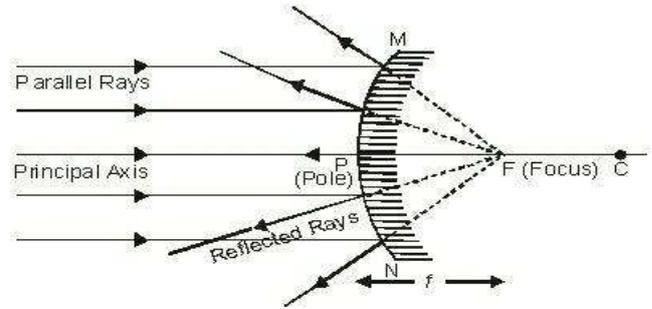
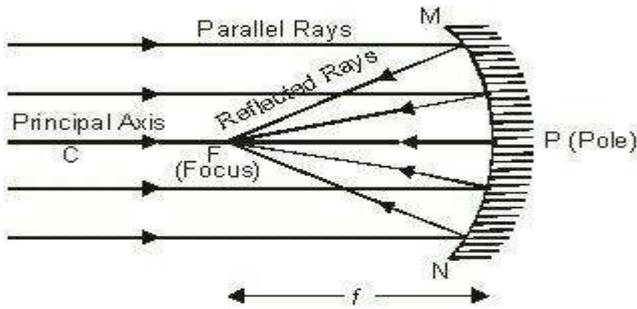


Focus of concave mirror: The principal focus of a concave mirror is a point on the principal axis of the mirror, at which all the incident rays parallel to the principal axis, and close to it, actually meet (converge) after reflection from the mirror.

Focus of convex mirror: The principal focus of a convex mirror is a point on the principal axis of the mirror, at which all the incident rays parallel to the principal axis and close to it, appears to diverge, after reflection from the mirror.

Rules for tracing image in spherical mirrors

- (i) The incident ray of light which is parallel to the principal axis of a concave mirror

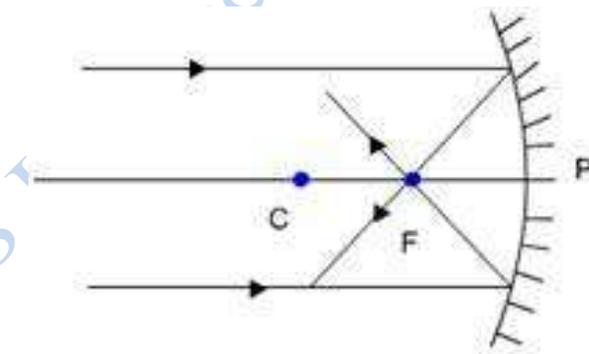


actually passes through the principal focus of the mirror after reflection from the mirror.

- (ii) The incident ray of light passing through the centre of curvature at a concave mirror is reflected back along the same path
- (iii) Incident ray of light passing through the focus of a concave mirror becomes parallel to the principal axis of the mirror after reflection.
- (iv) Incident ray of light which is incident (obliquely) at the pole P of the concave mirror is reflected back making the same angle with the principal axis of the concave mirror.

Image formation by concave mirrors

Object at infinity:



Since parallel rays coming from the object converge at principal focus, F of a concave mirror; after reflection. Hence, when the object is at infinity the image will form at focus.

Properties of image:

- 1. Point sized
- 2. Highly diminished
- 3. Real and inverted

Object between infinity and Centre of Curvature:

When the object is placed beyond the centre of curvature, a ray of light AD which is parallel to principle axis and another ray AE passing through centre of curvature intersects each other after reflection at A'.

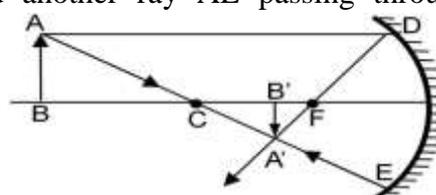
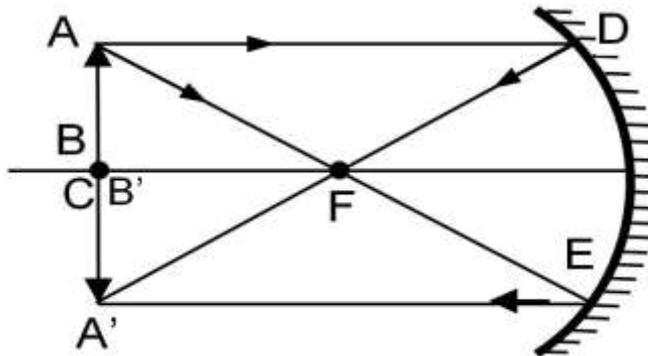


Image is formed between F and C.
Diminished compared to object
Real and inverted.

Object at C:

When object is placed at C then ray AD which is parallel to principle axis and another ray AE passing through focus meet after reflection at C where image is formed.

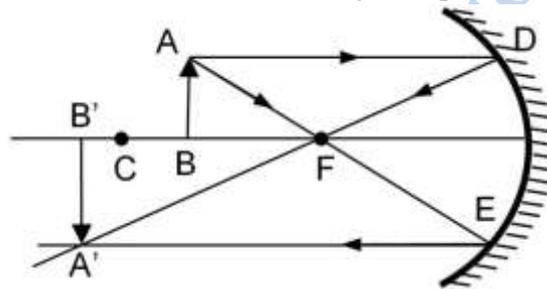
The image formed is:
Same size as object



Real and inverted

Object between C and F:

When object is placed between C and F, then ray AD parallel to principle axis and another



ray AE passing through focus meet beyond C after reflection where image is formed.

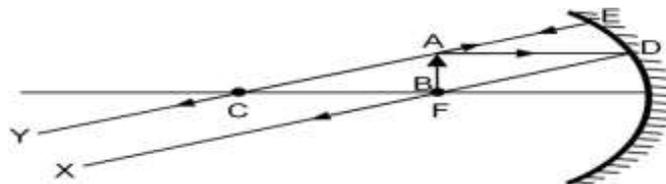
The image formed is:

Larger than object

Real and inverted

Object at F:

When object is placed at F, a ray AD incident parallel to principle axis reflects through focus and another ray AE passing through centre of curvature retraced its path. Reflected rays are parallel hence cannot meet, thus image is formed at infinity.



The image formed is:

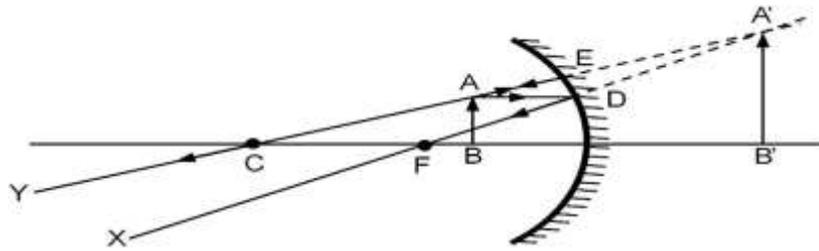
Highly enlarged

Real and inverted

Object between focus and pole of mirror:

When object is placed between F and P, ray AD incident parallel to principle axis reflects through focus and another ray AE passing through centre of curvature retraced its path. Since they can't meet after reflection but on extending backwards, they appear to meet beyond mirror where image is formed.

The image formed is:



Enlarged
Virtual and erect

Image formation by convex mirror

Object at infinity: When the object is at the infinity, a point sized image is formed at principal focus behind the convex mirror.

Properties of image:

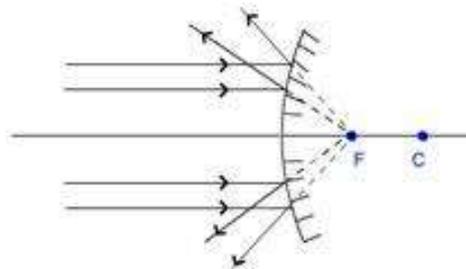
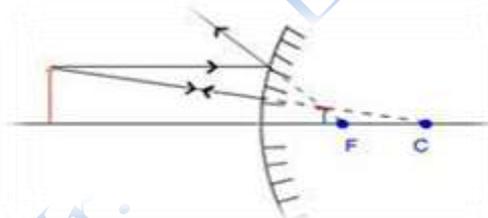


Image is highly diminished, virtual and erect.



Object between infinity and pole:

When the object is between infinity and pole of a convex mirror, a diminished, virtual and erect image is formed between pole and focus behind the mirror.

Properties of image: Image is diminished, virtual and erect.

Uses of Concave Mirror :

- (i) It is used as a shaving mirror because when it is placed close to the face, it forms a large image.
- (ii) It is used by dentists to see large and erect image of teeth.
- (iii) It is used as head light mirrors in automobiles to give powerful parallel beam of rays.
- (iv) It is used in solar heating devices like solar cooker, because it converges Sun's rays over a small area to produce high temperature.

Uses of Convex Mirror :

- (i) It is used as rear view mirror in automobiles because it gives erect image as well as diminished image due to which driver has wider field of view.
- (ii) It is also used in street lights to diverge the light on large area.

SIGN CONVENTIONS OF SPHERICAL MIRRORS

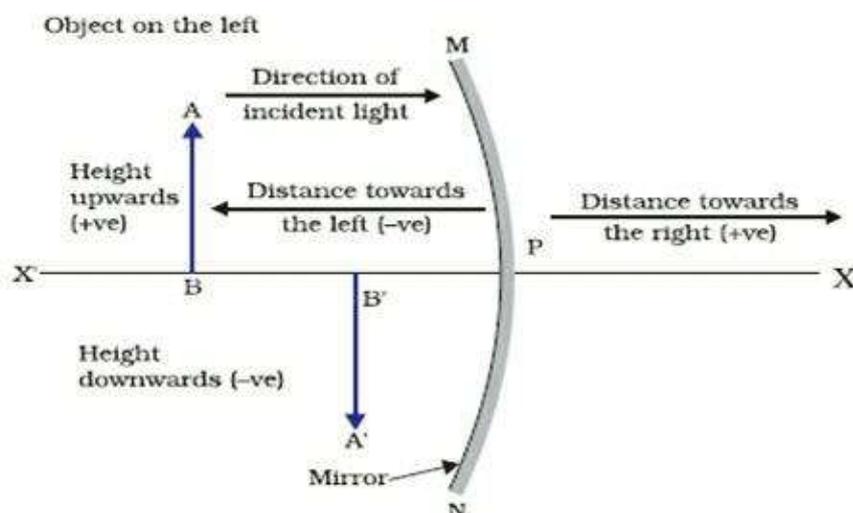
The object is always placed to the left of the mirror. This implies that the light from the object falls on the mirror from the left-hand side.

All distances parallel to the principal axis are measured from the pole of the mirror.

All the distances measured to the right of the origin (along + x-axis) are taken as positive while those measured to the left of the origin (along x-axis) are taken as negative.

Distances measured perpendicular to and above the principal axis (along + y-axis) are taken as positive.

Distances measured perpendicular to and below the principal axis (along y-axis) are taken as negative.



Mirror formula:-

It gives the relationship between image distance (v)

Object distance (u) and the focal length (f) of the mirror and is written as

$$\frac{1}{f} = \frac{1}{v} + \frac{1}{u}$$

Where v is the distance of image from the mirror, u is the distance of object from the mirror and f is the focal length of the mirror. This formula is valid in all situations for all spherical mirrors for all positions of the object.

Magnification

Magnification produced by a spherical mirror gives the relative extent to which the image of an object is magnified with respect to the object size. It is expressed as the ratio of the height of the image to the height of the object. It is usually represented by the letter m. So,

$$\text{magnification } m = \frac{\text{height of image}(h_1)}{\text{height of object}(h_2)}$$

or, $m = h_1/h_2$

The magnification m is also related to the object distance (u) and image distance (v) and is given as

$$M = h_1/h_2 = -v/u$$

Now three cases arise.

If $h_1 > h_2$, then $m > 1$

If $h_1 < h_2$, then $m < 1$

If $h_1 = h_2$, then $m = 1$

REFRACTIVE INDEX

Refractive Index is the extent of change of direction of light in a given pair of media. It is given by ratio of speed of light in vacuum to speed of light in given medium. It is a unit less quantity.

$$n = c/v$$

RELATIVE REFRACTIVE INDEX:

The relative refractive index between a pair of media is the ratio of their absolute refractive indices. While the absolute refractive index of any material medium is always greater than unity, its relative refractive index may be greater or lesser than unity.

$$n_{21} = n_2/n_1 = v_1/v_2$$

REFRACTION

Bending of light at the interface whenever light goes from one medium to another medium if different refractive index. When ray of light enters from a rarer medium into a denser medium, it bends towards the normal. On the contrary, when ray of light enters into a rarer medium from a denser medium it bends away from the normal.

LAWS OF REFLECTION: There are two laws of refraction.

A. The incident ray, refracted ray and normal to the interface of given two transparent media, all lie in same plane.

B. The ratio of sine of angle of incidence and sine of angle of refraction is always constant for the light of given colour and for the pair of given media.

The Second Law of Refraction is also known as Snell's Law of Refraction.

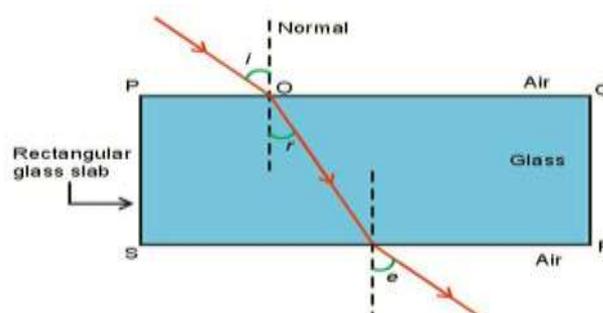
The constant is called refractive index of the second medium in relation to the first medium.

$$\text{That is } \frac{\sin i}{\sin r} = \text{constant}$$

REFLECTION THROUGH GLASS SLAB

To understand the refraction of light through a glass slab consider the figure given below which shows the refraction of light through a rectangular glass slab.

Here in this figure AO is the light ray travelling in air and incident on glass slab at point O .



Now on entering _____ the glass medium

this ray bends towards the normal NN' because light goes from air (rear medium) to glass (denser medium)

After getting refracted this ray now travels through the glass slab and at point B it comes out of the glass slab as shown in the figure.

Now OB ray goes from glass (denser medium) to air (rare medium) bends away from normal N 1 N' 1 and goes in direction BC .

It is observed that Emergent ray is parallel to incident ray. And angle of emergence is equal to angle of incidence.

When a light ray is incident normally to the interface of two media then there is no bending of light ray and it goes straight through the medium.

What is lens?

Lens is an optical device which converges or diverges the rays of light before transmitting. There are two types of lenses viz convex and concave lens.

Convex lens: A lens having two spherical surface bulging outwards is called Convex Lens. It converges the rays and lens also called converging lens.

Concave lens: A lens having two spherical surface bulging inwards is called Concave lens. It diverges the beam of rays lens also called diverging lens.

DIFFERENCE BETWEEN CONVEX LENS AND CONCAVE LENS

Converging (Convex) Lens | Diverging (Concave) Lens

After refraction, light rays meet at one point or appear to meet.	After refraction, light rays move away from one another.
The image formed can be real, virtual, enlarged or diminished based upon the position of object.	The image formed is always virtual and diminished.
Focal length is positive.	Focal length is negative.
Used to correct Hyperopia (Farsightedness)	Used to correct Myopia (Nearsightedness)

Image formation in convex lenses

There are six possibilities of position of object in the case of convex lens:

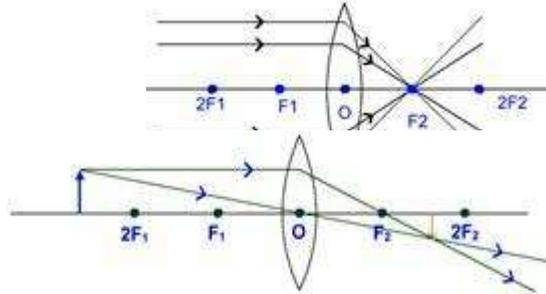
- a. Object at infinity
- b. Object beyond centre of curvature, C
- c. Object at centre of curvature, C
- d. Object between centre of curvature, C and principal focus, F
- e. Object at principal focus, F
- f. Object between principal focus, F and optical centre, O

1. Object at infinity

Convex lens converge parallel rays coming from object at infinity and a highly diminished - point sized, real and inverted image is formed at principal focus F_2 .

Properties of Image: Image is highly diminished, real and inverted.

Object beyond centre of curvature, C_1 or $2F_1$:

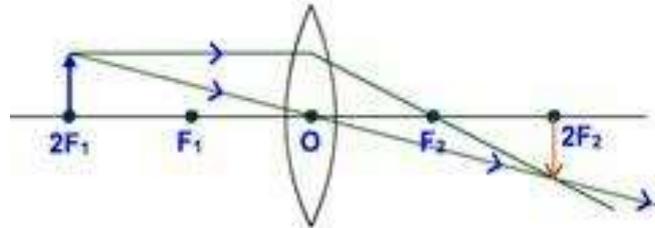


A diminished, real and inverted image is formed between principal focus, F_2 and centre of curvature, C_2 at the opposite side when an object is placed beyond C_1 of a convex lens.

Properties of Image: Image is diminished, real and inverted.

Object at centre of curvature, C_1 or $2F_1$:

A same sized, real and inverted image is formed at centre of curvature, C_2 when object is placed at centre of curvature, C_1 of a convex lens.

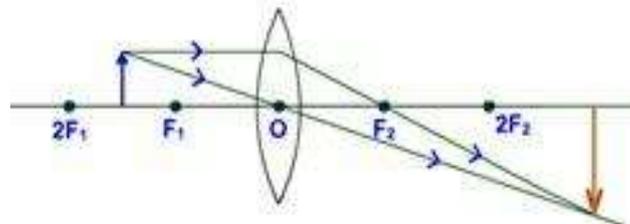


Properties of Image: Image is same size as object, real and inverted.

Object between centre of curvature, C_1 and principal focus, F_1 :

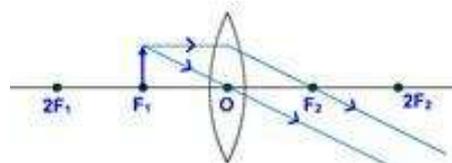
An enlarged, real and inverted image is formed beyond centre of curvature, C_2 when an object is placed between centre of curvature, C_1 and principal focus, F_1 of a convex lens.

Properties of Image: Image is enlarged, real and inverted.



Object at principal focus, F_1 :

An infinitely large, real and inverted image is formed at infinity when object is placed at principal focus, F_1 of a convex lens.



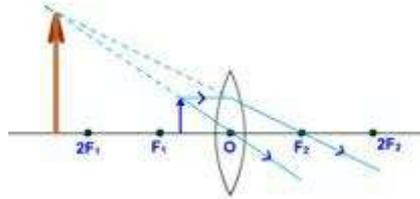
Properties of Image: Image is highly enlarged, real and inverted.

Between principal focus, F1 and optical centre, O:

A virtual, erect and enlarged image is formed at the same side of lens, when an object is placed between principal focus, F1 and optical centre, O of a convex lens.

Properties of Image: Image is enlarged, virtual and erect.

Image formation by concave lens

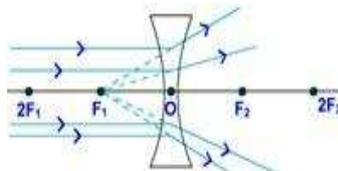


There are only two possibilities of position of object in the case of a concave lens:

- a. Object is at infinity
- b. Object is between optical centre, O and infinity

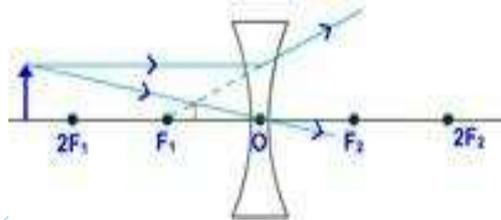
Object is at infinity:

A highly diminished point sized, virtual and erect image is formed when object is at infinity



by a concave lens at principal focus F1.

Properties of Image: Image is point sized, highly diminished, virtual and erect.



Object is between optical centre, O and infinity:

A diminished, virtual and erect image is formed between principal focus F1 and optical centre, O; when object is placed between optical centre and infinity of a concave lens.

Properties of Image: Image is diminished, virtual and erect.

LENS FORMULA

A lens formula may be defined as the formula which gives the relationship between the distance of image (v), distance of object (u), and the focal length (f) of the lens. It may be written as:

$$1/f = 1/v - 1/u$$

SIGN CONVENTIONS

1. All the distances are measured from the optical centre of the lens.
2. The distances measured in the same direction as that of incident light are taken as positive.
3. The distances measured against the direction of incident light are taken as negative.
4. The distances measured upward and perpendicular to the principle axis are taken as positive.

5. The distances measured downwards and perpendicular to principle axis is taken as negative.

POWER OF LENS

The ability of a lens to converge or diverge light rays depends on its focal length. It is given by reciprocal of focal length.

$$P = 1/f \text{ or } P = 100/f(\text{cm})$$

Thus, A convex lens of short focal length have high power and focus rays closer to the optical centre and vice versa.

Its SI unit is dioptre (D).

Power of convex lens is positive and that of concave lens is negative.

Define one dioptre?

1 dioptre is the power of a lens whose focal length is 1 metre.

Power of combination of lenses. When two or more lenses are connected, the power of combination is equal to the algebraic sum of power of individual lenses.

Thus net power $P = P_1 + P_2 + P_3 \dots$

OASIS Hr. Sec. Educational Institute

(Chemistry)

PERIODIC CLASSIFICATION OF ELEMENTS

INTRODUCTION

Elements are the building blocks of all substances. Around 1800, only 30 elements were known. With the passage of the time, the number gradually increased and then became very large. At present, nearly 118 elements are known. The process of discovering new elements is not yet over. Under the circumstances, it has become rather impossible to study and remember the properties of each element. Scientists felt the necessity to group elements of similar characteristics together so that if the properties of one of them are known, those of the others can be co-related. This is known as periodic classification of elements. The real credit for preparing the periodic table goes to Mendeleev. Periodic table may be defined as the arrangement of the known elements in certain groups in such a way so that the elements with similar properties are grouped together.

DOBEREINER'S TRIADS

In the year 1829, a German chemist Dobereiner observed that certain elements had similar properties and that he could put them together in a group of three elements each. These groups of three elements were called triads. According to Dobereiner's law of triads, "When the elements are arranged in the order of increasing atomic masses, groups of three elements (known as triads), having similar chemical properties are obtained. The atomic mass of the middle element of the triad being equal to the arithmetic mean of the atomic masses of the other two elements". For example; the elements lithium, sodium and potassium have similar chemical properties and form a triad.

Element of the triad	Symbols	Atomic masses
1. Lithium	Li	7
2. Sodium	Na	23
3. Potassium	K	39

From the table it is clear that the lithium is the first element with atomic mass 7, sodium is the middle element with atomic mass 23 and the potassium is the last element of the triad with atomic mass 39. As per Dobereiner's law the atomic mass of sodium should be equal to arithmetic mean of the atomic masses of other two elements. On calculating from the above table it is found that the atomic mass of Sodium is indeed equal to the arithmetic mean of atomic masses of other two elements.

LIMITATIONS OF DOBEREINER'S TRIADS

The limitation of the Dobereiner's classification was that it failed to arrange all the then known elements in the form of triads of elements having similar chemical properties. Dobereiner could identify only three triads from, the elements known at that time. So, his classification was not much successful.

NEWLAND'S LAW OF OCTAVES

In 1866, English Scientist John Newlands arranged the then known elements in the order of increasing atomic masses and found that the properties of every eighth element are similar to the properties of the first element. Based on this observation Newlands gave his law of octaves and is known as Newland's Law of Octaves. According to this law, "When elements are arranged in the order of increasing atomic masses the properties of the eighth element (starting from a given element) are a repetition of the properties of the first element". Newlands divided the elements into horizontal rows of seven elements each. Noble gases were not discovered at that time.

H	Li	Be	B	C	N	O
F	Na	Mg	Al	Si	P	S
Cl	K	Ca	Cr	Ti	Mn	Fe
Co & Ni	Cu	Zn	Y	In	As	Se
Br	Rb	Sr	Ce & La	Zr		

For Example; if we start from lithium (Li) as the first element, we find that the eighth element from it is sodium (Na). According to Newland's Law of Octaves, the properties of Lithium and sodium should be same. It has actually found that Lithium and sodium have same chemical properties.

LIMITATIONS OF NEWLAND'S LAW OF OCTAVES

The various limitations of Newland's Law of Octaves are as follows:

1. This classification was applicable to the classification of elements up to calcium only. After this the eighth element did not possess the same properties as by the element lying above it in the same group.
2. Newland assumed that only 56 elements existed in nature and no more elements would be discovered in future. Later lot of new elements were discovered and that on them his law was not applicable.
3. He placed two elements in the same slot in a particular group. For example, Co and Ni were placed in the same slot in the first group.
4. Iron element which resembles cobalt and nickel elements in properties was placed far from these elements.

MENDELEEV'S PERIODIC CLASSIFICATION

Mendeleev was the first to make a very significant contribution in the formation of the periodic table. He tried to co-relate the atomic masses of the elements with their physical and chemical properties. Based on his observation Mendeleev gave a period law in 1869. According to Mendeleev's periodic law, "Properties of the elements are a periodic function of their atomic masses".

Mendeleev arranged all 63 elements known at that time in the order of increasing atomic mass and this arrangement was called periodic table. Elements having similar properties came directly under one another in the same vertical column called group. The main characteristics of the periodic table are:

- (i) In this periodic table, elements are arranged in vertical columns called groups and horizontal rows called periods.
- (ii) There are eight groups. The elements belonging to I –VII are of normal elements and are divided into two sub-groups and eight group VIII is of transition elements and is divided into three sub groups.
- (iii) There are 7 periods. Periods from 4th to 7th have been divided in two series: 1st series and 2nd series.
- (iv) Two general formulas one for oxides and second for hydrides have been given for the elements of each group.

MERITS OF MENDELEEV'S PERIODIC TABLE

Mendeleev's periodic table was of great help in the study of elements. Various merits of Mendeleev's periodic table are as follows:

1. Mendeleev's periodic law predicted the existence of some elements that had not been discovered at that time. For example; Mendeleev's periodic table left proper gaps for the then

undiscovered elements like gallium (Ga), scandium (Sc) and germanium (Ge). When these elements were discovered later on, they were placed in those gaps, without disturbing the existing elements.

2. Mendeleev's periodic table could predict the properties of several elements on the basis of their positions in the periodic table. For example the properties of the then undiscovered elements like gallium (Ga) were predicted in this way.

3. Mendeleev's periodic table could accommodate noble gases when they were discovered.

4. Mendeleev also corrected the atomic masses of certain elements with the help of his periodic table.

5. It was for the first time that the systematic study of elements was done.

LIMITATIONS OF MENDELEEV'S CLASSIFICATION OF ELEMENTS

The various limitations of the Mendeleev's classification of elements:

1. The position of isotopes could not be explained: Mendeleev's periodic law arranged the elements in the order of increasing atomic mass. So accordingly the isotopes should be placed at different places in the periodic table. However, Mendeleev gave isotopes the same place in his periodic table. For example; Cl-35 and Cl-37 are two isotopes of chlorine with respective atomic mass 35u and 37u. They were placed in the same group at same place.
2. Wrong order of atomic masses of some elements could not be explained: Mendeleev's periodic law arranged the elements in the order of increasing atomic mass. So accordingly the elements with lower atomic mass should come first and the elements with higher atomic mass should come later. But in the Mendeleev's classification of elements some elements with higher atomic masses were placed before the elements with lower atomic masses. He could not explain this abnormal situation. For example cobalt with atomic mass 58.9u was placed before Nickel with atomic mass 58.7u.
3. A correct position could not be assigned to hydrogen in the periodic table: On the basis of properties hydrogen resembles with both alkali metal group as well as halogen group. Mendeleev's periodic table placed hydrogen in alkali group. However he could not explain why he did not place it in halogen group.
4. Different groups for similar elements: In some cases, elements with similar properties have been placed in different groups.

MODERN PERIODIC TABLE

The modern periodic table was prepared by Bohr. It is also known as long form of periodic table. It is based on the modern periodic law which is given by Moseley. According to modern periodic law, 'The properties of elements are a periodic function their atomic numbers'. When the elements are arranged according to increasing atomic numbers, then the elements having same number of valence electrons occur at regular intervals. The various characteristics of modern periodic table are:

1. The elements are arranged in the order of increasing atomic number.
2. The horizontal rows in a periodic table are called periods. The elements in a particular period have consecutive atomic numbers. There are 7 periods in the modern periodic table. These periods differ in the number of elements they contain.

- The vertical columns in a periodic table are called groups. The elements in a particular group has same number of valence electrons and thus have same chemical properties. There are 18 groups in the modern periodic table.
- There are two series in the periodic table. One is called Lanthanide series and other is called Actinide series.

MERITS OF MODERN PERIODIC TABLE

The various merits of modern periodic table:

- The modern periodic table is based on the atomic numbers of elements which is the most fundamental property of elements.
- In the modern periodic table, elements in the same group show similar chemical properties.
- It explains the reasons for the periodicity in properties of elements.
- Since the electronic configurations of the elements are repeated after 2, 8, 18 and 32 electrons. Therefore, the properties of elements are also repeated after 2, 8, 18 and 32 elements. This fixes the number of elements in a period of periodic table.
- There are no anomalies in the arrangement of elements in the modern periodic table.

How could the modern periodic table remove various anomalies of Mendeleev's periodic table?

Ans. The modern periodic table removed the anomalies that the Mendeleev's period table had. The explanation to them are as under:

- Explanation for the position of isotopes: since all the isotopes of an element have the same atomic number, they can be put at one place in the same group at the same place of the periodic table. For example; the atomic number of both isotopes of Chlorine Cl-35 and Cl-37 is same. Therefore, they can be place at the same place in the periodic table.
- Explanation for the position of cobalt and nickel: since the atomic number of cobalt is 27 and nickel is 28. Therefore in the periodic table cobalt comes before nickel even though it has atomic mass greater than nickel.
- Prediction of new elements: Since the modern periodic table is arranged on the basis of increasing atomic number. No two elements in the universe can have same atomic number. Therefore if the new undiscovered elements will be discovered they will occupy their respective place without disturbing the existing elements as atomic number varies regularly contrary to atomic mass which does not vary regularly.

CHARACTERISTICS OF PERIODS OF MODERN PERIODIC TABLE

The horizontal rows of elements in a periodic table are called periods. The various characteristics of periods are as under:

- Valence electrons: On moving from left to right in a period, the number of valence electrons in elements increase from 1 to 8. For example in 3rd period as we move from sodium on left to argon on right. Sodium has 1 valence electron and argon has 8 valence electrons.
- Valency: On moving from left to right in each short period, the valency of elements increases from 1 to 4 and then decreases to 0. For example in 3rd period as we move

from sodium on left to argon on right. Sodium has 1 valency silicon has 4 valency and argon has 0 valency.

3. Size of atom: On moving from left to right in a period, the size of elements decreases. This is due to protons in the nucleus which pull the electrons more close to the nucleus and the size of atom decreases.
4. Metallic Character: On moving from left to right in each period, the metallic character of elements decreases and the non-metallic character increases.
5. Chemical reactivity: On moving from left to right in each period, the chemical reactivity of elements first decreases then increases.
6. Nature of oxides: On moving from left to right in a short period, the basic nature of oxides decreases and the acidic nature of oxides increases.

CHARACTERISTICS OF GROUPS OF MODERN PERIODIC TABLE

Ans. The vertical columns of elements in a periodic table are called groups. The various characteristics of groups are as under:

1. Valence electrons: On moving from top to bottom in a group, the numbers of valence electrons in elements remain same. For example in 2rd group as we move from beryllium on top to radium at bottom. Valence electrons of each are 2.
2. Valency: The valency of all elements in a group is same. For example in 2rd group as we move from beryllium on top to radium at bottom. Valency of all elements in the group is same i.e. 2.
3. Size of atom: On moving from top to bottom in a group, the size of elements increases. This is due to the reasons on moving from top to bottom the new shell is added after each period. This increases the size of atoms. Thus, for example radium has greater atomic radius than beryllium.
4. Metallic Character: On moving from top to bottom in a group, the metallic character of elements increases. For example as we move from lithium to Francium in 1st group. Francium is most metallic and lithium is least metallic in nature.
5. Chemical reactivity: On moving from top to bottom in each group, the chemical reactivity of elements increases. For example as we move from lithium to Francium in 1st group. Francium is most reactive and lithium is least reactive in nature.
6. Nature of oxides: On moving from top to bottom in a group, there is no change in the nature of oxides.

(Biology)

LIFE PROCESSES

LONG TYPE QUESTIONS

Q1. What is nutrition? What are the types of nutrition?

Ans. Nutrition is the process of intake and utilisation of food by an organism in various life processes. The substances which are taken up by the organisms as food are known as nutrients. Various organisms live in different environmental conditions and they have different method of obtaining nutrients from the environment. Depending on the mode of nutrition, all organisms can be classified into two major groups— Autotrophic and Heterotrophic. Thus there are mainly two modes of nutrition:-

- a). Autotrophic nutrition b) Heterotrophic Nutrition.

Autotrophic Nutrition: In Greek, ‘auto’ means ‘self’ and ‘troph’ means ‘nutrition’. Thus, autotrophic nutrition is a mode of nutrition in which organisms prepare their own food from simple inorganic raw materials like carbon dioxide and water present in their surroundings in the presence of sunlight. Organisms which can make their own food from inorganic materials are called autotrophs. All green plants are autotrophs. Certain bacteria called autotrophic bacteria are also autotrophs.

Heterotrophic nutrition: In Greek, ‘hetero’ means ‘other’ and ‘troph’ means ‘nutrition’. Thus, heterotrophic nutrition is a mode of nutrition in which organisms can’t prepare their own food and depends on other organisms (autotrophs) to obtain food. Those organisms which can’t make their food from inorganic substances and depend on other organisms for their food are called heterotrophs. All animals, fungi and non-green plants are heterotrophs. Most bacteria are also heterotrophs.

Q2. Explain the types of Heterotrophic Nutrition?

Ans. Heterotrophic nutrition is a mode of nutrition in which organisms can’t prepare their own food and depends on other organisms (autotrophs) to obtain food. Heterotrophic nutrition is of three types:

1. Saprophytic nutrition 2. Parasitic nutrition 3. Holozoic Nutrition

1. Saprophytic nutrition: The term ‘sapro’ means ‘rotten’ and ‘phyte’ means to eat. Thus, saprophytic nutrition is that mode of heterotrophic nutrition in which organism derives its food (nutrients) from dead and decaying organic matter like rotten bread, rotten leaves, dead animals, etc. These organisms absorb organic fluids formed due to decomposition of dead organisms through their body surface. Organisms having saprophytic mode of nutrition are called saprophytes e.g. fungi and some bacteria etc.

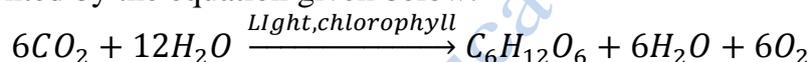
2. Parasitic nutrition: The term ‘para’ means ‘others’. Thus, parasitic nutrition is that mode of heterotrophic nutrition in which an organism derives its food from the body of another living organism without killing it. The organism which obtains the food is called parasite and the organism from whose body the food is obtained by the parasite is called host. A host can be plant or an animal. The host is not benefited by the parasite. In fact most diseases which effect man, crop and domestic animals are

caused by parasites. Some common examples of parasites are Ascaris, lice, tapeworm, plasmodium etc.

3. Holozoic nutrition: Holozoic nutrition is that mode of heterotrophic nutrition in which the organism is feeding on solid food. The organism takes the complex organic food material into its body by the process of ingestion, which is then digested, absorbed and assimilated in the body cells of the organisms. The undigested food is thrown out by the process called egestion. Examples of holozoic nutrition is the nutrition in animals including man.

Q3. Explain photosynthesis?

Ans. In Greek 'photon' means 'light' and 'synthesis' means 'put together'. Thus, the process of making organic food from inorganic raw materials in the presence of light energy by the green plants (autotrophs) is called photosynthesis. The process of photosynthesis takes place in green plants because the light can be trapped only by the green pigments called chlorophyll. Chlorophyll is present in the leaves of the green plants. Photosynthesis is the most important process in nature as it provides food supply for the biological world and purifies the atmosphere by consuming carbon dioxide and giving out oxygen. Virtually all the energy available for life in the earth's biosphere is made available through photosynthesis. The reaction of photosynthesis can be represented by the equation given below:



Q4. What are the conditions and raw materials necessary for photosynthesis?

Ans. The conditions and raw materials necessary for photosynthesis are as under:-

- (i) Carbon dioxide (ii) water (iii) sunlight (iv) chlorophyll

(i) **Carbon dioxide:** It is an important raw material for photosynthesis. Green plants take carbon dioxide from the surroundings and convert it into carbohydrates by the process of photosynthesis.

Land plants take carbon dioxide in gaseous form which enters the leaf through tiny pores called stomata. There are large number of stomata on the surface of the leaves. Each stomata is guarded by cells called guard cells. The opening and closing of stomata is controlled by guard cells. The aquatic plants take carbon dioxide in dissolved form which is taken in through the general are s oxidized in the presence of light to release electrons and protons which move through the electron transport system to generate the assimilatory power required for carbohydrate formation. Molecular oxygen is released which goes into atmosphere.

Plants absorb water from the soil through roots which is transported upwards through xylem vessels to the leaves, where it reaches photosynthetic cells and is utilized in photosynthesis.

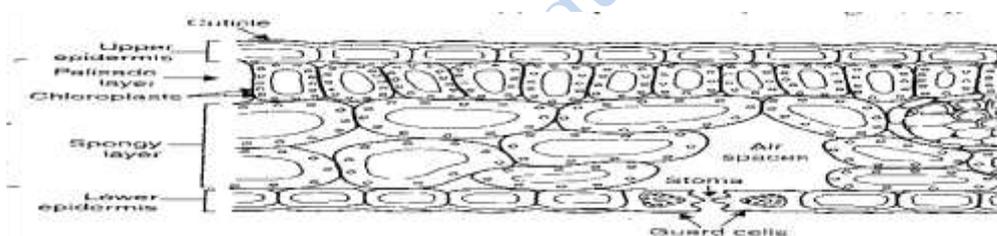
(ii) **Sunlight:** It is the ultimate source of light for photosynthesis in green plants. Only 2% of the total solar energy reaching the earth is used in photosynthesis. It is trapped by the chlorophyll present in the leaves of green plants and creates condition for the break-down of water and production of assimilatory power.

(iii) **Chlorophyll:** It is the most important pigment molecule involved in photosynthesis. It is a green pigment found in the chloroplast of the leaves. Chlorophyll molecules serve as antenna to absorb sunlight. Thus, they help in preparing chemical energy from inorganic material with the help of light energy that they trap.

Q5. (A) Describe leaf as a photosynthetic organ?

Ans. The sites of photosynthesis in a cell of leaf are green coloured plastids called chloroplast. Chloroplasts are organelles in the cells of green plants which contain the green pigment chlorophyll. They give the green colour to the plants. In a cross-section of a leaf, chloroplasts are seen as disc-like organelles in the mesophyll cells. The chloroplasts are discoid or biconvex lens shaped and measure about 4-6 micrometer in diameter. A cell may contain 100 or more chloroplast in it, and a leaf may contain thousands. Each chloroplast is a double membrane bound structure which is filled with a colorless matrix called stroma. It contains enzymes for reduction of inorganic carbon to organic carbon. Embedded in the stroma is a system of lamellae or flattened thylakoids that are arranged in stacks in certain regions known as grana. The grana are interconnected by a system of loosely arranged lamellae called the stroma lamellae. Chlorophyll molecules are located on the membrane of the lamellae in such a way that can trap maximum amount of light.

The complete process of photosynthesis takes place inside the chloroplast. The light phase occurs in the grana and the dark phase occurs in the stroma.



Q5. (B) Describe the mechanism of photosynthesis?

Ans. Photosynthesis is an 'oxidation-reduction process' in which H₂O is oxidized and CO₂ is reduced to carbohydrates. The reduction of CO₂ to carbohydrate level needs ATP and NADPH₂. Solar energy is trapped by chlorophyll, and is stored in the form of chemical energy (ATP) and as reducing power NADPH₂. Reducing power of NADPH₂ and energy of ATP are utilized in conversion of CO₂ to carbohydrates. The production of ATP and NADPH₂ (also called assimilatory power) is a light dependent process while reduction of CO₂ to carbohydrate is light independent process.

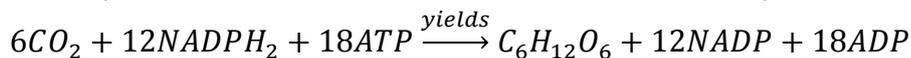
Thus overall mechanism of photosynthesis occurs in two phases:

- (1) Light dependent phase or Light reaction or Hill reaction.
- (2) Light independent phase or Dark reaction or Blackman's reaction.

(1) Light reaction: It occurs in granum of chlorophyll where absorption of radiant energy by two pigment systems lead to the production of three major substances i.e. Oxygen, ATP, NADPH₂. Light energy is absorbed by chlorophyll pigment system I and pigment system II. It results in the photolysis of water that releases molecular oxygen and electrons. The electrons are carried through electron transport chain

reducing NADP to NADPH₂ and ADP to ATP. ATP and NADPH₂ are high energy rich substances called assimilatory power.

(2) **Dark reaction:** Dark reaction occurs in the stroma part of chlorophyll. It involves a series of biochemical reactions occurring one after the other in a cyclic manner which utilize the assimilatory power of light reaction and converts carbon dioxide into carbohydrates. This is called dark reaction or Calvin cycle.



Q6. (A) What are the types of nutrition in animals?

Ans. Animals are heterotrophs i.e. they can't synthesis their own food and obtain food from external sources like plants, animals or their products. Depending on the food habit, all animals are classified into three categories:

- (i) Herbivores (ii) Carnivore (iii) Omnivore.
- (i) **Herbivores:** Those animals which eat only plants and their products like leaves etc. are called herbivore. Some of the examples of herbivores are Goat, cow, sheep, Horse, Deer etc.
- (ii) **Carnivores:** Those animals which eat other animals but do not eat plants at all are called carnivores. Some examples of carnivores are Tiger, frog, Vulture, Kingfisher, Wolf etc.
- (iii) **Omnivores:** Those animals which can eat both plants and other animals and their products are called omnivores. Some examples of omnivores are Man, dog, bear etc.

Q6 (B). Describe nutrition in human beings?

Ans. Human beings are heterotrophic omnivorous organisms and obtain food by holozoic mode of nutrition. The human digestive system consists of 9 metre long alimentary canal and several digestive glands which pour their secretion into the canal. The alimentary canal is a long tube which extends from the mouth to the anus. The nutrition in human beings involves following steps:

1. Ingestion: It means intake of food. The human beings have special organ for ingestion called mouth.

2. Digestion: it means breaking down of the complex food material into simpler small soluble material.

Digestion in buccal cavity: it is the oral cavity bound above by the plate, below by the throat and on the sides by the jaws. A muscular tongue forms the floor of this cavity. In human beings the digestion begins in buccal cavity where food is chewed by teeth and mixed with saliva by tongue. Saliva is secreted by pair of salivary glands in the cavity. Saliva contains digestive enzyme salivary amylase which aids chemical breakdown of starch into maltose. The chewed food is then passed to stomach through esophagus by peristaltic contraction of the muscular esophagus.

Digestion in Stomach: It is small J- shaped pouch with walls made of thick elastic muscles. It serves the following functions:

Storage of food: - Carbohydrates remain in stomach for 1-2 hours, proteins up to three hours and fats for 3-6 hours.

Mechanical churning: it is brought about by the periodic muscular contraction so that food is churned and thoroughly mixed with the gastric juice. The food here is in semi-liquid form known as chyme.

Partial digestion. The stomach wall contains the gastric glands which secrete gastric juice containing hydrochloric acid, enzyme pepsin and mucus. HCl kills any microorganism present in the ingested food and also provides optimum pH for enzyme pepsin which converts proteins into peptones. The mucus protects stomach wall from HCl.

Digestion of food in Small Intestines: The small intestine is coiled and narrow tube which is divided into three parts:

Duodenum: It is a U-shaped structure starts from pyloric end of the stomach and ends into Jejunum. It receives the secretions from liver and pancreas.

Jejunum: It is 2.4 metre long and bears finger like projection called villi which increases the surface area of the inner lining of the intestine.

Ileum: It is 2.4 metre long with club shaped villi.

The bile juice secreted by liver emulsified the fat. Pancreatic juice consist of Trypsin which breaks proteins into amino acid, Amylase breaks starch into sugar and Lipase breaks fats into glycerol. Thus, in small intestines the process of digestion is completed.

3. **Absorption:** The digested food is soluble and is absorbed in the small intestines with the help of finger like structure called villi. This process is called absorption. Villi increase the surface area for absorption.

4. **Assimilation:** The absorbed food goes to blood via blood capillaries. The blood carries the absorbed food to all parts of the body where it becomes assimilated as part of the cells. This assimilated food is used by the body cells for obtaining energy.

5. **Egestion:** The undigested food is not absorbed by small intestines and goes into large intestines. The walls of large intestines absorb most of water present in the undigested food and the undigested food remains solid and is egested through anus.

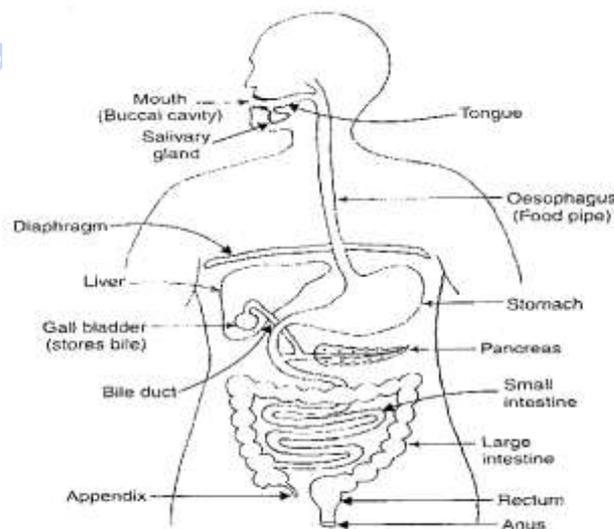


Figure II. The human digestive system.

Q7. Define Respiration? Explain the mechanism of respiration?

Ans. Respiration is a biochemical process in which the nutrients are broken down in the cells of an organism to release energy molecules which is utilized in various life processes. Respiration can take place either in presence of oxygen (Aerobic respiration) or in absence of oxygen (Anaerobic respiration). When respiration takes place in oxygen glucose breaks into CO_2 and water along with large energy. When respiration takes place in absence of oxygen glucose breaks into CO_2 and ethyl alcohol along with little energy.

Mechanism of Respiration: The simplest assimilated food is glucose. It broken in the body cells to release energy. It is a six carbon compound. The first step is the breakdown of glucose into a three-carbon molecule called pyruvate. This process takes place in the cytoplasm and is known as glycolysis. This step does not require oxygen and hence is common in both aerobic and anaerobic respiration. The pyruvate molecule contains a lot of energy in the bonds. In presence of oxygen, breakdown of pyruvate takes place in the mitochondria. This process breaks up the three-carbon pyruvate molecule to give three molecules of carbon dioxide and water along with 38 ATP molecules containing large energy. In absence of oxygen, pyruvate breaks down to produce either carbon dioxide and ethyl alcohol or lactic acid. Here pyruvate breaks down incompletely and produces only 2 ATP molecules containing little energy.

Thus, the most important thing that happens in respiration is break down of glucose to produce energy which is necessary for various life processes.

Q8. What are the types of Respiration? Give differences between Aerobic and Anaerobic respiration?

Ans. Respiration can take place in organisms either in the presence of oxygen or in the absence of oxygen. Based on the availability of oxygen, respiration is of two types:

1. *Aerobic respiration*
2. *Anaerobic respiration*

1. **Aerobic Respiration:** This type of respiration takes place in the presence of oxygen. In this process the respiratory substrate is completely broken down to release high energy. It takes place in the cytoplasm and mitochondria of the cell. During Aerobic respiration, every glucose molecule is completely broken down into 38 ATP molecules along with carbon dioxide and water.

2. **Anaerobic Respiration:** This type of respiration takes place in the absence of oxygen. In this process the respiratory substrate is incompletely broken down releasing little energy. It takes place in the cytoplasm of the cell but mitochondria is not involved. During Anaerobic respiration, every glucose molecule is incompletely broken down into just 2 ATP molecules along with carbon dioxide and ethanol in yeasts and lactic acid in muscles.

The differences between Aerobic and Anaerobic respiration are:

Aerobic respiration	Anaerobic respiration
1. It takes place in the presence of oxygen.	1. It takes place in the absence of oxygen.
2. In this process complete breakdown of the glucose takes place.	2. In this process incomplete breakdown of the glucose takes place.

3. In this process the end products are carbon dioxide and water.
4. In Aerobic respiration large energy is released i.e. 38 ATP molecules.
5. It takes place in cytoplasm and mitochondria of the cell.

3. In this process the end products are carbon dioxide and ethanol or lactic acid.
4. In Anaerobic respiration little energy is released i.e. 2 ATP molecules.
5. It takes place in cytoplasm of the cell but mitochondria is not involved.

Q9. Explain the Respiratory system in human beings?

Ans. The respiratory system in human beings includes nostrils, pharynx, larynx, trachea, bronchi and lungs.

The respiratory system begins with a pair of nostrils. Air enters the respiratory system through the nostrils in which the air is filtered by fine hairs that lines the passage. The dust particles and other impurities present in it are trapped by nasal hair and mucus so that clean air goes into lungs. The nasal passage open behind into pharynx. It is a common passage for food and air. It leads into an air tube called trachea through a slit called glottis. Trachea is a thin walled tube that extends downwards through the neck and divides into 2 major bronchi at its lower end. Trachea does not collapse even when there is no air in it because it is supported by rings of soft bones called cartilage. The bronchi are connected to the two lungs. The lungs lie in the thoracic cavity on the sides of the heart. The thoracic cavity is separated from abdominal cavity by muscular portion called diaphragm. Lungs provide the surface for the exchange of gases. Within the lungs the major bronchi further divide into secondary bronchi which sub-divide into small tertiary bronchi and finally into bronchioles. Each bronchioles divide into alveolar duct which enters the alveolar sac or alveoli. The **alveoli** are made up of non-ciliated squamous epithelium cells. It is surrounded by network of blood capillaries. The exchange of oxygen and carbon dioxide by the blood takes place in the alveoli.

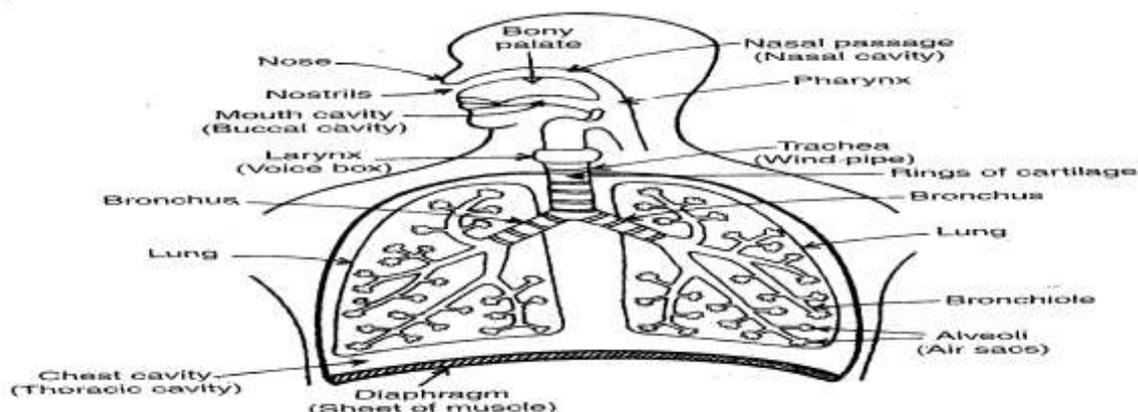


Figure 15. The human respiratory system.

Q10. Explain the mechanism of breathing in man?

Ans. In humans the function of respiratory system is to breathe in O_2 for respiration and breathe out CO_2 by respiration. It is the alveoli where the exchange of gases take place. The physical movements associated with the gaseous exchange is called breathing. These movements are controlled by the respiratory centre of medulla oblongata in the human brain. These are two types of physical movements associated with the gaseous exchange. They are Inspiration or Inhalation and Expiration or Exhalation.

Inhalation: When we breathe in air, the diaphragm and the muscles attached to the ribs contract as a result chest cavity expands. This results in decrease in air pressure and hence air from outside rushes into the lungs. During inhalation, oxygen, which is present in the inhaled air, gets diffused in blood at alveoli and reaches all the body cells.

Exhalation: When we breathe out air, the diaphragm and the muscles attached to the ribs expands as a result chest cavity contracts. This results in increase in air pressure and hence air from inside the body rushes from the lungs towards outside the body. During exhalation, carbon dioxide which is end product of respiration is carried by blood from the body cells to alveoli and is thrown out with exhaled air.

Q11. Describe Respiration in plants?

Ans. Plants are living organisms and require energy for their survival. Plants get this energy by the process of respiration. The respiration in plants is continuous day and night. The end products of respiration in plants during day i.e. carbon dioxide and water are utilized by photosynthesis in leaves. At night, the end products are thrown out as photosynthesis does not occur during night. Respiration in plants occurs through roots, stem and leaves.

1. Respiration through roots: Roots take up oxygen dissolved in the soil through root hairs by the process of diffusion and passes into other cells. Carbon dioxide produced during respiration also moves out through the root hairs of the roots by diffusion.

2. Respiration through stem: Stem of the plant is covered with a protective layer of dead cells having small opening. In soft plants these openings are stomata while in hard and woody plants these openings are called lenticels. The gaseous exchange in stem takes place through these openings. O_2 is taken in and reaches all cells while CO_2 produced during respiration moves out.

3. Respiration through leaves: The leavers have small pores called stomata. The oxygen diffuses in through stomata and reaches all the cells of the leaf. When the concentration of carbon dioxide increases produced during respiration, stomata open to release it into atmosphere.

Q12. Explain the transportation in human beings?

Ans. Transportation is a life process in which a substance is synthesized (or absorbed) in one part of the body and is carried to other parts of the body. Humans have a high metabolic rate i.e. they require more nutrients and oxygen at a faster rate. They also produce more wastes that have to be removed from the cells in less time. Thus, the movement of materials into and out of the system should be possible and also it should reach all the cells of the body and in time. Materials to be transported include digested food, respiratory gases, hormones, excretory products, etc. Blood is vascular tissue in man and more than 90% of this is water. Thus, only water soluble substances are transported through this fluid. For the transport of fatty substances, body uses another fluid called the lymph. Thus, there are two circulatory systems in humans. They are blood circulatory system and lymph circulatory system. Blood circulatory system, thus, transports all the water soluble materials while the lymph circulatory system transports the fatty substances.

Q13. What is blood? What are the components of blood?

Ans. Blood is fluid connective tissue. It is pumped by the heart and is circulated in the body through blood vessels (arteries and veins). It performs a number of functions such as transport of respiratory substances, regulation of body temperature etc. It is thicker than water.

Blood consists of four main components. They are:

1. Plasma
2. Red blood cells
3. White blood cells
4. Platelets

1. Plasma: Plasma is a pale yellowish fluid. Its contents are 90% water and the rest 10% includes proteins, inorganic ions and organic substances. It is the medium in which the blood and other substances are transported around the body.

2. Red blood cells (Erythrocytes): Red blood cells are also called Erythrocytes. They are minute biconcave disc structures without nucleus. They contain a protein known as hemoglobin. Hemoglobin consists of iron. Oxygen readily combines in the lungs with hemoglobin present in the RBCs and is carried to other body parts. RBCs also carry carbon dioxide produced during respiration from the cells. RBCs are produced by the bone marrow and have a span life of 3-4 months.

3. White Blood cells: WBCs are responsible for the defense system in the body they fight infection and protect us from infection. They are about 4000-10,000 per cubic millimeter of blood. These cells are also produced in the bone marrow. They have a life span of couple of days. When they die, they are destroyed by surrounding WBCs and are replaced by new ones.

4. Platelets: They are disc-shaped cells with diameter 2- 4µm. they do not have nucleus. They have a life span of 5-9 days. They facilitate blood clotting so as to prevent loss of blood whenever injury takes place.

Q14. (A). Explain the mechanism of blood clotting?

Ans. When the injury takes place, bleeding starts which is stopped by a process called blood clotting. At the site of injury, the platelets rupture and release a substance called thromboplastin. In the presence of calcium, thromboplastin acts on protein prothrombin and forms an enzyme called thrombin. Thrombin acts on a soluble protein fibrinogen and changes it into fibrin. Fibrin undergoes rapid polymerization to form long fibres. The fibres form a network over the damaged wall of blood vessel and exposed part of the skin. It forms a jelly like mass called blood clot. The clot contracts and solidifies. A liquid called serum is expelled.

Q14(B). What are types of blood vessels?

Ans. Blood vessels are hollow, tubular vessels which conduct the blood from the heart and back to the heart. There are of three types of blood vessels.

1. Arteries
2. Veins
3. Capillaries.

1. Arteries: These are thick walled vessels which carry oxygenated blood from the heart to different parts of the body. Pulmonary artery is an exception which carries deoxygenated blood from heart to lungs where oxygenation of blood takes place. The blood passing through the arteries has a considerable pressure. The aorta is the biggest artery in the body.

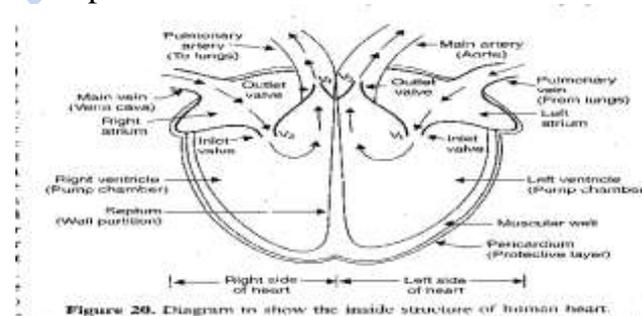
2. Veins: Veins are thin walled vessels which bring deoxygenated blood from the body parts back to the heart. Pulmonary vein is an exception which brings oxygenated blood from lungs back to heart. These are larger and hold more blood than arteries. Blood carrying through veins has low pressure. Superior vena cava and inferior vena cava are two main veins in the body.

3. Capillaries: they are the thinnest vessels. They form a connective link between artery and vein. The walls of capillaries are permeable to water and dissolved substances. So that exchange of materials between the blood and body cells takes place.

Q15. (a) Briefly explain the structure of human heart?

Ans. The human heart is a muscular con shaped organ about 12cm in length and 9cm in breadth. Heart is situated between the lungs of thoracic cavity and is slightly tilted towards the left. It is covered by a membrane called pericardium. The pericardial fluid is present between the pericardium and heart which reduces the friction between the heart and surrounding tissues when heart beats and also protects heart from shock.

The human heart is four chambered. The upper chambers are called auricles and the lower two chambers are called ventricles. The two auricles are separated by interauricular septum and the two ventricles are separated by interventricular septum. The right auricle opens into right ventricle and is guarded by a tricuspid valve. The left auricle opens into left ventricle and is guarded by a bicuspid valve. Both these valves prevent flow back of blood from ventricles into auricles. The ventricles pump blood into the blood vessels and are more muscular than auricles. The deoxygenated blood from different parts of body are collected by two major veins – Superior Vena Cava which collects blood from upper body and Inferior Vena Cava which collects blood from lower body and both these open into right auricle. From the right auricle deoxygenated blood goes into right ventricle which pumps blood into pulmonary artery and is send to lungs. In the lungs oxygenation of blood takes place and the oxygenated blood is returned to left auricle through pulmonary vein. This oxygenated blood goes into left ventricle which pumps the blood into major artery aorta which carries blood to different parts.



Q15. (b). Explain the circulation of blood? Or explain double circulation of blood in man?

Ans. The passage of blood throughout the body under the influence of pressure exerted by heart is called circulation. In humans the blood passes through the heart twice in one cardiac cycle. This type of circulation is called double circulation. It consists of pulmonary circulation and systemic circulation.

Pulmonary circulation is the movement of blood from the heart to the lungs and back

to heart again. Deoxygenated blood is pumped out of the right ventricle into the pulmonary artery. The pulmonary artery carries the blood into the lungs where the oxygen is added to blood and carbon dioxide is removed from the blood. The oxygenated blood is carried back to heart by pulmonary vein into the left atrium. Blood is then circulated in the systemic circulation.

Systemic circulation occurs when the left ventricle contract and blood is forced through the aorta which circulated the blood throughout the body by arterial system. At the capillaries exchange occurs and deoxygenated blood is returned to the right atrium by superior vena cava and inferior vena cava i.e. by venous system.

In this way the circulation of blood takes place in humans and the blood passes through the heart twice in one cardiac cycle.

Q16. Describe the lymphatic system in humans?

Ans. Lymphatic system is an accessory circulatory system which transports lymph from the intercellular spaces of tissues to the blood vascular system. This system is formed of the following components:

1. Lymph
2. Lymph capillaries
3. Lymph vessels
4. Lymph nodes.

1) Lymph: It is straw coloured fluid connective tissue. It is formed from the blood by the passage of substance through the walls of blood capillaries into the intercellular tissue space by the process of diffusion. It consists of two parts plasma and lymphocytes. Plasma is the fluid matrix in which the lymphocytes float. Lymphocytes are special type of WBCs which fight infection. Lymph flows only in one direction that is towards heart.

2) Lymph capillaries: the portion of the lymphatic system that collects the tissue fluids are known as lymphatic capillaries. The lymphatic capillaries are more permeable than ordinary capillaries.

3) Lymph vessels: they have walls that are single celled thickness. The lymph vessels join together to form the bigger lymph ducts. Lymph vessels don not have any muscles but have valves that allow the unidirectional lymph flow. Lymph is circulated in the body with the help of the action of the muscles surrounding the lymph vessels. They join the venous system near the heart.

4) Lymph nodes: The lymph vessels enlarge at certain places to form cavities called lymph nodes. These nodes have numerous lymphocytes. These lymphocytes produce antibodies against bacteria and other germs and attack them and thereby protecting the body from the diseases.

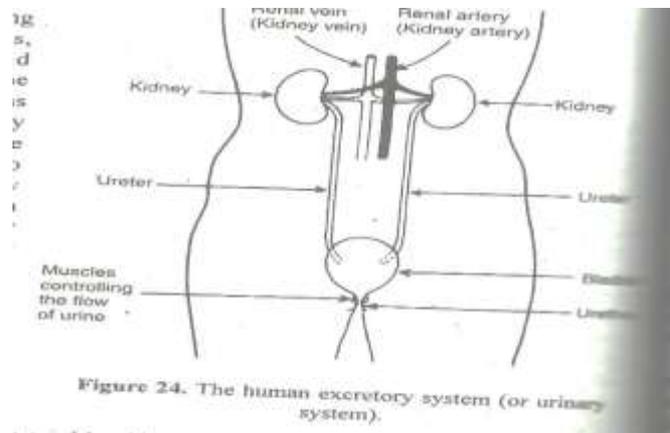
Q17. What is Excretion? Explain the excretory system in human beings?

Ans. The process of removal of toxic wastes from the body of an organism is called excretion. The excretory system is a passive biological system that removes excess unnecessary or toxic materials from an organism. The main parts of excretory system in human beings are:

1. Kidney: these are two bean shaped reddish brown coloured structures located in the back of the abdominal cavity. It is the main organ of excretion through which the wastes are removed in the form of urine. Kidneys contain millions of nephron.

Nephron is the structural and functional unit of kidney. It consists of two parts: Bowman's capsule and glomerules. Nephron acts as a filtering unit.

2. Renal arteries: two renal arteries constantly transport blood to each of the kidneys.
3. Renal vein: two renal veins return nutrients back into the bloodstream after filtering the unwanted substances in the kidney.
4. Ureters: These are the two tubes which arise one from each kidney and carry urine to the bladder.
5. Urinary bladder: this is a muscular sac-like structure where urine is stored till it is thrown out.
6. Urethra: This is a short muscular tube that carries urine from the urinary bladder to the outside of the body.



Q18. Explain the process of urine formation? Or explain the formation of excretion?

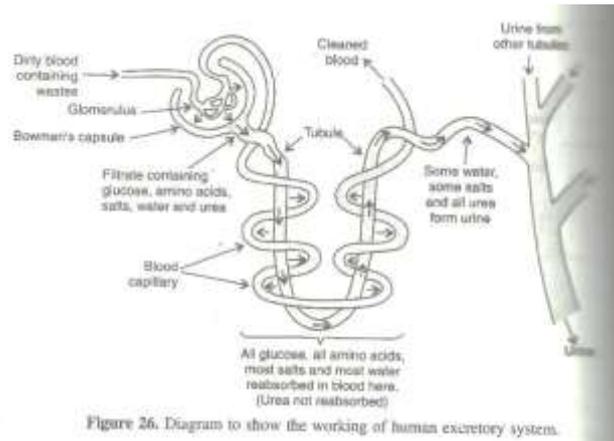
Ans. Kidneys filter the blood coming from the heart. This results in the formation of urine. The process of urine formation happens in the nephrons present in kidneys. The process of urine formation consists of following steps:

1. Filtration: blood flows inside glomeruli under pressure due to narrowness of the efferent arteriole. Blood under pressure helps plasma of the blood to pass through the capillary walls in the glomerulus. The plasma contains water, glucose, amino acid and urea. The product filtered out is called nephric filtrate.

2. Reabsorption: During this stage the substances which are useful nutrients like amino acid, glucose, water etc. are reabsorbed and travel back into the blood. It occurs in renal tubules.

3. Tubular Secretion: It is active secretion of waste products by the blood capillaries into the urinary tubule. It ensures removal of all the wastes from blood like urea, uric acid, creatinine etc. are secreted into urinary tubule.

The urine is passed out of the body by urination process.



OASIS Hr. Sec. Educational Institute

SUBJECT: SOCIAL SCIENCE

(History)

NATIONALISM IN EUROPE

WRITE IN BRIEF

Q#1 Write a note on:

1. **Guiseppe Mazzini:** - Guiseppe Mazzini was the great political idealist of the Italian struggle for independence. He was born at Genova on June 22, 1807. At the age of 24, he joined the secret society of the Carbonari and was sent on a mission to Liguria, where he was arrested for attempting a revolution in 1831. On his release, he subsequently founded two underground societies, first Young Italy, among the Italian exiles in Marseilles, which aimed for the establishment of a free and united Italian Republic. And then young Europe or young Germany in Berne, whose members were selected from Poland, France, Italy and Germany. Mazzini believed that God had intended nations to be the natural units of mankind. So, Italy could not continue to be a patchwork of small states and kingdoms. It had to be forged into a single unified Republic within a wider alliance of nations. This unification alone could be the basis of Italian liberty. Following his model, secret societies were set up in Germany, France, Switzerland and Poland. Mazzini's relentless opposition to monarchy and his vision of Democratic Republic frightened the conservatives. Metternich (Austrian Chancellor) described him as, "The most dangerous enemy of our social order." The conspiracy for a national rising planned by "Young Italy" was discovered and many of the leaders were executed and Mazzini himself condemned to death on March 10, 1872.
2. **Count Camillo de Cavour:** - Count Camillo de Cavour, generally known as Cavour was an Italian statesman and a leading figure in the movement towards the Italian unification. He was born in Turin (Italy) on August 10, 1810 and died on June 6, 1861. The real credit for the unification of Italy goes to him. The historians bestow upon him the honour of being, "The Bismarck of Italy." He dedicated himself to achieve his goal of independence and unification of Italy. For this, he took the recourse of diplomatic skills and took sides in many ways to attract the other states like Lombardy, Modena and Tuscany to throw off the Austrian yoke and join Sardinia. He had a powerful diplomatic alliance with France, which helped him to defeat the Austrian forces in 1859. Thus, in 1861, Italy was unified and Victor Emmanuel-II was proclaimed as the king of unified Italy. When he died he had unified the whole of Italy under Sardinia with the exception of Papal territories of Venetia and Rome.
3. **The Greek War of Independence:** - Greece had been part of the Ottoman Empire since the 15th century. The Greek War of Independence was a successful war of independence waged by the Greek revolutionaries between 1821 and 1829 against the Ottoman Empire. The growth of revolutionary nationalism in Europe sparked off a struggle for independence amongst the Greek nationalists. In this war, the Greeks got support from other Greeks living in exile and also from many West European countries, while the poets and artists, who added romanticism to the Greek struggle of independence, also participated in this war against the Ottoman Empire. Finally, the treaty of Constantinople of 1832 recognized Greece as an independent Nation.
4. **Frankfurt Parliament:-** In the German regions, a large number of political associations, whose members were middle class professionals, came together

in the city Frankfurt and decided to vote for an all German National Assembly. Around 831 persons were elected. The assembly decided to organize the Frankfurt Parliament in the Church of St. Paul. Thus, on 18th May, 1848, the famous Frankfurt Parliament was convened. The assembly decided that the German nation would be headed by a Monarchy which in turn would be controlled by the Parliament. The parliament offered the crown on these terms to the Prussian king, Friedrich Wilhelm-IV. But he rejected it and joined other monarchs to oppose the elected assembly. The Parliament faced strong opposition from aristocracy and military. The parliament was dominated by the middle class who resisted the demands of workers and artisans. As a result of this, the middle class lost their mass support. Ultimately, the monarchy and military combined together with aristocracy, won over the liberal nationalist middle class and the assembly was forced to disband.

Therefore, the Frankfurt Parliament is famous in history as a failure of liberalism and victory of monarchy.

5. **The role of women in nationalist struggles:-** Women played a very significant role in the nationalist struggle all over the world. They led the movements, stood by their male counterparts, spread the ideas of liberal nationalism and also participated in the various revolutionary organizations. For example, they participated very activity in the nationalist struggles in France, Germany, Italy etc. They took part in demonstrations and political meetings during 1830s and in the 1848 revolution, yet they were not given equal rights as that of men. Even they were denied suffrage during the election of the All German National Assembly. The Frankfurt Parliament which was convened in the Church of St. Paul, women were only allowed to stand in the visitors' gallery as observers.

Liberty is personified as a women and also liberal nationalists proposed the idea of Universal suffrage, but in spite of this, they were given little or no political rights, till the end of the 19th century. They were given the liberty to fight in the revolution but not equality in the social and political sphere.

Q#2 What steps did the French revolutionaries take to create a sense of collective identity among French people?

Ans. The French revolutionaries took the following steps to create a sense of collective identity among French people:

1. They introduced the ideas of la-patrie (the fatherland) and le-citoyen (the citizens). These ideas emphasized the notion of a united community enjoying equal rights under a constitution.
2. A new French flag, the tricolour, was chosen to replace the former royal standard.
3. The Estates General was renamed the National Assembly and was elected by a group of active citizens.
4. They established a centralized administrative system, which formulated uniform laws for all citizens.
5. They adopted a uniform system of weights and measures and abolished internal custom duties.
6. The regional dialects were discouraged and French, as it was spoken and written in Paris, became the common language of the nation.
7. They further declared that it was the mission and destiny of the French nation to liberate people of Europe from despotism, in other words to help other people of Europe to become nations.
8. They composed new hymns, took oaths and commemorated martyrs, all in the name of nation.

Q#3 Who were Marianne and Germania? What was the importance of the way in which they were portrayed?

Ans. The artists in the 18th centuries started representing the nations in human forms. The Nation was then portrayed as female figure. The female form did not stand for any particular woman in life; rather it became the allegory of the nation. Therefore, Marianne was the female allegory of the French nation and similarly, Germania was the female allegory of German nation.

They stood as personifications of ideals like, “Liberty and the Republic”. They were portrayed in such a way that it sought to give an abstract idea of the nation in a concrete form and would instill a sense of nationality in the citizens of these countries.

(OR)

Ans. Marianne and Germania were the women allegories or symbols to represent the nations of France and Germany respectively. Marianne was a popular Christian name portrayed with red cap, tricolour and cockade. Germania was visualised as wearing a crown of oak leaves which stood for heroism. Both these allegories were invented by the artists and visualised to represent their nation. Their statues were erected in public squares to remind people about the national symbol. They stood for liberty and republican government. The peculiar way of their representation was meant to develop the sense of nationalism in the citizens.

Q#4 Briefly trace the process of German unification.

Ans. For centuries, the history of Germany was one of discord and disunion. Germany was a patchwork of numerous states of different sizes, loosely bound together in a confederation under the nominal supremacy of Austria. So far, these states had no conception of political unity. But the struggle against Napoleon had aroused a sense of German nationalism and now the German liberals looked forward to the reorganization of their country on liberal and nationalistic lines. However, their hopes were shattered when the congress of Vienna made a Germany that was merely a loose confederation of 39 states with the Emperor of Austria as its President. The first step towards the German unity was taken by Prussia in 1834, when she established the Zollverein (customs union). In course of time, almost all the states of Germany except Austria joined the Zollverein and chose to function within a common fiscal policy. This economic union paved the way for political unification under the Prussian leadership.

A new era began in the history of Germany, when on the death of Fredrick William-IV, his brother William-I succeeded him. The new king soon became involved in a bitter struggle with the Prussian Parliament over the question of army reforms. To tide over the crisis, he summoned to his aid Otto Von Bismarck, a man of strong convictions and a resolute supporter of autocracy.

Bismarck came to office with clear-cut views and declared that the unification of Germany could be achieved not by speeches and paper resolutions but by a policy of “blood and iron.”

Bismarck tried to achieve his aim of unification of Germany by the dint of his military power and astute diplomacy. For this, in 1864 C.E, he fought a war against Denmark and took control of Schlesneig. In 1870 C.E., Prussia defeated Frank and occupied Alsace and Lorraine. The impact of Prussia’s impressive victories was so great that other German states also joined the German confederation.

On January 18, 1871, in the Hall of Mirrors at Versailles, the King of Prussia, Kaiser William-I, was crowned as the German Emperor and the ceremony symbolized in the eyes of the world, the newly born unity of the German people.

Q#5 What changes did Napoleon introduced to make the administrative system more efficient in the territories ruled by him?

Ans. Napoleon introduced the following changes to make the administrative system more efficient in the areas ruled by him:-

1. He established civil code in 1804 also known as the Napoleonic code. It did away with all privileges based on birth. It established equality before law and secured the right to property.
2. He simplified administrative divisions, abolished feudal system and freed peasants from serfdom and manorial dues.
3. In towns too, guild restrictions were removed. Transport and communication systems were improved.
4. Peasants, artisans, businessman and workers enjoyed the new found freedom. Businessmen and small-scale producers realized that uniform laws, standardized weights and measures and common currency would facilitate the movement and exchange of goods and capital from one region to another.

THINGS TO DISCUSS

Q#1 Explain what is meant by the 1848 revolution of the liberals. What were the political, social and economic ideas supported by the liberals?

Ans. The 1848 revolution of the liberals refers to the various national movements pioneered by educated middle class alongside the revolts of the poor, unemployed and starving peasants and workers in Europe. While in countries like France, food shortage and widespread unemployment during 1848 led to popular uprisings, in other parts of Europe such as Germany, Italy, Poland and the Astro-Hungarian Empire, men and women of the liberal middle classes came together to voice their demands for the creation of nation states based on parliamentary principles.

The political, social and economic ideas supported by the liberals were clearly based on democratic ideals. Politically, they demanded constitutionalism with national unification, i.e. a nation-state with a written constitution and parliamentary administration.

They wanted the society to get rid of its class-based partialities and birth rights. Serfdom and bonded labour had to be abolished and economic equality had to be pursued as a national goal. The right to property was also significant in the liberals' concept of a nation based on political, social and economic freedom.

Q#2 How was the history of nationalism in Britain unlike the rest of Europe?

Ans. The development of nationalism in Britain was totally different from the rest of Europe. The nationalism developed in Europe after the powerful revolutions, war and military campaigns, as was the case of the German and Italian unification. But Britain was an exception to this. There never occurred a war for nationalism.

Britain comprised ethnic groups such as- English, Scottish, Irish etc. Among them, English became powerful with time and began to dominate the other ethnic groups. First they united with Scottish and dominated them. The Act of Union (1707) between England and Scotland that resulted in the formation of the United Kingdom of Great Britain, meant, in effect, that England was able to impose its influence on Scotland. Then they began to control Irish people. Ireland was a country deeply divided between Catholics and Protestants. The English helped the Protestants of Ireland to establish their dominance over a largely Catholic country. Thus, Ireland was forcibly in-corporated into the United Kingdom in 1801. Thus, the United Kingdom of Great Britain emerged without any kind of bloodshed.

Q#3 Why did nationalist tensions emerge in the Balkans?

Ans. Balkan states are the states between the Black Sea and the Adriatic Sea like the Bulgaria, Serbia, Bosnia, Herzegovina, Greece, etc. These states were a bone of contention between various European powers and Turkey, for a long time. Some of the major causes of the nationalist tensions in the Balkans were:-

1. Balkans was the region where many ethnic groups resided. The majority of the people of the Balkan states were Christians. The Muslims who were the ruling class oppressed them in many ways.
2. By the beginning of the 19th century, the Turkish Empire became very weak. So it came to be known as the “Sickman of Europe”. This encouraged the Balkan People who were mostly Christians to claim for their independence and they used history to prove that they had once been independent but had subsequently subjugated by foreign powers.
3. The French Revolution and the Napoleonic wars inspired the feelings of nationalism for independence. Hence, the Balkans thought of their struggles as attempts to win back their long lost independence.
4. There was a clash of interests among the big powers in the Balkans. For instance, Russia wanted to control the Black Sea but England could not tolerate it. On the other hand, Austria wanted to expand her empire by annexing the Balkan territories. Thus, all these problems in the Balkans states gave birth to many wars and finally the First World War.

Q#4 Choose three examples to show the contribution of culture to the growth of nationalism in Europe?

Ans. The development of nationalism did not come about only through wars and territorial aspiration but by many other factors as well which are as follows:

1. The first example of the effect of culture in creating the idea of nationalism was set by a romantic German Philosopher Johann Gottfried Herder (1744-1800). He claimed that it was through folk songs, folk poetry and folk dances that the true spirit of the nation was popularized.
2. The second example regarding the effect of culture in arousing national feeling was presented by a polish writer Karol Kurpinski. He through his operas, music and folk dances, which he used as nationalists symbols, aroused the national emotions of the people against the partition of his country, Poland, by the then great powers Russia, Prussia and Austria.
3. The third example was presented by a French painter Delacroix. He through his painting “The Massacre of Chios” (Island in Greece) depicted an incident in which about 20,000 Greeks were said to have been killed by the Turks in the land of Chios. By dramatizing the Massacre, the painter sought to appeal to the emotions of the spectators for the cause of Greek independence.

Q#5 Through a focus on any two countries, explain how nations developed over the 19th century.

Ans. The making of nationalism in Germany and Italy:-

1. **Nation-building process in Germany:-** For centuries, the history of Germany was one of discord and disunion. Germany was a patchwork of numerous states of different sizes, loosely bound together in a confederation under the nominal supremacy of Austria. So far, these states had no conception of political unity. But the struggle against Napoleon had aroused a sense of German nationalism and now the German liberals looked forward to the reorganization of their country on liberal and nationalistic lines. However, their hopes were shattered when the congress of Vienna made a Germany that was merely a loose confederation of 39 states with the Emperor of Austria as its President.

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2. **Nation- building process in Italy:-** Like Germany, Italy too had a long history of political fragmentation. The Italians were scattered over several dynastic states as well as the multi-national Habsburg Empire. During the middle of the 19th century, Italy was divided into seven states (Lombardy, Venetia, Kingdom of the two Sicilies (Sicily and Naples), Papal States, Sardinia, Tuscany, Parma and Modena).

The struggle for Italian independence and unification was organized by the two famous revolutionaries of Italy- Giuseppe Mazzini and Giuseppe Garibaldi. The movement led by them is known as the ‘Young Italy’ movement. But this movement failed to unite Italy.

After 1848, his Chief Minister, count Cavour, took the initiative of unifying Italy. Through a tactful diplomatic alliance with France engineered by Cavour, Sardinia-Piedmont succeeded in defeating the Austrian forces in 1859 C.E. In 1860 C.E., they marched into South Italy and the Kingdom of the two Sicilies and succeeded in winning the support of the local peasants in order to drive out the Spanish rulers. In 1861 C.E, Victor Emmanuel-II was proclaimed the king of united Italy.

In spite of the important role played by democratic and revolutionary leaders such as Mazzini and Garibaldi in the struggle for Italy’s liberation and unification, Italy also, like Germany, became a monarchy.

SYLLABUS QUESTIONS

Q1 Describe the contribution of French Revolution in the development of nationalism in Europe.

Ans. The events of 1789 in France triggered a social and political upheaval which shook the European society to its very foundations. The first clear expression of nationalism came with the French Revolution in 1789. The kings of France were absolute rulers. They believed in the theory of the Divine Right of kings, which claimed that the king was the representative of God on earth. The political and constitutional changes that occurred after the French Revolution led to the transfer of the political power from the monarchy to the people.



The French revolutionaries introduced various measures and practices that could create a sense of collective identity amongst the French people. The ideas of la Patrie (the fatherland) and le Citoyen (the citizen) emphasized the notion of a united community enjoying the equal rights under a constitution. A new French flag, the tricolour, was chosen to replace the former royal standard. A national Assembly was formed. The most important work of the National Assembly was the abolition of feudalism, serfdom and class privileges. New hymns were composed to enshrine the new-born national sentiments.

A centralized administrative system was put in place which abolished internal custom duties and introduced a uniform system of weights and measures. It also encouraged French as common language of the nation.

When the news of these events reached the different corners of Europe, the students and the other members of educated middle class began setting up Jacobin clubs. The activities of the European Jacobins prepared the way for the French armies which moved into Belgium, Holland, Switzerland and much of Italy. During the revolutionary wars in the 1790s, the French armies carried the idea of nationalism abroad.

Q2 How did the French Revolution and Napoleon contribute to the growth of Nationalism in Europe?

Ans. The concept of nationalism emerged in the French Revolution and was spread to the rest of Europe by Napoleon's conquests. Nationalism was used by Napoleon to make France a great power in Europe. There is no denying the fact that democracy remained absent as long as Napoleon ruled but he was a very able administrator and organizer. He introduced the civil code of 1804, usually known as the Napoleonic code. It did away with all the privileges based on birth, established equability before law and the right to property. Napoleon simplified administrative divisions, abolished feudal system and freed peasants from serfdom and manorial dues. Transport and communication systems were improved. During the Napoleonic wars, the Napoleonic code was exported to the regions that came under the French control. As Napoleon conquered more countries, kingdoms and empires started to panic. The spreading idea of Nationalism meant that people would start to rebel against them. But as Nationalism spread, it became a powerful weapon against Napoleon. People, who at first welcomed the French armies as harbingers of liberty, now felt that they were being taken over by a foreign conqueror because they realized that the new administrative arrangements did not go hand in hand with the political freedom. Increased taxation, censorship, forced conscription into the French armies, all seemed to outweigh the advantages of the administrative changes. Unfortunately, the initial enthusiasm turned into hostility and became a reason for the downfall of Napoleon.

Q3 How did the French Revolution of 1830 impact France and the rest of Europe?

Ans. The French Revolution of 1830 was of great importance in the history of France. The French Revolution of 1830, better known as the July Revolution, was triggered after Louis XVIII died and his brother, Charles-X, rose to power.

After suffering a defeat in 1814, Napoleon Bonaparte abdicated the throne of France and left to the island of Elba (Italian island). This led to the restoration of Louis XVIII (brother of Louis XVI) to power as decided by the Congress of Vienna. When Louis XVIII's reign came to an end, after dying in 1824, his younger brother, Charles X inherited the throne. The government of Louis XVIII (1815-1824) was conservative constitutional monarchy, with a legislature elected by a narrow electorate of 100,000 property owners. Although, Louis XVIII managed the country well, but his brother and successor Charles-X (1824-30), proved to be unpopular.

An autocratic ruler, Charles-X passed a number of acts that stripped away power promised by Louis-XVIII to the people. This concluded in the July ordinances, which dissolved the Parliament. He censored the press, restored the Clergy's position in the schools and politics, tried to bring back feudalism, gave pensions to nobles, who had lost lands and rights from the Revolution of 1789. He established the French constitution that many citizens of France opposed because that limited their rights and freedom. As a result, in 1830, the Parisians revolted and threw up thousands of barricades. They forced Charles-X to abdicate to England "common habit for deposed kings to flee". The July Revolution of 1830 brought a sea-change in the ruling dynasty of France. The Bourbons were replaced by the Orleanists. A constitutional monarchy was put in place, headed by Louis Phillippe d' Orleans. However, the monarchial system continued, despite protests from the Republicans. Minor changes were made in the constitution of France, establishing constitutional monarchy. The king's powers were curtailed as much as he was to rule in accordance with the will of the people, not by any Divine diktat.

The French example was followed in many parts of Europe in the same year. These all failed, with the exception of Belgium which managed to obtain its independence from the Dutch in 1830. Once again, France had lived up to the truth of Metternich's famous remark, when France sneezes, "The rest of Europe catches cold."

Q4 Why were the 1830s the years of great economic hardship in Europe?

Ans. During the 1830s, Europe faced a series of economic hardships. There were various reasons for such hardships, but most important one of all was the population explosion. In the first half of the 19th century, the population of Europe increased enormously. As a result, unemployment grew many folds. There were more seekers for jobs than there were openings. A major chunk of the population migrated to cities in search of jobs. Small producers often had to face tough competition from imports of cheap machine-made goods from England. Such challenges were more common in the textile industry, in which weaving was mainly carried out in homes or workshops which were partially mechanized. Serfdom and feudalism were still prevalent over much of Europe. In those regions of Europe where the aristocracy still enjoyed power, peasants struggle the burden of feudal dues and obligations. Taken with these factors, a bad harvest and consequent rise in prices usually pauperized both urban and rural poor, since they had no reserves left to fall back upon.

Q5 How did the French Revolution of 1848 impact France and the rest of Europe?

Ans. In 1848, a great upheaval took place in Paris on account of unemployment and economic hardships. The people of France came out on the streets to protest against unemployment and food shortage. Once again Europe was sparked off by a revolution in Paris which overthrew the July Monarchy of Louis Phillippe.

After the revolution of 1830, Louis Phillippe took over the throne in place of Charles X. Under his rule, privileged groups were favoured and only approximately 1% of the French population was allowed to vote. Louis Phillip was viewed as generally indifferent to the needs of society. As a result, the people revolted and the campaign began in July 1847 and lasted until February 1848. Just like in 1830, barricades were set up and fighting broke out between the citizens and the military troops. Because of the revolution, France again changed their form of government and this time, they set up a Republic, which granted suffrage to all adult males above 21. The establishment of the Second Republic led to

the election of Napoleon Bonaparte's nephew; Napoleon-III (1852-1870) who like his uncle used a military coup to extend his Presidency and made himself Emperor of France.

Just like before in July Revolution of 1830, revolutionary fever spread all over Europe, with 50 revolutions erupting in the German states, Italian states and Habsburgs empire, where people demanded the nation state with written constitution and parliamentary administration.

In Germany, revolts started in order to achieve more liberal rights, but the goals were soon replaced with nationalistic sentiments. On 18 May, 1848, the Constituent Assembly, under the direction of 831 elected delegates from the German states drafted a constitution for the German nation to be headed by a monarchy subject to a Parliament. The delegates offered the crown on the terms mentioned before to Friedrich Wilhelm –IV, King of Prussia. However, he rejected it and this movement failed as the

constituent Assembly had no actual power and Friedrich would not accept a crown, “from the gutter”. While the opposition from aristocracy and military became stronger, the social basis of the assembly eroded and was forced to disband. The Prussian troops put down the revolts in Berlin as well as other revolts throughout Germany.

The forces of nationalism and liberalism were defeated but conservatives could not restore the old order. The monarchs were beginning to realize that the cycles of revolution could only be ended by granting concessions to the liberal-nationalist revolutionaries. As a result, serfdom and bonded labour were abolished in Russia, while in the Habsburg dominions; feudalism was banned forever, thus giving ordinary farmers their personal freedom.

Q6 Discuss the similarities between the July Revolution of 1830 and February Revolution of 1848.

Ans. The similarities between the two can be discussed as under:

1. The aim of both the revolutions was to abolish monarchy in France and other countries of Europe. The July Revolution of 1830 broke out against the absolute monarchy of Charles-X. In the same way, the February Revolution of 1848 took place against Louis Philipe, also known as “citizen king”.
2. Both the Revolutions began in France and had their repercussions all over Europe very soon. The political condition of almost all countries of the continent was greatly affected by these revolutions.
3. Both the revolutions collapsed in the same manner. None of them could achieve full success. In 1830, except for Belgium, the revolutions were mercilessly put down by the autocratic rulers of the respective states. In the same way, in 1848, the revolutionists achieved success in Prussia and Sardinia where liberal constitutions were framed and constitutional monarchy was established.
4. The people of Paris largely took part in both the revolutions. The people of the provinces and the rural areas were quite indifferent. In this way, the consequences of the revolutions remained confined to the big cities only.
- 5.

Q7 Discuss the differences between the Revolution of 1830 and the Revolution of 1848.

Ans. The differences between the two can be listed as under:-

1. The main causes leading to the outbreak of the July Revolution of 1830 were the political and social unrest and inequality. The rich people and feudal lords of France were enjoying special privileges under the rule of Charles –X . On the contrary, the outbreak of the Revolution in 1848, took place mainly because of the economic unrest, unemployment and food shortage.
2. As a result of the July Revolution of 1830, the constitutional monarchy was established in France. The autocratic rule of the House of Bourbons ended and another branch of that House known as the Orleans was enthroned.

In this way, monarchy could not be overthrown in 1830, only the theory of the Divine Right of kings was put to an end. But the revolutionists achieved success in 1848 in establishing the Republic Government in France.

3. The principle of social equality was established in France as a result of the July Revolution of 1830, whereas the Revolution of 1848 established political equality too.

Q8 How were allegories used for visualizing a nation?

Ans. The artists in the 19th century came up with female forms for allegorical representations of ideas such as nationalism. An allegory is an artistic expression of an idea and in many of the paintings of this era, such as “the Dream of Worldwide Republics”, print by Frederich Sorrieu, Democracy was represented by a female figure. In other words, artists chose to represent a country or an ideal by giving a female form, always a popular vehicle for artists trying to personify an abstract idea. During the French Revolution, too, artists tried to portray dominant ideas of the time, such as liberty, justice and republic, through the medium of allegory. “Justice” is universally depicted as a blindfolded woman carrying a pair of weighing scales. Similar female allegories were invented in different countries.

Germania became an allegory for the German nation. In paintings, Germania always wears a crown of oak leaves, the oak being a symbol of heroism in Germany. In using this tactics, German artists took inspiration from the ancient Greeks, who always crowned victors at the earliest Olympic Games with laurel wreaths.

In France, liberty was allegorically represented by a female form called Marriane, a popular Christian name which underlined the idea of a people’s nation. Her accessories- the red cap, the cockade, the tri-colour-were the symbols derived from the French Revolution. Marriane images were also engraved on French coins and stamps. Statues of Marriane adorned public squares, national symbols of unity that were meant to serve as public reminders of ideals such as liberty and freedom.

Q9 How did nationalism lead to imperialism?

OR

How did nationalism and imperialism lead to conflict in Europe?

OR

What is the relationship between nationalism and imperialism?

Ans. By the last quarter of the 19th century, nationalism no longer retained its liberal-democratic sentiment of the first half of the century. One of the distinctive features of this period of European history was the transformation of nationalism into a narrow creed with limited ends. During this period, nationalist groups became increasingly intolerant of each other, ever ready to go for war. Very often, nationalism was exploited as a potent tool against other nations when it came to business rivalry or imperial expansion. Unfortunately, the rise of nation-states did not lead to peace in Europe.

When the Turks were at the height of their power, they ruled over the Balkans, Asia Minor, Syria, Mesopotamia, Arabia, Egypt and North-Coast of Africa. Over time, the Turkish Empire began to decline. The process of disintegration spanned two centuries, before Ottoman rule at last ended in the Balkan Peninsula. The Turkish rule was very oppressive. People were encouraged in Balkan regions to assert their independence, partly on account of the decline of military power of the Turks and partly on account of growth of nationalism among them.

They were also assisted by Russia and by other powers such as England and France. The Balkan Peninsula was a melting pot of geographical and ethnic diversity, comprising modern day Albania, Romania, Montenegro, Slovenia, Croatia, Bosnia-Herzegovina, Macedonia and Serbia. All the inhabitants of the Peninsula were collectively known as Slavs. The Balkan people tried to assert their independence time and again.

A new era dawned in the Balkans after the abolition of the Ottoman Turkish Empire. A fierce struggle ensued to define Balkan nationality and identity. As the fighting intensified over the years, it provided an opportunity to bigger European powers to establish footholds there. Each power- Russia, Germany, England and Austria-Hungary, was keen to counter the efforts of other powers. The Balkans soon became an ulcer that gnawed at Europe's vitals. The Balkan problem, as it came to be known, precipitated a series of wars and ultimately led to the First World War. Thus, nationalism and imperialism ultimately led Europe to the brink of disaster in the World War-I.

Q10 What is nationalism? What factors lead to the rise of nationalism in Europe?

Ans. Nationalism is the idea of a sense of common identity and a sense of belongingness to a particular geographical area. Apart from this, devotion, love and patriotic feelings for one's own nation is called nationalism. It is a feeling of political consciousness and unity among the people of a state. It is also the state of having an attachment to one's country and the aspiration for independence felt by people who are under foreign oppression.

Various factors such as common race, language, religion, aims and aspirations culture and shared past gave rise to nationalism. However, the following main factors were responsible for the rise of nationalism in Europe:

1. **Decline of feudalism:-** Feudal lords were a great obstacle in the way of the rise of the nationalist feelings among the people. But many causes led to their fall. Many of them died in mutual warfare. The crusades also impoverished the barons. Without the destruction of nobility, the cause of nationalism might have been greatly suffered.
2. **Weakness of Papacy and the Holy Roman Empire:-** In the middle ages, the Church enjoyed supreme and exalted position and commanded a great power. But the Renaissance and Reformation movements led to awakening among the people and weakened the authority of the pope. Consequently, national churches and national states were established in many countries.
3. **Foreign rule:-** In certain countries, foreign rule played an important role in the growth of nationalism. The foreign rulers suppressed the people under them cruelly and mercilessly. But all this led to reaction and united the people against the foreign rule and infused the spirit of nationalism in them to free themselves from the foreign yoke.
4. **Reaction against injustice:-** Reaction against injustice also led to nationalism. The Vienna settlement after the Napoleonic wars tried to suppress the force of revolution and nationalism in Europe. But soon, there started a reaction against the arbitrary rule and the people of the subjected countries started national movements for their independence.
5. **Contribution of great writers:-** The contribution by various writers, poets, philosophers, statesmen and politicians had a great impact in infusing the feelings of nationalism in Europe. This can be judged from the fact that Machiavelli is called the Father of modern nationalism. Apart from that, the writings of J.S. Mill, Garibaldi, Mazzini etc. also went a long way in rousing among the people the spirit of nationalism.

Q11 What is imperialism?

Ans. The word imperialism has been derived from a Latin word, “imperialism” which means power. It refers to the subjugation of one country by another country by fair or foul means. It includes political occupation along with social domination and economic exploitation of the native people by the imperialist powers. Under it, the resources of the occupied lands are fully exploited for the benefit of the people of the advanced countries. By 1914, almost all the countries of Asia and Africa had become colonies of the imperialist powers. The imperialist powers were England, France, Germany, Italy, Portugal, Spain, Holland etc. The causes of the rise of imperialism were the political instability and disunity, military backwardness and lack of technology of the Asian and African countries.

Results of July Revolution of 1830 in France:-

The July Revolution of 1830 spread to other parts of Europe, particularly in Italy and Germany, where minor revolutions broke out immediately. The mutiny in north German states like Saxony and Hanover took place and passed the liberal constitution. Vienna congress impaired Italy without logical division. People rebelled in Parma, Modena and papal regions. Initially, Metternich suppressed these revolts with the help of military.

1. It changed the map of Europe prepared by the congress of Vienna.
2. As a result of the July Revolution, the democratic principles were introduced in the French government with the emergence of monarchy.
3. The atrocity and audacity of Charles X came to an end.
4. According to Prof. Lipson. “The task of the French Revolution of 1789 which remained incomplete hitherto was now completed by this Revolution. Now the fundamentals of the revolutionary ideology, equality, secularism and constitutional liberty became secure forever.”

Results of July Revolution of 1830 on Europe:-

1. **Belgian Revolution:-** Vienna congress annexed Belgium with Holland and made Netherlands. But the people of Belgium started war and declared free Belgium on October 4, 1830.
2. **Impact on Germany and Italy:-**
3. **Impact on Poland:-** Vienna congress had given stand to Russia. Though Russian emperor Alexander-I had liberal regime and constitution. Still, Poland wanted freedom czar Nicholas –I in 1825, became emperor of Russia, who was very cruel. In 1830, Polish rebelled against him but emperor nations did not support Poland to get independence from Russia.

(Political Science)

Chapters included are:

POWER SHARING

FEDERALISM

Q#1 What are the different forms of power sharing in modern democracies? Give an example of each of these.

Ans. The different forms of power sharing in the modern democracies can be discussed under the following headings:

i. **Horizontal division of power:-** It is the sharing of power among the different organs of the government, namely the Executive, the Legislature and the Judiciary. In such a power sharing arrangement, the different organs of the government placed at the same level, exercise different powers. This separation of powers ensures that each organ should be limited to its own sphere of action without interfering in the matter of the others and the each should be independent within that sphere. This is what is meant by the theory of separation of powers. According to Montesquieu, by separating the functions of the Executive, the Legislative and the Judicial departments of the government, each may operate as a balance against the others, thereby putting in place a system of checks and balances.

The division of powers between the council of Ministers headed by the Prime Minister, the Indian Parliament and the Indian Supreme Court is an example of this kind of power sharing.

ii. **Vertical division of power:-** It involves the division of powers between the higher and the lower levels of the government. In such a power sharing arrangement, the power is shared among the governments at different levels i.e. a general government for the entire country and the governments at the provincial or regional level. For example, in India, the constitution defines the way power is to be shared between the Central government and the various State governments. There are certain matters on which only the Central government can take decisions, while there are others on which only an individual State government has an exclusive right for decision making.

iii. **Division of power among social groups:-** Power can also be shared among different social groups, such as the religious and linguistic groups. Community government in Belgium and reserved constituencies in India is a good example of this arrangement. In some countries, there are constitutional and legal arrangements whereby socially weaker sections and women are represented in the legislative bodies and administration. This type of arrangement is meant to give space in the government and administration to minority communities who otherwise would feel alienated from the government.

iv. **Division of power among the political parties, pressure groups and movements:-** Political parties are the organizations which aim to control power by contesting elections. In a democracy, citizens have the freedom to choose among the various contenders for power. Such a freedom of choice entails competition among the different parties, which in turn ensure that power does not remain in one hand and is shared among different Political Parties representing different ideologies and social

groups. Pressure groups such as those of traders, industrialists, farmers etc. also share governmental power, either through participation in governmental committees or bringing influence on the division making process.

Q#2 State one prudential reason and one moral reason for power sharing with an example from the Indian context.

Ans. A prudential reason for power sharing is that it helps to reduce the possibility of conflict between the various social groups. Since social conflict often leads to violence and political instability, power sharing is a good way to ensure political stability. Imposing the will of the majority community over others may look like an attractive option in the short run, but in the long run, it undermines the unity of the nation. In India, seats have been reserved in the Legislatures for the socially weaker sections keeping in mind the prudential reason for power sharing. A moral reason for power sharing is that it upholds the spirit of democracy. In a democratic setup, the citizens too have a stake in governance. People have a right to be consulted on how they are to be governed. In India, the citizens can come together to debate and criticize the policies and decisions of the government. This in turn puts pressure on the government to re-design its policies and re-consider its decisions. This active political participation is in keeping with the moral reason for power sharing.

Q.3. After reading this chapter, three students drew different conclusions. Which of these do you agree with and why ? Give your reasons in about 50 words. Thomman – Power sharing is necessary only in societies which have religious, linguistic or ethnic divisions.

Mattai – Power sharing is suited only for big countries that have regional divisions.

Ouseph – Every society needs some form of power sharing even if they are small or do not have social divisions

Ans. Ouseph's statement is the most logical, and thus, should be agreed on. Every society needs some form of power sharing even if it is small or does not have social divisions. A democratic society is one where its members or citizens through participation acquire a stake in the system. Power sharing not only prevents conflict between various groups in the society but it also generates a sense of belongingness among them to the society. Power sharing helps to maintain a balance of power among various institutions and also keep a check on how it is exercised. Irrespective of the size of a country or the type of a society, people will be more satisfied where they have a say in the functioning and decision making processes of the system.

Q#4 The Mayor of Merchtem, a town near Brussels in Belgium, has defended a ban on speaking French in the town's schools. He said that the ban would help all non-Dutch speakers integrate in the Flemish town. Do you think that this measure is in keeping with the spirit of Belgium's power sharing arrangements? Give your reasons in about 50 words.

Ans. This measure has not been taken in keeping with the spirit of Belgium's power sharing arrangement. As per the power sharing arrangement in Belgium, Dutch speakers and French speakers have stake in power. The Brussels government has equal representation from the French speaking people and the Dutch speaking people, which shows that both groups have to respect each other's rights. By banning French, there will be civil unrest in the country. Both the languages should be made acceptable in the town's schools as the main purpose of the power sharing arrangement is to maintain peace between the French and Dutch speaking

constituencies. This bi-lingual education system will be a better way to integrate the people of the town. Hence, the Mayor of Merchtem is wrong in banning the French language in the schools.

Q.5. Read the following passage, and pick out any one of the prudential reasons for power sharing offered in this.

“We need to give more power to the Panchayats to realise the dream of Mahatma Gandhi, and the hopes of the makers of our Constitution. The Panchayati Raj establishes true democracy. It restores power to the only place where power belongs in a democracy – in the hands of the people. Giving power to Panchayats is also a way to reduce corruption, and increase administrative efficiency. When people participate in the planning and implementation of developmental schemes, they would naturally exercise greater control over these schemes. This would eliminate the corrupt middlemen. Thus the Panchayati Raj will strengthen the foundations of our democracy.”

Ans: The prudential reason for power sharing offered in this passage is giving power to panchayats is also a way to reduce corruption and increase administrative efficiency.

Answer6: (a) A, B, D and F

Answer7: (d) B, C and D

Answer8: (c)

Answer9: Both A and B are true.

SYLLABUS QUESTIONS

Q#1 What is power sharing? Mention some examples from various countries related to their power sharing mechanism.

Ans. Power sharing is the strategy under which all the major segments of the society are provided with a permanent share of power in the governance of the country. It is a potential tool for solving disputes in the society divided into deep ethnic, cultural or social groups by giving them a wide range of power sharing in order to reduce the tensions through consensus oriented governance.

Power sharing involves a wide range of political arrangements, usually embodied in constitutional terms. It refers to a joint exercise of power where all principal groups are given a permanent share in the governance.

Power sharing mechanism in Sri Lanka:-Sri Lanka gained its independence from the United Kingdom in February, 1948. Sri Lanka is an island nation. It has a diverse population. The major social groups are Sinhala speakers (74%) and Tamil speakers (18%). Further, the Tamil groups are divided into two sub-groups- Sri Lankan Tamils and Indian Tamils.

The leaders of the Sinhala Community sought to secure dominance over government by virtue of their majority. As a result, the democratically elected leaders adopted a series of government majoritarianism measures to establish Sinhala Supremacy. In 1956, an Act was passed to recognize Sinhala as the only official language, thus, disregarding Tamil language. The government followed preferential policies that favoured Sinhala applicants for university positions and government jobs. A new constitution stipulated that the state shall protect and foster Buddhism. All these government measures, coming one after the other, gradually increased the feeling of alienation among the Sri Lankan Tamils. The distrust between the

two communities turned into widespread conflict. It soon turned into a civil war. Sri Lanka is now required to put a strategy in place to prevent the relapse into violence and introduction of political power sharing arrangement in the central government to facilitate nation building which Sri Lanka yearns for.

Power Sharing Mechanism in Belgium:- Belgium is a small country located in Western Europe. It has a small population, slightly larger than one crore. It has a very complex ethnic composition. Of the country's total population, 59% live in Flemish region and speak Dutch language. Another 40% live in the Wallonia region and speak French. Remaining 1% of the Belgians speak German. In the capital city Brussels, 80% people speak French while 20% are Dutch speaking.

The minority French-speaking community in Belgium was relatively rich and powerful. This was resented by the Dutch-speaking community who got the benefit of economic development and education much later. This led to tension between the Dutch-speaking and the French speaking communities during 1950s and 1960s. But the Belgium leaders recognized the existence of regional differences and cultural diversities. Between 1970 – 1993, their constitution was amended four times to work out an arrangement that would enable everyone to live together in harmony. Here is an outline of the steps taken by the Belgium government in this regard:

- **Equal number of ministers from the Dutch and French-Speaking communities:-** The constitution prescribed that the number of Dutch and French speaking ministers shall be equal in the central government. Besides, a separate government was set up at Brussels giving equal representation to both the communities. It helped in a way that no single community can take decisions unilaterally.
- **More power to state governments:-** Under the new power sharing arrangement, many powers of the central government were given to the state governments of the two regions of the country. The state governments are not subordinate to the central government.
- **Formation of community government:-** Apart from the central and state government, there is a third kind of government called the community government, which is elected by the people belonging to one language community- Dutch, French and German speaking, no matter where they live. This government has the power regarding cultural, educational and language related issues. It helped in reducing the tension between the two major communities and averted a possible division of the country on linguistic line.

Q#2. Why is power sharing desirable?

OR

Why do we need power sharing?

Power sharing is good for democracy. Two sets of reasons can be given in favour of power sharing:

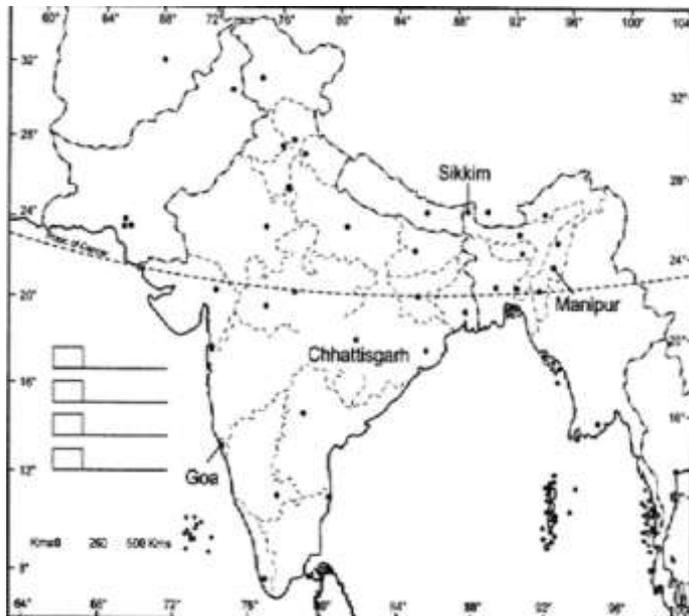
- I) Avoids conflicts:-** Power sharing helps to reduce the possibility of conflict between the various social groups. Since social conflict often leads to violence and political instability, power sharing is a good way to ensure political stability. Imposing the will of the majority community over others may look like an attractive option in the short run, but in the long run, it undermines the unity of the nation.

- ii) **Strengthens the spirit of democracy:** - Power sharing helps in upholding the spirit of democracy. In a democratic set up, the citizens too have a share in governance. People have a right to be consulted on how they are to be governed. This in turn puts pressure on the government to re-design its policies and re-consider its decisions.

FEDERALISM

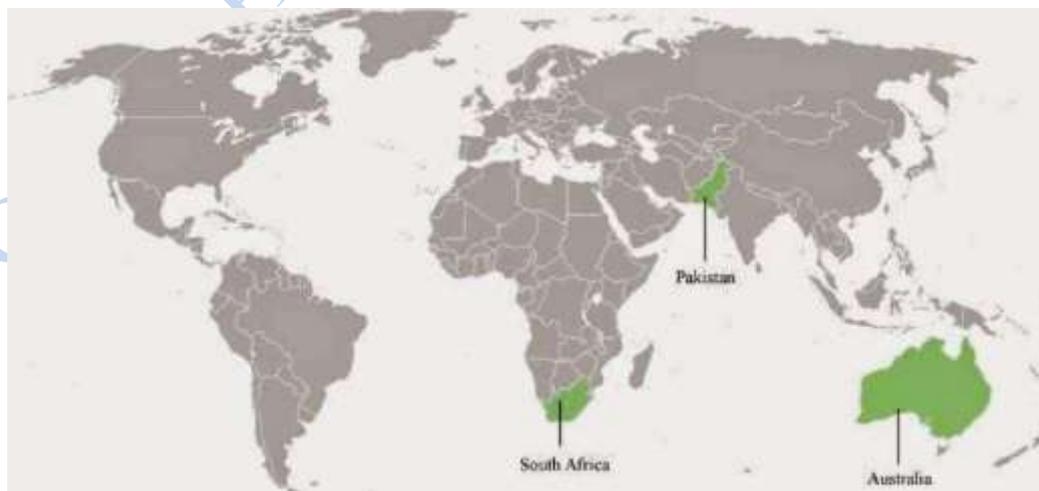
1. Locate the following States on a blank outline political map of India: Manipur, Sikkim, Chhattisgarh and Goa.

Answer 1:



2. Identify and shade three federal countries (other than India) on a blank outline political map of the world.

Answer2:



3. Point out one feature in the practice of federalism in India that is similar to and one feature that is different from that of Belgium.

Answer3:

In India, just like in Belgium, the central government has to share its powers with the regional governments. However, unlike India, Belgium has a community government in addition to the central and the state government.

4. What is the main difference between a federal form of government and a unitary one? Explain with an example.

Answer 4

In a federal form of government, the central government shares its powers with the various constituent units of the country. For example, in India, power is divided between the government at the Centre and the various state governments. The division of powers between the union and the state governments is provided under Article 245 and 246 and three legislative lists in the Seventh Schedule. The first is the Union List which consists of 100 subjects over which the Union Parliament has exclusive law-making power. The second is the State List which consists of 61 subjects over which State Legislatures have exclusive law making power. The third is the Concurrent List which consists of 52 subjects. Both the Centre and the state can legislate on the subjects mentioned in the Concurrent List.

In a unitary form of government, all the power is exercised by only one government. For example, in Sri Lanka, the national government has all the powers. There is no constitutional provision for division of powers between the central and the provincial governments. The authority of the central government runs in all the provincial and local administration in Sri Lanka.

5. State any two differences between the local government before and after the Constitutional amendment in 1992.

Answer5:

The two differences between the local government before and after the constitutional Amendment in 1992 are listed as under:

i) The Panchayats in villages and the municipalities in the urban areas were set up in all the states. But these were directly under the control of state governments. Elections to these local governments were not held regularly. But after the Constitutional Amendment in 1992, it is constitutionally mandatory to hold regular elections to the local government bodies. Seats are reserved in the elected bodies for women, scheduled castes, scheduled tribes and other backward classes. An independent institution called the State Election Commission has been created in each state to conduct Panchayat and Municipal elections.

ii) Local governments did not have any powers or resources of their own. There was very little decentralization in effective terms. But after the Constitutional Amendment in 1992, the state governments are required to share some powers and resources with local government bodies. The nature of sharing varies from state to state.

6. Fill in the blanks:

Since the United States is a coming together type of federation, all the constituent States have equal powers and States are strong vis-à-vis the federal government. But India is a holding together type of federation and some States have more power than others. In India, the Central government has more powers.

Answer7: I agree with Sangeeta's reaction. If the policy of accommodation was not followed, and states were not created on linguistic basis, there would have been further partition of India. For example, imposition of Hindi as the national language would have led the South to break away from the North and Tamil Nadu would have become an independent nation.

Answer8: (d) Governmental power is divided between different levels of government.

Answer9:

Union List	Defense, Banking , Communications
State List	Police, Agriculture, Trade
Concurrent List	Education, Forests, Marriages

Answer 10:

d	Local governments	Residual powers
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Answer 11: (c)

Answer12: (c) A and B only

OASIS Hr. Sec. Educational Institute

(Geography)

RESOURCES & DEVELOPMENT

Q1. Name three states having black soil and the crop which is mainly grown in it.

Ans. The three states having black soil are Maharashtra, Madhya Pradesh and Chhattisgarh. The crop which is mainly grown in black soil is cotton. The black soil is also known as cotton soil.

Q2. What type of soil is found in the river deltas of the eastern coast? Give three main features of this type of soil.

Ans. Alluvial soil is found in the eastern coastal plains particularly in the deltas of the Mahanadi, the Godavari, The Krishna and the Kaveri rivers. The three features of alluvial soil are:

- 1) The alluvial soils consist of various proportions of sand, silt and clay.
- 2) Alluvial soils can be classified as old alluvial (Bangar) and new alluvial (Khadar). The bangar soil has higher concentration of karther nodules than the khadar. It has more fine particles and is more fertile than the bangar.
- 3) Alluvial soils as a whole are very fertile. Mostly these soils contain adequate proportion of potash, phosphoric acid and lime which are ideal for the growth of sugarcane, paddy, wheat and other cereal and pulse crops.

Q3. What steps can be taken to control soil erosion in the hilly areas?

Ans. Some of the methods of controlling soil erosion in hilly areas are:

Ploughing along the contour lines can slow down the speed or flow of water down the slopes. This is called contour ploughing. Steps can be cut out on the slopes making terraces. Terrace cultivation restricts erosion. Western and central Himalayas have well developed terrace farming.

Q4. What are the biotic and abiotic resources? Give examples.

Ans. On the basis of origin resources are of the following types:

BIOTIC RESOURCES: these resources are obtained from biosphere and have life such as human beings, flora and fauna, fisheries, livestock etc.

ABIOTIC RESOURCES: All those resources which are composed of non-living things are called abiotic resources. For example: rocks and minerals, metals etc.

LONG ANSWER TYPE QUESTIONS

Q1. Explain land use pattern in India and why has land under forest not increased much since 1960-61?

Ans. The total geographical area of India is 3.28 million square kilometers. As per the land use data only 93% of the total geographical area is available. Of this 43.4% is the net sown area, forest cover is 22.6%, 4.4% is cultivable waste, 7.03% is current fallow, 4% is covered by pasture and 1% is covered by the tree crops.

The pattern of net sown area varies greatly from one state to another. Forest area in the country is far lower than the desired 33% of the geographical area, as it was outlined in the natural forest. The percentage of forest cover is needed to be increased for the maintenance of the ecological balance.

The land under forest did not increase much since 1960-61 due to several reasons:

1. The improper use of land which has caused degradation of the available land and has made conservation of forests difficult.
2. The even increasing illegal cutting of trees and forest cover to meet the needs of and increasing population.

3. Large scale development projects industrialization and urbanization have reduced the forest cover to a great extent.

Q4. How have technical and economic development led to more consumption of resources?

Ans. While early human societies used to consume much less resources, with the dawn of industrialization era, consumerism has shown an exponential rise. It has been related both to the increase in population size as well as increase in our demands due to change in lifestyle. Earlier we used to live a much simpler life and used to have fewer wants. In the modern society our needs have multiplied and so consumerism of resources has also multiplied.

Rapid development activities have been associated with more and more exploitation of various natural resources. Technological development has resulted in fast depletion of non-renewable energy resources, mainly coal and petroleum and also various minerals. Mining activities, dam building, urbanization and industrialization have all interfered with the ecological balance of nature due to large scale impacts.

OASIS Hr. Sec. Educational Institute

داستان پر مختصر نوٹ لکھئے۔

داستان کہانی کو کہتے ہیں۔ پہلے زمانے میں داستان گوئی کا رواج تھا اور ان داستانوں میں زیادہ تر خیالی قصے ہوتے تھے اور ان قصہ کہانیوں کا حقیقی زندگی سے دور کا بھی واسطہ نہ ہوتا تھا۔ اردو میں داستان گوئی کی روایت فارسی سے آئی۔ دنیا کے ہر ادب میں داستان گوئی کی روایت ملتی ہے۔ اور داستان گوئی اولین ادبی کوشش میں سے ہے۔ انسان جو چیزیں روزمرہ کی زندگی میں حاصل نہیں کر سکا۔ وہ اُن کو خوابوں اور داستانوں میں پانے کی جستجو کرنے لگا۔ اردو ادب میں داستان گوئی کی ابتداء شروع سے ہی نظر آتی ہے۔ دکنی ادب میں ملا وجہی کی مشہور داستان ”سبرس“ اور گجرات میں ”کرمل کتھا“ نام کی داستان ملتی ہے۔ تحسین اثاوی کی داستان ”نوطر زمر صبح“ جس پر امیر خسرو کی مشہور داستان ”قصہ چہار درویش“ کی بنیاد ہے۔ اور انشا اللہ خان کی داستان ”رانی کیتکی کی کہانی“ کا کافی اہمیت رکھتی ہے۔ سترہویں اور اٹھارہویں صدی میں ہندوستان میں داستان گوئی اپنے شباب پر نظر آتی ہے۔ میرامن کی داستان ”باغ و بہار“ رجب علی بیگ کا ”فسانہ عجائب“ رتن ناتھ سرشار کا ”فسانہ آزاد“ اور داستان امیر حمزہ، ان ہی ادوار کی پیداوار ہے۔ داستانوں کے کردار رومانی ہوتے ہیں۔ ان میں جن، دیو، پری اور بھوت پریت کا خاصا عمل دخل نظر آتا ہے۔ ساتھ ہی مثنویوں، دعاؤں اور تعویذوں سے بھی کافی کام لیا جاتا ہے۔ ان داستانوں میں ہم فقیروں، جوگیوں، درویشوں، جادوگروں اور سیانوں کو دیکھتے ہیں۔ داستان ذہنی عیاشی کے لئے لکھی جاتی رہی ہیں اور ان کا مقصد صرف یہ رہا ہے کہ پڑھنے والے ارد گرد کی دنیا سے کٹ کر دور دراز کے خیالی ملکوں اور سرزمینوں میں پہنچ جائیں اور اپنے ذہن کے کواڑ کھول دے اور زیادہ سے زیادہ ذہنی حظ اور سکون حاصل کر سکیں۔

سوال: میرامن دہلوی کے حالات زندگی اور ادبی کارنامے کے بارے میں مختصر نوٹ لکھئے؟

جواب: میرامن دہلوی کے رہنے والے تھے۔ اُن کا اصلی نام میرامان اللہ تھا۔ اور تخلص میرامن تھا۔ وہ کب پیدا ہوئے اس کا علم نہیں ہو سکا ہے مگر یہ ضرور ہے کہ وہ دہلی میں پیدا ہوئے۔ اسی شہر میں تعلیم پائی اور شاعری کرنے لگے۔ اس زمانے میں تخلص لطف تھا۔ گذر بسر کے لئے ماں باپ کی دولت اور جاگیریں تھیں۔ ان کے ابا و اجداد ہمایوں بادشاہ کے وقت مغلیہ سلطنت سے وابستہ تھے۔ شاہی دربار سے اُن کو جاگیریں بھی عطا ہوئی لیکن احمد شاہ دورانی کے حملے کے وقت میرامن کا گھر بھی لوٹا گیا۔ خاندانی جاگیر ضبط کر لی گئی اور ان کو مجبوراً وطن چھوڑنا پڑا۔ کئی برس تک انہوں نے عظیم آباد میں قیام کیا۔ پھر وہاں سے کلکتہ پہنچے اور وہاں دو سال تک میرمحمد کاظم خان کے تالیق رہے۔ اسی زمانے میں میر بہادر علی حسینی نے ان کا تعارف ڈاکٹر گل کرسٹ سے کر لیا۔ جنہوں نے میرامن کو فورٹ ولیم کالج میں جگہ دی۔ اور ۱۸۰۱ء میں قصہ چہار درویش کو سلیس اردو نثر میں لکھنے کے لئے مامور کیا۔ جو کہ ایک مشہور فارسی قصہ ہے۔ اردو میں میرامن نے اس کا نام ”باغ و بہار“ رکھا۔ اس کو دیکھنے سے پوری قدرت حاصل ہے۔ روانی اور سلاست کے علاوہ محاوروں کا استعمال اور زبان کی لوج نہایت خوبی کے ساتھ نبھاتے ہیں۔ اس کتاب کی خوبی کے لئے یہی دلیل کیا کم ہے کہ دو سو برس سے زیادہ بیت گئے مگر اس کی مقبولیت میں کوئی فرق نہیں آیا۔ اگر میرامن کو اپنے اس کارنامے پر فخر تھا تو بے جا نہ تھا۔ میرامن اپنے عہد کے سب سے ممتاز مصنف ہیں۔ میرامن کا طرز تحریر اس قدر سادہ، شیریں اور با محاورہ ہے کہ سرسید احمد خان ان کو اردو نثر میں وہی مقام دیتے ہیں جو میر تقی میر کو نظم میں ہے۔

﴿ فورٹ ولیم کالج پر مختصر نوٹ ﴾

مغلیہ سلطنت کے زوال اور انگریزوں کی آمد کا نہ صرف ہندوستان کی سیاست بلکہ ادب پر بھی گہرا اثر پڑا۔ مغربی ادب اور تہذیب کا اثر تیزی سے ہندوستان پر پڑ رہا تھا۔ دوسری طرف ایسٹ انڈیا کمپنی کا اقتدار روز بروز بڑھتا جا رہا تھا۔ کئی صوبوں میں اس کی حکومت قائم ہوئی۔ اس نے محسوس کیا کہ انگریز حکام کو اردو زبان سے واقف ہونا چاہیے تاکہ وہ ہندوستانیوں سے حکومت کا کام لے سکیں اور اردو زبان کے توسل سے زیادہ سے زیادہ ان کے قریب ہو سکیں۔ اس کو حاصل کرنے کے لئے اردو زبان میں آسان کتابوں کی سخت ضرورت تھی۔ تاکہ انگریز حکام اردو سیکھ سکیں۔ چنانچہ ۱۸۰۰ء میں ایسٹ انڈیا کمپنی کی طرف سے کلکتہ میں فورٹ ولیم کالج قائم ہوا۔ اس کا مقصد اردو کو زیادہ سے زیادہ آسان بنا کر کمپنی کے ملازمین کو اردو سکھانا تھا اس لئے ملک کے مشہور مصنفین کو اس کالج میں مقرر کیا۔ اس کالج کے پرنسپل جان گل کراسٹ تھے۔ چونکہ وہ اردو زبان سے نجوبی واقف تھے اس لئے انہوں نے اس ادارے کے منتظم علی کی حیثیت سے اردو کی قابل قدر خدمات انجام دیں۔ میرامن دہلوی کی مشہور کتاب ”باغ و بہار“ جو ایک فارسی داستان قصہ چہار

درویش کا ترجمہ ہے یہیں تیار ہوئی۔ اس کالج کی کوشش سے اردو میں بہت جلد یہ صلاحیتیں پیدا ہو گئیں کہ وہ فارسی کی جگہ سرکاری زبان کا درجہ اختیار کر لے چنانچہ ۱۸۳۵ء میں فارسی زبان کے بجائے اردو سرکاری زبان قرار پائی۔

﴿باغ و بہار پر ایک مختصر نوٹ﴾

میر آسن دہلوی کی یہ کتاب اردو ادب کا مایہ ناز سرمایہ ہے۔ اس کتاب کے قصے کو آسن نے کہاں سے لیا ہے۔ اس سلسلے میں لوگوں کے مختلف خیالات ہیں۔ کچھ لوگوں کا کہنا ہے کہ اس داستان کو میر آسن نے امیر خسرو کے ”قصہ چار درویش“ سے ماخوذ کیا ہے۔ کچھ محققین کا خیال ہے کہ عطا حسین کی تصنیف ”نوطر زمر صبح“ سے لیا گیا ہے جو قصہ چہار درویش کا اردو ترجمہ ہے۔ میر آسن نے فورٹ ولیم کالج میں بہت سی کہانیوں اور بہت سی کتابوں کی تصنیف و تالیف اور ترجمہ کا کام کیا ہے۔ انہیں میں سے ایک باغ و بہار بھی ہے۔ اس کتاب کا سنہ تصنیف ۱۸۰۲ء ہے۔ میر آسن کا یہ ادبی شاہکار اپنی گونا گوں خوبیوں کے باعث زندہ جاوید ہے۔ تقریباً دو سو سال سے زیادہ گزر جانے کے بعد بھی اس کی مقبولیت میں کمی نہیں آئی۔ اس کتاب کی زبان دہلی کی نکسالی زبان ہے۔ جس کی سلاست، راوی، محاورے، استعارات اور لطافت زبان قابل تعریف ہے۔ آج بھی اردو ادب طبقہ اس کتاب پر فخر کرتا ہے۔ اور اس کو اردو ادب کا سرمایہ عظیم سمجھتا ہے۔

ان فقروں کے معنی پر غور کریں۔

فقرے	معنی	فقرے	معنی
بہ خوبی تربیت ہوا	اچھی طرح سے تربیت حاصل کی	حادثہ رو بکا رہوا	حادثہ پیش آیا
سلطنت سے کنارہ پکڑنا	حکمت سے الگ ہونا	ارادہ کوچ کا کیا	آخری وقت چلنے کا آ گیا
تم اس کی نیابت کچھو	تم اس کی جگہ پر کام کرنا	بزرگی کو کام فرمایو	عقل و دانائی سے کام لینا
جان بحق تسلیم ہوئے	انہوں نے انتقال فرمایا	محنت کچھ ننگ نگلی	محنت کسی کام نہائی
میں سلطنت سے گزرا	مجھے حکومت کی چاہت نہیں	کتھرائی بھی ہوگی	شادی بیاہ بھی ہوگا

سوال نمبر: افرش پر سے پتھر ہٹانے کے بعد شہزادے نے زمین کے اندر کیا دیکھا؟

ج: افرش پر سے پتھر ہٹانے کے بعد شہزادے نے زمین کے اندر خوبصورت عمارت اور چار مکان دیکھے۔ اور ان کے دالانوں میں دس دس مٹکے سونے کی زنجیروں میں جکڑے تھے ہر مٹکا سونے کی اشرفیوں سے بھرا ہوا تھا ہر مٹکے کی منہ پر سونے کی ایک ایک اینٹ اور اس پر ایک بے جان بندر کا مجسمہ جو کہ لعل و جواہر سے سجایا ہوا رکھا گیا تھا۔ ان چار دالانوں میں کل چالیس مٹکے اشرفیوں سے بھرے ہوئے تھے اتالیس منکوں پر ہیروں سے سجے بے جان بندر کے مجسمے سونے کی اینٹ پر رکھے ہوئے تھے چالیسواں مٹکا لعل اور جواہرات سے بھرا ہوا تھا مگر اس پر نہ تو سونے کی اینٹ تھی اور نہ ہی بے جان بندر کا مجسمہ تھا اور وہاں جواہرات سے بھرا ہوا ایک تالاب بھی تھا۔

سوال ۲۔ ملک صادق کون تھے اور شہزادے کے ساتھ ان کا کیا رشتہ تھا؟

ج: ملک صادق جنوں اور ہیروں کا بادشاہ تھا اور بد قسمت شہزادے کے والد کا جگری اور دلی دوست تھا۔ یہ دونوں دوست ایک دوسرے کے پاس آتے جاتے تھے۔ اور ان کو ایک دوسرے کی دوستی کا بڑا خیال رہتا تھا۔ بادشاہ جب ملک صادق کے پاس جاتا تو اپنے ساتھ کئی تھے اور نذرانے لیکر جاتا تھا۔ اور جب وہاں سے رخصت کیا جاتا تھا تو ملک صادق اسکو سونے کے جواہرات کے تحائف کے علاوہ ہیروں سے سجایا ہوا بندر کا ایک بے جان مجسمہ بھی ساتھ دیتا تھا۔

سوال ۳۔ شہزادے کے چچا کے لئے کیوں کہا گیا ہے کہ وہ ”بجائے ابو جہل“ کے تھے؟

ج: ابو جہل مکہ مکرمہ کا ایک مشہور کافر تھا اور پیغمبر اسلام حضرت محمد ﷺ کے خاندان سے تعلق رکھتا تھا اسی لئے رشتہ داری میں اسکو پیغمبر اسلام ﷺ کا چچا بھی کہا گیا ہے۔ اُس نے رسول اللہ ﷺ کی نبوت اور رسالت کا انکار کیا اور آپ ﷺ کا سب سے بڑا دشمن بنا۔ آپ کو طرح طرح سے ستایا، تکلیفیں پہنچائی بلکہ آپ ﷺ کو قتل کروانے کے درپے تھا۔ چنانچہ آج بھی حق و صداقت سے انکار کرنے والے کو ابو جہل کے ساتھ تشبیہ دی جاتی ہے۔ اسی لئے شہزادے کے چچا کو بھی ابو جہل کہا گیا کیونکہ وہ بھی تحت و تاج کی لالچ میں اندھا ہو کر اپنے یتیم بھتیجے کے حق کی ادائیگی سے انکار کر کے اُسے مروانا چاہتا تھا۔ اور شہزادے کا جانی دشمن بن کر خود ابو جہل کا کردار ادا کر رہا تھا۔

چین کے بادشاہ کا بیٹا ہوں ناز و اداسے پالا گیا۔ زمانے کے بڑے بھلے سے ناواقف تھا سو چا کر تا تھا کہ زندگی اسی طرح آرام اور سکون سے بسر ہوگی لیکن قسمت کو یہ منظور نہ تھا اسی بے فکری کے علام میں میرے والد اس دینا سے چل بسے۔ مرنے سے پہلے میرے چچا کو بلا یا اور اُس سے کہا کہ ”میرے بھائی میں یہ دنیا چھوڑ کر جا رہا ہوں لہذا تجھے جو وصیت کروں اس پر عمل کرنا اور وہ یہ ہے۔ کہ جب تک شہزادہ جو کہ اس ملک اور تخت و تاج کا حقیقی مالک ہے جو ان ہو جائے۔ اور اس میں سوجھ بوجھ پیدا ہو۔ تب تم حکومت کو سنبھالنا۔ تب تک تم حکومت کو سنبھالنا۔ تخت و تاج کا مالک بن کر فوج اور عام لوگوں کا خیال رکھنا جیسے میں رکھتا تھا۔ اور جب شہزادہ بالغ ہو جائیگا۔ اور اُسے بڑے بھلے کی تمیز آجائے گی۔ تب یہ تاج و تخت اور حکومت اس کے حوالے کرنا اور اپنی بیٹی روشن اختر سے اس کی شادی کر کے خود حکومت سے الگ ہو جانا اس طریقے سے اس ملک کی بادشاہت ہمیشہ ہمارے خاندان میں ہی رہے گی یہ وصیت کر کے والد صاحب انتقال کر گئے۔

۷۔ گرامر: کلام اور اس کی قسمیں۔

جب دو یا دو سے زیادہ کلمات ترتیب پائیں تو اُسے ”مرکب“ کہتے ہیں۔ مرکب کی دو قسمیں ہیں۔ (۱) مرکب تام (ب) مرکب ناقص

(۱) مرکب تام: وہ مرکب ہے۔ جس سے سننے والا پورا مطلب سمجھ جائے۔ اس مرکب کو ”جملہ“ یا ”مرکب مفید بھی“ کہتے ہیں۔ مثلاً زید لکھتا ہے۔ اکبر بیمار تھا وغیرہ۔

(ب) مرکب ناقص: وہ مرکب ہے جس سے سننے والا پورا مطلب نہ سمجھ سکے۔ مثلاً میرا دوست۔ ٹخنڈا پانی۔ حیدر علی۔ شاہد کے سوا سب۔ اسلم کا گھوڑا وغیرہ وغیرہ۔

مرکب ناقص کی اقسام

مرکب ناقص کی مندرجہ ذیل قسمیں ہیں۔

- | | | | | | |
|------------------|----------------|-----------------|---------------------|---------------|---------------|
| ۱۔ مرکب استثنائی | ۲۔ مرکب اشاری | ۳۔ مرکب امتزاجی | ۴۔ مرکب تاکیدری | ۵۔ مرکب اضافی | ۶۔ مرکب بدلی |
| ۷۔ مرکب تمیزی | ۸۔ مرکب توصیفی | ۹۔ مرکب جاری | ۱۰۔ مرکب ظرفی | ۱۱۔ مرکب عددی | ۱۲۔ مرکب عطفی |
| ۱۳۔ مرکب موضوع | ۱۴۔ تابع مہمل | ۱۵۔ حال ذوالحال | ۱۶۔ عطف بیان و مبین | | |

س ۸۔ درج ذیل الفاظ کو ملا کر صحیح جملے بنائیے:

۱۔ تھا ملک صادق جنوں کا بادشاہ	۲۔ دسویں پڑھتا میں جماعت ہوں میں	۳۔ کنارے دریا میرا مدرسہ واقع کے ہے	۴۔ کشمیر بھر دنیا میں مشہور ہے	۵۔ داستان میرا من باغ و بہار نے لکھی ہے	ملک صادق جنوں کا بادشاہ تھا میں دسویں جماعت میں پڑھتا ہوں میرا مدرسہ دریا کے کنارے واقع ہے۔ کشمیر دنیا بھر میں مشہور ہے داستان باغ و بہار میرا من نے لکھی ہے۔
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س ۹۔ سبق میں جو محاورے آئے ہیں ان کا مفہوم لکھئے:

معنی	محاورات	معنی	محاورات
چھاتی پر سانپ پھیرنا	غصہ میں پیچ و تاب کھانا	خاطر جمع رکھنا	اطمینان رکھنا
راست آنا	ٹھیک بیٹھنا	ہاتھ آنا	مل جانا
راست آنا	ٹھیک بیٹھنا	ہاتھ آنا	مل جانا
پاؤں پر گر پڑنا	رور و کرالتجا کرنا	اوپری دل سے	دکھاوے کے طور پر

س ۵: اُردو شاعری کی ایک اہم صنف قطعہ پر نوٹ لکھیے؟

ج۔ قطعہ کے لغوی معنی ’گلزرا‘ یا ’جزو‘ کے ہیں۔ اصطلاح میں اس نظم کو کہتے ہیں جس میں ایک خیال یا واقعہ کو مسلسل اور مربوط شکل میں نظم کیا جاتا ہے۔ قطعہ کم از کم دو اشعار کا ہوتا ہے اور زیادہ سے زیادہ کیلئے کوئی قید نہیں۔ قطعے غزل کے درمیان میں بھی آجاتے ہیں۔ قطعہ میں پہلے شعر کے دونوں مصرعوں کا ہم قافیہ ہونا ضروری نہیں۔ قطعہ ہر بحر میں کہا جاسکتا ہے۔ موضوع کی قید بھی نہیں۔ قطعہ میں ہر شعر کے دوسرے مصرعے میں قافیہ کی پابندی لازمی ہے۔ اس صنف میں فلسفیانہ حکیمانہ اور اخلاقی مضامین بڑی خوش اسلوبی سے آجاتے ہیں۔ چھوٹے چھوٹے واقعات اور محسوسات کو قطعے میں نظم کیا جاتا ہے۔ تمام بڑے شاعروں نے کوئی نہ کوئی قطعہ لکھا ہے جن میں اکبر آلہ آبادی اور مولانا حالی کے قطعے خاصے کی چیزیں ہیں۔

س ۶۔ حالی کی حیات کا تذکرہ کیجئے؟

ج۔ خواجہ الطاف حسین حالی ۱۸۳۷ء میں پانی پت کے محلہ انصار میں پیدا ہوئے۔ چار برس کے ہوئے تو پانی پت کے مشہور حافظ قرآن ممتاز حسین سے قرآن شریف پڑھنے لگے۔ ابھی نو سال کے بھی ہوئے تھے کہ ان کے والد چل بسے۔ کچھ عرصہ بعد ماں کے پیار سے بھی محروم ہو گئے۔ اسی لئے تعلیم اور نگرانی کا فرض بڑی بہن اور بھائی نے ادا کیا۔ ماں باپ کی جدائی کا ان کے دل پر گہرا اثر پڑا جس کی وجہ سے انہیں تعلیم حاصل کرنے کے لئے بے حد مشکلات کا سامنا کرنا پڑا۔ ابھی ان کی عمر سترہ برس کی تھی کہ بہن بھائیوں کو شوق ہوا کہ ان کی شادی چائیں ان کے نہ چاہتے ہوئے بھی بیاہ ہو گیا۔ علم حاصل کرنے کا شوق اس قدر تھا کہ چپ چاپ گھر سے نکل پڑے اور دہلی جا پہنچے۔ وہاں ہزار طرح کی مصیبتیں اٹھائیں لیکن تعلیم کا سلسلہ جاری رکھا۔ اسی شہر میں نواب شیفیت سے شناسائی ہوئی۔ انہوں نے حالی کو اپنے بچوں کا استاد مقرر کیا نواب صاحب کے ذریعے اُردو کے مشہور شاعر مرزا اسد اللہ خان غالب سے ملے اور شاعری میں ان کے شاگرد ہو گئے۔ مرزا غالب کی وفات کے بعد دلی کے اینگلو بک اسکول میں فارسی پڑھانے لگے اور اس کے بعد لاہور چلے گئے جہاں کے تعلیمی ادارے گورنمنٹ بک ڈپو میں ان کو نوکری مل گئی۔ گورنمنٹ بک ڈپو ٹوٹا تو حالی کو سرسید احمد خان نے علی گڑھ بلا یا اور ان کے ساتھ مل کر کام کرنے لگے۔ اسی زمانے میں آپ نے مشہور و معروف ’مسدس مدو جز اسلام‘ لکھا۔ مولانا الطاف حسین حالی شاعر بھی تھے۔ اور نثر نگار بھی۔ دونوں میں ان کا درجہ بلند نظر آتا ہے۔ ان کی مشہور کتابوں میں حیات سعدی، یادگار غالب، حیات جاوید، دیوان حالی، مقدمہ شعر و شاعر اور مدو جز اسلام وغیرہ ہیں حالی نے ایک شاعر اور ایک نثر نگار کی حیثیت سے اُردو ادب کے خزانہ کو مالا مال کر دیا۔ ۱۹۱۲ء میں اس مخلص انسان کا پانی پت میں زندگی کا سفر ختم ہوا۔

س ۷۔ حالی کے ادبی خدمات کا جائزہ لیتے ہوئے ان کا مقام متعین کیجئے۔

ج۔ حالی نے غالب سے مشورہ سخن کیا اور شیفیت سے استفادہ حاصل کیا اور میر کی تقلید کی۔ حالی کی شاعری غزل گوئی اور نظم گوئی پر مشتمل ہے۔ ان کی غزلیں قدیم وجدید رنگ کی ہیں۔ ان کی نظمیں فطرت و قومیت کے جذبات و احساسات کی ترجمان ہیں۔ نثر میں حالی نے تنقید نگاری اور سوانح نگاری پر سب سے پہلے توجہ کی۔ اور آپ اُردو میں سیرت نگاری، تنقید، قومی شاعری اور نیچرل شاعری کے موجد ہیں۔ ادب پر آپ کا احسان عظیم ہے کہ انہوں نے اپنی زبردست جدوجہد اور کوشش سے اُردو شاعری خصوصاً اُردو نظم کو ایسی پاکیزگی، اثر آفرینی اور لطافت بخشی جو قیامت تک اردو ادب کو زندہ رکھنے کے لئے کافی ہے۔ حالی اُردو زبان کے سب سے بڑے نقاد ہیں۔ حالی کو ہندستان کا سعدی اردو ادب کا مجدد، جدید نقطہ نظر کا پیام، نیچرل شاعری کا بانی، اردو کا پہلا نقاد اور سوانح نگار ملت اسلامیہ کا بے لوث خادم اور مادر وطن کا مایہ ناز فرزند تسلیم کیا گیا ہے۔

﴿غزل﴾

معنوی اور لغوی حیثیت سے غزل گوئی اُس صنف سخن کو کہتے ہیں۔ جس میں عشق کی داستان خود عاشق کی زبان سے ادا کی جائے۔ تمام اصناف شعر میں غزل سب سے حسین دل کش اور سب سے زیادہ پسندیدہ قسم ہے۔ کیونکہ اس کا تعلق جذبات اور احساسات سے ہے۔ یعنی یہ ایسے مختلف اشعار کا مجموعہ ہوتا ہے۔ جس میں واردات قلبی کا تذکرہ کیا گیا ہو۔ اُردو ادب کے ابتدائی دور سے اس کا وجود ہے۔ یہ فارسی سے اُردو میں آئی۔ اس کا ہر شعر الگ الگ مطلب کا حامل ہوتا ہے۔ غزل کے پہلے شعر کو مطلع کہتے ہیں اگر دوسرا شعر بھی ہم قافیہ ہو تو اُسے حسن مطلع کہتے ہیں۔ اس طرح ایک سے زائد مطلع والی غزل کے پہلے شعر کو مطلع اول یا شاہ مطلع اور دوسرے مطلع کو حسن مطلع یا مطلع ثانی بھی کہتے ہیں۔ آخری شعر جس میں عام طور پر شاعر اپنا تخلص استعمال کرتا ہے مقطع کہلاتا ہے۔ غزل کا ہر شعر اپنی جگہ مستقل اکائی کی حیثیت رکھتا ہے۔ ہر شعر ایک مکمل مضمون ہوتا ہے۔ بعض اوقات پوری غزل میں ایک ہی مضمون ہوتا ہے اور بعض اوقات ہر شعر الگ الگ مضمون ہوتا ہے۔ غزل ایک ہی بحر میں لکھی جاتی ہے غزل کو اردو شاعری کی آبرو کہا جاتا ہے۔ یہ سب سے زیادہ

مقبول صنف ہے۔ اس کا آغاز دکن سے ہوا اور اس کو عروج شمالی ہندستان میں حاصل ہوا۔ اس صنف کو اردو میں میر، سودا، درد، مؤمن اور غالب وغیرہ نے بام عروج پر پہنچایا۔ غزل گو شعراء کے دو بڑے مرکز لکھنؤ اور دلی تھے۔ غزل کی مخالفت بھی ہوئی مگر آج بھی اس کی آب و تاب میں کوئی فرق نہیں آیا۔ غزل کی لمنساری اور روداری نے حسن و عشق کے میدان سے آگے قدم بڑھایا اور اخلاقی، فلسفہ، تصوف وغیرہ ہر قسم کے مضامین کو اپنے اندر جگہ دی اقبال، مجاز، اور فیض نے غزل میں انقلاب پیدا کر دیا۔ حسرت، فانی، جگر اور فراق نے غزل کو ایک لافانی صنف بنا دیا۔

﴿میر تقی میر﴾

نام میر محمد تقی اور میر تخلص تھا۔ والد کا نام میر محمد تقی تھا۔ آگرہ کے رہنے والے تھے۔ ۱۷۳۳ء میں پیدا ہوئے۔ گیارہ برس کی عمر میں باپ کا سایہ اٹھ گیا۔ اس کے سوتیلے بھائیوں نے انہیں بہت تکلیف دی جس کا تذکرہ انہوں نے ذکر میر میں کیا ہے۔ میر تقی کی زندگی کا زیادہ عرصہ دلی میں اور آخری زمانہ لکھنؤ میں گذرا۔ اس نے بڑا پُر آشوب زمانہ پایا تھا۔ ایک طرف دلی بار بار حملوں اور لوٹ مار کا نشانہ بنتی رہی۔ دوسری طرف خود میر کی زندگی آلام و مصائب کا شکار تھی۔ آخر کار مجبور ہو کر دلی کو خیر بار کیا۔ لکھنؤ آئے۔ نواب آصف الدولہ نے سنا تو اپنے یہاں لے گئے اور دو سو روپے ماہوار وظیفہ مقرر کیا۔ کچھ دنوں تک دربار میں آنا جانا رہا مگر کسی بات پر نواب سے ان بن ہو گئی نازک مزاج تھے ہی اس پر حد درجہ خودداری مرتے مر گئے مگر پھر کبھی نواب کے یہاں قدم نہیں رکھا۔ ۱۸۱۰ء میں لکھنؤ میں ہی انتقال کیا۔

﴿میر تقی می کی ادبی کارنامے﴾

میر تقی میر اپنے زمانے ہی میں غزل گو شاعر کی حیثیت سے مشہور ہو گئے تھے اور بعد کے شعراء نے بھی ان کی استاد کی کالو ہا مانا ہے۔ غزل میں ان کا رتبہ سب سے بلند ہے۔ قدرت نے انہیں بے پناہ صلاحیتوں کے ساتھ ساتھ درمند دل بھی عطا کیا تھا۔ آلام زو زگار، غم زندگی اور درد مندی، ان تمام باتوں نے نل کر ان کے کلام اور بالخصوص غزلوں میں بے پناہ درد اور کڑوا پن بھر دیا ہے۔ میر اپنی غزلوں میں ایسی بحر جوں کا استعمال کرتے ہیں۔ میر کالب و لہجہ نرم، دھیما اور درد انگیز ہوتا ہے۔ میر کے چھ دیوان ہیں۔ ان کے علاوہ نکات الشعرا اور ”ذکر میر“ فارسی کی کتابیں ہیں۔ غزلوں کے علاوہ قصیدے، مثنویاں، مرثیے اور نظمیں وغیرہ بھی کہی ہیں۔

سوالات و جوابات

س۱۔ شاعر نے دل ستم زدہ کو کیوں تھام لیا؟

ج۔ جب شاعر کے سامنے کوئی اس کے معشوق کا نام لیتا ہے یعنی اُس کی تعریفیں کرتا ہے شاعر اپنے دل کو تھام لیتا ہے جو اسی محبوب کی ستم آزاریوں سے پہلے ہی زخمی ہوا ہے۔ دوسری طرف رشک سے یہی دل گھل جاتا ہے کہ یہ میر ارقیب بن گیا ہے اور دل پسند نہیں کرتا ہے کہ کوئی دوسرا اس کے محبوب کو چاہے اس لے بہت مشکل سے اپنے دل کو تھام لیتا ہے۔

سوال ۲۔ دونوں غزلوں میں سے ایسا شعر تلاش کیجئے جس میں شاعر نے تعلق موجود ہو؟

ج۔ پہلی غزل میں جو مقطع کا شعر ہے اس میں شاعر نے تعلق موجود ہے۔

اگرچہ گوشہ نزیں ہوں میں شاعروں میں میر
یہ میرے شعر نے روئے زمین تمام لیا۔

س۳۔ سر کی کھوپڑی نے کون سی پتے کی بات بتائی؟

ج۔ سر کی کھوپڑی نے دنیا کی ناپائیداری اور بے ثباتی کی بات بتائی جب اُس کی بوسیدہ ہڈیوں پر کسی کا پاؤں پڑ گیا اور وہ ریزہ ریزہ ہو کر چلا اُٹھی کی ایک وقت ایسا بھی تھا جب میں ایک انسان کے سر پر گھنڈ بنی ہوئی تھی۔ میں بھی چلتا پھرتا، کھاتا پیتا اور جیتا جاگتا انسان تھا مگر آج میری یہ حالت دیکھ کر ہر ایک انسان کو عبرت حاصل کرنا چاہئے کہ کبھی کسی وقت اس کا حشر بھی ایسا ہی ہو سکتا ہے۔

س۴۔ دوسری غزل کے تیسرے شعر میں حضرت موسیٰ سے متعلق تلمیح کو بیان کیجئے؟

ج۔ کہہ طور فلسطین کے ایک پہاڑ کا نام ہے۔ جس پر پیغمبر حضرت موسیٰ سے ہم کلام ہوتے تھے۔ اسی پہاڑ پر انہوں نے خدا کا جلوہ بھی دیکھا۔ واقعہ اس طرح ہے کہ موسیٰ کو خدا کی طرف سے حکم ملا کہ تم کو طور پر جا کر تیس دن تک ہماری عبادت کرو۔ اس کے بعد ہم تمہیں ”تورات“ نام کی ایک آسمانی کتاب عنایت کریں گے۔ چنانچہ خداوند تعالیٰ کے حکم سے وہ کوہ طور پر گئے اور اپنی امت بنی اسرائیل کو خوب سمجھا کر ہدایت کر گئے کہ میرے پیچھے تم پھر گمراہ مت ہو جانا۔ کو طور پر حضرت موسیٰ اللہ سے ہم کلام ہوتے تھے اسی وجہ سے ان کا لقب ”کلیم اللہ“ ہے۔ یعنی اللہ سے بات کرنے والا۔ بات چیت کا یہ سلسلہ عرصہ تک چلتا رہا۔ ایک روز حضرت موسیٰ کے جی میں آیا کہ میں اللہ کا دیدار بھی کروں۔ چنانچہ انہوں نے

فرمایا ”رَبِّ اَرْنِي“ یعنی اے رب تو مجھے اپنا جلوہ دکھا دے۔ خدا کی طرف جواب ملا۔ ”لَنْ تَرَانِي“ یعنی تم مجھے نہیں دیکھ سکو گے۔ حضرت موسیٰ خدا کا جلوہ دیکھنے کے لئے بار بار اصرار کرتے رہے۔ یہاں تک کہ انکی ضد پر اللہ نے فرمایا کہ اگر تم جلوہ ہی دیکھنا چاہتے ہو تو سامنے کے پہاڑوں پر نظر ڈالو اگر وہ پہاڑ یعنی کوہ طور اپنی جگہ پر قائم رہا تو سمجھ لینا کہ تم مجھے دیکھ سکو گے ورنہ نہیں تھوڑی ہی دیر میں تختی نور الہی جلوہ گر ہوئی پہاڑ جل کر راکھ ہو گیا اور حضرت موسیٰ اس تجلی کی تاب نہ لا کر بے ہوش ہو گئے۔ کافی دیر بعد جب ہوش آیا تو اللہ سے اپنی گستاخی کی معافی مانگی اور آئندہ کے لئے توبہ کی۔

س ۵۔ صنعت تلمیح کی تعریف لکھئے اور مثالیں دیجئے؟

ج۔ کسی شعر میں مشہور واقعہ یا کسی مذہبی روایت کی طرف اشارہ کرنے کو تلمیح کہتے ہیں۔ تلمیح کے الفاظ بظاہر مختصر ہوتے ہیں۔ لیکن اس کے پیچھے وہ پورا قصہ ہوتا ہے۔ جس کی طرف شاعر اشارہ کرنا چاہتا ہے۔ اس پورے قصے کو جانے بجز نہ تو شعر کا مطلب بخوبی سمجھ میں آ سکتا ہے۔ اور نہ ہی شعر کے اندر لائی گئی صنعت تلمیح کا پورا پورا اظہار اٹھایا جاسکتا ہے۔ مثلاً یہ شعر تلمیحی شعر ہے۔

نازمو دو کو کیا گلزار دوست کو یوں بچا دو یا تو نے (داغ) یا یہ شعر دیکھئے

اُڑ کے بیٹھے کیا سمجھ کے بھلا طور پر کلیم طاقت ہو دیکھ تو تقاضا کرے کوئی۔ (اقبال)

س ۶۔ صنعت تعلق کی تعریف لکھئے اور مثالیں دیجئے؟

ج۔ صنعت تعلق وہ صنعت ہے جس میں شاعر اپنی شاعری کے سلسلہ میں مبالغہ سے کام لیتا ہے اس سلسلے میں ہمارے بعض شعراء نے اپنی تعریف، اپنی شاعری کی تعریف کچھ اس طرح بڑھا چڑھا کر کی ہے کہ بارگراں گزرتی ہے میر۔ غالب اور بعض شعرا بھی اس عیب کا شکار ہوئے ہیں جیسے غالب کا یہ شعر دیکھیے

”ہیں اور بھی دنیا میں سخنور بہت اچھے کہتے ہیں کی غالب کا ہے انداز بیان اور۔“

﴿خوجہ حیدر علی آتش﴾

خوجہ حیدر علی نام اور آتش تخلص فرماتے تھے۔ آپ فیض آباد کے ایک معزز گھرانے میں ۱۷۷۷ء کو پیدا ہوئے۔ باپ کا سایہ کم عمری میں

سرسے اٹھ گیا۔ اس وجہ سے مروجہ تعلیم حاصل نہ کر سکے۔ مزاج میں شوریدہ سری اور باکلین پیدا ہو گیا۔ آپ لکھنؤ آئے اور مصحفی

کے شاگرد ہوئے اور تھوڑے ہی عرصے میں کثرت مشق اور افتادہ طبع کی بدولت اُستاد کے ہم پلہ ہو گئے۔ آتش کے مزاج میں ایک فقیرانہ

انداز آ گیا اور طبیعت فقر و فاقہ کی طرف مال ہوئی۔ ساری عمر توکل اور قناعت کی راہ سے قدم نہیں اٹھایا۔ آخری عمر میں اُن کی بیہوشی بھی چلی گئی آخر ۱۸۴۷ء میں

لکھنؤ میں اُن کا انتقال ہو گیا۔ آتش اردو غزل کے بہت بڑے محسن ہیں۔ آتش کے کلام کی جملہ خوبیاں کو دیکھتے ہوئے یہ کہنا بے جا نہ ہوگا کہ وہ لکھنؤ اسکول کے ممتاز ترین غزل

گو شاعر تھے۔ اُن کا کلام دو دو یونوں میں شائع ہو چکا ہے۔ آتش کے یہاں تصوف کی چاشنی اس مزے اور آزادی کے ساتھ ہے۔ اگر ان کو اردو زبان کا حافظ کہا جائے تو بے جا نہ

ہوگا۔ فقیرانہ اور آزاد رنگ آتش کو انفرادی حیثیت دے کر دوسرے شعراء سے ممتاز کرتا ہے۔ اور ان کے شعروں میں جان پیدا کرتا ہے۔ آتش اپنے کلام

میں جہاں کہیں کیف و مرادگی و خوداری کے جذبات قلم بند کرتے ہیں۔ وہاں اُن کی امتیازی خصوصیت ان کو اردو کے بہترین شعراء کی صف میں جگہ دلاتی ہے۔ ان کے شاگردوں کی

تعداد بہت ہے جن میں مرزا شوق اور دیانکر نسیم خاص ہے۔

سوال: اس غزل میں اُس شعر کی نشاندہی کیجئے جس میں انسان کی بے ثباتی کا ذکر ہے؟

جواب: نہ گور سکندر نہ ہے قبر دارا مٹے نامیوں کے نشان کیسے کیسے

سوال: شاعر نے غم و غصہ رنج و اندوہ کو اپنے مہربانوں میں کیوں شمار کیا ہے؟

جواب: شاعر نے غم و غصہ رنج و اندوہ کو اس لئے مہربانوں میں شمار کیا ہے۔ کیونکہ یہ چیزیں ہمیشہ شاعر کے ساتھ رہتی تھیں۔ اس طرح ساری زندگی غموں سے پڑھی۔ جس چیز کی

تئنا کی اور وہ مل نہ سکی۔ ہر ایک شخص نے شاعر کا ساتھ چھوڑ دیا، ساری زندگی یا اس اور قنوطیت میں گذری صرف عمر بھر غموں نے ساتھ دیا یعنی مہربان بنے۔

سوال: تشریح کیجئے:

نہ گور سکندر نہ ہے قبر دارا:

مٹے نامیوں کے نشان کیسے کیسے

جواب: اس شعر میں آتش دنیا کی بے ثباتی یعنی ناپائیداری کا ذکر کرتے ہوئے فرماتے ہیں۔ کہ یہ دنیا فانی ہے اور مٹ جانے والی ہے۔ یہاں بڑے بڑے بہادر اور امیر لوگ آئے اور چلے گئے۔ لیکن آج ان کے نام سے کوئی واقف نہیں ہے۔ آج نہ سکندر اعظم یونان کا عظیم بادشاہ جس نے ساری دنیا فتح کرنے کا خواب دیکھا تھا اس کی قبر نظر نہیں آرہی ہے۔ اور نہ دارا (ایران کا بادشاہ جسے سکندر نے شکست دی تھی) کی قبر کہیں موجود ہے۔ کیونکہ بے رحم گردش ایام نے بڑے بڑے نامور لوگوں اور بادشاہوں کے نام و نشان مٹا دیئے ہیں۔

ناول پر ایک مختصر نوٹ

ناول انگریزی زبان کا لفظ ہے۔ اور اس کے معنی نئی اور انوکھی چیز کے ہیں۔ ”ناول“ اطالوی زبان کے لفظ ”ناویلا“ سے ماخوذ ہے۔ یہ لفظ پہلے کہانیوں اور خبروں کے لئے استعمال ہوتا تھا۔ بعد میں اسے وسیع معنوں میں استعمال کیا جانے لگا۔ ناول دراصل وہ نثری قصہ ہے۔ جس میں ایک خاص نقطہ نظر کے تحت زندگی کے حقائق اور واقعات کی عکاسی کی جاتی ہے۔ ناول میں فلسفہ زندگی کی جھلک ہوتی ہے۔ اور ہر ناول ایک نئے ذہنی سفر آغاز اور فطرت انسانی سے پردہ اٹھانے کی کوشش ہوتی ہے۔ ناول کے لئے پختہ شعور اور عمدہ ذوق کی ضرورت ہوتی ہے۔ کیونکہ یہ ایک حکیمانہ اور فلسفیانہ کام ہے۔ ناول اور افسانے کی تکنیک اور خصوصیات میں زمین و آسمان کا فرق ہے۔ افسانہ ایک پہلو اور ناول کئی پہلوؤں پر بحث کرتا ہے۔ اسی طرح ناول اور داستان میں بھی فرق ہے۔ داستان بغیر پلاٹ کے بھی ہو سکتی ہے۔ مگر ناول کا باقاعدہ پلاٹ ہوتا ہے۔ داستان کے کردار مافوق الفطرت والے کردار ہوتے ہیں۔ جبکہ ناول میں صرف انسانی کردار ہوتے ہیں۔ داستان کی زبان رنگین، مشکل اور مصنوعی ہوتی ہے۔ ناول کی زبان عام فہم اور سادہ ہوتی ہے۔ ناول کے اجزائے ترکیبی میں کہانی، پلاٹ، کردار نگاری، مکالمہ، زبان و مکان، جذبات نگاری، منظر نگاری، زبان اور فلسفہ حیات پر خصوصیت کے ساتھ زور دیا جاتا ہے۔ جس طرح انگریزی ادب میں چرچر ڈسن کا ناول کامو جد کہا جاتا ہے۔ اسی طرح اردو ادب میں ڈپٹی نذیر احمد کی کہانیوں کو ناول کے اولین نمونے کہا جاسکتا ہے پھر سرشار، شرر، مرزا رسوا، راشد الخیرتی اور پریم چند اردو کے سب سے بڑے ناول نگار ہیں۔

مولانا ڈپٹی نذیر احمد کے حالات زندگی

نذیر احمد ریاست اتر پردیش کے ضلع بجنور کے قصبہ رہڑ میں ۶ دسمبر ۱۸۳۶ء کو پیدا ہوئے ۱۸۴۸ء میں دلی کالج میں داخلہ لیا وہاں آپ کا وظیفہ بھی مقرر ہوا۔ ۱۴ سال کی عمر میں والد کا انتقال ہوا۔ اور آپ گجرات کے ایک مدرسہ میں چالیس روپیہ ماہوار پر مدرس مقرر ہوئے۔ وہاں سے کانپور ڈپٹی انسپکٹر مدارس تعینات ہوئے۔ یہاں انگریزی زبان کی مہارت خوب حاصل کی۔ تعزیرات ہند کا ترجمہ اردو زبان میں اس قابلیت سے کیا کہ گورنر صوبہ نے آپ کو کانپور کا تحصیلدار مقرر کیا۔ اس کے بعد دوسری کتابوں کے ترجمے نہایت خوبی سے کئے اور ۱۸۸۴ء میں ڈپٹی کلکٹر بن گئے۔ سالار جنگ کی وفات کے بعد دہلی آگئے اور اعلیٰ خدمات انجام دیتے رہے۔ متعدد اردو تصانیف کے صلہ میں نقدا انعامات سے نوازا گیا۔ ۱۸۹۷ء میں شمس العلماء کا خطاب عطا ہوا۔ ۱۹۰۲ء میں ایڈن برگ نے ایل۔ ایل۔ بی اور دوسری یونیورسٹی نے ڈاکٹر آف لٹریچر کی ڈگریاں دیں۔

آخری عمر میں صحت خراب ہو گئی اور ہاتھ میں رعشہ آ گیا۔ پھر ۱۹۱۲ء میں انتقال کیا۔ آپ کی چند مشہور تصانیف کے نام یہ ہیں۔ مراۃ العروس۔ توبتہ النصح۔ نبات النعش۔ ابن الوقت۔ تعزیرات ہند۔ قانون فوجداری اور انکم ٹیکس وغیرہ وغیرہ۔

مولانا ڈپٹی نذیر احمد کے ادبی کارنامے پر ایک مختصر نوٹ

نذیر احمد ۱۸۳۶ء میں بجنور میں پیدا ہوئے۔ دہلی کالج میں تعلیم پائی اور دہلی کو ہی اپنا وطن بنا لیا۔ اور یہیں ۱۹۱۲ء میں وفات پائی۔ انہوں نے اردو ناول کو مہذب اور سنجیدہ رنگ میں پیش کیا۔ ان کا پایہ اردو نثر میں بہت بلند ہے اور ان کا شمار آج بھی چوٹی کے نثر نگاروں میں ہوتا ہے۔ مولوی نذیر احمد اردو کے پہلے ناول نگار ہیں۔ ان کے تمام ناول اصلاحی و معاشرتی ہیں۔ مراۃ العروس ان کا پہلا ناول ہے۔ اس ناول میں عورتوں کے خیالات کو بہو بہو اس خوبی سے ادا کیا ہے کہ یہ خوبی کسی دوسرے مصنف کو نصیب نہیں ہوئی ان کی تحریر میں بے تکلفی اور بے ساختہ پن بہت ہے وہ تشبیہ اور استعارے سے بہت کم کام لیتے ہیں۔ نذیر احمد کا بڑا کام اصلاح معاشرت ہے جس کا خیال انہوں نے اپنی ناولوں میں رکھا ہے۔ انہوں نے اسلامی سوسائٹی اور خاص کر مسلمانوں کے خاندانوں کی اندرونی معاشرت کی تصویر ایسی بے لاگ کھینچی ہے کہ آنکھوں کے سامنے نقشہ پھر جاتا ہے۔ روزمرہ معمولی واقعات گھروں میں واقع ہوتے ہیں ان کا خوبی سے بیان کرنا ان کا خاص حصہ ہے۔

اور مزاج دارلٹ گئی

سوال نمبر ۱: لوگوں کو دھوکا دینے کے لئے جن کوئی چیزیں اپنے پاس رکھتی تھی؟

جواب: لوگوں کو دھوکا دینے کے لئے جن طرح طرح کے تبرکات اپنے پاس رکھتی تھی خاص کرتبیج۔ خاک شفا۔ مدینہ منورہ کی کھجوریں۔ زمزمیاں۔ کوہ طور کا سرمہ۔ خانہ کعبہ کے غلاف کا ٹکڑا۔ عقیق الجبر۔ مونگے کے دانے۔ نادعلی۔ پنجسورے اور بہت سی دوائیاں ہوتی تھی۔

سوال نمبر ۲: جن نے مزاج دار سے قیمت لئے بغیر اسکو فیروزے کی انگوٹھی کیوں دی؟

جواب: جن نے جب مزاج دار کی باتوں سے احساس ہوا کہ یہ عورت یعنی مزاج دار جلد ہی جال میں پھنسنے والی ہے اسی لئے قیمت لیے بغیر مفت میں فیروزے کی انگوٹھی اسکو دے دی۔

سوال نمبر ۳: ”مزاج دار“ بہو کو بے وقوف بنانے کے لئے جن نے کیا کیا؟

جواب: ”مزاج دار“ بہو کو بے وقوف بنانے کے لئے جن نے بہو کو ایک پیسہ میں بہت سا کوہ طور کا سرمہ، دو آنے میں نادعلی، چار آنے میں دو روپیہ کا ریشمی کمر بند اور بغیر قیمت لئے مفت میں فیروزے کی انگوٹھی دی۔ اس کے علاوہ میاں بیوی ہیں محبت بڑھنے کے لئے دو لونگیں بھی دیں۔

سوال نمبر ۴: محمد عاقل جن کی چال کیوں نہ سمجھ سکا؟

جواب: محمد عاقل نے جب دیکھا کہ قیمتی چیزیں بہت ہی سستے داموں میں مل رہی ہے تو لالچ کی وجہ سے اُس کی عقل پر پردہ پڑ گیا اس لئے وہ جن کی چال کو نہ سمجھ سکا۔

سوال نمبر ۵: جن مزاج دار کے زیورات لوٹ لینے میں کس طرح کامیاب ہو گئی؟

جواب: جن نے اپنی چال بازی سے مزاج دار کے دل میں اپنی جگہ بنالی تھی اور اس کا بھروسہ اور اعتماد

حاصل کیا تھا لہذا جوں ہی اس نے مزاج دار کے زیورات دیکھ لئے تو مزاج دار سے کہا بیٹی آپ تو بڑی بے پردہ ہو۔ جگنی میں ڈورا کیوں نہیں ڈالوایا ہے اور ان زیورات پر میل لگی ہوئی ہے تمہیں نہیں معلوم کہ میل سونے کو کھا جاتا ہے۔ ان کو صاف کروانا چاہیے۔ پھر ہمدرد بن کر جن زیورات کو صاف کروانے اور جگنی میں ڈورا ڈالوانے کے بہانے زیورات اپنے ساتھ لے جاتی ہے۔ اس طرح مزاج دار بہو کو لوٹنے میں کامیاب ہو جاتی ہے۔

س (درج ذیل اقتباس کے آخر پر دیئے گئے سوالات کے جوابات لکھیے؟

اقتباس: ”اگلے دن زلفن کو بھیج کر جن کو بلوایا۔ آج مزاج دار بیٹی بنی جن کو ماں بنا یا۔ محمد عاقل نے کہا دیکھو ہوشیار رہنا۔ اس بھیس میں کنٹیاں اور ٹھکنیاں بہت ہوا کرتی ہیں۔ لیکن طبع نے عاقل کی عقل پر ایسا پر ڈال دیا کہ اتنی موٹی بات وہ نہ سمجھا کہ دو روپے کا مال چار آنے کو کوئی بے وجہ بھی دیتا ہے۔“

سوال نمبر ۱: درج بالا اقتباس کس سبق سے ماخوذ ہے۔

جواب: درج بالا اقتباس ہماری درسی کتاب میں درج ”اور مزاج دارلٹ گئی“ سبق سے ماخوذ ہے۔ جو ڈپٹی نذیر احمد کی ناول مرآة العروس سے لیا گیا ہے۔

سوال نمبر ۲: زلفن کون تھی؟

جواب: زلفن مزاج دار بہو کی نوکرانی تھی۔

سوال نمبر ۳: ان جمع اسموں کے واحد لکھیے کنٹیاں۔ ٹھکنیاں

جواب: واحد اسم: کنٹی۔ ٹھکنی، جمع اسم: کنٹیاں۔ ٹھکنیاں

سوال نمبر ۵: محمد عاقل کی عقل پر پردہ کیوں پڑا؟

جواب: محمد عاقل کی عقل پر اس لئے پردہ پڑا۔ کیونکہ طبع اور لالچ کہ وجہ سے وہ اتنی سیدھی سادھی بات سمجھ ہی نہ سکا کہ دو روپے کی چیز کوئی چار آنے میں بھلا کیوں دے۔

سوال نمبر ۶: درج بالا اقتباس کا حاصل اپنے الفاظ میں لکھیے؟

جواب: اس اقتباس میں مولوی نذیر احمد کہتے ہیں کہ مزاج دار ایک سیدھی سادھی عورت تھی وہ جن کی معتقد بن جاتی ہے اور اگلے روز مزاج دار جن کو بلانے کے لئے زلفن کو بھیجتی

ہے۔ وہ جن کو اپنے ساتھ لاتی ہے مزاج دار بڑی آؤ بھگت سے بٹھاتی ہے۔ خود اُس کی بیٹی بنتی ہے اور جن کا ماں کا درجہ دیتی ہے۔ رات کے وقت محمد عاقل کے ساتھ جن کے بارے میں باتیں ہوتی ہیں۔ محمد عاقل اپنی بیوی کو ہوشیار رہنے کی تلقین کرتا ہے اور کہتا ہے کہ ایسے ہی روپ میں دلالہ اور ٹھکنیاں گھومتی رہتی ہیں۔ لیکن خود محمد عاقل کو بھی لالچ نے اندھا کر دیا تھا وہ یہ سمجھ ہی نہ سکا کہ دور روپے کا ایزار بند کوئی چار آنے ہیں بلا وجہ کیوں بیچے گا۔

سوال: اور مزاج دار لٹ گئی، اقتباس کا خلاصہ لکھئے؟

جواب: اور مزاج دار لٹ گئی، کے عنوان سے جو سبق ہماری اردو درسی کیاب میں شامل ہے وہ ڈپٹی نذیر احمد کی ناول ”مراۃ العروس“ سے لیا گیا ہے اس سبق میں نذیر احمد بتانا چاہتے ہیں کہ دینی اور دنیوی تعلیم اور اپنے مذہب میں پختہ یقین مردوں اور عورتوں سب کے لئے ضروری ہے۔ کیونکہ سماج اقتصادی عناصر کو الگ کرنے کے لئے اور ان سے ہوشیار رہنے کے لئے یہی دوتھیاریا ہم ہیں۔ اس سبق میں بتایا گیا ہے کہ کس طرح بہلا پھسلا کر ایک ٹھکن مزاج دار بہو کو لوٹ لیتی ہے۔ مزاج دار بہو اور اُس کا خاندان محمد عاقل اس ناول کے دو اہم کردار ہیں۔ محمد عاقل اپنی بیوی مزاج دار سے کہتا ہے۔ کہ آج کل شہر میں ایک ٹھکنی یعنی دلالہ آئی ہے۔ اس نے اپنی مکاری سے کئی گھروں کو لوٹ لیا ہے لہذا کسی اجنبی عورت کو گھر میں داخل نہ ہونے دینا۔ مزاج دار ایک سیدھی سادھی عورت تھی ایک ٹھکن ان کی گلی میں

آتی ہے وہ لوگوں کو ٹھکنے کے لئے اپنے ساتھ تبرکات جیسی بہت سی چیزیں رکھتی تھی۔ جن نام کی اس ٹھکنی نے جب مزاج دار بہو کی گلی میں اپنی دکان چکائی اور اُس کے ارد گرد کئی لڑکیاں جمع ہو جاتی ہیں۔ تو مزاج دار اپنی نوکرانی زلفن سے کہتی ہے۔ ”میرے لئے آؤ تاکہ ہم بھی تبرکات کی زیارت کریں گے۔ زلفن جن کو لے آتی ہے۔ مزاج دار بڑی محبت سے جن کو اپنے پاس بٹھاتی ہے اور چیزیں دیکھتی ہے۔ سرمہ اور ناندلی خرید لیتی ہے۔ باتوں باتوں میں جن جان لیتی ہے کہ یہ عورت بہت جلد جال میں پھسنے والی ہے۔ اس لئے صرف ایک پیسے میں ناندلی اور سرمہ دیتی ہے اور ساتھ میں فیروزے کی ایک انگوٹھی بھی مفت میں دیتی ہے۔ اپنی بنائی ہوئی دو چار باتیں بنا کر بال بچوں کے بارے میں پوچھتی ہے مزاج دار آہ کھینچ کر کہتی ہے کہ ہماری قسمت میں بچے کہاں لکھے ہیں اور کہتی ہے کہ میرا خاندان مجھ سے ہمیشہ ناراض رہتے ہیں۔ غرض مزاج دار پہلی ہی ملاقات میں جن کو اپنے گھر کا سارا حال سنا دیتی ہے۔ جن بڑی چالاک اور مکار عورت تھی گھر کا سارا راز معلوم کر کے رخصت ہوتی ہے۔ دو چار دن کے بعد جن اپنے ساتھ ایک ریشمی کمر بند لاکر مزاج دار کے گھر حاضر ہو جاتی ہے۔ اور کہتی ہے کہ وہاں محلے میں ایک بیگم رہتی ہے جو زندگی گزارنے کے لئے اپنی چیزیں بیچتی ہے میں ہی اکثر اس کی چیزیں بیچتی ہوں۔ مزاج دار کو دور روپے کا ایزار بند چار آنے میں دیتی ہے وہ خوش ہوتی ہے۔ اور کہتی ہے کہ دوبارہ جو بھی چیز بیچنی ہوں پہلے مجھے دکھانا۔ وہ کہتی ہے کہ میں ضرور پہلے تجھے دکھایا کروں گی۔ پھر جن مزاج دار کو دو لوٹ لیں بٹوہ سے نکال کر دیتی ہے اور کہتی ہے ایک لوٹ اپنے بالوں میں رکھنا اور دوسری لوٹ اپنے خاندان کے تکیے میں رکھنا تاکہ وہ شک نہ کرے اور آج ہی ان کا فائدہ دیکھ لو گی تم دونوں میاں بیوں میں محبت قائم ہوگی میں تمہیں اک تعویذ بھی بنا کر دوں گی۔ شام کو جب مزاج دار کا خاندان محمد عاقل گھر آتا ہے تو مزاج دار اُسے سارا ماجرا سُناتی ہے اور ان چیزوں کے بارے میں بتاتی ہے جو اُس نے جن سے خریدی تھیں۔ محمد

عاقل بیوی سے کہتا ہے کہ یہ سبھی چیزیں آپ نے بہت سستی ہی ہیں کہاں سے خریدی۔ مزاج دار کہتی ہے کہ ایک نیک بخت جن کئی دنوں سے گلی میں آتی ہے اُسی نے کسی بیگم کا یہ ایزار بند بیچنے کے لئے لایا تھا۔ پھر وہ خاندان کو ناندلی۔ سرمہ۔ فیروزے کی انگوٹھی وغیرہ دکھاتی ہے۔ لالچ بُری بھلا ہے اچھا خاصا آدمی بھی دھوکا کھا جاتا ہے اسی طرح محمد عاقل کے ساتھ بھی ہوتا ہے۔ فائدہ دیکھ کر لالچ میں آ جاتا ہے بیوی سے کہتا ہے تم ضرور وہ چیزیں خریدنا۔ لیکن خبردار رہنا کہ مال چوری کا نہ ہو اور یہ بھی دیکھنا کہ جن کوئی ٹھکنی تو نہیں۔ مزاج دار کہتی ہے تو یہ کرو ایسا کہنے سے وہ ایک عورت ہے۔ اگلے روز مزاج دار جن کو بلانے کے لئے زلفن کو بھیجتی ہے۔ آج مزاج دار خود بیٹی بنتی ہے اور جن کو ماں کا درجہ دیتی ہے۔ جن نے نقلی موتوں کی ایک جوڑی لائی تھی اور مزاج دار سے کہا کہ یہ بیگم کی ناک کے موتی ہیں۔ ہزار پانچ سو کے ہونگے میں پنال جوہری کو دکھا کر آئی۔ اُس نے دو سو روپے دیئے تھے۔ میں نے بیگم سے پچاس روپے میں خریدے۔ تم یہ موتی لے لو۔ پھر ایسا مال نہیں ملے گا۔ مزاج دار نے کہا کہ میرے پاس پچاس روپے نہیں ہیں جن نے کہا کہ اپنا دست بند بیچ دو پھر خرید لینا۔ نہیں تو آج یہ موتی بک جائیں گے۔ جن نے اس انداز سے کہا کہ مزاج دار فوراً زیوروں کا ڈبہ لے آئی اور دست بند نکال کر جن کے حوالے کیا۔ جن نے جب مزاج دار کا زیور دیکھا تو اُس سے کہا کہ بیٹی تم بھی بہت لاپرواہ ہو۔ جو زیور کو اس طرح گاجر مولی کی طرح رکھتی ہو۔ جگنی میں ڈورا ڈلوادو، بالی پتے، مرکیاں، بازو بند وغیرہ میلے ہو گئے ہیں۔ اور میل سونے کو کھا جاتی ہے۔ ان سب کی صفائی کرالو۔ مزاج دار نے کہا کہ جب اس سے کہتی ہوں تو وہ کہتے ہیں کہ فرصت نہیں ہے۔ اب کون ڈورا ڈلوائے اور کون زیور کو صاف کرائے۔ جن کہتی ہے یہ کونسا مشکل کام ہے۔ چلو موتی کو رکھو تم تمام زیور زلفن کو دو اسے میرے ساتھ بیچ دو میں ابھی ڈورا بھی ڈلوادو گی اور صاف بھی کر دوں گی۔ مزاج دار سارا زیور زلفن کے حوالے کرتی اور اس کو جن کے ساتھ بیچ دیتی۔ گلی سے نکلنے کے بعد جن زلفن سے کہتی ہے کہ ذرا ڈبے کو ادھر لاؤ تاکہ صاف ہونے والے اور ڈورا ڈلوانے والے زیور کو الگ الگ کروں۔ زیور الگ کرتے کرتے جن زلفن سے کہتی ہے کہ اس میں ناک کی کیل نہیں ہے۔ شاید پاندان کے ڈھکن

پردہ گئی۔ تم جلدی جاؤ اور ناک کی کیل لے آؤ۔ زلفن دور تے دوڑتے گئی اور دروازے پر ہی مزاج دار کو آواز دی کہ ناک کی کیل پاندان کے ڈھکنے پر رہ گئی ہے اُسے جلدی سے دو۔ جن گلی کے کپڑے پر دیا بننے کی دکان کے آگے میرا انتظار کر رہی ہے۔ زلفن نے جب یہ کہا تو مزاج دار بہو کو خطرے کا احساس ہوا اور زلفن سے کہا تم پاگل ہو گئی ہو میرے پاس کوئی کیل نہیں ہے۔ بے وقوف جلدی واپس جا کہیں جن چلی نہ جائے۔ زلفن اٹے پاؤں دوڑتی ہے لیکن جن کو کہیں نہیں پاتی وہ مزاج دار کے پاس آ کر کہتی ہے کہ جن کا تو کہیں پتہ نہیں۔ میں سارا بازارد دیکھ کر آئی۔ معلوم نہیں کہ وہ کہاں غائب ہو گئی۔ یہ سن کر مزاج دار سر چٹپٹی ہے اور چلاتی ہے کہ میں تو ٹٹ گئی ارے لوگو خدا کے لئے دوڑو وہ موم گھروں کے چھتے میں رہتی ہے۔ لوگ جب وہاں جاتے ہیں تو انھیں معلوم ہوتا ہے کہ جن ایک مہینہ سے وہاں کرایہ پر رہتی تھی۔ پانچ دن پہلے ہی مکان چھوڑ کر چلی گئی ہے اب کچھ نہیں ہو سکتا۔

(قصیدہ مرزا محمد رفیع سودا)

سوال ۱: سودا نے اس قصیدے میں جن پیشوں کا ذکر کیا ہے۔ ان کی فہرست بنائے؟

جواب: سودا نے اس قصیدے ”شہر آشوب“ میں جن پیشوں کا تذکرہ کیا ہے وہ حسب ذیل ہیں۔

ج) درس و تدریس کا پیشہ

ب) سوداگری

ا) سپاہ گری

د) شاعری کا پیشہ

و) درویشی اور فقیری کا پیشہ

سوال ۲: اس نظم میں بہت سے الفاظ ایسے ہیں جن کے معنی اب بدل گئے ہیں یا جو اب استعمال نہیں

ہوتے ہیں۔ ایسے کچھ الفاظ ڈھونڈئے اور لکھئے؟

جواب: اس نظم میں مندرجہ ذیل الفاظ استعمال کئے گئے ہیں جن کے معنی اب بدل گئے ہیں اور جواب استعمال نہیں ہوتے ہیں مثلاً تحقیق ہوا۔ گسو۔ سو۔ یاں۔ واں۔ ٹک۔

انہوں کا۔ ماحضر۔ اخوند۔ خیرگی۔ عدس۔ چھٹے ہی۔ گویندہ۔ خان زمان۔ حرفیست۔ ملائی۔ خیل وغیرہ وغیرہ۔

سوال ۳: اس قصیدے کو شاعر نے ”شہر آشوب“ کیوں قرار دیا ہے؟

جواب: ”شہر آشوب“ کی اصطلاح اُن نظموں کے لئے استعمال ہوتی ہے۔ جس میں کسی شہر کی تباہی اور بد حالی یا زمانے کی عام ابتری اور بد نظمی کا ذکر ہو لیکن اس بات کا خاص

خیال رکھا جاتا ہے کہ شہر یا ملک کی خرابی کا حال مختلف پیشوں کے حوالے سے پیش کیا جاتا ہے کہ ان کی حالت کتنی خراب ہوئی ہے۔ اس قصیدے میں بھی سودا نے شہر دلی کی حالت

۱۸۵۷ء کی بغاوت کے بعد کتنی خراب ہوئی اور انگریزوں نے اپنا غصہ خاص طور پر دلی شہر پر اتارا۔ اور اسے خوف تباہ و برباد کیا اور اسی تباہی کا اظہار کرنے کے لئے سودا نے یہ قصیدہ

لکھا۔ اور اس تباہی کا حال مختلف پیشوں کے حوالے سے بیان کیا اور اس نظم کا نام شہر آشوب رکھا۔

سوال ۴: ”شہر آشوب“ سے کیا مراد ہے؟

جواب: ”شہر آشوب“ کے لغوی معنی ”شہر میں فتنہ و ہنگامی“ یا ”شہر میں فتنہ برپا کرنے والے“ کے ہیں۔ اطلاق میں وہ نظم جس میں شہر کے اور شہر کے لوگوں کے حالات کا

ذکر ہو۔ شہر آشوب وہ نظم ہے جس میں شہر یا ملک کی اقتصادی یا سیاسی بے چینی کا تذکرہ ہو یا شہر کے

مختلف طبقوں کی مجلسی زندگی کے کسی پہلو کا نقشہ مزاحیہ طنزیہ یا جویہ انداز میں کھینچا گیا ہو۔ شہر آشوب کے لئے کوئی خاص ہیئت مقرر نہیں۔ ہر ہیئت میں شہر آشوب لکھے گئے

ہیں۔ بعض شعراء کے یہاں آشوبیہ غزلیں بھی ملتی ہیں۔ اردو میں بڑی کثرت سے شہر آشوب لکھے گئے ہیں۔ جنگ آزادی

کے بعد اس صنف کی ہیئت میں تبدیلیاں آئیں۔ دہلی کی تباہی و بربادی ”فغان دہلی“ میں بیان کی گئی ہے اس کے بعد پھر اس کا رخ بدل گیا۔ حالی کی شہر آشوب

مد و جزر اسلام، اور ہندوستانی کا شہر آشوب ”اسلام“ زیادہ اہم ہے۔ موجودہ دور میں شہر آشوب نہیں لکھا جاتا ہے۔ تاہم سیاسی، معاشی اور معاشرتی موضوعات پر لکھی جانے والی اکثر

نظمیں ”شہر آشوب“ ہیں۔

سوال ۵: ”واسوخت“ سے کیا مراد ہے؟

جواب: واسوخت وہ نظم ہے۔ جس میں بے زاری، روگردانی اور تنفر کا اظہار کیا جاتا ہے یعنی یہ وہ صنف شاعری ہے جس میں محبوب کی بے وفائی، سنگ دلی اور اس کے

نظم و ستم کا ذکر کر کے اسے بڑا بھلا کہا جاتا ہے۔ تلخ لہجے میں اُسے جلی کئی سنائی جاتی ہے اور دھمکی بھی دی جاتی ہے۔ کہ اگر محبوب نے اپنے رویے میں تبدیلی پیدا کی اور

عاشق کی ظریف ملتفت نہ ہوا تو وہ اس کی محبت سے دست بردار ہو کر کسی اور شخص سے دل لگالے گا۔ واسوخت مسدس یا مثنیٰ کی ہیبت میں عام طور پر لکھی جاتی ہے لیکن کبھی کبھار کوئی اور صنف بھی استعمال کی جاتی ہے۔

نظم ”مفلسی“ از نظیر اکبر آبادی

سوال: نظیر اکبر آبادی کی حیات اور شاعری پر ایک مختصر نوٹ لکھئے؟

جواب: ان کا اصلی نام ولی محمد تھا۔ اور نظیر تخلص کرتے تھے۔ والد کا نام محمد فاروق تھا۔ جن کا انتقال نظیر کے بچپن ہی میں ہو گیا تھا۔ ابدالی کے زمانہ میں دلی چھوڑ کر اپنے خاندان کے ساتھ آگرہ آئے اور اکبر آبادی ہو گئے یہاں لالہ بلاس رام کے یہاں معلمی اور شاعری بھی کرتے رہے ان کی صحیح تاریخ

پیدائش معلوم نہیں ہے قرین قیاس یہی ہے کہ ان کی پیدائش ۳۵ء کو دہلی میں ہوئی اور انتقال ۹۵ سال کی عمر پر ۱۸۳۰ء میں ہوا۔ اس طرح ایک طویل عمر پائی تھی اور ضعیفی میں ان پر فالج گرا تھا۔ نظیر کی شاعری کوئی راہوں پر جانے کا خوب موقع ملا۔ پابندیوں کی کمی، معیار کی قید سے آزادی وغیرہ کی وجہ سے نظیر کو اپنی شاعری کی دنیا کو وسیع کرنے کا موقع بھی مل سکا۔ اور انہوں نے غزل سے ہنکر نظموں پر اپنی ساری توجہ مرکوز کر دی۔ کلیات نظیر کی چند نظمیں اسی معلوم ہوتی ہیں۔ جن میں افلاس کی زندگی کو فطرت کی رعنائیوں کے ساتھ دیکھنے کی کوشش کی انہوں نے اپنی نظموں میں زندگی کی تکلیفوں کی تصویر کھینچی گئی ہے لیکن جن نظموں کے وجہ سے نظیر کا نام زندہ رہا وہ ان کی واعظانہ اور ناصحانہ نظمیں ہیں۔

سوال: مفلسی آدمی کو کس کس طرح سے ستاتی ہے؟

جواب: نظیر اکبر آبادی اس نظم میں کہتے ہیں کہ مفلسی آدمی کو ہر طرح سے ستاتی ہے۔ مفلسی سے انسان میں طرح طرح کی خرابیاں ہو جاتی ہے اُسے بھوکا اور پیاسا سلاتی ہے۔ اُسے پانی کی ایک ایک بوند کے لئے اور ایک ایک روٹی کے ٹکڑے کے لئے ترساتی ہے۔ مفلسی انسان کو بادشاہ سے فقیر بناتی ہے۔ طرح طرح کے گناہوں میں مبتلا کر دیتی ہے۔ اُسے پھٹے کپڑے پہناتی ہے اس کی شکل و صورت فقیر جیسی بناتی ہے۔

سوال ۲: مفلسی کو ہر وقت کس چیز کی فکر رہتی ہے؟

جواب: مفلسی کو ہر وقت روزی روٹی کی فکر رہتی ہے۔ اس فکر میں وہ دن رات محنت کرتا ہے۔ روزی روٹی کی فکر اُسے اپنے آپ سے بے خبر کرتی ہے۔ جس کی وجہ سے اُس کے کپڑے پھٹے ہوئے ہوتے ہیں۔ وہ روٹی کے لئے لڑتا جھگڑتا رہتا ہے۔ کتے کی طرح روٹی پر چھٹ پڑتا ہے۔